A STUDY
OF THE STATUS OF SPEECH CORRECTION
IN THE PUBLIC SCHOOLS OF UNITED STATES AND CANADA
WITH SUGGESTIONS AND EXERCISES
FOR SPEECH CORRECTION IN THE
ELEMENTARY SCHOOL

A THESIS

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PREFACE

Speech is the prime tool of communication. Any factor that disturbs or dulls this cardinal instrument of social intercourse creates a hardship for the individual.

Normal man is socially inclined. He likes to live in groups, work in groups, play in groups, converse in groups; any element that obstructs the natural social life of the individual is harmful to him, mentally, emotionally, and physically. The psychologists aver that to act when one is ready to act creates a satisfying sensation within the individual, but to be thwarted in one's attempt to act when one has the impulse is dissatisfying; such a condition will soon warp the life and personality of the person thus afflicted.

Not to be able to speak when one has something to say is a definite block to the pleasure of the person who is so inhibited. Such an individual often becomes morbid and morose. He shuns the group life he actually craves, thus establishing within himself a distinct emotional conflict. Yet in comparison with the definite and efficient steps which have been taken in the United States to alleviate the suffering and discomforts of the deaf, the blind, and the feeble-minded, very little has been done to mitigate, prevent, or cure disorders of speech.

Authorities agree that speech disorders appear very early in the life of the child. Some state that the greatest

per cent of defects occur between the ages of five and nine, others set the ages at three and eight. An editorial in the Literary Digest states; "The United States Public Health Service estimates that in the United States at least one million persons have some form of speech disorder; and of these approximately five hundred thousand are school children who stammer or stutter." While the editor may or may not be correct in his estimated number, the report must be at least approximately indicative of the actual conditions. The Service in its "Health News" states further that "uncorrected speech defects become a serious economic and social handicap in later life because of their bearing on education and the ability to secure employment.

"Fortunately, the majority of speech defects are functional, not dependent on definite organic lesions and can, therefore, be corrected."

It is on the plausibility of the last named statement that the problem of this thesis has been based.

Emporia, Kansas, August, 1931. Letha A. Rice.

INTRODUCTION

Through clinical and research work in the field of speech correction the following vital facts have been determined, namely:

1. The majority of speech defects are functional and can be corrected by the use of proper remedial measures.

2. Speech disorders, generally, appear very early in the child's life.

3. Impediments of speech often make their appearance after the child has started to school.

4. Speech defects that may be only slight ones when the child enters school often become more pronounced and pernicious.

5. Contrary to public opinion, children do not, as a rule, outgrow impediments of speech.

6. Imitation is an important factor in the establishment of correct habits of speech.

7. Physical and mental hygiene are important elements to be considered in the correction of speech disorders.

8. Slight functional disorders may be entirely cured through simple but persistent treatment.

9. Primary and elementary teachers on a whole display a woeful ignorance in respect to the recognition and classification of even the minor speech defects.

10. Very little if anything is being done to correct speech disorders of children in the public schools of the United States, except in the larger cities, wherein, under a department of special education speech centers with a specialist in charge have been established.

It is the belief of the writer that primary and elementary school teachers could treat and prevent many of the slight defects of speech had they the requisite information for locating and classifying speech disorders, and had they access

to desirable remedial exercises.

It is true that only minor defects could be aided in this way. In such major disorders as stuttering or stammering, cleft palate, tongue-tie, hare-lip, aphasia, etc., the untrained teacher might easily do more harm than good. Major defects require the services of a specialist. Minor disorders such as "persistent baby-talk," slight "lisping," "letter-substitution," and "foreign accent" can be much more easily corrected.

However, regardless of the fact that the classroom teacher who is untrained in speech pathology cannot treat major speech impediments she can do much to provide a happier schoolroom situation and a more pleasant school environment for the child who has a speech disorder if she knows something of the nature of the defect and its emotional reactions in the child. If she has some knowledge of the psychology of speech and of mental hygiene, and comprehends that each child presents a distinct and individual problem, she can do much to improve the situation for the afflicted child, for the other children in the class and for herself.

THE PROBLEM

Based on the ten facts presented in the introduction the problem as a whole resolves itself into four parts, namely:

Part one, to present the status of speech correction in the public schools of United States and Canada.

Part two, to classify speech defects, according to the classifications of authorities in the field of speech pathology.

Part three, to offer suggestions and exercises for the treatment of minor speech disorders--the exercises to be selected from those which have been used successfully by speech experts and original ones which the writer has found worthwhile in her own clinical work.

Part four, to supply an annotated working bibliography which will afford the classroom teacher many valuable sources of information in the field of speech correction.

Methods of Procedure

To ascertain the status of speech correction in the public schools of United States and Canada, a survey of a general nature was made. Letters were sent to the Superintendents of Public Instruction in United States and to the Ministers of Education in Canada. Fifty-six letters were sent out and fifty-six replies were received. Letters were also sent to four people who are known to be experts in the field of speech pathology. A study was made of all the major investigations in the prevalence of speech disorders, ratio of speech disorders with regard to sex, the effect of speech

disorders on school progress, and the incidence of various types of speech impediments.

The causation and classification of speech defects are compiled from the opinions of various authorities on speech disorders. The problem was to choose the simpler classifications and diagnoses which could be easily comprehended by the layman and the untrained teacher.

In the selection of remedial measures a study was made of the exercises advocated by authorities in corrective speech. The simpler and more easily applied of these exercises were compiled. In the compilation was included original exercises which have been used successfully in the speech clinic of the Kansas State Teachers College of Emporia.

In these remedial measures one original test--a test for spontaneous speech--which was worked out by the writer is included. The test was tried with fifty children picked at random from the kindergarten to the third grade inclusive, and the results of the test were tabulated.

To make the study more valuable for the untrained teacher a rather comprehensive annotated bibliography is appended.

PART ONE

Studies and Status of Speech Correction in the Public Schools of United States and Canada.

"Mend your speech lest it mar your fortunes." -
Shakespeare.

Various authorities affirm that it is difficult to obtain accurate and reliable historical data pertaining to the early discovery and treatment of speech disorders. However, it seems quite probable that speech impediments have existed since the beginning of the spoken word.

Biblical references reveal that the men of Bible times were afflicted with disorders of speech. Perhaps, the greatest of these was Moses who said, "O, Lord, I am not eloquent, neither heretofore nor since Thou hast spoken to thy servant, but I am slow of speech and slow of tongue."[1]

Demosthenes, the great Athenian orator of the fourth century (384-322 B. C.) has been classed as a stammerer. We cannot be sure that he really stammered, but through the writings of Cicero we are told that Demosthenes had much difficulty with the letter "r", and it was only with the greatest diligence in the use of the most tedious exercises that he was able to overcome the defect and become the most fluent and eloquent speaker of his time.

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1. The Book of Exodus, Chapter IV, Verse 10.

Alcibiades, the powerful Athenian general and politician of the fifth century B. C. is also said to have had a speech difficulty of a like nature. Alcibiades substituted the letter "l" for "r". Historians tell us, however, that Alcibiades was not embarrassed or disturbed by this defect, but rather made it an asset by turning the substitution into a type of coquetry.

"Judging from the Greek vocabulary, containing as it does a large variety of terms relating to the impediments of speech, we are justified in the conclusion that a fair number of persons thus afflicted were to be found among the Greeks.... Aristotle points out that there was some method in their use, as they refer to particular forms of various defects of speech."[2]

Stammering and lisping were classified by the Romans with other defects and physical peculiarities. With them the squinter, the long-nosed, or the bandy-legged person was given a special name. In a like manner, the stutterer and lisper were identified by the appellative (Balbus Blaesus).

During the sixteenth century, Hieronymus Mercurialis quoting the authority of medical and other learned men of the age makes a distinction between "Balbus naturalis" (chronic stammering) and "Balbus accidentalis" (accidental stammering).

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2. Alfred Appelt, The Real Cause of Stammering and Its Permanent Cure, Second Ed., p. 3. Chicago, Illinois: Chicago Medical Book Co., 1920.

According to the views of Mercurialis, "the cause for chronic stammering is to be found in a humidity of the brain which disturbs the normal action of this 'central organ', whereas, 'accidental stammering' is caused by sudden emotion and other influences, which injure the whole nervous system." This conception--which rightly names the 'central organ' as the seat of the affliction--marks a vital progress, and may be considered to be the forerunner of most of the theories which have held the ground up to the recent years.[3]

About the beginning of the third decade of the nineteenth century marks the initiation of the "surgical period" for the correction and cure of speech disorders. In the year 1840 this period reached the height of its enthusiasm. In this particular movement, the Germans, lead by the German phyaician and surgeon, Dieffenbach, were foremost. The French were lead by Velpeau, and the English by Yearsly and Braid.

During the "surgical regime" persons afflicted with speech disorders were subjected to the most needless and useless torture. "Wedge-shaped portions were cut from the back of the tongue; the hypoglossal nerve, the lingual frenum, and the various extrinsic and intrinsic muscles of the tongue were severed. The tongue was pierced with needles. Cauteries, blisters and embrocations of petroleum, also innoculations of croton oil were administered. Tinctures of rectified alcohol

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3. Ibid., p. 4.

were applied. Wooden wedges were placed between the teeth. Smoking was recommended as a sedative to the vocal cords."[4]

In the course of a year nearly 200 cases in France had submitted to the "operation cure." However, the surgical method of correction became unpopular quickly, for those who had been subjected to experimentation warned others against the treatment.[5]

Nevertheless, the person afflicted with a speech impediment continued to be the subject of various experiments, but gradually the procedure tended more toward the psychological and pedagogical methods. To-day the physician, the psychiatrist, the psycho-analyst, and the teacher are meeting on a more common ground in the investigation and interpretation of the science of speech disorders. True, they do not always agree on means and methods, but great strides have been made in the last fifteen years toward the re-education and cure of speech defective persons, through the co-operation of the above mentioned specialists.

Some of the most prominent and worthwhile studies in the field of speech correction have had to do with the incidence of speech disorders. Very conclusive surveys of the prevalence of speech defects among school children have been

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4. J. M. Fletcher. "An Experimental Study of Stuttering," AMERICAN JOURNAL OF PSYCHOLOGY, Vol. XXV. pp. 205-206. (April, 1914).

5. James Sonnet Green and Emilie J. Wells. The Cause and Cure of Speech Disorders. p. 6. New York: Macmillan Co., 1927.

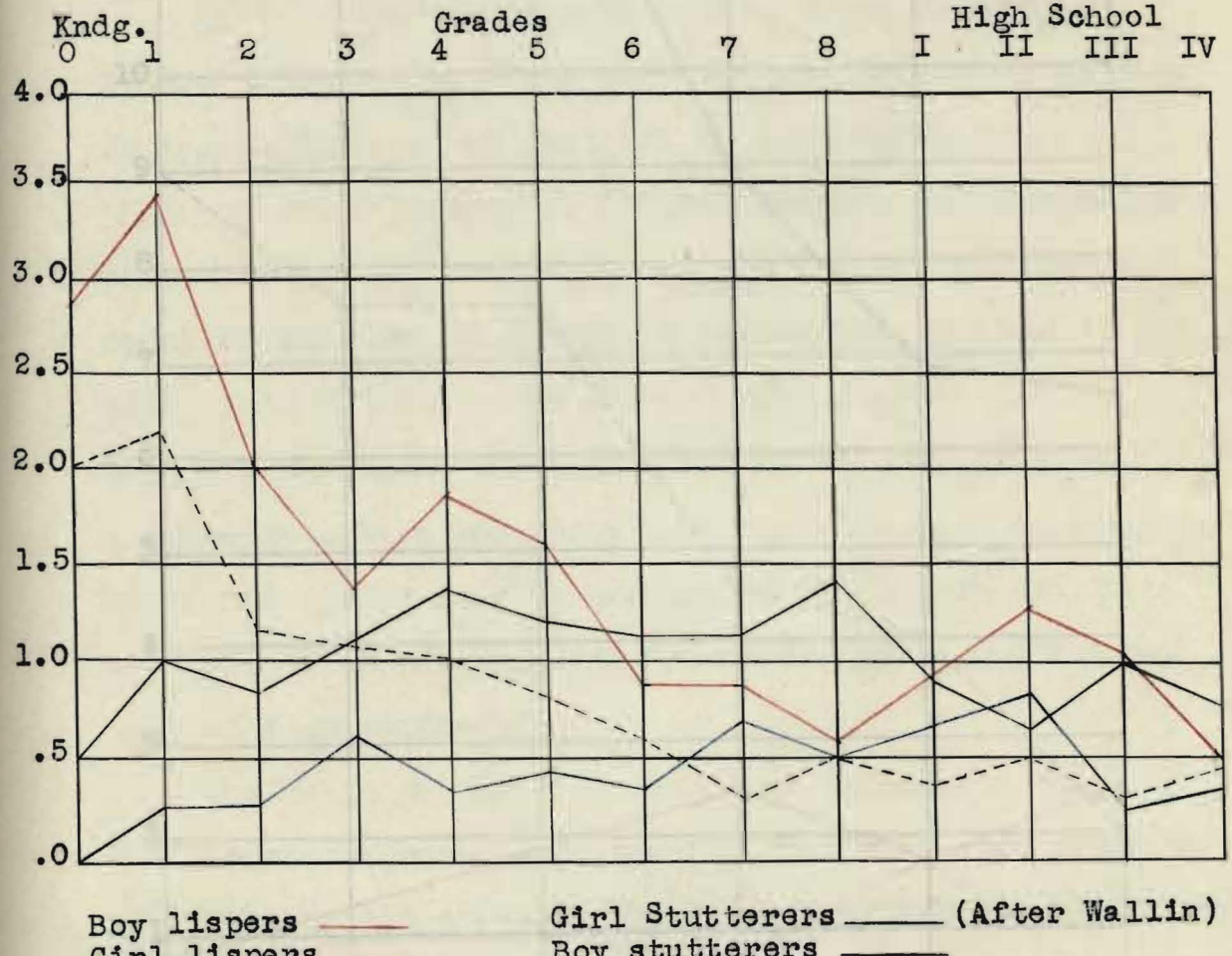

Fig. 1. Incidence of Lisping and Stuttering by Grade and Sex.

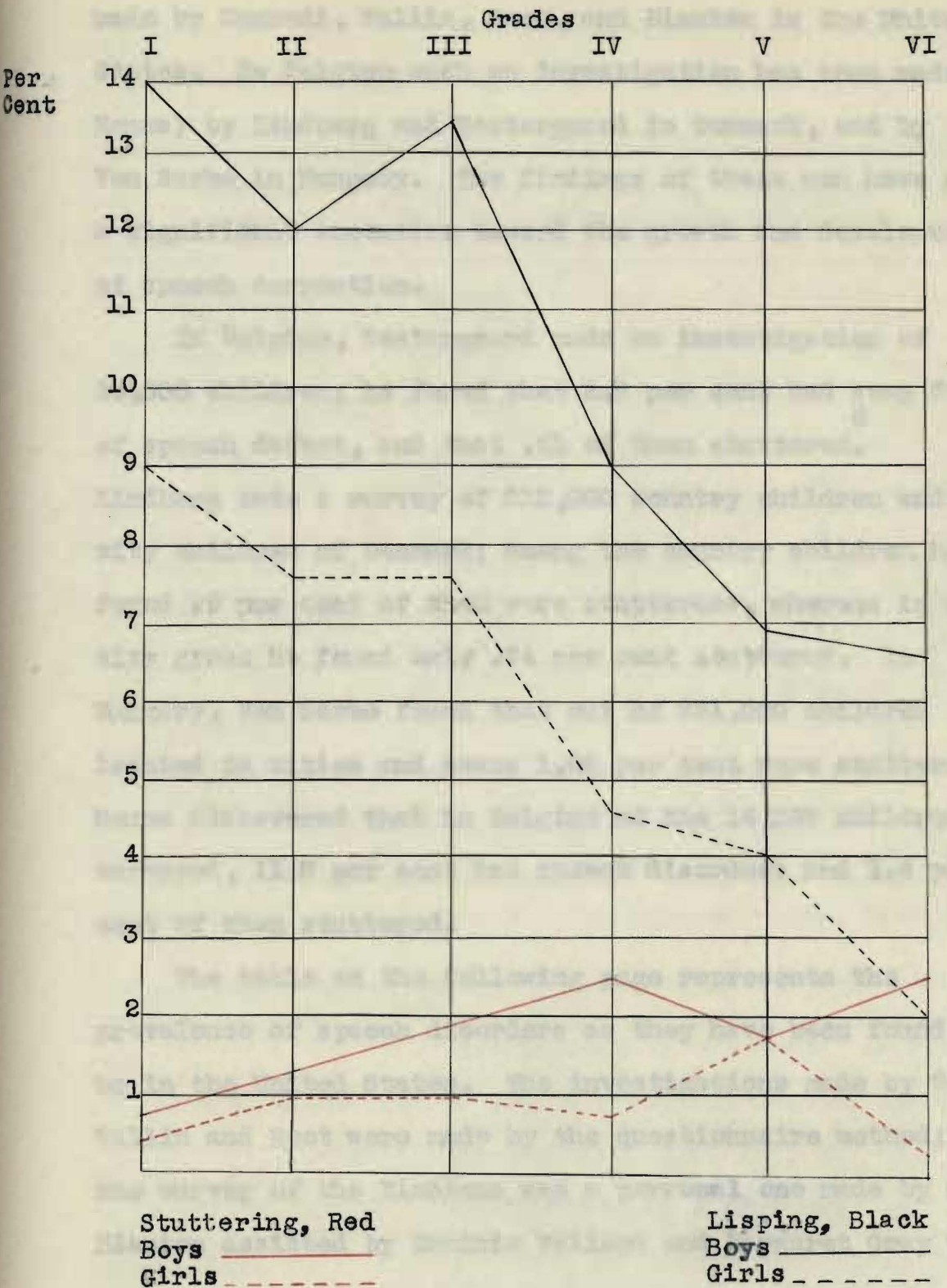

Fig. 2. Percentage of children lisping or stuttering in first six grades. (After Rouma)

made by Conradi, Wallin, Root, and Blanton in the United States. In Belgium such an investigation has been made by Rouma; by Lindberg and Westergaard in Denmark, and by Von Sarbo in Hungary. The findings of these men have proved a significant incentive toward the growth and development of speech correction.

In Belgium, Westergaard made an investigation of 34,000 children; he found that 2.2 per cent had some form of speech defect, and that .61 of them stuttered.[6] Lindberg made a survey of 212,000 country children and 85,000 city children of Denmark; among the country children he found .9 per cent of them were stutterers, whereas in the city group he found only .74 per cent stuttered. In Hungary, Von Sarbo found that out of 231,000 children located in cities and towns 1.02 per cent were stutterers. Rouma discovered that in Belgium of the 14,235 children surveyed, 11.6 per cent had speech disorders and 1.4 per cent of them stuttered.

The table on the following page represents the prevalence of speech disorders as they have been found to be in the United States. The investigations made by Conradi, Wallin and Root were made by the questionnaire method; while the survey of the Blantons was a personal one made by Smiley Blanton assisted by Erminie Ballard and Margaret Gray Blanton.

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6. Lewis M. Terman and John C. Almack. The Hygiene of the School Child. New York: Houghton Mifflin Co., 1929. pp. 347-369.

TABLE I.

INCIDENCE OF SPEECH DEFECTS IN THE UNITED STATES.

Cities Surveyed	Number of Children	Per cent with defects	Per cent Stuttered	Investigator
*Milwaukee	31,810			
Cleveland	19,678			
Louisville	14,865			
Albany	11,369			
Springfield, (Mass.)	5,902			
Kansas City	3,816			
Total	87,440	2.46	.87	Conradi
**St. Louis	89,057	2.8	.7	Wallin
***Madison, Wis.	4,862	5.7	...	Blanton
Madison, Wis.	8,717	5.4	...	Blanton
Kenosha, Wis.	6,051	5.0	...	Blanton
Madison, Wis.	5,000	...	.72	Blanton
****S. Dakota	14,072	6.3	1.2	Root
*****Grand Rapids, (Mich.)	.....	13	2.64	Camp

Miss Camp reports that surveys made in several cities in Wisconsin show that from 5 to 7 per cent of all school children are afflicted with some type of speech disorder.[7]

* Edward Conradi "Psychology and Pathology of Speech Development in the Child" in PEDAGOGICAL **SEMINARY, p. 345, Vol. III. (1904).

Wallace J. E. Wallin "A Census of Speech Defects among 89,057 Public School Pupils" in SCHOOL AND SOCIETY, pp. 213-216, Vol. III, No. 58. (Feb. 5, 1916).

*** Smiley Blanton "A Survey of Speech Defects" in THE JOURNAL OF EDUCATIONAL PSYCHOLOGY, pp. 581-592, Vol. VII, No. 10. (Dec., 1916).

**** A. R. Root "A Survey of Speech Defectives in the Public Schools of South Dakota" in THE ELEMENTARY SCHOOL JOURNAL, pp. 531 ff, Vol. XXVI, No. 7. (March, 1926).

***** Pauline Camp QUARTERLY JOURNAL OF SPEECH EDUCATION, pp. 280-283, Vol. XI. (1923).

7. Ibid., 280-283.

These various studies reveal other phases of the incidence of speech disorders, for example, the ratio of speech disorders with regard to sex; the ratio with regard to age and school grade; the effect of speech defects on school progress and the age at which speech disorders show the highest prevalence. Many significant facts are brought forth. For instance, it was found that stuttering was far more prevalent among boys than among girls. Conradi found a ratio of nearly 3:1. In his findings 1.25 per cent of all the boys stuttered while only .47 per cent of all the girls were found to be stutterers.[8] Wallin's results showed that 1.1 per cent of all the boys stuttered and .4 per cent of all the girls.[9]

In 1922 Dr. Sara M. Stinchfield, giving speech tests to "all children in each of the eight grades in the Madison, Wisconsin, public schools found 18 per cent having speech difficulties ranging from relatively mild to severe. In six years of speech testing at Mount Holyoke College, including all the entering students in classes from the fall of 1922 to 1927 an average of 16 per cent of the class each year has been classified in the speech correction group because of speech difficulties from mild to severe."[10]

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8. Edward Conradi, op cit. p. 345 ff.
9. Wallace J. E. Wallin. op cit. pp. 213-216.
10. Sara M. Stinchfield Speech Pathology with Methods in Speech Correction. Boston, Mass. Expression Co., 1928. p. 85.

The statistics of speech defect cases taken from special classes for speech defectives in 1928-1929 in six cities in Minnesota are as follows:[11]

TABLE II.

STATISTICS OF SPEECH DEFECT CASES IN SIX CITIES IN MINNESOTA 1928-1929.

City	No. Teachers	Pupils Boys	Pupils Girls	Total With Defects	Stammering	Other Defects*
Chisholm	1	115	49	164	42	122
Duluth	1	154	56	210	54	156
Mankato	1	63	51	114	8	106
Minneapolis	11	1439	935	2374	295	2079
St. Paul	4	523	279	802	164	638
Winona	1	125	69	194	41	153
Total	19	2419	1439	3858	604	3254

The above table shows stuttering present in 18.5 per cent of the cases. Of the total number having speech defects of some form, 62.7 per cent were boys, while the girls comprised but 37.3 per cent of the total number.

A summarized report of the Speech correction Department of Omaha, Nebraska schools for 1929-1930 is as follows: Stuttering cases, 419; phonetic cases, 2287; cleft palate and hare-lip cases, 20; paralysis cases, 9; placement cases, 41; hard of hearing cases, 173; retarded speech cases, 19. The total number of cases studied was 2968 and out of this total, 419 or approximately 7 per cent were stutterers.[12]

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11. Letter from Kenneth Nilson, Director of Special Classes for Speech Defectives, Saint Paul, Minnesota.
* Number of students having defects other than stammering.
12. J. H. Beveridge, Superintendent of Schools, Omaha, Neb. Letter in writer's possession.

"During the year 1929-1930 there were 2165 children enrolled in speech correction classes in the Baltimore Public Schools."[13] Doubtless this estimate does not approach all possible defective children. When the population of Baltimore is considered, one is quite certain that the figures offered are but an estimate of the children who could be reached through the facilities available in The Baltimore Public Schools. Of these 2165 children, "1450 received speech training in thirty-one white schools and 715 colored children suffering with speech difficulties were enrolled in twelve colored schools.

Speech teachers were able by scientific methods to eliminate over five hundred cases of stammering, lisping, lalling, defective phonation, and foreign accent."[14]

Dr. J. E. W. Wallin, in a report of a survey of Special Education in the public schools of Baltimore, Maryland, for the year 1929, states that a total of 1102 speech defectives were receiving speech correction in special classes in the Baltimore Public Schools. These comprised 1.25 per cent of the total number of pupils enrolled.[15] The percentages are based on the enrollment in grades I to VIII.

Dr. Wallin makes the following recommendation for the Baltimore schools.

> "All teachers in the kindergarten and first grade should receive training in speech development and the

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13. Elsie M. Saulsbury, Dept. of Education, Baltimore, Md. Letter.
14. Ibid.
15. Dr. J. E. W. Wallin. A Brief Survey of Special Education in the Public Schools of Baltimore. Baltimore, Maryland. 1929. p. 15.

correction of the milder forms of lalling, lisping, letter-substitution, indistinct articulation, and baby-talk. This will make it possible to dispense with a large staff of speech correction teachers, and leave such teachers free to devote their time to stutterers and stammerers, and other complicated forms of speech disabilities." 16

He then concludes with this admonition.

"Speech correction teachers who start in as amateurs should not attempt to treat stammering and stuttering, which requires a highly technical preparation, including a thorough grounding in the principles and practices of mental hygiene. Amateur handling of stuttering ordinarily does not remedy the condition and often produces other mental disturbances."17

At the present time the State of Wisconsin makes provision in its school system for the correction of speech disorders. There are classes for the correction of speech defects in "twenty of the cities and towns of the state with an enrollment of about 6,000 pupils and thirty-five teachers."18 Lavilla A. Ward, Supervisor--Deaf, Blind and Correction of Speech Disorders tells of the system in Wisconsin.

"The organization of the work on a whole is uniform. The teacher goes from school to school meeting children in periods of fifteen to forty-five minutes in groups of one to eight or ten. She usually spends a half day in a school and meets children in about four schools. In many places it is impossible for the teacher or teachers to cover the entire school system; they usually work in the school for a year and in some places it is possible that certain schools will be carried on from year to year for an indefinite time... In other cities the teachers work in one group of schools one year and pass on to another group the next year. The average teaching load at any one time

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16. Ibid., p. 57.
17. Ibid., p. 57.
18. Lavilla A. Ward, Supervisor--Deaf, Blind, and Correction of Speech Disorders, Wisconsin. Communication to writer.

is from 100 to 150 pupils but many of our teachers enroll as high as 200 pupils during the year."[19]

The school district of Philadelphia, Pennsylvania carries on an extensive program in speech improvement. After April first of 1929, seven new special clinics were organized... This distribution of clinics made it possible to reach a larger number of children in different sections of the city. Four per cent more children had speech defects corrected this year than last year. Many pupils were dismissed from speech classes when their defects were remedied as far as possible... During the year 36 per cent of the children were reported corrected.[20]

Table No. III shows the number of pupils attending speech improvement classes in the Philadelphia schools and the types of defects found in this group of children.

TABLE III.

NUMBER OF CHILDREN ATTENDING SPEECH IMPROVEMENT CLASSES AND TYPES OF DEFECTS FOUND AMONG THESE PUPILS.

Stammering	Lingual Protrusion	Lisp. Lateral Emission	Defect. Phonation	Lalling	Voice Defect	Foreign Acc.	Total Cases
1217	1638	517	1102	85	136	356	5049

19. Ibid.
20. Gladys G. Ide, Edwin C. Broome. Board of Public Education, School District of Philadelphia. Division of Special Education. Report for Year ended 1929. pp. 153-154.

If the above table were shown in percentages the results would be as follows: Stammering was found in 24 per cent of all cases, lingual protrusion lisping in 32.6 per cent, lateral emission lisping in 10.3 per cent, defective phonation in 22 per cent, lalling in 1.06 per cent, voice defects in 2.07 per cent, and foreign accent in 7 per cent of the total number of children enrolled.

TABLE IV.

DISTRIBUTION OF SPEECH DEFECTS AMONG 4801 CHILDREN AS REVEALED IN THE SPEECH IMPROVEMENT CLASSES IN THE PHILADELPHIA SCHOOLS.

High Schools having Speech Classes	Stammering	Defective Phonation	Lalling	Nasality
14	196	1032	54	303

TABLE IV.
cont.

Cleft Palate	Hoarse Voice	Lack of Resonance	Lisping	Foreign Accent	Total of all Cases
1	453	97	1416	1249	4801

Table No. IV shows the percentages of different types of defects among 4801 school children to be stammering 4.8 per cent, defective phonation 21.4 per cent, lalling 1.14 per cent, nasality 6.3 per cent, hoarse voice 9.4 per cent, lack of resonance 2 per cent, lisping 27 per cent, foreign

accent 26 per cent. In the entire group of 4,801 children there was found only one case of cleft palate.

A course in speech correction work has been added to the curriculum of the beginning class at the Philadelphia Normal School. "The aim of this course is to enable the students to recognize the various types of speech defects and to correct the minor defects commonly found in the classroom."[21] This venture constitutes a very definite and noteworthy stride on the part of the Philadelphia Normal School, for much could be done to cure and eliminate minor speech disorders such as "defective phonation, lisping and foreign accent" in the elementary schools if the teachers of the lower grades have a knowledge of phonics and the fundamental principles of speech pathology. Much good may be accomplished through the treatment of these mild disorders while the children are in the first and second grades.

TABLE V.

THE NUMBER OF PUPILS RECEIVING CORRECTIVE WORK IN SPEECH IN WYOMING IN THE YEARS 1927-1928 AND IN PAST YEARS.

Cities	1920	-21	-22	-23	-24	-25	-26	-27	-28	Total
18	77	164	105	240	433	107	153	262	131	1672

The Sixth Biennial Report of the State Department of

21. Ibid., p. 157.

Education issues the following statement: "Five hundred and thirty-four speech cases have been diagnosed by the Division of Special Education. Many of these cases are in rural schools and do not have the advantage of speech correction training which they should have. In the city schools last year 131 children were receiving training in speech correction by teachers giving part time from their regular work." Wyoming has a proposed Special Education program in which the need for full time speech teachers is a point stressed. "The work being done," the educators state in the bulletin, "does not begin to adequately provide for the speech correction problem in the public schools in Wyoming." These cities are cited as needing full time teachers in speech: Sheridan, Rock Springs, Laramie, Rawlins, Casper, Cheyenne, and Afton.[22]

In the spring of 1912 a survey was made of the Boston Schools to ascertain the status of speech defects among the school children. "Nine hundred and ninty-eight were found having pronounced defects." The survey was made by Miss Theresa A. Dacey, a grade school teacher. "She studied under Dr. Edward W. Scripture at the Vanderbilt Clinic in New York, and in October organized the first corrective speech class in Boston... To-day three thousand pupils are attending classes, all under the direction of Miss Dacey, and up to July 1,

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22. Biennial Report of the State Department of Education of Wyoming. 1926-1928. pp. 60-61.

1929, seven thousand and six hundred cases had been followed up."[23]

> "The present organization in Boston includes sixteen speech centres (Note: A speech centre is a single classroom to which a group of fifteen pupils come twice a week for periods of one and one-half hours. Sometimes a centre draws from one school alone).[24] The clientele of these centres includes pupils from the kindergarten through high school with adults from outside the school system. Somerville and Arlington send pupils and pay for their instruction."[25]

In 1924 a rough survey of the Providence, Rhode Island, Schools revealed the fact that 740 children were in need of speech improvement aid. For the purpose of treating these cases a trained teacher was appointed in February, 1925. Her entire time was given over to the work and "approximately 135 children were given corrective treatment in five grammar schools, one primary school, and one high school."[26]

In 1927, approximately 530 children afflicted with speech disorders received corrective treatment in one high school, seventeen grammar schools, five primary schools, and one vocational school. In her article Miss Ballard concludes: "The results of corrective speech treatment in Providence have fully justified the work... At the present time a careful survey of all elementary schools, in which there are

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23. Fredrick W. Swan, Master of Abraham Lincoln School, Boston, Mass. Improved Methods of Treatment of Atypical Children as Applied to Speech Defectives in Boston Schools. Amherst, March 26, 1930. p. 1.
24. Ibid., p. 3.
25. Ibid., p. 5.
26. Elizabeth Ballard. The Correction of Speech Disorder in the Providence Schools, The Service Bulletin, Vol. III, No. 3, March, 1928. pp. 8-9.

no classes for the correction of speech defects is being made by the speech correction staff. Results will be available later."[27]

The centre for active speech correction work in the state of Washington seems rightly to belong in Seattle. The work in Seattle is carried on by means of speech centres or clinics three of which are always in operation. The city is divided into districts for this purpose, a centre being maintained for each district.[28]

Miss Langdon states that the speech problem in public schools presents a threefold aspect, namely:

> "1. The correction of actual impediments of speech, which occur all through the elementary, intermediate and high schools. This includes cases of stammering, stuttering, lisping, infantilism, lalling, etc.
>
> 2. Improvement of articulation and enunciation in the ordinary speech of the classroom and the development of speech in primary classes.
>
> 3. Measures for preventing the development of speech defects among pre-school children."[29]

This latter aim they hope to carry out through the co-operation of the Parent-Teachers Association and the Pre-School Circle.

The State Department of Education in California gives financial support to all schools districts that are conducting

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27. Ibid., p. 9.
28. Anna Y. Langdon. Speech Improvement in Seattle Washington. Service Bulletin, Vol. III, No. 3, March, 1928. pp. 9-10.
29. Ibid., p. 10.

classes in the Correction of Speech Defects. State Bulletin No. D-I on Physically Handicapped Children, provides:

> "Speech defective children should be considered as physically handicapped, and excess cost reimbursement may be claimed for their instruction, the total cost of such special instruction being considered 'as excess cost.'"[30]

Mabel F. Gifford, State Chief of the Bureau of Correction of Speech Defects, in California explains the State reimbursement fund as follows:

> "This entitles the district to reimbursement up to $200.00, half of which comes from the state and half from the county, for every unit of average daily attendance. Four students for one hour every day is equivalent to four hours or one unit of average daily attendance, and would entitle the district to reimbursement up to $200.00 a year to cover the excess cost of this education. An average of six students for two hours each day would be equivalent to 12 unit hours, or three units of average daily attendance, and would entitle the district to reimbursement up to three times $200.00 or $600.00 a year to cover the excess cost of speech instruction.
>
> A full time teacher, working between five and six hours a day would entitle the district to reimbursement varying from $1400.00 to $1500.00, depending on the size of her classes and the length of the working day."[31]

The University of California at Berkley, and the State Teachers College at San Francisco, offer training in speech correction in their summer sessions. In order to secure State credentials one must have two summer sessions, covering 12 units of work, and 100 hours of practice teaching, besides

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30. Mabel Farrington Gifford. Course of Study for Correction of Speech Defects and Disorders State of California, Dept. of Education, Bureau of Correction of Speech Defects and Disorders. 1930.

31. Ibid.

definite personality qualifications. The University at Los Angeles is planning to introduce regular training courses there also.[32]

Kansas does not have a state supported movement for corrective speech in the public schools, but at least one of the larger cities offers the work in its school system. Topeka has a full time teacher of corrective speech who works chiefly in the elementary and junior high schools. "She goes from building to building making appointments with the children and they are excused from the classrooms for a certain length of time and are given instructions and advice regarding home practice."[33]

In the fall of 1928 the Kansas State Teachers College of Emporia instituted a speech clinic and began offering courses in speech pathology. This clinic is open to all children of the state whether of school or pre-school age and to any adults who want treatment. During the year 1930, fifty-eight cases consisting of persons of pre-school age, school children and college students were treated in the clinic. They came from various parts of the state and some from outside the state. Children from the college training school are examined for speech defects and receive treatment. The director of the clinic diagnoses all cases, recommends treatment, inspects the cases from time to time, and keeps a

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32. Ibid.
33. A. J. Stout, Superintendent of Public Schools, Topeka, Kansas. Communication to writer.

careful record of the progress of each case. College students who are members of the speech pathology classes work with these cases; thus the clinic functions doubly, first, as an agent for the treatment of speech defects and second, as a laboratory wherein students who expect to enter the field of corrective speech may have actual experience in the work.

The department is yet new, but is steadily growing, and the excellent work being accomplished fully justifies its continuance as a part of the college curriculum.

A summary of the reports from the forty-eight states reveals the following facts: Nineteen states are carrying on some sort of a program in the field of speech correction in their schools. Of these nineteen the states which are outstandingly active in the field are California, Wisconsin, Michigan, New York, Pennsylvania, New Jersey, Massachusetts, and Washington. Twenty-one states are doing nothing to promote corrective speech work in their schools, and the report from eight states was too indefinite to form any but general conclusions concerning their status in the work. It is doubtful, however, if these are doing anything in the field. Eleven states reported that surveys to discover the number of children with speech defects within their borders had been made or were in the process of being made. Twenty-eight states reported no surveys, and the remaining nine gave no data pertaining to surveys.

Few of the states are making any concentrated effort to ascertain the number of physically or mentally handicapped

children among their numbers. Among the few who are making the attempt are New York, New Jersey, Massachusetts, Maryland, Pennsylvania, Wisconsin, Michigan, and California. Most of this work is done through state departments of Special Education. Data on hand would indicate that several states which at present are not doing anything toward corrective speech in their public schools are becoming interested in the movement and some are beginning surveys toward that end.* The data points toward a slow but consistent growth throughout the country toward the installation of measures for speech correction in the public schools. More surveys revealing the need of such education will greatly aid in giving an impetus to the movement. When educators are convinced that speech correction is not a fad but a vital institution which we cannot afford to be without, the work will attain a firmer basis and progress become more rapid. One educator aptly expressed the need of corrective speech when he said, "It is closely related to the three R's--Retardation, Regular Promotion and Rapid Advancement."[34] The same man further states that there are two other R's related to this subject,--"Ridicule and Resentment."

> "If this work in correction continues to remove a source of ridicule and replace the resentful feeling of unfortunate children, it is well worthy of permanent recognition, and normal schools should include sufficient

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* See Appendix.

34. Fredrick W. Swan. op cit., p. 5.

consideration of the subject of atypical children to insure a sympathetic and intelligent attitude toward defectives."[35]

The most comprehensive of all recent surveys was conducted through the Whitehouse Conference on Child Health and Protection. The report of the Committee on Special Classes which contains the detailed information gathered by the Subcommittee which dealt with the subject of speech defects has not yet been completed. However, a bulletin issued by the department offers these significant findings:

> "1,000,000 or 4 per cent of children of United States between the ages of five and eighteen are so defective in speech that they require remedial treatment and training; one-fourth of these are stutterers.
>
> Children suffering from speech defects should be classified into four groups:
>
> 1. Three per cent whose defects are remediable but whose intelligence is so low that the advantage of exact speech is not worth the effort to secure it.
> 2. Two per cent whose defects due to inoperable structural anomalies are irremediable
> 3. Ten per cent whose defects are remediable but not by the usual methods
> 4. Eighty-five--eighty-six per cent whose defects will yield to standard methods.
>
> Less than 60,000 are receiving training; little of this work being done outside of large cities.
>
> Ten dollars per child is the average annual cost for speech correction. The results abundantly justify the expense."[36]

No state has any requirement in its school laws which designates that before prospective teachers are issued teaching certificates they must have had some speech training in their

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35. Ibid.
36. Sub-Committee of Whitehouse Conference on Child Health and Protection. "Physically Handicapped Speech Defectives." Bulletin issued by White House Conference on Child Health and Protection, Washington, D. C. 1931. pp. 3-4.

college courses. Such a provision would aid greatly in securing better conditions for the promotion of speech correction work in the public schools. The following recommendations are made in the report of the Sub-Committee on the Defective in Speech of the Committee on Special Classes of the Whitehouse Conference:

> "Provision in teacher-training institutions of well-balanced courses for speech correction teachers incorporating
>
> 1. Phonetics
> 2. Physiology
> 3. Anatomy
> 4. Neurology
> 5. Psychology
> 6. Education
> 7. Psychometry
> 8. Biochemistry
> 9. Genetics
> 10. Sociology
> 11. Physical Education
> 12. Speech.
>
> Provision for elementary courses in speech disorders as a part of the training of primary teachers, researches into causes, prevention, proper training, and treatment of speech disorders."[37]

Status of Corrective Speech in the Public Schools of Canada

Reports from the departments of education in the nine provinces of Canada convey the information that the situation pertaining to corrective speech in the Canadian schools is not greatly different from the status of the work in United States. *

> "The question of corrective speech is dealt with in the Normal Schools, and the Inspectors call attention to any defect in the teachers' speech when making their regular report."[38]

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37. Ibid., pp. 4-5.
* See appendix, p.
38. J. F. Ross, Deputy Minister of Education, Edmonton, Canada. See appendix, p.

Winnepeg reports that special attention to the matter of corrective speech is given by the Normal Schools "with a view to having well-trained teachers in that respect."*

The province of Ontario has corrective speech work carried on in three of its cities, Toronto, Hamilton and Ottawa. A six-weeks summer course which provides teacher-training along the line of corrective speech is given in the Normal School of that province*.

There have been no recent surveys in Canada to ascertain the need for corrective speech training in the public schools. The data received indicate that there are no specially required courses in speech training that must be taken by candidates before they are issued teaching certificates.

Much of the data stressed the point that a careful consideration of the teachers' own speech habits is given by the Normal Schools. It is in this respect that many of our own teacher-training institutions are remiss. Persons who have speech defects are often found as teachers in the public schools of United States. The inevitable result of such careless selection of public school instructors is that such persons are not only unable to assist the child who has defective speech but are actually bad classroom models for the entire group in their charge.

The conclusion, according to the facts, presented is that the status of corrective speech work in Canada is not as far

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* See appendix, p.
* See appendix, p.

advanced as it is in United States. But, on the other hand, a more careful selection of teachers in respect to their speech habits is practiced by the Canadian Normal Schools. Doubtless this is due to the English influence which pervades the teacher-training institutions of Canada.

PART TWO

Classification and Causation of Speech Defects.

The classification of speech defects presents a difficult problem when one attempts to simplify definitions so that they may be understood by the layman or untrained teacher who wishes to obtain a working knowledge of speech disorders. To use only terms that are applied in the medical world would be of small advantage, for they are too technical in nature to be easily understood; to use only the terms that are taken from the vocabulary of the psychologist would be equally confusing; therefore, it seems best to choose the simplest, clearest and most explanatory of the two groups.

There is a difference in the conceptions of speech defects as evinced by various authorities, for example, Scripture lists four different forms of lisping disorders; namely, negligent lisping, organic lisping, neurotic lisping and cluttering.[1] He states the causes for these four types of lisping as--"When a child is careless or negligent in his observation of the speech of other people or himself, he fails to produce the sounds properly and he does not even notice his errors. These are the characteristics of 'negligent lisping.'[2] The essential pathological fact is mental carelessness.

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1. E. W. Scripture. Stuttering and Lisping, New York: The Macmillan Co., 1912. P. 111.
2. Ibid., pp. 122-123.

'Organic lisping' is caused by anatomical defects of the vocal organs, such as 'over-shot jaw,' 'hare lip,' or 'feeble lips,' 'tongue defects,' 'tongue-tie,' jaw and tooth defects, high palatal arch, cleft palate, and obstructed nasal passages."[3]

'Neurotic lisping,' Scripture holds, is "allied to stuttering in its causation (fright and nervous strain and in the presence of an emotional disturbance). It differs in having excessive muscular tension of a constant rather than spasmodic kind; this results in speech somewhat like lisping and not in the peculiar sounds of the stutterer."[4]

'Cluttering' he defines as being "characterized by great nervousness that shows itself in excessive rapidity of speech with indistinct enunciation."[5]

Greene and Wells interpret lisping to mean defects of the 's' sounds--s, ss, sh, z, zh. The person who lisps very frequently substitutes 'th' for 's' as 'thith' for 'this' or 'yeth' for 'yes,' or "he may expel large quantities of air from one or both sides of his mouth (Lateral or Bi-lateral Sigmatism). This side air emission will cause him to substitute another sound, that of 'sh' for 's' as 'she' for 'see.'"[6]

The Blantons include both lisping and lalling under

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3. Ibid., pp. 162-172.
4. Ibid., p. 185.
5. Ibid., p. 187.
6. James Bonnet Greene and Emilie J. Wells. The Cause and Cure of Speech Disorders, New York: The Macmillan Co., 1927. p. 18.

letter-substitutions. However, they describe lisping under a number of heads such as 'mechanical lisping,' (the same as organic), 'neurotic lisping,' and 'negligent lisping.'[7]

Blanton defines stuttering as a "break in the rhythm of speech due to a blocking or inhibition of the muscle co-ordination." He names four types of stutterers: the hypomaniac, the hysterical stutterer, the anxious nervous type, and the stutterer who may be afflicted with organic or functional disorders.[8]

Bluemel attributes stuttering to some defect in the auditory or visual imagery.[9]

Fletcher holds that "stuttering should be diagnosed and described, as well as treated as a morbidity of social consciousness, a hypersensitivity of social attitude, a pathological social response." He believes that the neurosis is primarily the cause of the symptom and the inferiority complex or the feeling of inferiority the inevitable resulting condition.[10]

Appelt adheres closely to the theories of Freud and believes that "stammering like all phobias and obsessions, is

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7. Margaret Gray Blanton and Smiley Blanton. Speech Training for Children and The Hygiene of Speech. New York: Century Co., 1919. pp. 99-125.
8. Ibid.
9. C. S. Bluemel. Stammering and Cognate Defects of Speech. Vol. I. New York: G. E. Stechert and Co., 1913. pp 100 ff.
10. John Madison Fletcher. The Problem of Stuttering. New York: Longmans, Greene and Co., 1928. p.226.

caused by a psychic complex which is endowed with extremely intense emotions and inhibitions, and, therefore, possesses so impelling a power that it forces the patient to be more or less under its influence.... All paroxysms of stammering are produced by an energy supplied by suppressed libido."[11]

Knight Dunlap calls attention to two facts that he has found to be outstanding in the data derived through experimentation with stuttering boys, namely: "First, that stammering dates (where dating can definitely be made) from the time when the boy first went to school, or began to associate with a number of other boys; second, that in many cases (not in all) the stammerer has especial difficulty with words beginning with one of a small group of sounds with which certain obscene words much favored by small boys begin." He further states that "the boy employes these new terms with satisfaction among his juvenile friends, but never, never, does he let his mother, father, or sisters hear them."[12] Dunlap attributes most cases of stuttering among boys to emotional repression of a certain "stress" the boy may have to act, but is denied the relief of acting because the social conditions for which he has been trained will not permit such freedom. Similar to Appelt, Knight Dunlap follows the hypothesis of Freud. Both of these investigators advocate the psychoanalytic

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11. Alfred Appelt. Stammering and its Permanent Cure, Second Ed., p. 133. Chicago, Illinois: Chicago Medical Book Co., 1920.

12. Knight Dunlap. "The Stuttering Boy." JOURNAL OF ABNORMAL PSYCHOLOGY, pp. 44-48, Vol. 12. (1917).

treatment for stammering or stuttering.

Green and Wells treat stammering and stuttering as entirely different maladies. For example, they define stuttering thus--"Stuttering is a speech of hesitating nature which is conditioned on certain states of mind in the form of emotions, feelings, attitudes, or ideas. The continuity of the stutterers' speech is interrupted by spasms of the muscles involved in speech production. The stutterer is able to enunciate every sound or combination of sounds."[13] Then follows the distinguishing definition for stammering.

> "Stammering is a speech of defective nature and may arise from numerous conditions either of a central (brain) involvement or a peripheral involvement. There is an inability to form correctly any or all of the sounds of speech. The continuity of the stammerers speech is never broken, but the enunciation is at fault."[14]

These writers base their interpretation of the terms stammering and stuttering on the German version of the words. The Germans apply the term "Stammelin" to every form of lisping or oral inaccuracies. "Gutzmann describes the difference in one sentence, 'Stottern ist ein Fehler der Rede; Stammelin ein Fehler der Aussprache,' meaning that stuttering is a defect of conversation while stammering is a defect of enunciation."[15]

Borden and Busse use the terms stammering and stuttering synonymously, classifying stammering under neurotic defects, and thus defining the word:

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13. James Sonnet Green and Emilie J. Wells. op cit., p. 11.
14. Ibid.
15. Ibid.

> "A person is said to stammer when his speech is impaired by--(1) pathologic retardations, (2) pathologic repetitions, (3) pathologic accelerations, (4) pathologic prolongations, and (5) the frequent use of starters."

The above defects are called by the authors "acoustic peculiarities" and are "usually associated with a number of physiological and psychological abnormalities."[16]

Stinchfield defines stuttering as:

> "A form of motor inco-ordination or an anxiety neurosis in which the speech disturbance is a prominent symptom. The motor speech impulse is not co-ordinated with the motor speech musculature, and there is consequently a lag or delay in transmission. This occasions a blocking, inhibition, or cramp in some part of the peripheral speech mechanism. The speech is hesitant, there may be an utter inability to articulate words or phrases, or there may be a tendency to repeat final words or sound units, causing jerky unrhythmic utterance."[17]

Elizabeth D. McDowell gives a very clear conception of stuttering in her summarized definition.

> "Stuttering is an intermittent inability to produce voiced sounds accompanied by severe cramps of the diaphragm, larynx, tongue, or all three of these speech organs. It is recognized by the following symptoms, more or less frequently present: (1) repetition of consonant sounds preceding vowels; (2) inability to speak words, phrases, or sentences beginning with vowels; (3) special difficulty in emitting short vowels; (4) tics, or muscular spasms of the face, particularly blinking of the eyes; (5) general muscular tension throughout the body exhibited in clenched hands and toes; (6) glottal catches; (7) back placement of the vowels; (8) irregular, jerky grouping of phrases; (9) lack of rhythm;

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16. Richard C. Borden and Alvin C. Busse. Speech Correction. New York: F. S. Crofts and Co., 1925. pp. 278-279.

17. Sara M. Stinchfield. Speech Pathology with Methods in Speech Correction. Boston, Maine: Expression Co., 1928. pp. 28-29.

(10) gasping breath controlled in its emission by the muscles of the larynx."[18]

To the above symptoms as listed by McDowell, it will be well to add "monotonous voice." Dr. Scripture especially stresses this trait of the stutterer saying that "The speech of the stutterer is monotonous and stiff, having neither melody nor flexibility."[19]

Anxiety and fear are recognized by most authorities to be potent factors in the origin and cause of stuttering, and the feeling of inferiority is held by most to be a consequent result. "Abdominal cramps are nearly always present....and laryngeal cramps are a never-failing symptom of stuttering."[20] The stutterer has a great fear of appearing ridiculous, is very self-conscious and often withdraws from group life and develops a morbid and morose personality.

There are many influences which may cause or aid in initiating the beginning of stuttering. These maybe listed under six headings, namely:

1. Organic.
   a. Adenoids.
   b. Defective Teeth.
   c. Enlarged Tonsils.
   d. Any malformation of the speech organs.

2. General physiological weaknesses.
   a. Malnutrition.
   b. Overwork--School overpressure.

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18. Elizabeth Dickinson McDowell. The Educational and Emotional Adjustments of Stuttering Children. New York: Teachers Columbia Publications. 1928. p. 59.
19. E. W. Scripture, op cit., p. 75.
20. Ibid., pp. 10-11.

e. Diseases--Whooping cough, scarlet fever, measles, influenza, intestinal troubles, scrofula, rickets, St. Vitus dance, muscle spasms, pneumonia, diptheria, and mumps.

3. Psychical Causes.
   a. Shock.
   b. Hysteria.
   c. Over-stimulation, excitement.
   d. Imitation.
   e. Morbid fear, dread, confusion, embarrassment, fear of social situations, repressions, etc.

4. Maladjustments.
   a. Home.
   b. School.
   c. Social.
   d. Faulty home training.

5. Heredity.

6. Interference with normal left-handedness.

The last named cause is rather a mooted question among authorities in the field of speech pathology. However, Ballard, Stinchfield, Terman, and others give some credence to the theory that any attempt to change normal left-handedness to right-handedness is very likely to create a complication in the speech learning process. Dr. Blanton explains the theory of left-handedness and its relation to stuttering quite simply.

> "In the left-handed child the speech area is on the right side of the brain; in the right-handed child it is on the left. We found in a study of 500 stuttering children that about 8 per cent were originally left-handed but had been forced to use the right-hand. It has been estimated that only about 1 per cent of non-stutterers are left-handed. We, therefore, have urged parents and teachers not to force left-handed children to use the right-hand as this might interfere with the development of the speech area and cause stuttering."[21]

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21. Smiley Blanton. "Why Children Stutter." PARENTS' MAGAZINE, pp. 26-27, Vol. VI, No. 11. (Feb. 1931).

Ballard made three studies of the relationship of handedness to speech defects. The last of these studies was quite decisive in its results. In this particular experiment Ballard made personal examinations of 322 sinistrals (originally left-handed children) found among some 11,939 children from eight to fourteen years of age. Of this number (322) there were 271 who had been required to write with the right-hand (dextro-sinistrals).

> "Of these 46 stuttered at the time and 24 had stuttered previously and recovered, or 25.8 per cent in all. Of the 51 sinistrals who had been permitted to use the left hand not one stuttered. The proportion of stutterers among the dextro-sinistrals was, in this investigation, about eight times as great as among pure dextrals."22

(Note: Ballard designates as "sinistrals" those persons who are normally left-handed; as "dextrals" those who are normally right-handed; and "dextro-sinistrals" is the term applied to those individuals who have been changed from being normally left-handed to right-handedness.)

This investigation by Ballard cannot in itself be accepted as conclusive evidence that there is some basis for the theory that interference with normal left-handedness has some bearing on speech defects. But the fact that many authorities in the field of speech correction have found some correlation between left-handedness and speech defects

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22. Lewis M. Terman and John C. Almack. The Hygiene of the School Child. Revised Edition. Chap. XVIII. "Speech Defects and the Hygiene of the Voice," New York: Houghton Mifflin Co., 1929. pp. 347-369.

would tend to establish the hypothesis that compelling the normally left-handed child to use his right hand may be a causal factor of speech impediments.

There are a number of classifications offered by the different speech specialists. To choose the simpler and more easily understood of these is not an easy matter. For that reason the writer has supplied definitions and classifications from several authorities, attempting to choose those which would be most easily understood by the layman and the teacher who is untrained in the subject of speech correction.

Lisping

Lisping is perhaps the most frequent of all the speech disorders. It is usually defined as a defective articulation or imperfect production of the sibilant sounds--"s," "sh," "z," and "zh." It has several phases, i. e., it may be caused by "lingual protrusion,"--in which case the tongue is thrust beyond the teeth in the production of the sibilant sounds. It may result from lateral emission or bi-lateral--in which case the air escapes from one or both sides of the mouth instead of in a central stream. It has been previously stated that lisping has been classed under three different heads, namely: "negligent," "neurotic," and "organic." These three forms are described on the first page of this chapter. Lisping is very prevalent among children during the period of second dentition. The absence of the front teeth makes it difficult

for the child to articulate the sibilant sounds. The child usually overcomes this with the growth of the new teeth. However, if the habit becomes fixed it may be necessary to institute remedial measures.

Lalling

Lalling is a "thick-tongue" type of speech due in most cases to weakness, sluggishness or inactivity of the lingual muscles. The words, instead of being clearly enunciated, are blurred and indistinct. Sound units are slurred and confused. Very often there is a driveling of the mouth with this type of disorder. Many cases of "lalling" are mistakenly diagnosed as "tongue-tie." However, Dr. Fredrick Martin states that out of an average of fifty cases brought to him for "tongue-tie" he found but one case that was really caused by that malformation.[23] Lalling is found very frequently in cases of subnormal or mentally defective children.

Oral Inaccuracy

Oral inaccuracy is a term intended to include such defects as lisping, letter-substitution, omissions of sound units, lalling, and slurred or indistinct speech. In short, all

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23. Dr. Fredrick Martin. "The Prevention and Cause of Speech Defects," University of the State of New York Bulletin (reprint). No. 743. Albany, New York, Oct., 1922. p. 6

imperfections of pronunciation and articulation are oral inaccuracies.

Stinchfield offers the following classification of speech disorders as being the one adopted by the Committee on Speech Classifications for the American Society for the Study of the Disorders of Speech. The grouping is comprehensive and easily understood.

"Practically all speech defects which are encountered in the school room, in the home and in institutions....may be placed appropriately under one of six general headings." These are:

"1. Alalia; Delayed Speech, or absence of speech since birth.

2. Dyslalia; Oral Inaccuracy, including lisping, careless enunciation, indistinct utterance and letter substitutions or mutations.

3. Dysarthria; Stuttering (stammering).

4. Dysphonia; Aphonia or loss of voice after it has been once acquired.

5. Aphasia; Aphasia, partial or complete loss of speech.

6. Distonia; Vocal Defects of Quality."[24]

Under the last named heading will be found such vocal imperfections as high pitched voice, guttral, throaty tones, strident voice, nasal tones, coarse, raucous tone, thin voice, etc.

Another authority classified speech disorders under these

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24. Sara M. Stinchfield. op. cit., p. 25.

headings: Organic Defects, Neurotic Defects, Defects of Carelessness, Foreign Accent, Provincial Dialect, Defects of Infantile Perservation, Defects of Tone Quality, Intonation, etc.[25]

In the above named classification we find some of the following distinctions:

1. Organic Defects.

   Organic defects are caused by any malformations, disease, or injury of the speech organs, such as abnormal growths (adenoids), diseased tonsils, obstructed nasal passages and resonance chambers, tongue-tie, cleft palate, and hare-lip.

   "Organic defects result in--nasal speech, thick speech, harsh speech, and aphonia."[26]

2. Foreign Accent.

   Foreign accent usually results from the home environment of the child. In German and French homes, especially, children are quite often taught the native language of the parents before they are taught the English language. When the transition is made from the one language to another, a speech defect may result.

   McCullough and Birmingham group the defects of foreign accent under three manifestations, namely:

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25. Border and Busse. op. cit., pp. 127-286.
26. Ibid.

(1) Rising inflection--"We will come tomarrow?"
(2) Wrong accent--"car pen' ter, cal en' der, ca pit' a list."
(3) Improper vowel quality--"sopper" for "supper."[27]

3. Defects of Provincial Dialect.

Defects of provincial dialect are due to "geographical, racial, or religious barriers from the main stream of national life." In United States we have developed a number of such dialects. There is the dialect of the Carolina Mountaineer, dialects associated with certain industries such as mining, ranching, factories, the dialect of the "New Yorker," the "Southerner," the "Westerner," the "Easterner," the "Northerner," the dialect of the negro, and even the newsboy has his own particular "lingo."[28] Due to a polyglot population we have developed a polyglot language which contains many types of provincial dialects.

4. Defects of Carelessness.

The two main characteristics of defects of carelessness are letter substitutions and letter or sound omissions.[29] Slovenly pronunciation such as "gimme" "gotta" "didja" etc., lip-laziness, and negligent lisping may be classed as defects of carelessness.

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27. Grace A. McCullough and Agnes Birmingham. Correcting Speech Defects and Foreign Accent. New York: Charles Scribner's Sons, 1925. p. 5 ff.
28. Borden and Bussee, op. cit., p. 129.
29. Ibid., pp. 129-130.

5. Infantile Perservation.

Infantile perservation or the persistent continuance of "baby talk" consists almost wholly of letter substitutions and letter omissions. The child has formed an early habit of substituting an easy speech sound for a more difficult one, and is very unlikely to change unless prompted by some older person. Good speech models often help to correct such a situation. A mother who uses excellent English in her conversation and who refuses to tolerate incorrect pronunciations scarcely ever has a case of "infantile perservation" among her children. Whereas, the mother who thinks it "so clever" when her seven year old Mary Lou says "O, muver, I 'ove 'oo 'ots." Or perhaps the child may say "Thee Thara's (Sara's) nith pink dweth (dress)." will be very likely to have a persistent case of "prolonged baby talk" in her family which will require the most diligent application of remedial measures before it can be eradicated. Letter substitutions and omissions that are used persistently beyond the sixth year of the child's life--unless they are the result of malformations of the speech mechanism--belong to that class of defects known as "infantile perservation."

The more frequent of the "baby talk" errors which were found to be prevalent among twenty-five cases

in the Speech Clinic of the Kansas State Teachers College were these:

Letter Substitutions

b for v ... voice--"boice"
b for m ... make--"bake" mine--"bine"
ch for c ... curl--"churl"
ch for h ... hat--"chat"
ch for s ... sister--"chitter"
ch for s (middle position) as bicycle--"bichicle"
d for g and omission of ng ... going--"doin"
good--"dood"
d for th ... and t for s ...this--"dit" that--"dat"
f for th ... thumb--"fumb" thief--"feef"
f for th (final) teeth--"teef"
j for g ... gum--"jum" go--"jo"
l for r ... rabbit--"labbit" run--"lun"
n for ng ... finger--"finner" sometimes "fimmer"
o for r ... mother--"motho" father--"fatho"
oo for u ... music--"moosic"
p for wh ... white--"pith" whip--"pip"
sh for s ... see--"she"
t for c ... coffee--"toffee" cup--"tup"
t for k ... keep--"teep" cat--"tat"
t for sl ... sleep--"teep"
t for st ... stairs--"tairs" stop--"top"
t for c and omission of ng ... dancing--"dantin"
uh for r ... fur--"fuh" purr--"puh"
v for th ... (middle position) mother--"muver"
father--"faver"
w for r ... rug--"wug" race--"wace"
y for l ... lady--"yady" let--"yet"

Omission of letters or sound units

ch (final position) bunch--"bun"
k ... kitty--"itty"
l ... little--"ittle" let--"et"
ng ... going--"goin"
r ... rat--"at" run--"un"
s ... snow--"no" snake--"nake"
th ... that--"at" this--"is"

6. Neurotic Defects.

Nervous disorder may cause stammering or stuttering, level intonation, aphonia. In short, "all defects caused by a functional nervous disturbance may be

classed under the general heading Neurotic Defects."[30]

Summary

The above outline of speech defects is recommended for the layman, or untrained teacher since it is couched in simpler terms and tends to be more understandable to the person who is not a specialist in the field of speech correction. It is comprehensive in that it includes practically all of the defects which will be met in the home or classroom

Under the heading "organic defects" is included all disorders that result from the malformation, disease, or injury of the speech mechanism. "Foreign accent" is distinguished in three ways; by (1) rising inflection, (2) wrong accent, and (3) improper vowel quality. "Provincial dialect" takes account of the various dialects found in our own country. Defects of carelessness includes "letter-substitutions" and "sound unit omissions," "lalling," "slovenly speech," "lip-laziness," and "negligent lisping." "Infantile perservation" is the omission of sound units, letter substitution, (not caused by dentition, or malformations of the speech mechanism) carried to the sixth year and beyond. "Neurotic defects" include stammering or stuttering, level intonation, and aphonia--in fine, all defects resulting from a functional nervous disturbance.

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30. Ibid., pp. 278-286.

This classification follows very closely the one outlined and discussed by Borden and Busse in their book "Speech Correction." It is not being offered as an ideal classification, or even a perfect one because the study of speech disorders is such a new field that no authority can be quoted as impeccable. However, the outline presented compares favorably with other classifications which are being used successfully, and is valuable because of its simplicity.

PART THREE

A Manual of Suggestions and Exercises for Use in Discovering and Treating Minor Speech Disorders.

When the final analysis is taken and a conclusion reached, it must be admitted that in the problem of the classification of speech disorders the terminology is not so important. The diagnosis in technical terms is not of necessity important. The major task of the diagnostician is to decide whether the defect is structural, or functional and if it can be eradicated.

One cannot stress too emphatically the necessity of keen perception on the part of the teacher. The classroom teacher who would aid in the prevention and cure of speech disorders among her pupils must be alert to recognize an impediment. She must be a keen listener and have a well-trained ear for correct speech sounds. A full knowledge of speech defects and their causes is not necessary for the apprehension of minor defects. However, to treat even the slightest defect, one must have some enlightenment concerning the cause and cure of speech disorders.

The greatest asset which the classroom teacher who is working with speech defectives can possess is a sympathetic attitude and an understanding heart. A knowledge of the correct technical treatment for the defect is not enough. The teacher must know something of the characteristic

personality traits of children afflicted with speech impediments. She should know the value of mental hygiene in the treatment of defective speech, for there is a social side of the situation that is quite as much a problem as the defect itself. The child with a speech disorder is often quite unable to make social adjustments. He is unable to adapt himself to other children, to school routine, and playground situations; he may even shrink from association with others and for this reason have difficulty in taking his place in the world of affairs. Moroseness and morbidity are not uncommon accompaniments of defective speech. Children thus afflicted often acquire an anti-social attitude that is directly responsible for the formation of undesirable and sometimes vicious habits. Studies pertaining to speech defects and deliquency among children reveal interesting facts which should influence the more skeptical who are not converted to the need for speech correction in the regular school system.

H. H. Young tells of a speech clinic case which evinced a very bad speech defect, and was also a problem in misconduct. He found the cause for the impediment, and as the disorder was gradually overcome so was the misconduct. He concludes that "bad conduct is always a symptom which can be removed by discovering its underlying causes and treating them." In this case the cause was improper speech habits. People could not understand the child. "What could have been expected of her as an adolescent, or an adult," asks Mr. Young, "if she had been severely disciplined instead of instructed

to speak correctly?"[1]

Dr. William Healy makes the following statement with regard to speech disorders and delinquency:

> "We agree entirely with several authorities who state that the tendency of stuttering is to make the individual highly anti-social. The victim of this annoying disorder looks upon himself as different from others of his kind, and is easily won by suggestions of anti-social behavior... We have seen just this tendency result in miserably inferior associations on the part of otherwise normal young fellows. Thieving, vagrancy, and homosexual practices have in consequence been indulged in.
>
> Character deterioration has been made much of by specialists in speech defects. These maintain that the emotional disturbances and discouragements lead all the way to a definite psychosis and marked suicidal tendencies. From all our vivid experiences...we are convinced that a stuttering offender needs, above anything, encouragement and special attention."[2]

The evil effects of speech disorders on the personality of those afflicted is not merely opinion, but a fact established by the study and experiences of many authorities. Another specialist in the field says:[3]

> "Many children are considered mentally retarded, backward and even feeble-minded because of a speech defect. Inferiority complexes, shutin personalities, shyness, timidity, maladjustment, suicidal tendencies, emotional instability, criminality and anti-social characteristics are some of the results of disturbances of speech."

When the child with a speech impediment starts to school,

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1. H. H. Young, "Speech Clinic Case with Misconduct as a By-Product," in JOURNAL OF APPLIED PSYCHOLOGY, pp. 371-381, Vol. 9. (Dec., 1925).
2. William Healy, M. D. The Individual Delinquent, pp. 220-221. Boston: Little, Brown and Co. 1915.
3. John H. Glassburg, "Overcoming Vicious Speech Habits," in HYGEIA, pp. 449-451, Vol. 6, No. 8. (Aug., 1928).

he becomes more than ever a target for the badinage and very often ridicule of his schoolmates. If he is naturally sensitive the condition is made worse. His sensitivity is increased until more and more, he withdraws from the games of his classmates, and views all school activities with a hurt and distrustful mind. The teacher can do much to relieve the situation by tactfulness and sympathy. She should treat the speech defective as an equal of all the other children in the group in the participation of school activities. This is not always easy to do. There is danger of drawing the criticism of the other pupils if any seeming favoritism is shown. Making the child an ordinary member of the class is the best procedure to follow. Discourage any discussion of the child's defect by other pupils, nor should the teacher discuss his speech with other children in his presence. The instructor can well make it a mark of bad citizenship for any child to ridicule or jest about another's speech disorder on the playground.

Children having speech defects are often accused of being mentally deficient because of certain traits which they have developed. Retardation in school is common among speech defectives. Raymond H. Barnard discussing the relation of intelligence and personality to speech defects says:[4]

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4. Raymond H. Barnard, "Relation of Intelligence and Personality to Speech Defects," in THE ELEMENTARY SCHOOL JOURNAL, pp. 604-620, Vol. XXX, No. 8. (April, 1930).

> "Varying levels of intelligence are found in various kinds of speech defects. Low intelligence is a symptom, rather than a cause of speech defects.
>
> Personality traits are more enlightening than intelligence in the study of speech defects since they point to emotional difficulties as the source of stuttering and kindred defects. Retardation in school in the case of speech defectives is not caused by lack of intelligence but is an emotional maladjustment, which may be remedied by an understanding of the personality of the individual."

The brightest children are often afflicted. In the speech clinic of the Kansas State Teachers College of Emporia, among twenty-five afflicted children whose ages ranged from five to sixteen, the intelligence quotients as revealed by the Stanford Revision of the Binet-Simon test showed a range from 49 to 146. In working out the median for the group, the range was 97, with an arithmetical average of 96.7; the mean was 97.3, and the median for the group was 100.63.

Five of the twenty-five children studied were below 79. These might be considered borderline cases. Eight were retarded two or more years in their school grade. While this group is much too small to be offered as significant proof that speech defects do not necessarily indicate low intelligence, the findings are comparable to the data of larger studies.

Dr. Blanton examined 4,862 pupils ranging in ages from four to eighteen. He found 277 or 5.69 per cent of these having speech defects. Of this group 49 or 17.7 per cent were retarded children:[5]

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5. Smiley Blanton, M. D., "A Survey of Speech Defects," in THE JOURNAL OF EDUCATIONAL PSYCHOLOGY, pp. 581-592, Vol. VII, No. 10. (Dec., 1916).

> "The cases were called retarded that were two or more years behind in their grade without adequate explanation. About ten of these were feeble-minded children whose speech defect was due to lack of brain development. We felt, however, that a great majority were retarded because of the speech defect, and in a number of these cases, the class teacher declared that it was the sole cause of the backwardness."

In his investigation of 87,440 school children, Conradi found that in every case the age of the stutterer was higher than that of other pupils.[6]

> "Such pupils are behind probably not on account of any mental inferiority, but, either because they are neglected by their teachers, or because they are discouraged on account of a sensitiveness with regard to their trouble or on account of the jeering of their classmates. Whichever of the causes may be operative, however, the fundamental condition is the defect of speech, and with the removal of that, normal intellectual development becomes possible."

Westergaard found among 790 school children of Denmark who had defective speech that invariably they were in the lower half of the class. Comparing the average age of normal children with the age of children having speech defects, he found the average age of the speech defectives to be higher for the respective grades than the age of all the children.

Root through his study of 14,072 pupils in the elementary schools of South Dakota, concludes that:[7]

> "Speech defectives are as a general rule a half-year older than the average pupils of the same grade;

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6. Edward Conradi, "Speech Defects and Intellectual Progress," in JOURNAL OF EDUCATIONAL PSYCHOLOGY, pp. 35-38, Vol. III, No. 1. (Jan., 1918).

7. A. R. Root, "A Survey of Speech Defectives in the Public Elementary Schools of South Dakota," in THE ELEMENTARY SCHOOL JOURNAL, p. 531 ff, Vol. XXVI, No. 7. (March, 1926).

> conversely, pupils with speech disorders are, on the average, a half-grade behind the average pupils of the same age."

This being the case, that speech defects are a cause for retardation and failure in classwork, the whole educational outlook for the speech defective looks dark unless something is done to bring his speech back to normaley. If the educational advantages are bad then the vocational advantages of the individual are jeopardized. Thus the speech defective is often deprived of an adequate way of supporting himself, and he becomes a misfit, educationally, vocationally, and socially.

The fact, that the majority of speech defects are of a type which are remediable through educational methods, should interest teachers. The sooner these disorders are attacked by correct remedial measures the better the results will be. That is the reason it is so necessary that primary and elementary teachers know something of the nature and treatment of disorders of speech. Statistics give definite proof that the largest number of speech defectives are to be found among the children of the lower grades. One study offers conclusive evidence that the number of speech defects are greatest in the first grade and gradually diminish until they practically disappear in the eighth grade.[8] (Shown graphically on page 52.)

There are several reasons for the decrease in the number of speech defectives as the student advances in his school-work. A few may have overcome their defect; others become so

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8. Smiley Blanton, op cit., pp. 588 ff.

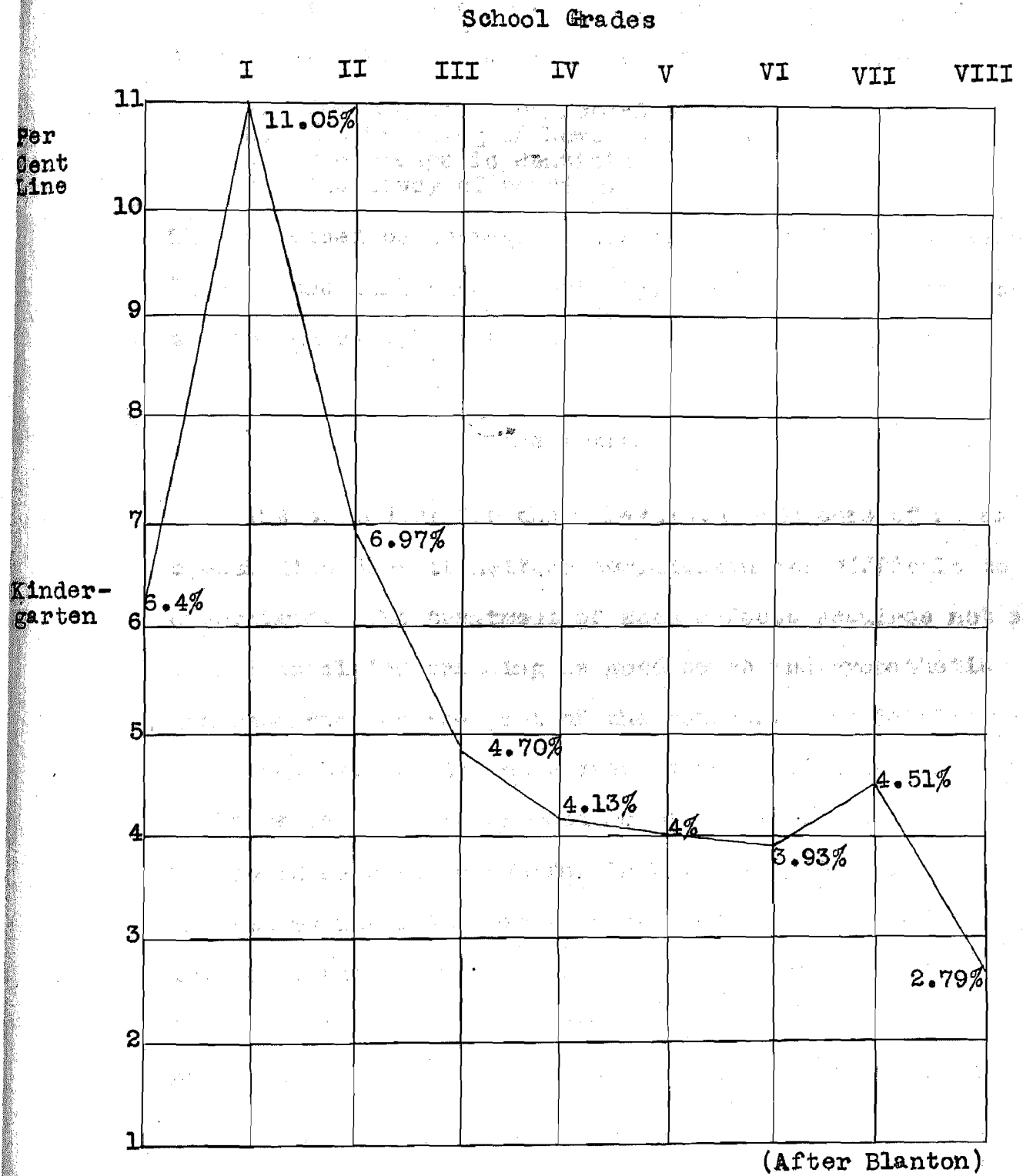

Fig. 3. Curve Showing Percentage of Speech Defects by Grades.

discouraged by retardation and repeated failures that they drop out as soon as the school law will permit.

The first grade shows the greatest percentage of defectives.[9] Blanton attributes this to four causes, namely:

1. The beginning of formal study
2. The breaking of home associations
3. The change in dentition
4. The study of reading.

The increased percentage in the seventh grade he believes is "due to the influence of puberty, instability of the nervous system, and mental conflicts."[10]

The Approach.

The procedure for the alleviation and cure of minor speech disorders is neither complicated nor difficult to understand. The treatment of such defects requires not so much intensified training as good sense and sympathetic understanding on the part of the teacher. Any intelligent grade teacher who is interested in her pupils and in humanity at large can administer much helpful treatment. The teacher who would be most successful in her effort to aid speech defectives needs to possess five requisites: intelligence,—interest, tact, sympathy, and patience--and the greatest of these is patience. The correction of speech difficulties is not an overnight process. Cures cannot be effected in a day,

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9. Ibid., p. 582.
10. Ibid., p. 582.

a week, or even a month and sometimes not in a year. A complete and permanent cure takes time, diligence, and patience on the part of both the teacher and the patient.

One of the most precarious phases of the work is the approach. It is here that the teacher must employ all her tact and sympathetic understanding. Much care must be taken to keep from creating an aversion in the child when first starting to work with him. Other pupils will often taunt a child because he is being treated for a defect. These are the things the teacher has to anticipate and intercept before harm is done. It is necessary first to gain the child's confidence and his interest. This may be done by making the corrective work, as far as possible, a game, and by giving as much of the treatment indirectly as possible.

One of the first basic steps for corrective treatment is to get the individual's intelligence quotient. In some cases, this may be had from the school records. The use of the Stanford Revision of the Binet-Simon Test is recommended. Group tests are not so satisfactory, but where one wishes to test an entire grade the Stanford, Terman Group Tests are excellent. Stinchfield advises the use of the Kuhlman or the Merrill-Palmer Tests for children under three years of age. For deaf children she uses the Pintner-Patterson Manual, "A Scale of Performance Tests."[11]

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11. Sara M. Stinchfield, Associate Professor of Psychology, Mount Holyoke College. Communication to writer.

The Blanton-Stinchfield Tests are intended to locate "the articulatory difficulty in whatever condition the speech may be, and to get at the vocabulary through the Vocabulary Test, and to find out the speed in motor speech reaction and thinking, through a Silent Reading Test, an Oral Reading Test, and a Spontaneous Speech Test."[12] Work is being done on the Blanton-Stinchfield tests to improve their standardization.

Stinchfield quotes nine tests which are used by Miss Alice Descoeudres as a measure of the power of speech.

1. Naming opposites in pictures and objects shown.
2. Filling in missing words in ten easy omissions.
3. Repetition of numbers pronounced to child.
4. Naming six callings in response to such questions as, "Who makes shoes?"
5. Name six materials such as, "What are pencils made of?"
6. Naming eight opposites from memory. "If your meat is warm then it is not ...."
7. Naming ten colors.
8. Finding twelve verbs representing actions performed by the examiner or in which the child imitates action.
9. Giving a list of twenty-five words of increasing difficulty and finding out by question whether or not the child knows the meaning of the words.

To solve the exercises would require 103 correct answers.[13]

Detection of Difficulties.

It is not always possible for the grade teacher to have all these various tests and methods of testing at hand. In

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12. Ibid.
13. Sara M. Stinchfield, Speech Pathology with Methods in Speech Correction. Boston, 1928. p. 74.

that case, small children may be interested with blocks and pictures and through their spontaneous conversation the examiner can check their defects. The clever teacher can work out a series of devices of her own to get a spontaneous speech test. Posters made by using brightly colored, attractive pictures pasted on pleasing backgrounds of construction paper are excellent devices for getting spontaneous speech reactions from small children. Care should be taken when making up the posters to choose pictures that are of interest to all children:--fruit, flowers, animals, birds, magazine cover designs depicting children in some activity, all are good subjects to use.

There is a tendency in children, especially those of the primary grade age, to seem slightly nervous when brought to the clinic for a speech test. There is a lack of spontaneity in their responses to tests and an apparent blocking or inhibition in reactions. This is not true in all cases, but is decidely apparent in some. Such a condition prevents the examiner from attaining an accurate test. This inhibition may be due to several causes; the child may have been frightened by false stories told by older children or adults about "clinics," or the testing situation may create a tension in the child. Some children who are naturally shy and sensitive are almost wholly unresponsive to the testing measures. With the idea of relieving the clinical atmosphere and getting a test that would catch the child's interest to such an extent that he would forget he was being "tested," the writer worked

The Speech Sounds Game

out a device which she calls "The Speech Sounds Game."

The device consists of a disk upon which there are twenty-four illustrations, each one representing one or more of the fundamental speech sounds. An arrow is fastened in the center of the disk. The child spins the arrow, and when it stops, he tells the examiner what the object is or what sound the object makes. In order to lessen the frequency of repeats, the disk is apportioned so that each time the indicator stops there are three possible chances for it to stop on a different object. If there is a repeat, for example, suppose the arrow stops on the illustration of the sheep, and the child cries "Sheep," the examiner says, "Now if the arrow stops on sheep again tell me what the sheep says." The next time the indicator points to "sheep," the child will say "ba-ba." (See illustration of Speech Sound Game on the opposite page.)

The device was tried out on fifty children picked at random from the kindergarten to the fourth grade. Some of the children had speech defects; others were normal. The items checked in giving the test were: the time required to give the test to each child; the number of errors made by each child in naming the objects; (This was necessary to ascertain if the illustrations were well-chosen and familiar to all children) the number of repeat spins made by each child during the game, and the age of each child taking the test. The average time for giving the test was eight minutes

and thirteen seconds; the average of errors made was five; the average number of repeated spins was eleven, and the average age of the children taking the test was six years and ten months. Four of the children were ten years old and the youngest one was five.

The objects causing the greatest number of errors were the horse and the goose. The children named the objects readily enough. But when asked what sounds the objects made, forty could not tell what sort of sound the horse made, and thirty-seven did not know what kind of noise a goose made. The gurgle or "gug-gug" of the faucet was the third most difficult sound; twenty-two missed that one. Nineteen missed the hiss of the snake. They were very anxious to make the sounds when the examiner told them what they were.

The score is based on one point for each sound with a total of fifty-nine possible points. The form (pp. 59-60) is so arranged that the specific disorder may be checked, thus the tester when examing the score sheet can tell whether the child gave a perfect rendition of the sound, stuttered, omitted letters, substituted letters, or could not make the sound at all.

The most satisfying results of the test were the absolute spontaneity with which the children responded to the procedure--they were actually eager to play the game, the number of correct responses given, and the small amount of time required to give the test. The device was originally designed for the primary grades. But the examiner found while

SCORE SHEET

Possible number of points 59.

	Word	Sounds	Perfect	Cannot Make	Stuttered	Lisped	Substitute	Pts.
1.	Goose	oo kw (quaw, quaw)						2
2.	Sheep	sh- a (ba-ba)						2
3.	Rooster	r- oo (cock-a-doodle)						2
4.	Snake	s- hiss						2
5.	Druum	d- rat-a-tat						2
6.	Dog	d- bow-wow						2
7.	Duck	d- quack, quack (kw)						2
8.	Cat	k- meow, meow						2
9.	Horse	h- n-n-n-n						2
10.	Automobile Car	ah honk, honk						2
11.	Bear	b- woof, woof						2
12.	Owl	ow- hoot, hoot						2
13.	Watch	ch- tick-tock						2
14.	Bell	b- ng ding, dong (ng)						2
15.	Bird	ir- peep, peep						2
16.	Hive Bee	-v ee (buzz-buzz)						3
17.	Faucet	f- gug-gug						2
18.	Mouse	m- squeak, squeak						2
19.	Spool Thread	sp- th-						2
20.	Apple	-pl						1
21.	Umbrella	m-br						1
22.	Ring	r- ng						2
23.	Tree	tr-						1
24.	Fan	f-						1

SCORE SHEET
(cont.)

Words	Sounds	Perfect	Cannot Make	Stuttered	Lisped	Substitute	Pts.
25. Yellow	y- o-						2
26. Fly	f- ī- (ai)						2
27. Red	e- (e)						1
28. Brown	br-						1
29. Huh-huh	(Panting)						1
30. Stick	st-						1
31. Green	gr-						1
32. Swimming	m-m						1
33. White	wh-						1
34. Sleep	sl-						1
35. Blue	ū						1
36. Jig-Jog	jig-jog (j)						1
						Total Score	59

For speech sounds from 25 to 36 inclusive, the following questions must be asked:

25. What color is the bird? Ans. Yellow.

26. What would the bird do if someone frightened it? Ans. Fly.

27. What color is the apple? Ans. Red.

28. What color is the horse? Ans. Brown.

29. How does the dog breathe when he has been running very fast. Ans. Huh-huh-huh.

30. What do we use to beat the drum? Ans. Sticks (or drumsticks.)

31. What color is the tree? Ans. Green.

32. What is the duck doing? Ans. Swimming.

33. What color is the bear? Ans. White.

34. What will the bird do at night? Ans. Sleep.

35. What color is the center of the circle? Ans. Blue.

36. How does the horse trot? Ans. Jig-jog, jiggety-jog.

making the test that intermediate children as high as the 6 B were anxious to play the game. The real value of the game lies in the spontaneous response which it evokes from the child and the desirable emotional attitude which it sets for further tests or examinations.

Value of Knowing Case History.

Every individual whether specialist or novice who attempts to work with speech defectives should know the value of the case history. Satisfactory work is impossible without such a record. The history may be obtained from the parents, nearest relatives or friends of the subject. Such information is in all cases regarded as confidential by the teacher and in no instance divulged to others. Regular forms may be obtained for case histories, but these are not absolutely necessary. The teacher may make her own form which should include all the following facts: the family history of the case, any medical history that the child may have--operations, child diseases, etc., a psychological record including intelligence rating, home environment, economic status of the home, personal characteristics of temperament, emotional stability, special interests, any peculiarities of personality, and conclude the history with a diagnosis of the defect, a prognosis, treatment and the results obtained.

The taking of a case history is one of the most important factors in the beginning treatment of a case for it is the

only background the examiner can obtain, and presents the only data upon which she can base her diagnosis. Then, too, the taking of the case history brings the teacher and the parents together, thus helping to establish a spirit of co-operation between the school and the home, for only very unusual parents are not interested in the removal of their children's speech defects. This interchange of confidences often reveals vital elements in a case which could not be learned otherwise. For example, a bright little girl in 2 B was sent to the clinic to be treated for what was diagnosed as a very bad case of infantile perservation (baby-talk). After a few weeks of treatment her speech was noticeably improved. However, following each vacation, especially one of several days duration, she would have a relapse and the habit would be as bad as before being treated. A conference with her mother brought to light the trouble. The child was the youngest in the family and a favorite of two spinster aunts. She spent her vacation with these aunts, who talked baby-talk to her constantly. Naturally, this took the child back into her baby-talk habit, and with each lapse the defect was harder to overcome. The mother assisted in the treatment by making the child's visits with her aunts less frequent, by having a tactful talk with her relatives, and by carefully watching the girl's speech at home. As a result, the progress made with the case was most gratifying. There is no estimate of the good that can be done in helping a case progress when the interest and co-operation of the parents is obtained.

Simplified Procedure for Locating Speech Defects.

The grade teacher cannot have at her disposal all the necessary equipment for the treatment of speech defects, but she should have some of the less expensive and simpler ones. This equipment should include: laryngeal mirror, tongue depressors, paper napkins, a metronome, pictures, books, games, tests, wind flags, and material for making posters and charts.

Laryngeal mirrors may be bought in several different sizes. If only one may be had, it should be a medium-sized one. Care must be taken when using the mirror to avoid nauseating the subject. The frame of the instrument is metal and should not be very warm or extremely cold when being inserted in the subject's mouth or the danger of nausea will be increased.

To use the laryngeal mirror, the subject should be seated with his head tilted slightly back, mouth open. The tongue should be held a little forward and down by means of a tongue depressor. The laryngeal mirror is inserted with the right hand. The examiner should avoid touching the walls of the mouth or the tongue as much as possible. The instrument must be tilted at an angle sufficient to reveal that portion of the throat or mouth which is to be inspected. A head mirror aids greatly when using the laryngeal mirror. However, when one is not available, the subject should be placed in a position such that a strong light (artificial or sunlight) will strike his mouth directly, and the mirror adjusted to reflect the part to

be examined. Any local physician will demonstrate the use of the laryngeal mirror if there is any doubt about the procedure. This instrument is to be used in the examination of the larynx and vocal cords, the tonsils, and the posterior nasal cavity.

The laryngeal mirror must be carefully sterilized after each usage. After it has been used on one subject, do not use on another until the instrument has been thoroughly sterilized by boiling in pure water or by immersion in some recommended antiseptic solution. Leaving the instrument in a solution of carbolic acid for about ten minutes then rinsing it in alcohol will effect a complete sterilization.

Tongue depressors can be purchased in either metal or wood. Those of wood are quite inexpensive and easily taken care of, for they are thrown away after each usage.

Wind flags are simple contrivances, and can be made by the teacher. Small rectangles 1½ inches by 2½ inches are cut from tissue paper or any light weight paper. These are cut in strips about ½ inch wide, the length of the rectangle. Stop the slits about ½ inch from the edge of the paper; paste this uncut edge around a toothpick and the wind flag is complete.

Wind flags are used in locating cases of lateral, and bi-lateral breath emission. By placing the flag about two inches from, and directly in front of the subject's lips, and observing the motion of the flag while the subject speaks, the examiner can tell whether the breath is issuing from the center of the lips as it should, or is coming from one side or the other, or from both sides of the mouth. The test will also

prove whether too much air is being emitted through the nose. The wind flag test should always be used for lispers or for any difficulty with the sibilant sounds (s, z, sh and zh).

Paper napkins may be purchased in sanitary packages, and are softer than paper towels for use in wiping off instruments, and as sanitary handkerchiefs.

The metronome, while not absolutely essential, is valuable in teaching children the sense of rhythmic beats, and as a guide to slowing the speech rate. Children may count, or say words and sentences to the beat of the metronome noticing the difference between that rate and their ordinary speaking. Breathing exercises may also be taken with the metronome.

Books, pictures, posters, and toys are all necessary to give the child a pleasant introduction to the remedial work and treatment. They provide excellent material through which the teacher may work indirectly with the child.

One clinical case from grade 1B brought her doll to class each day, and together, she and the speech teacher taught the doll "to talk." The youthful mother was very careful to speak to her "toy daughter" in perfect English. In teaching her doll, incidently, the girl corrected her own defects. It is doubtful if she ever realized that she was the one who was receiving treatment. The case came to the clinic in September, and by the mid-winter holidays, the child was no longer omitting her r's and substituting l's. She had worked earnestly teaching her doll "to talk"; consequently, in a few

months time, a case of infantile perservation was almost entirely corrected. The girl was highly sensitive and easily hurt by criticism; therefore, in her case, the procedure was a good one to follow.

The teacher should keep a chart of each pupil's progress. This chart may take various forms, but it should show specifically the subject's speech disorders--what sounds are being omitted, what sounds give trouble, what letters are substituted, if the initial letter of a word gives difficulty, if the endings are being omitted, in short, exactly what the difficulties are. The chart constitutes a part of a record which will show the diagnosis of the case, the prognosis (suggested treatment) and the daily progress of the subject. This record should be a clear, concise revelation of all the facts of the case in order that the next teacher may know how to continue treatment. Older children are often interested in their own progress charts. These charts may act as an incentive to stronger effort on the part of the subject. However, that is purely a matter of judgment on the part of the teacher.

Tests have been treated in a preceding part of this study.

Physical Factors to be Considered in the Treatment of Speech Disorders.

As has been previously stated speech disorders mainly fall into two great classes, namely, organic or structural disorders

and neurotic or functional disorders. Under organic defects are to be found cases of cleft palate, high palatal arch, elongated uvula, velar paralysis, velar insufficiency, hare-lip, double hare-lip, undershot jaw, overshot jaw, open bite, any abnormality in dentition such as extreme projection of the teeth (dental obtrusion), inward growth of the teeth (dental intrusion), edentulations (gaps left in the dentition by missing teeth) and tongue-tie. These are all defects of the mouth. Defects of the nose may be adenoids, or growths of different types, and nasal catarrh. The throat defects are diseased tonsils, and pharyngitis. The larynx may be affected by laryngeal growths, laryngitis, or laryngeal paralysis. The results of the above defects are nasal speech, thick speech, harsh speech, and aphonia (loss of voice), and the majority of them are not amenable to educational measures. Therefore, they can be treated only by the specialist or expert in speech pathology, the dentist, and the surgeon. However, the teacher who is familiar with the appearance of the normal throat, mouth, and nose may locate malformations, and recommend the pupil for scientific treatment.

The illustration on the following page shows a cross section of the human head revealing the nose, mouth, and throat which are important parts of the speech mechanism. The drawing has been adapted from Perisol's Anatomy, and represents an ideal anatomical condition. The same condition may seldom be found in actual cases. However, the illustration is offered for the purpose of comparison, and to act as a guide

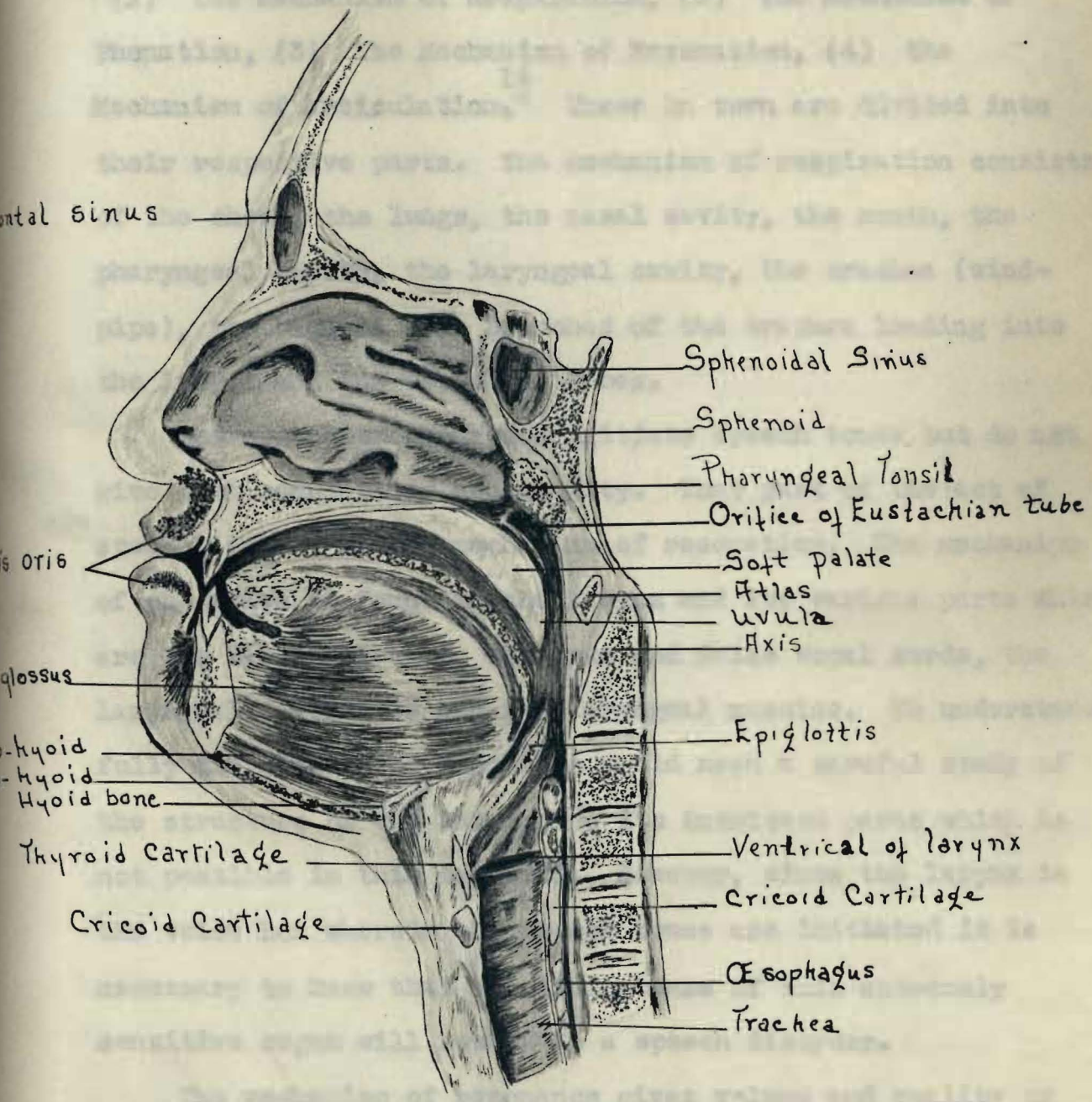

Fig. 4. Sagittal Section of the Head.

Showing the mechanism of articulation, the lips, the teeth, the gums, hard palate, soft palate, and the tongue.

(After Piersol)

for the location of malformations of the mouth and throat.

Speech mechanism is divided into four main divisions: "(1) The Mechanism of Respiration, (2) The Mechanism of Phonation, (3) The Mechanism of Resonation, (4) The Mechanism of Articulation."[14] These in turn are divided into their respective parts. The mechanism of respiration consists of the chest, the lungs, the nasal cavity, the mouth, the pharyngeal cavity, the laryngeal cavity, the trachea (wind-pipe), the bronchi (two branches of the trachea leading into the lungs), and the bronchial tubes.

The organs of phonation initiate speech tones, but do not give them modulations and quality. That part of the act of speech is left to the mechanism of resonation. The mechanism of phonation is found in the larynx and its various parts which are the laryngeal tube, the true, and false vocal cords, the laryngeal cartilages, and the laryngeal muscles. To understand fully the process of phonation would mean a careful study of the structure of the larynx and its intricate parts which is not possible in this treatise. However, since the larynx is the voice box wherein all speech tones are initiated it is necessary to know that any disturbance of this extremely sensitive organ will result in a speech disorder.

The mechanism of resonance gives volume and quality to

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14. Richard C. Borden and Alvin C. Busse, Speech Correction. p. 2. F. S. Crofts and Co. New York. 1925.

speech tones. It is in this mechanism that vocal defects occur. The resonators which make up the resonance mechanism are the throat, nose, and mouth cavities, together with the laryngeal ventricules, and the maxillary, sphenoidal, and ethmoidal sinuses. (See illustration 4.) Any impairment of these resonators may result in a vocal defect.

Vocal defects are mainly those of pitch, volume, and quality. Voice development is not the same for both sexes. Girls mature somewhat younger than boys, and do not have a noticeable change of quality in their voice during adolescence. The girl's voice, no doubt, undergoes a developing process, and grows richer and fuller, but there is no abrupt or painfully apparent change such as the boy has to incur. The boy's voice is much affected by puberty, undergoing a decided change in pitch and quality and increasing in strength and volume. Most boys are highly sensitive to this change, and are greatly embarrassed by their lack of voice control. As a result a boy may become very self-conscious during the early adolescent period. Therefore the period of puberty becomes one of the dangerous ages among boys for the initiation of speech defects. Stuttering is very apt to appear during this period.

The displeasing qualities of the voice which appear in vocal defects are raucous, gutteral, harsh, strident, shrill, nasal, husky, coarse, thin, tones. The pitch of the voice may be high and shrill, thin and reedy, flat and toneless, weak and infantile, or subdued and monotonous. Correct breathing habits, which will be spoken of later, have much to do with

good pitch and tone quality. Many of the vocal defects are remediable by voice exercises and breathing exercises.

The mechanism of articulation takes the speech tones which have been produced by the mechanism of phonation and resonance and moulds them into patterns of sound, called by some author "speech noises". The organs of articulation are the lips, the tongue, the teeth, the gums, the hard palate, and the soft palate. The perfection of pronunciation depends upon the exact performance of these respective organs. While perfection of speech depends upon the perfect action and synchronization of all four mechanisms.

Major Organic Speech Disorders.

Because major organic defects cannot usually be corrected through educational measures, but must be referred to the surgeon, the dentist, and the speech pathology specialist, they will not be given intensive treatment in this treatise. Mention will be made of the nature of several such defects in order that the teacher may recognize the malformation when she encounters it.

Any abnormality in dentition is not difficult to detect, and the individual who is thus afflicted should be recommended for dental correction.

One of the more frequently found organic disorders is hare-lip which consists of a split in the upper lip usually near the center of the lip. A double hare-lip has one slit on each side of the upper lip directly below the nostril openings.

MAJOR ORGANIC DEFECTS

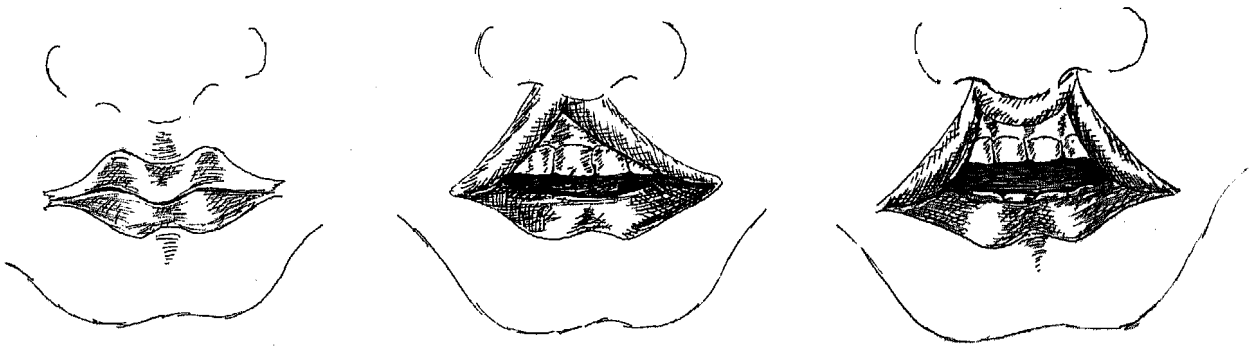

Fig. 5

1. Normal Lips.
2. Single Harelip.
3. Double Harelip.

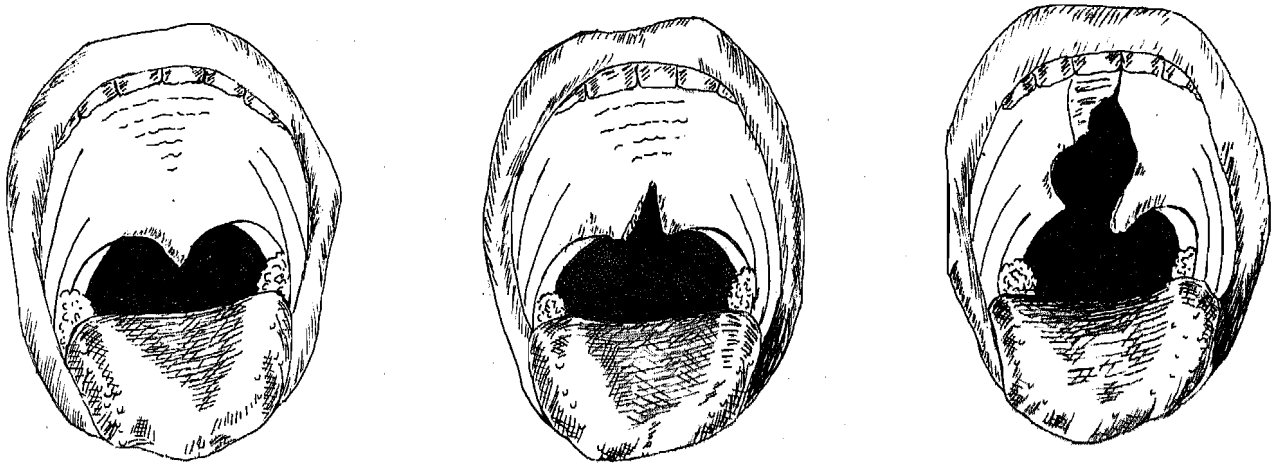

Fig. 6

1. Normal palate.
2. Cleft palate in Velum (soft palate).
3. Extreme cleft affecting both hard and soft palate.

Surgical operations in the case of hare-lip are most generally successful, especially in the case of very young children.

The cleft palate is an abnormality which may affect only the soft palate or, in very severe cases, the cleft may extend well into if not completely across the hard palate. It is one of the most difficult to correct of all the organic defects. The surgical operation offers the only aid for cleft palate and that is not always successful. The velum cleft is more easily repaired.

The elongated uvula presents another disorder which can only be mended by surgery. The malformation drags against the back of the tongue, and causes a constant irritation often creating hoarseness.

Tongue-tie was once thought to be one of the most frequent malformations. In early days the tongues of babies were clipped whether necessary or not in fear that the child might be "tongue-tied." However, Dr. Fredrick Martin says that cases of tongue-tie are rare.

> "Many cases of lalling are given the misnomer "tongue-tied". However out of an average of fifty cases which are brought to me as "tongue-tied" I found but one really is... The majority of the cases which may be grouped in the class of lalling and cognate defects require clinical training or the expert advice of a teacher who has had such scientific experience."15

The normal tongue should thrust forward approximately an inch from the lips or from one and one-fourth to one and three-

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15. Fredrick Martin, "What Are You Doing for The Speech Defective?" Service Bulletin, No. 15, Speech Improvement Number. Vol. IV. p. 3. April, 1929. (Reprint from the University of New York Bulletin).

MAJOR ORGANIC DEFECTS

Fig. 7

1. Reach of normal tongue.

2. Average reach of tied tongue.

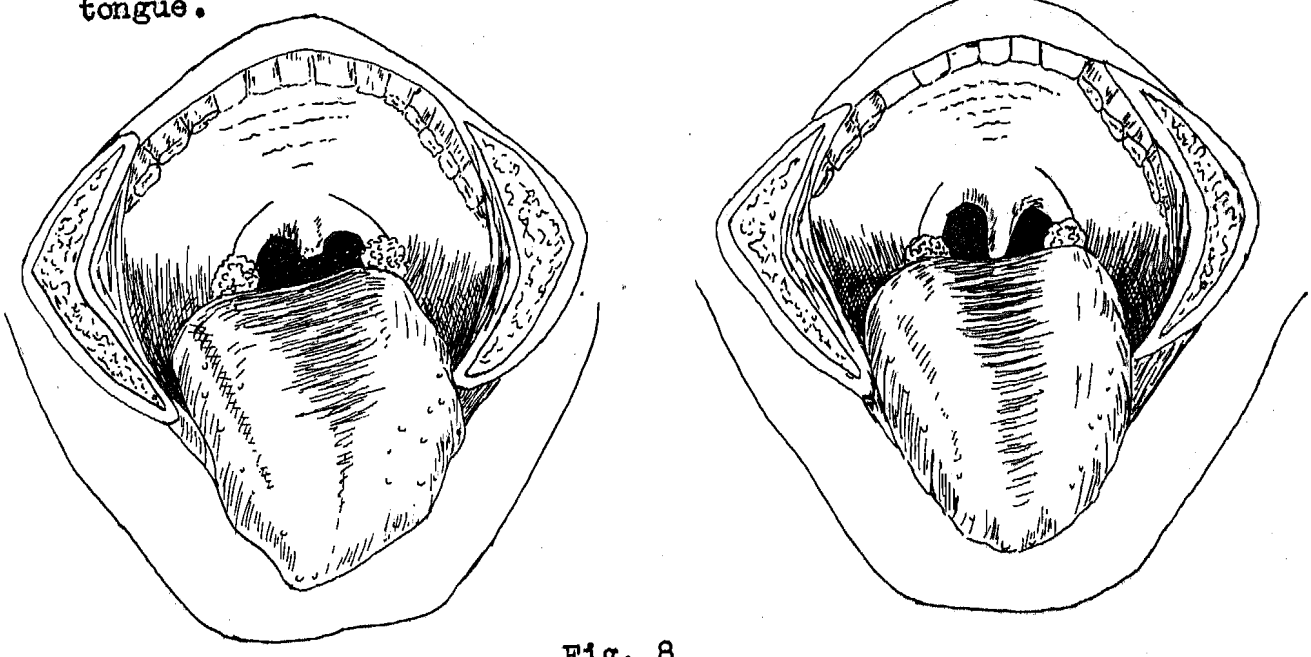

Fig. 8

3. The oral cavity with speech agents. (1) tongue, (2) tonsil, (3) normal uvula (4) velum (soft palate) (5) hard palate.

4. Elongated uvula.

Note: Fig. 8 adapted from Stinchfield's "Psychology of Speech."

fourths inches from the front teeth. Tongue-tie is the result of an abnormal attachment of the fraenum (a fold of membrane which attaches the under side of the tongue to the floor of the mouth). This attachment should begin about an inch back from the tip of the tongue. If the attachment is closer to the tongue tip than one inch the result will be tongue-tie.

The correction for tongue-tie is a simple surgical operation in which the fraenum is clipped and the tongue is given more freedom to act. Few persons reach the age of maturity before having tongue-tie corrected if they are so afflicted.

Hypertrophied or excessively enlarged tonsils are usually discovered by the school nurse or doctor and the patient is recommended for an operation. Hypertrophied tonsils tend to fill up the throat obstructing the space of the oro-pharyngeal cavity and thus impairing a portion of the mechanism of resonance.

The majority of children suffering from adenoidal growths have them discovered, and removed in the preschool years or in the first two or three years of school. However, not all of them are so fortunate and cases of adenoids are found even in pupils of high school age. Inspection for adenoids requires the use of the nasal speculum and the head light. Most teachers will not have this equipment. However, there are certain symptoms which the teacher may recognize, and suggest a medical examination for the pupil. Following are some symptoms of adenoids: an open mouth, a short upper lip and a lower one that is thick and drooping, pinched nostrils, large upper teeth.

The child who has adenoids is usually listless and uninterested; he may be mentally dull. Inquiry into his home life will often reveal that he does not eat well or sleep soundly, that he has difficulty breathing while asleep, and that he sleeps with his mouth open. Adenoids should be removed as soon as the subject is old enough, for they retard physical development and may cause speech defects. They greatly impair nasal resonance.

Abnormal jaw formations are difficult to treat. The overshot jaw is a malformation which consists in a protrusion of the upper jaw over the lower one to such an extent that it is conspicious. The undershot jaw is the opposite condition in which the lower jaw projects beyond the upper one. In this case the lower dentition protrudes beyond the upper one. If the upper and lower teeth will not meet at all the malformation is called "open bite". There are special operations for these defects and only surgical and dental treatment will aid in their alleviation.

In very slight cases of overshot jaw the speech of the subject may be improved by diligent drill on the following speech sounds:

th--think	th--than	f--fine	v--vine
s--sin	z--zing	wh--what	w--watt
sh--assure	zh--azure	p--pond	b--bond
t--town	d--down	oo--boot	oo--book
ch--choke	j--joke	a--flaw	o--note

Protruding teeth affect the same speech sounds that are affected by the overshot jaw; consequently, the same speech exercises may be used. But the ultimate correction depends

upon the slightness of the defect and the earnestness with which the corrective measures are undertaken.

Edentulations are gaps or spaces between the teeth. When these occur in the upper front teeth they will affect the production of the sibilant sounds, s, sh, z, zh, also t and d. Spaces caused by the change in dentition often affect these sounds and children begin to lisp during this period. The fault should be corrected immediately with the coming of the new teeth. However, if the disorder persists, drill on the specific sounds affected should be taken up until the subject can produce the sounds correctly.

In case of the more pronounced and severe organic or structural disorders, the grade teacher's efforts are best confined to urgent recommendations for expert medical or dental treatment. If there is a speech clinic within reach the patient should go there for further treatment. In her own sphere, the teacher can make the schoolroom and playground situation as pleasant as possible for the afflicted child. Thereby, relieving him of much ridicule and badinage, and preventing mental wounds and the danger of an inferiority complex.

Functional Speech Disorders that May be Found in the Schoolroom.

Neurotic speech disorders are the result of functional nervous disturbances. Stuttering and aphonia are two major

functional disorders.[16] One authority includes "level intonation" (neurotic monotone) as a major neurotic disorder. The same writer suggests treatment for level intonation as follows:[17]

"1. Make the patient hear the acoustic divergence between the intonations of his own speech and the intonations of the instructor's speech.*
2. Have the patient attempt to imitate the intonations of the instructor's speech on the basis of trial and error drill.
3. Develop the patient's consciously imitated intonations into firmly rooted speech habits."

Aphonia cannot be treated by the inexperienced teacher. It presents a case for the psychanalyst and speech expert. Stinchfield says:[18]

"Aphonia is a loss of voice...due to psychic disturbances, to partial arrest of lingual development, or to the impairment of the vocal chords. It may be temporary or permanent. ...Sometimes it has a functional rather than an organic basis, as in hysteria or other psychic disturbances. ...In character it is a whispered tone, or a hoarse, breathy tone in quality; in a severe form both phonation and whispered speech are lost."

STUTTERING

Stuttering or stammering* is one of the most frequent of the neurotic defects. Moreover, it is one of the most difficult to treat. In many instances, more harm than good has been done by so called remedial treatment for stuttering. The causes for

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16. Richard C. Borden and Alvin C. Busse, op. cit., p. 278.
17. Ibid., p. 206.
* This may be done by the instructor recording a selection by both himself and the subject on a dictaphone record. Have the subject listen to this record over and over to fix the correct intonations in his mind.
18. Sara M. Stinchfield, op. cit., p. 31.
* Many writers are now using the terms stammering and stuttering synonomously.

the disorder are so obscure that a successful diagnosis is difficult and to work from conjecture or snap judgment is ruinous.

There has been much controversy, both written and oral, concerning the causes and cures for stuttering. However, the modern tendency in treatment is toward a recognition of the emotional aspects of the disorder. More stress is being given to psychical elements as underlying basic causes for the trouble than to solely physical factors as was formerly the case. This is a notable forward move since the origin of stuttering was at first thought to be purely physical.

Many phases of experience are being investigated as causes for stuttering. A change from normal left-handedness to right-handedness is believed by some authorities to initiate stuttering. Anxiety neurosis, severe frights, accidents, illnesses, operations are all being named as contributing factors in the inception of stuttering. Early school training is held a contributing factor.

> "Stammering very often finds its inception in the schools in the pernicious practice of forcing children to articulate words before the areas controlling voice have been properly developed. The brain centers for the production of speech very often do not keep pace with the centers wherein we form mental images of words or written language. The result is that the child will think faster than he can speak; speech conflict will ensue and stammering will be engendered."[19]

The simplest incident may result in the initiation of a

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19. Fredrick Martin, "Prevention and Cure of Speech Defects." National Education Association Year Book. Vol. 60. pp. 584-598. Washington D. C. 1922.

case of stuttering. One two year old boy, to the writer's knowledge, began to stutter because he accidentally repeated the initial letter of the word "potato" and an older child laughed at him. For several months the boy continued to stutter. Fearing that he would become a stutterer, his mother consulted a psychiatrist and upon his advice she began to ignore the child's habit, and warned others to do so. Finding himself no longer a source of entertainment for others, and seeing that the habit no longer brought him the extra attention he desired, he gradually stopped stuttering and spoke normally again. At four years he has almost overcome the habit, stuttering rarely and only when overly excited. However, he has not, as is generally believed by some, "outgrown the disorder," but has simply discontinued the practice because the inciting motive which was "extra attention" has been removed.

Stinchfield lists as common causes for stuttering: "bad example, in the home"--this might well apply to the school also--"faulty education and psychotic tendencies."[20] After all the important thing to be noted pertaining to the causes of stuttering is that all possible contributing factors are thoroughly investigated before treatment is prescribed, thereby avoiding much of the danger arising through the employment of trial and error methods of treatment.

It is essential and important that the grade teacher be familiar with the common causes for stuttering because the

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20. Sara M. Stinchfield, op. cit., p. 24.

disorder usually originates at a very early age either in the preschool years or in the first two or three grades. Dr. Blanton found in a study of five hundred stuttering children[21]:

> "that the majority of cases began between fifteen months and three years. Another large group began at the time that the child entered school and only a very few cases began after the age of six or seven."

If something is known of the reason for the pupil's defect, the teacher may much more efficiently assist the child in making his school adaptation. She cannot, of course, treat the defect. Indeed, such procedure is not advisable for one who is not experienced in clinical work or does not have expert knowledge of treatments for the disorder. But she can ably assist the speech teacher by co-operating with her to get the best possible results.

Stuttering in its time has been subjected to almost every known treatment under the sun from surgery to breathing exercises, and phonetic drills. Quack doctors have advertised "quick cures" for stuttering, and thousands of afflicted persons have patronized these impostors. Cases of stuttering have been cured and can be cured, but such cures have been the results of scientific treatment and the careful application of speech pathology, speech psychology, and mental hygiene.

Phonetic drills obviously could not effect a cure, for there is no fault in the stutterer's pronunciation of the speech

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21. Smiley Blanton, M. D., "Why Children Stutter." PARENTS MAGAZINE, Vol. VI. No. 11, pp. 26-27, 61, 65. (February, 1931).

sounds. The fault lies in a blocking which either prevents the utterance of a sound or causes the repetition of the same sound.

> "The articulation of explosive sounds is especially difficult for stutterers, as the utterance is blocked at the stop-points for vowels and consonants in the peripheral speech mechanism, although the cause of the blocking or inhibition has been found to lie within the central nervous system and the higher cortical centers. The respiratory, muscular and psychic processes are not co-ordinated and there is often a simultaneous blocking of the respiratory, diaphragmatic, and laryngeal muscles whenever the delay occurs."[22]

The stutterer's breathing may be at fault, but any direct application of breathing exercises is dangerous. In fact, the stutterer should be worked with indirectly as far as possible, for calling attention to his defect only tends to increase the anxiety neurosis which in turn aggravates the disorder.

> "Breathing, vocal exercises, phonetic drills all make the stutterer more self conscious about his speech, and phonetic drills are especially harmful because they increase the stutterer's anxiety about his articulatory organs."[23]

Dr. Blanton further states that the stutterer should not be asked to repeat his words or to go slower for such admonitions call attention to his stuttering. In the treatment of stuttering one is reminded of the jingle:

> "A centipede was happy quite
> Until a frog in fun
> Said, 'Pray, which leg comes after which?'
> This raised her mind to such a pitch,
> She lay distracted in a ditch,
> Considering how to run."

To call attention to the stutterer's speech only increases his

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22. Sara M. Stinchfield, op. cit., p. 24.
23. Smiley Blanton, M. D., op. cit., p. 61.

perplexity and anxiety. Most authorities advise relaxation exercises, to get the subject quiet and relieve him of his fear. Invite him to participate in group activities, but do not urge or force him to against his will. Give him a natural place in the school room without placing him in the foreground or causing him embarrassment. Miss Cotrel of the Speech Department of the public schools of San Francisco is quoted by Fletcher[24] on the treatment of stutterers in the schoolroom, as follows:

> "The situation is explained to the teacher, and she is urged (1) not to call on the pupil to recite but to allow him to volunteer when ready, (2) to give him some responsibility in the room, such as a monitorship, or to make him a group leader, or to give him some pupil to coach. Besides this, he is gently but firmly pushed into team athletics, and club work. The mother is urged to give him responsibilities at his home, his own room, a weekly allowance, and never to speak about his speech at all...We try to have every class give at least one dramatic performance during the year and it is really remarkable how well these children do, and how much this does for them to build up their confidence."

Blanton stresses the value of group work and regular speech training for the stutterer.[25] He advocates:

> "Speaking in a conversational way to a group, debating, or better still, acting, is excellent for the stutterer. This is more than just speech training; it is training in adjustment...It is easy for the stutterer to talk when he is acting a part, and the joy, self-confidence and poise that come with successful performance are a great help in eliminating the fear of speaking."

However, it is not the writer's intention to prescribe methods of treatment for the eradication of stuttering. The

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24. John Madison Fletcher, The Problem of Stuttering. p. 284. New York: Longmans, Green and Co. 1928.

25. Smiley Blanton, M. D., op. cit., p. 65.

above quotations were presented for the purpose of showing that there are certain types of classroom procedure that should be followed in the case of the stuttering pupil if he is to be kept happy in his school environment; there are certain traits which are possessed by the majority of stutterers which the classroom teacher should know about. Such traits are: lack of self-confidence, super-sensitiveness, a tendency to inferiority complexes, lack of social adjustment, emotional instability, fear of speaking, anti-social attitude, nervous, shy, and easily embarrased. More often than not, the stutterer possesses a very high intelligence and will make an excellent student if properly directed in his school activities.

In summarizing the discussion of stuttering these are the essential facts: (1) that the study of stuttering has been evolutionary, passing through several distinct stages from the early anatomical theories, through the physiological, the neurological, into the field of Freudian psycho-analysis on to the latest theory which deals with stuttering on the basis of the biological organism. (2) The treatments prescribed have followed the same course as has the study of the defect, changing with each new theory. (3) The treatment of the disorder is a task for experts not novices or untrained experimenters. One writer says that the best results in the treatment of stuttering will be attained "when the case is considered as a psycho-physical problem, and when suggestion and mental and physical therapy are all employed to break up the undesirable speech

habits and replace them by socially desirable ones."[26] (4) The classroom teacher can do her bit by offering sympathy and understanding to the stutterer, by making him feel that he is an essential part of the school life, and by not making him (this is to the teacher who always has the child repeat the word until he can say it "correctly") so "speech-conscious" that he will be afraid to talk when he really has something to say.

LISPING

Lisping has been found to be the most frequent of all speech disorders; consequently, it becomes important because of its prevalence. Most authorities recognize three types of lisping. Simple or negligent lisping, neurotic, and organic.# These types have been discussed elsewhere in the thesis.

With the exception of organic lisping which is the result of some abnormality of the peripheral speech mechanism, usually, the jaws, palate, or the dentition, lisping is amenable to educational measures, and can be corrected by the use of mental hygiene and phonetic drills. (See exercises on page 138).

The neurotic lisp is caused by a nervous condition, and quite often the child is not able to control the speech mechanism with the result that the tongue placement for making

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26. Sara M. Stinchfield, op. cit., p. 24.
\# See lisping, p. 27, ff., Part II.

the letter "s" is not properly taken. In such case, it is necessary to show the child the correct tongue position. The teacher should demonstrate the position to the child by having him watch her make the sound. If the pupil still has difficulty with the tongue position, have him look in a mirror while saying "s" and he can observe whether or not he has the proper placement for the sound.

The simple lisp will always yield to phonetic drills, and any teacher may safely treat this disorder. The complete cure of any defect requires constant observation on the part of the teacher, and persistent practice for the subject. There is no doubt that the treatment of speech defects presents a problem for the classroom teacher in that it requires extra time outside of school hours. The corrective work should not be done in the presence of other pupils. The danger of creating inhibitions and feelings of inferiority through such procedure is too great to warrant its practice. Nor should an instructor ever permit class criticism of a pupil's defect during a class recitation or at any time in the presence of the speech defective. To illustrate the danger of class criticism the following incident is related. Clinical Case B- was a precocious child who had a persistent sound unit omission habit. She omitted the initial letter in many words; consequently, it was difficult to understand her. For this reason she was not asked to belong to Grade 2 B's reading club. She had always been an excellent contributor to oral recitation, but suddenly her contributions

stopped. She no longer talked in class. The instructor suggested that perhaps the corrective work was creating an inhibition in the child, or that it was so difficult for her to make the sounds correctly that she kept still in preference to making the necessary effort to talk. However, further investigation revealed that when she recited, the class criticised her, and something of this nature took place. If she mispronounced a word, some eager little critic would say. "Betty said 'no,' and it's not 'no;' it's 'snow'." Sometimes there would be a general protest of "We can't understand what she says." The reason for the child's lack of response undoubtedly lay in this class criticism.

Whatever corrective work is done by the classroom teacher should be done privately. In case there are several "lispers" in the room, or several children having like defects, she may organize a class and work with the group privately. However, individual work will bring the best results if there is time for it. The grade teacher always has more than she can do, but fifteen or twenty minutes a day given to a child who needs treatment for a minor speech disorder represents one of the most worthwhile bits of philanthropy. Children do not outgrow speech defects; they only grow more persistent with time, and every speech defective is handicapped, educationally, vocationally, and socially. Is there a greater benefit to humanity than to relieve such handicapped children?

LALLING

The definition of lalling is found elsewhere. It is a defect that will not often be found in the schoolroom since it is usually associated with the subnormal or mentally deficient child. In very bad cases there is excessive drooling of the mouth, and the patient has a thick, sluggish acting tongue.

Common Defects Which May be Found in the Classroom.

Common defects found in the classroom are defects of carelessness which include sound unit substitution, sound unit omissions, infantile perservation, slovenly speech, mild forms of cluttering (speaking so rapidly that the speech is almost unintelligible), foreign accent or dialect, provincial dialect, and delayed speech.

The defects of carelessness usually result from poor speech models in the home and elsewhere. Despite the fact that imitation in the process of learning to talk is a disputed theory, some of the outstanding psychologists admit the importance of imitation in the acquiring of speech habits. Watson says with respect to the acquisition of speech habits:[27]

> "The infant starts with his instinctive repertoire and the various word acts are fixed in the same way and by the same process that the successful act is fixed in any habit. One additional factor seems to come in, namely, that of

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27. John B. Watson, Psychology from the Standpoint of a Behaviorist. Chap. IX. Philadelphia; J. B. Lippincott Co. 1919. p. 311 ff.

> imitation. Imitation plays a very minor role in the acquisition of manual habits...In the case of vocal habits there seems to be a difference. Imitation seems to be a process directly connected with the establishment of the act."

A great responsibility rests on the grade teacher to provide good speech models for her pupils. The jargon of the playground together with the faulty speech habits formed in the home offer a definite and grave problem for correction. Children with ideal home speech conditions have been known to deteriorate badly in their speech habits after starting to school. One child using good speech habits on the playground will not influence the bad speech habits of a dozen others. On the contrary, the one child will, in most cases, very soon take on the slovenly speech of his playmates. Very little can be done about the home conditions, but the school can and must provide good speech models and corrective measures for speech defects--if the speech of this nation is ever to be pure and perfectly spoken English.

As a nation, we are quick to place the responsibility for our many provincial dialects and slovenly speech habits on the fact that we are a polyglot country made up of so many different nationalities. As a matter of fact, a very great portion of the fault lies in the inadequacy of an educational system which takes no cognizance of speech training whatever in the lower grades. Only a small per cent of high schools have speech training courses. Few offer any corrective work, and these are only to be found in the larger cities where speech centers are established.

There is little wonder that the English people are noted for their pure pronunciation. England attacks the problem of speech training from a different point of view than that of United States. In United States, especially in the lower grades, the stress is placed on "training in reading rather than training in clear articulation."[28] Mrs. Emma Grant Meader finds in her study of speech education in England that, "according to the English recommendation, systematic training in the sounded speech of standard English, is of equal importance with training in reading."[29] Mrs. Meader further explains that while "this phase of English is found in many language courses in United States, it is treated incidentally, however, because of the fear of inhibiting 'pupil spontaneity.' In England, on the other hand, training in speech is undertaken in a direct and definite manner."[30] In the demonstration school connected with Goldsmith's Training College, London, speech work starts in a direct way with seven year old pupils. "Each class devotes one twenty-minute period a week for one school year to special speech drills. Verse-speaking, dramatization, conversation, and all forms of oral composition come at a different period."[31] The same writer reports the system used by Miss Gullan at the London Day Training College as follows:[32]

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28. Emma Grant Meader, Teaching Speech in the Elementary School. Teachers College, Columbia, New York. 1928.

29. Ibid., p. 58.
30. Ibid., p. 58.
31. Ibid., p. 80.
32. Ibid., p. 83.

"English College students spend the first two years in learning the fundamental principles of good speech. These students are never permitted to take part in any formal debate or dramatic performance during their first semester. The second semester is given over to individual work and perhaps some public work...During the second year the student applies her knowledge of phonetics to various forms of dramatic work and verse speaking. The final test of the student's speech is conducted in connection with her practice teaching."

Some such procedure in the colleges and normal schools of United States is needed. But the colleges cannot be expected to solve the problem alone; the co-operation of the grade schools and high schools is necessary, for, to wait until the individual is in college before trying to establish good speech habits is too late. Speech correction for the adult can be accomplished, but it is very difficult for the habit has become so firmly fixed that chances for eradication and cure are few.

The ideal situation would be the establishment of speech corrective work by adequately trained teachers in all grade schools, either by the grade teacher, herself or by a speech supervisor. Advanced speech training should come in the college or normal school, but corrective work belongs in the grades and in the secondary schools.

Speech Correction a Process of Re-learning.

The correction of speech defects is a difficult task because it consists of two elements, an "unlearning" process and a "re-learning" process. Its major aim is the breaking down of old and undesirable speech habits and the re-establishment of new desirable ones. This program requires much of drill and

practice on the part of the subject, for practice must be kept up until the correct use of the organ is established and the new habit firmly fixed.

The important items for the teacher to remember during the process of treating a speech defect are these: (1) Speech disorders cannot be cured at once; their ultimate eradication takes persistence, time, and patience. (2) The quicker an attack is made on a speech impediment the easier and more successful will be the treatment; therefore, speech correction and speech education should begin in the early grades. (3) And lastly, children do not outgrow speech disorders. It is a common belief that stuttering children will overcome the defect in time. However, the following findings prove the contrary:[33]

> "A personal survey was made of fourteen hundred members of the entering class at the University of Wisconsin. It was found that one per cent had a marked stutter, and one per cent had a mild stutter, making two per cent in all. It will be seen from these figures that stuttering is not outgrown to any degree, and even though the defect of speech disappears, there remains the defect in emotion--an undue sensitiveness, a feeling of inferiority which interferes with the progress of the individual."

Speech being man's chief medium of communication is also his most important means of social adaptation. Deprived of speech, man has much difficulty in existing; his chances for success socially and economically are greatly lessened. The parents of the club-footed child will spend thousands of dollars, justly, to have the malformation corrected. People

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33. Smiley Blanton and Margaret Gray Blanton, Child Guidance. New York: Century Co. pp. 94-110. 1927.

cannot endure the sight of physical defects. However, they will allow the speech defect to wait to be outgrown--a thing that seldom happens--and the child goes on not physically handicapped, but socially, educationally and sometimes economically handicapped which is even worse.

Training in speech is training in character. Man speaks his thoughts, and when they are well expressed, he experiences a feeling of satisfaction. But if there is a blocking or inhibition in the speaking process he is disturbed and emotionally upset. He formulates a comparison of himself and his fellow-beings, and his side of the contrast is most unflattering. During this process of self-analysis, he may give over to self pity and begin to establish defense mechanisms and rationalizations for his own perverse acts. In many instances, the outcome will be a warped personality, that is easily the prey of unscrupulous, stronger characters. Thus, as William Healy has confirmed, the speech defective often develops criminal tendencies. In view of these facts, speech correction becomes not only important, but imperative.

The Presentation of Speech Correction Exercises in the Primary Grades.

Corrective speech in the primary grades should center itself mainly in plays, songs, and games. Fifteen or twenty minutes a day devoted to speech education games, songs, and plays for the entire kindergarten would be a big step toward

speech improvement. Children having speech disorders should be included in the class work, but individual work should also be given them outside the class work.

The best type of games are those full of action to give a sense of rhythm and poise. Singing games that will give practice in the vowel sounds and in clear enunciation of the consonants are the most desirable. Primary children should be taught to listen and to appreciate perfectly spoken language and well modulated tones. In this way, the ear becomes attuned to correct speech, and the child can become his own critic. Many children have speech defects and mispronounce words because they have no sense of the correct sound and have not been hearing the sound correctly. Some children get this habit from foreign-speaking parents. Therefore, the cultivation of the act of listening is a most important factor in speech education, and it should be taught early.

The important idea in kindergarten and primary work is to destroy incorrect images of sound and build up correct ones. The work should be done as indirectly as possible trying to keep the interest of the pupil very high. Individual work may require more direct application. Classwork should consist of breathing exercises, games that will introduce drill in phonetics, games for rhythm and poise, and exercises stressing volume, pitch, rate, and modulation of tone. Disorders such as lisping, lalling, cluttering, sound unit omissions, sound unit substitutions, lip-laziness, and muscular inactivity of the tongue or jaws, defects of foreign-accent, baby-talk,

nasality and vocal defects must be treated individually.

Breathing Exercises for the Lower Grades.

Children should first be taught correct posture. Proper breathing is impossible if the shoulders droop, the body slumps, and the chest is pushed in. When children are told to hold the head up, chin in, and chest well up, they often misinterpret the instructions. They draw the chest up rigidly and throw back the shoulders which stiffens all the muscles around the throat. A simple way to teach correct posture is to have the children sit very straight in the seat with their shoulders set squarely and easily, not stiffly, against the back of the seat. With heads up, and chins in, they should place their hand on the breast bone and see how it feels when in the correct position. By placing the left hand on the chest and the right hand over the abdomen, they will note that the chest and abdomen are in a straight line.

Standing position may be taught by having the class stand with their backs against the wall, heads up, chins in, and shoulders flattened easily against the wall. The hips and calves of the legs should just touch the wall. They should test the position of the chest and abdomen to see if they are in line as they should be. In this position the children take a deep breath and count 1, 2, 3, 4, exhaling slowly to the same rhythmic count. Next, they breathe deeply on the same count 1, 2, 3, 4, and when the breath has been expelled, in a relaxed

position, but the shoulders drooping and chest pushed in, they should breathe as before inhaling slowly to 1, 2, 3, 4. They will readily notice the difference, and the comparison will show them the necessity of standing correctly if they want to breathe properly. If they are asked to tell about the difference, they will enjoy making the report, which will help to fix the idea in their minds.

It is not enough to simply tell children how to breathe. They must be made aware of correct breathing through both the sense of touch and hearing. If they place the left hand on the chest and the right hand over the abdomen, they can feel that they are keeping chest and abdomen in a straight line. By holding one hand at each side of the abdomen or just over the floating ribs and resisting the pressure against the hands while inhaling deeply, they will be made aware of the push made by the abdominal muscles while the breath is being taken in. This will help them realize when they are taking full deep breaths. After this first awareness has been established, the stress should be changed to making breathing an unconscious automatic process.

The first deep breathing exercises may be taken audibly; in this way the children will realize more readily what is happening. To a rhythmic count 1, 2, 3, 4, the pupils take a full breath voicing the sound "ah" as they release the breath and exhale. The exercise is repeated, but this time the "ah" is shaped but not sounded. After the children have become aware of the process of breathing, by breathing audibly and even noisily, the exercises should stress easy, silent breathing.

There may be a tendency for a child to exhale too quickly, or to let out too much breath on the first count; the rhythmic counting will help avert that possibility. No child should be "breathless" or short of breath on count 2 or 3 but the breath should be emitted gently and easily until it is exhausted on the last count.

Something of the physical nature of the process of breathing should be explained to children. Younger children will not understand that good breathing consists of the perfect co-ordination of the thoracic (chest), and abdominal muscles. But they can be taught the sense of hearing and the feeling of correct breathing, and why it is necessary.

Exercises

1. Rhythmic breathing--Count 1, 2, 3, 4, while the children breathe in slowly to the count. Then count 1, 2, 3, 4, as they slowly breathe out, exhausting the breath supply on the fourth count. It is essential that they keep the hands over the lower ribs and across the diaphragm while this exercise is being taken because they must be made conscious of the feel of deep breathing. The lips should be gently closed and the breath come easily and steadily through the nose.
2. Count 1, 2, 3, 4, while the children breathe in slowly; then have them pause, holding the breath through four counts and exhale. Rest for four counts. Repeat, alternately breathing

and resting for 36 counts.

3. Take exercise 1, but this time keep the lips and teeth slightly apart during both inhalation and exhalation. This is for the purpose of teaching the renewal of breath supply while reading or reciting. The child may take a deep breath with the lips closed at the beginning of the passage, or the recitation, but it is not possible to pause and close the lips to renew the breath supply. Therefore, the pupil must learn to breath easily and silently with the lips and teeth apart.

4. Take a long deep breath on the count of five. Exhale suddenly and explosively.

5. Inhale quickly on count of 1; exhale slowly to count of five.

6. Slowly inhale; exhale quickly--whisper "yes" as the breath is released, prolonging the hissing sound as much as possible.[34]

7. Take deep breath. Pronounce word "home" on one count. Prolong the humming sound as long as you easily can.[35]

8. Intake deeply. Say "song" on one count. Prolong "ng" sound as long as possible.

9. Take deep breath to count of four. Exhale in panting exercise, huh, huh, huh, huh.

10. Breathe deeply to count of four. Exhale in panting exercise, slowly, then more rapidly as a little dog pants when he has been running too hard.

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34. Sara M. Stinchfield, op. cit., p. 137.
35. Ibid., p. 137.

11. Have the pupil take a deep breath and count aloud slowly 1, 2, 3, 4. Increase the count with each practice. When he is able to count to twelve easily and slowly on one breath, he is attaining breath control. The chest expansion should be noted to see that there is no lifting of the shoulders or that the chest does not move up and down while the breath is being taken.

The above exercises may be used for the upper as well as the lower grades. The aim of breathing exercises is to give the child a consciousness of correct breathing with practice to fix the habit until it becomes an unconscious automatic process resulting from perfect co-ordination of the thoracic and abdominal muscles. As soon as the child is aware of the method of correct breathing, the importance should be placed upon quietness of breathing and increasing the power of breath control. All children will not need the same amount of practice in correct breathing. The judgement of the teacher must determine each child's needs. Each child will present an entirely distinct and different problem and must be treated as such if speech correction is to accomplish its desired end.

One warning concerning breathing exercises is necessary. In no case should the child who stutters be given exercises in breath control. Any attention that is called to the speech mechanism of the stutterer only interferes with freedom of the muscle co-ordination and makes his trouble worse.

There are many ways in which the exercises may be made more interesting, more attractive, and less a series of practices to

small children. Introduce the panting exercise by asking the children to pretend that they are puppies who have been running very hard. In the explosive exhaling, let them pretend to blow out a candle, or tell them to be Mr. Wolf of the "three Little Pigs" story, and "huff and puff until they blow the house in." The more indirectly the exercises may be given the better the results will be. There is always danger of making speech exercises too formal. Discrimination and tact are necessary in order to make the work suit each individual need and to keep the pupil's interest high.

Correct Tongue Positions
Shown by Placement Illustrations.

The following illustrations give the tongue and lip positions for the production of the vowel and consonant sounds.* Often it is necessary to show a subject the proper position for making certain speech sounds. It may be necessary to experiment with various tongue positions before the placement will be found which will give the purest and most perfect sound for that person. For this reason, these illustrations cannot be accepted as the only positions possible for the production of the speech sounds, but they are approximately the position for the particular sound indicated and must be adapted to suit each

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* The diagrammatic drawings of the head are adapted from Greene and Wells' "The Cause and Cure of Speech Disorders." The sketches of the lip and mouth positions are original mirror drawings.

individual case.

The mirror is a good thing to use in showing the position for any sound that the subject is unable to make. The instructor should make the sound first several times, permitting the pupil to observe her mouth as she makes it, then have the child make the sound and observe his own mouth in the mirror while doing so.

The Formation of the Consonant Sounds.

The consonant sounds are the result of two movements, namely, contact and release, or separation. The tongue, lips, teeth, and gums are the important speech agents used in the production of the consonants. The position of the lips should be carefully observed when the speech defective is being given a drill in the articulation of consonants. Often poorly articulated consonant sounds are caused by lip laziness. The breath, the voice, and nasal resonance are the other factors involved in consonant production.

A consonant is said to be "voiced" when the breath, released by the separation of the speech organs from their contact, is vocalized. That is, when the tongue is withdrawn from against the upper front teeth, if the air current which is released is vocalized, then the consonant sound is said to be "voiced." If the air current is not vocalized, the consonant is "breathed," or a breath sound. For example, "d" is voiced; "t" is a breath sound. "p" is a breath sound,

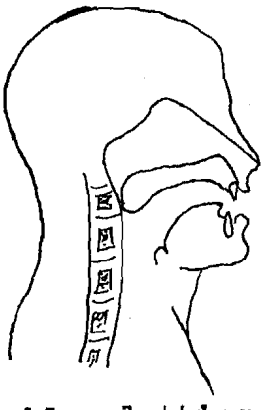
but "b" is voiced. "H" is a breath sound, made by simply blowing out the breath.

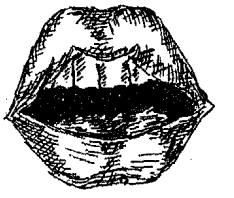
If the nasal passage is open when the sound is made, and the air current comes through the nose, the sound is a nasal sound. M, N, Ng, are such sounds and are called the "nasal resonants."

The instructor should keep in mind the formation of the consonant and the vowel sounds when trying to improve articulation, enunciation, or pronunciation, for frequently, a subject does not know how to make the sounds he is omitting, or those for which he is substituting some other sound. The principal elements to note are the position of the tongue, and the position of the lips, and the clearness of the nasal resonance.

H

H as in HAND, HE, HILL, HOME,
HAT, HAIR, HUM, HAIL, etc.

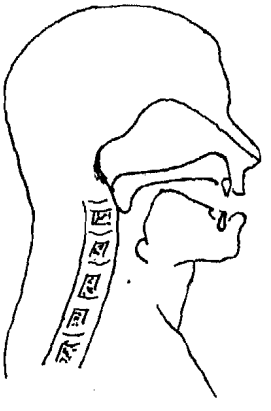


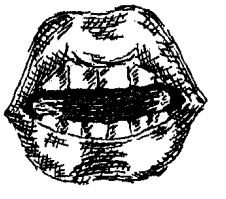


Breath only is used in the formation of "H" which is called a glottal aspirate. Raise the soft palate against the pharyngeal wall. Open the mouth--not too wide--letting the tongue lie on the floor of the mouth, in this position expel the breath.

Y

Y as in YET, YOUTH, YESTERDAY, YOUR,
YES, YEAR, YELLOW, YULE, YANK, etc.

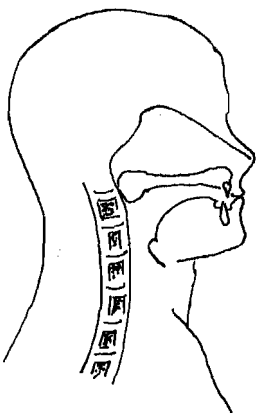




Raise the soft palate against the pharyngeal wall. Take the tongue position as shown in the diagram. The blade of the tongue is arched almost touching the hard palate. The sound "ee" is approximated in producing "y." The current of air is voiced as "ee" (y-ee).

P-B

P as in PAPER, SLIPPER, LAMP,
PAPA, POND, PEPPER, LAP,
etc.

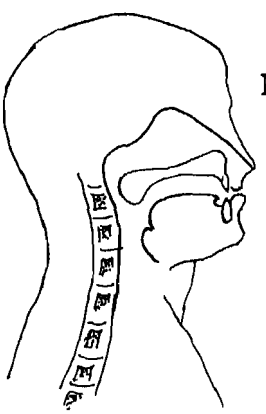


Raise the soft palate against the pharyngeal wall. Bring the two lips together closely; they should form an air-tight closure. The breath stream is unvoiced and is released suddenly and explosivly. Practice--pa, pa, pa, poh, poh, poh, pup, pup, pup, etc.

B as in BALL, RUBBER, BITE,
SOB, BIG, BAT, BEAR, etc.

B takes the same formation as P only the air is vocalized.
Practice--bah, bah, bah, bay, bay, bay, be, be, be, baw, baw, baw, etc.

M

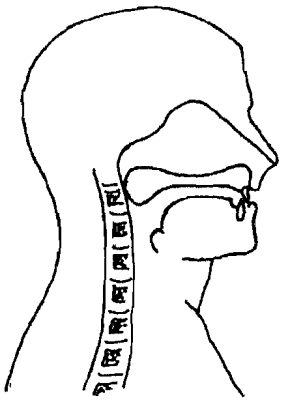


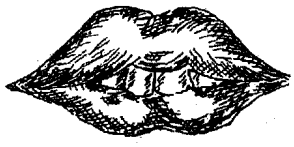
M as in MAKE, SUMMER,
DREAM, BEAM, DIM,
MICE, REMOVE,
TREMBLE, etc.

Close the lips; lower the soft palate. M is a nasal resonant, and the sound is emitted through the nose. Place the fingers on the sides of the nose, and feel a distinct vibration in the sides of the nose.

F-V

F as in FAIL, FEAR, EFFORT, STIFF,
FINE, DIFFER, FIFTEEN, etc.





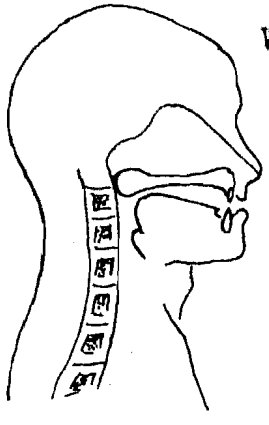
Raise the soft palate against the pharyngeal wall. The lower lip should be raised until the edges of the upper front teeth touch the lip. The teeth are gently scraped across the lower lip. F is a breath or unvoiced vibration.
Practice--fa, fay, fe, fi, fo, foo.

V as in VAIN, VELVET, DIVIDE, VISIT,
GRAVE, CAVE, FEVER, OVER, etc.

V is made just as F, except that V is a voiced vibration.
Practice--va, vay, ve, vi, vo, voo, etc.

Wh-W

Wh as in WHERE, WHEN,
WHALE, WHISTLE,
WHY, WHILE,
WHAT, etc.



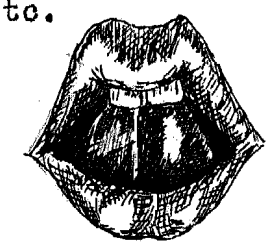
Raise the soft palate against the pharyngeal wall. Thrust the lips forward so that there is a small rounded opening between them. A strong current of breath is forced through this opening. Wh is an unvoiced vibration.

W as in WAY, WE, AWAKE, WAIL, WOE,
WEAK, WISH, WAIL, etc.

Raise the soft palate against the pharyngeal wall. Round the lips as for Wh. Expel through this opening a current of voiced breath.

T-D

T as in TAKE, ATTACK, FAT, TOWN,
GET, TEN, TATTOO, LETTER, etc.



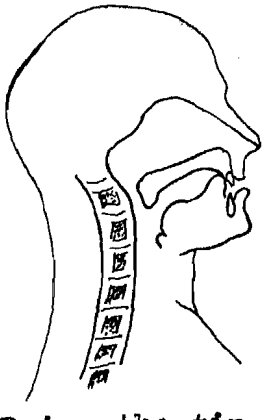
Raise the soft palate against the pharyngeal wall. The tip of the tongue must be placed tightly against the gum behind the upper front teeth. Drop the tongue suddenly allowing the breath to come through in a puff, causing an explosive sound. T is an unvoiced consonant.

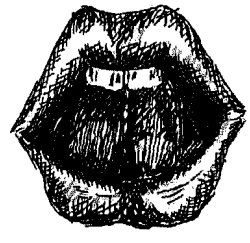
D as in ADD, SUDDEN, DOLL, DOWN,
DATE, LADDER, DADDY, DON'T, etc.

D is produced in exactly the same manner as T, except that D is a voiced consonant. The air that is released by the dropping of the tongue is vocalized.

N

N as in DINNER,
NOT, SON, BANNER,
WON, FINE, NAG,
NOON, CAN, etc.



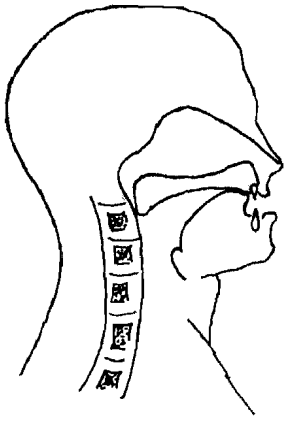


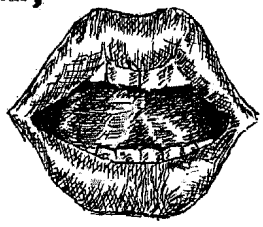
Raise the tip of the tongue tightly against the gum ridge behind the upper front teeth. Lower the soft palate. The breath is emitted through the nose. N is a nasal resonant.

Practice on such words as: London, fun, run, penny, Ned, no, etc.

L

L as in LAKE, BELL, DOLLAR, PEAL, TALLOW, LILY, LION, LITTLE, PEARL, etc.

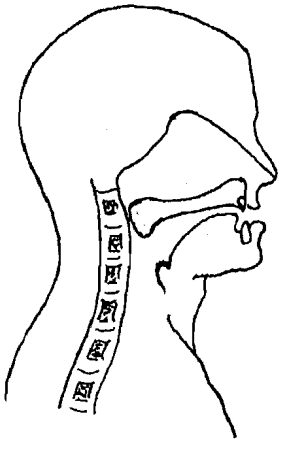


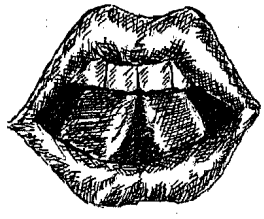


Raise the soft palate against the pharyngeal wall. Place the tongue tip against the gum ridge behind the upper front teeth. Hold the tongue in place while expelling a current of vocalized breath. The breath should pass evenly distributed on each side of the tongue.

R

R as in RACE, MERRY, ROAR, RUM, MIRROR, RIVER, ARRAY, RED, ROLL, etc.

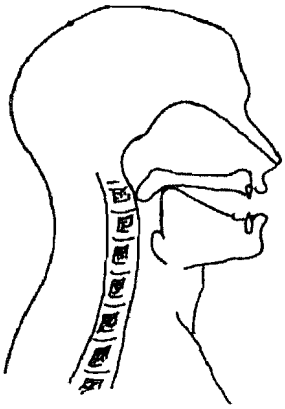




Raise the soft palate against the pharyngeal wall. Raise the tip of the tongue upwards towards the hard palate, but not touching the palate. Hold it there while expelling a current of vocalized air.
Practice--rah, ray, re, raw, ro, roo.

K-G

K as in KEG, MILK, OAK, KATE,
KITE, MAKE, KEY, ASK,
TALK, etc.

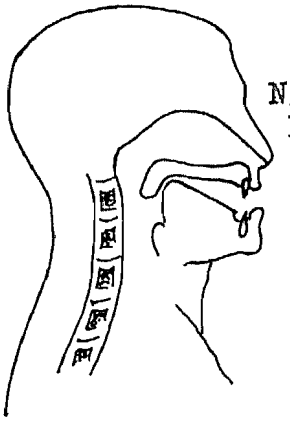


Raise the soft palate against the pharyngeal wall. Press the back of the tongue against the soft palate. Allow a current of air to come against this closure. Drop or depress the middle part of the tongue thus releasing the air in an explosive puff. K is an unvoiced consonant.

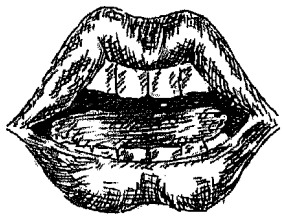
G as in GOOD, BIGGER, RAG, TAG,
GATE, DIGGER, WAGGING, FLAG, etc.

Raise the back of the tongue against the soft palate, release suddenly allowing vocalized breath to escape explosively. G is a voiced consonant.

Ng



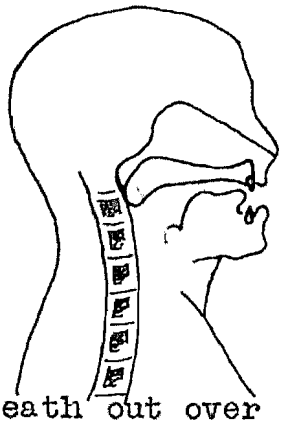
Ng as in SONG, KING,
MORNING, LONGER,
THING, SINGLE,
HUNG, etc.



Bring the back of the tongue up against the soft palate. Lower the soft palate. Let the breath current expire through the nose. Ng is a nasal resonant. Practice--ring, ding, dong, ting-a-ling, morning, coming, jingle, etc.

S-Z

S as in SEE, ASSIST, PASS,
SINK, MISSIVE, SON,
MISS, etc.



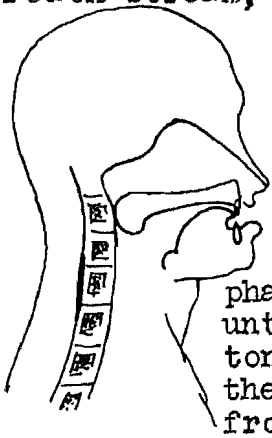
Raise the soft palate against the pharyngeal wall. The front teeth should nearly meet. Raise the tip of the tongue to the back of the upper front teeth--not quite touching the palate. Expel a stream of unvocalized breath out over the tip of the tongue--a soft hissing noise will result.

Practice--sah, say, see, saw, so, soo, etc.

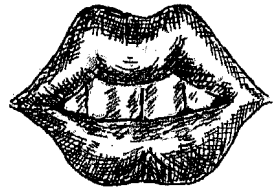
Z as in ZINC, LIZARD, DRIZZLE,
ZONE, DAZZLE, PRIZE, etc.

Raise the soft palate against the pharyngeal wall. The position is the same as for S. In the emission of the breath stream, use the voice making a buzzing sound.

Sh-Zh



Sh as in SHAVE,
CASH, FRESH, SHOP,
CASHIER, WISH, etc.



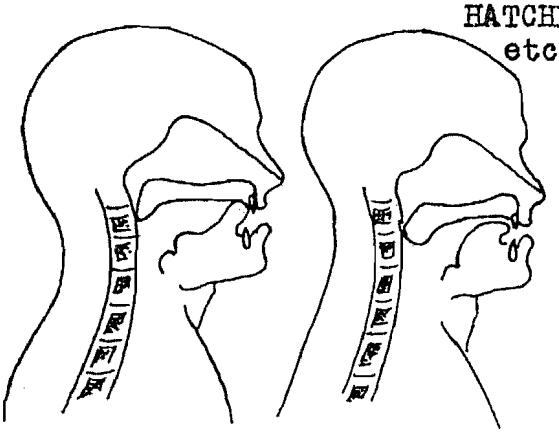
Raise the soft palate against the pharyngeal wall. Close the front teeth until they almost meet. Arch the tongue, leaving a free space between the front of the tongue and the upper front teeth, through this opening send out a steady stream of unvocalized air. The lips should be thrust forward and slightly rounded.

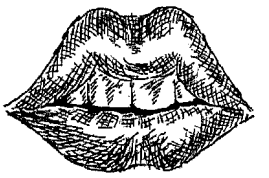
Zh as in AZURE, PLEASURE, VISION,
TREASURE, SEIZURE, etc.

Sh and Zh take the same position in sound formation. In the production of the sound Zh, the breath stream is vocalized or voiced.

Ch

Ch as in CHAIR, PITCHER, WITCH,
CHALK, TEACHER, STARCH,
HATCHET,
etc.

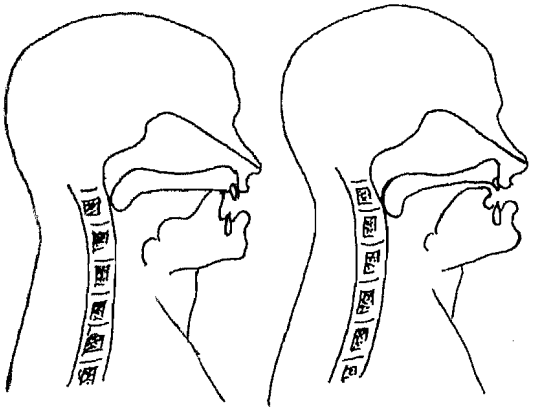


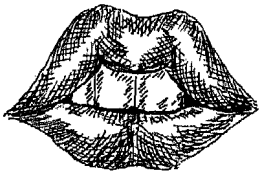


Raise the soft palate against the pharyngeal wall. Press the tip of the tongue against gum ridge behind the upper front teeth. Allow a current of unvocalized breath to press against this closure. Draw back the tongue suddenly, releasing the air in a diffused manner. Ch is a combination of the sounds "t" and "sh".

J

J as in JAM, JUNE, ENJOY, JOKE,
REJOICE, JUDGE, JUG, JUNGLE,
JEWEL, etc.

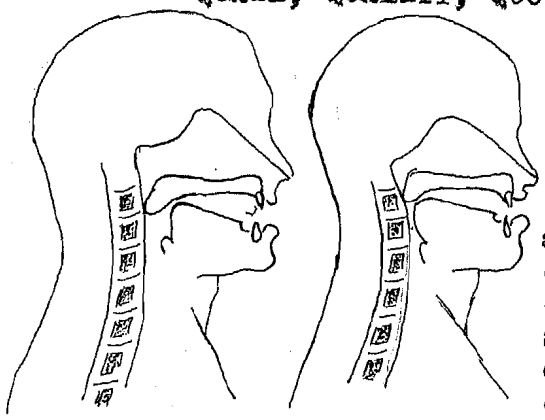




Raise the soft palate against the pharyngeal wall. Place the tip of the tongue against the gum ridge of the upper front teeth. Allow a current of vocalized air to press against this closure. Depress the tongue suddenly while releasing the breath stream in a diffuse manner.

Q or Qu

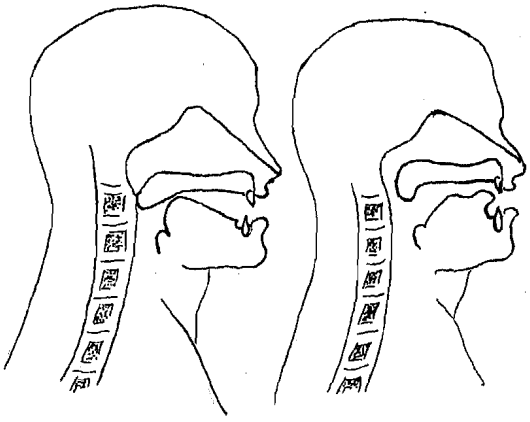
Q-Qu as in QUACK, QUIET, QUESTION, QUAIL, QUALITY, QUOTE, QUEER, etc.

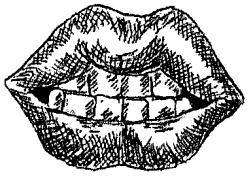


Both breath and voice are used in the formation of this consonant. The combination "qu" is the same as "kw". Notice both diagrams. Press the back of the tongue against the soft palate as in the production of "k" and by rounding the lips and using the voice quickly merge with the sound of "w".

X

X as in AXLE, OXEN, EXERCISE, EXCUSE, FIX, EXILE, VEX, etc.

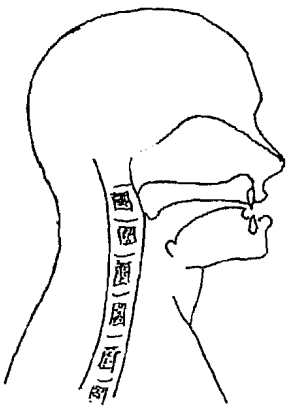


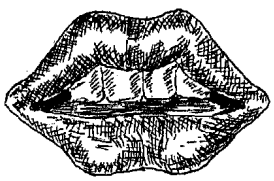


X is approximately the sound of "k" and "s". Breath is used in its formation. The front teeth should almost meet. Press the back of the tongue against the soft palate. Merge quickly into the "s" sound by sending a stream of air over the tip of the tongue.

Th-<u>Th</u>

Th as in THINK, ATHLETE, TEETH, THIN,
THIMBLE, THURSDAY, THREAD, etc.





Raise the soft palate against the pharyngeal wall. Raise the tip of the tongue and gently place it against the edges of the upper front teeth. Send out the unvocalized breath between the irregular openings between the edges of the teeth and the surface of the tongue.

<u>Th</u> as in THAT, ANOTHER, FATHER,
THEY, RATHER, WEATHER,
THESE, MOTHER, etc.

Raise the soft palate against the pharyngeal wall. Take the same position as given for the production of "th". The difference is that "th" is an unvoiced or breath sound and <u>th</u> is a voiced sound. Send out a current of vocalized breath over the uneven gaps between the teeth and the surface of the tongue and the sound <u>th</u> will be produced.

The Formation of Vowel Sounds.

The consonant sounds give clearness, distinctness, and preciseness to our speech, but the vowel sounds afford the fullness and beauty of tone quality. The consonants may be either breath sounds or voiced sounds, but the vowel is always a voiced sound.

In the production of vowels the tongue assumes three positions, high, low, and middle, or mid position. These positions are well-described by one writer.[36]

> "The high position, when the body of the tongue is raised so that it is felt along the roof of the mouth and against the upper teeth. The mid position, when it extends along the middle of the mouth and the point rests against the roots of the lower teeth. The low position when it rests on the floor of the mouth and the point touches the lower gums."

The shape taken by the tongue and the position of the lips are important factors to be noted in the production of the vowel sounds. The muscular tension of the tongue, whether it is tense or relaxed, also claims attention. The vowels are said to be "front," "back," and "mixed," according to the position assumed by the tongue in their production. For example, "a" as in "lace" is a front vowel; "i" as in "bird" is a mixed vowel; "o" as in "note" is a back vowel. Say these words slowly, and note the position taken by the tongue in their production.

A vowel sound may be single or it may be composed of two sounds. If two sounds are necessary in the formation, the vowels are called dipthongs. "I" as in "fine" is composed of "a" as in "after," and "i" as in "fit;" therefore because it is composed of two sounds, "a" and "i," "I" as in "fine" is a dipthong.

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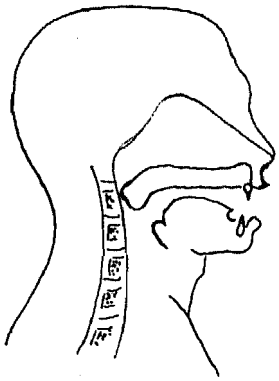
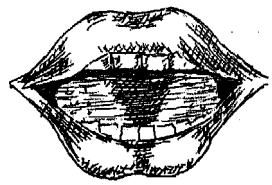
36. James Sonnet Greene, and Emilie J. Wells, The Cause and Cure of Speech Disorders. New York: Macmillan Co. 1927. p. 251.

A

A as in ARM, ART, CALM, CHART,
CAR, PARDON, etc.

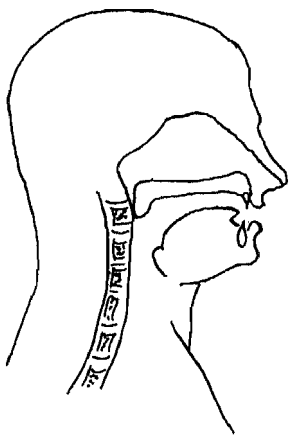


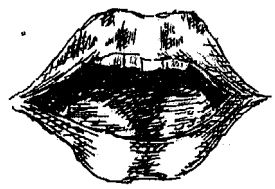


In the production of the vowel "A" as in "arm" the tongue lies relaxed; the tip of the tongue will touch the lower gums. The lower jaw should feel loose and relaxed. Practice--ah, fa, ba, pa, la, da, etc., and words--hard, palm, dark, park, farm, psalm, chart, dart, art, etc.

A

A as in ATE, RATE,
LATE, MATE, etc.

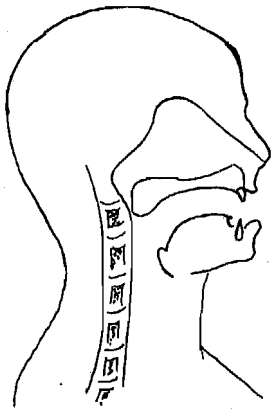


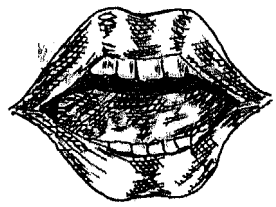


In the production of the vowel "A" as in "ate" the soft palate is raised against the pharyngeal wall; the lower jaw is dropped; the tongue is raised midway in the mouth and held rigid during the production of the sound.

A

A as in FAT, FLAT, ADD, BAG,
BAT, SAND, CASH, BATCH, etc.

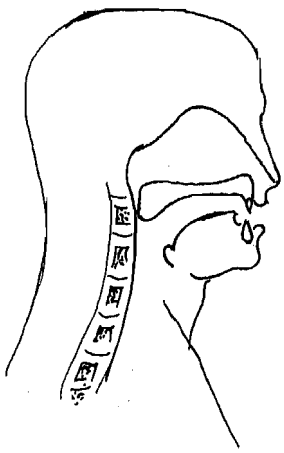


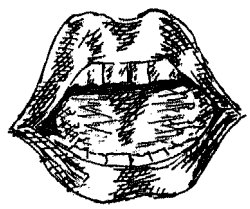


To produce "A" as in "fat" the soft palate is raised against the pharyngeal wall. Drop the lower jaw. Place tongue as shown in the diagram. The tongue muscles should be lax.
Practice--a, fa, ba, pa, la, da, etc.

A

A as in AIR, FAIR, BARE, PAIR, AFFAIR,
CHAIR, STAIR, DECLARE, etc.

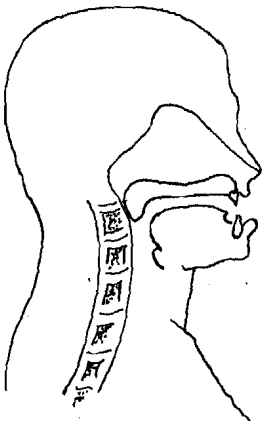


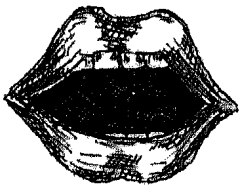


The soft palate should be raised against the pharyngeal wall. Drop the lower jaw slightly. Adjust tongue as shown in the diagram. The tongue muscles should be tensed so that the usual concavity is almost overcome.
Practice--pay, may, day, say, lay, ray, vay, etc.

A

A as in ALL, BALL, TALK,
ALMOST, ALMANAC, CALL,
MALT, etc.

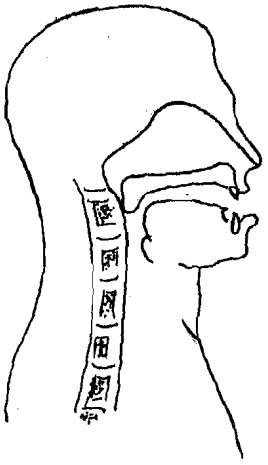


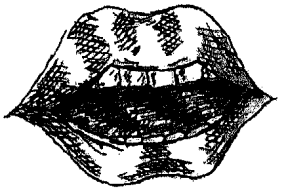


Raise the soft palate against the pharyngeal wall. Drop the lower jaw. Adjust the tongue as shown in the diagram. The tongue muscles should be tense so that there is little concavity of the tongue.
Practice--aw, faw, law, maw, raw, paw, saw, etc.

A

A as in ASK, FAST, DANCE, ANSWER,
GLASS, WAFT, AFTER, PASSED, etc.

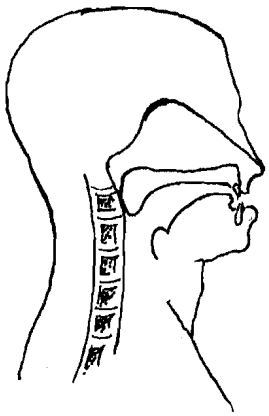


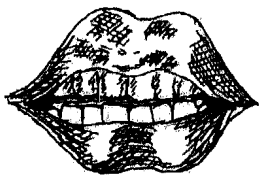


Raise the soft palate against the pharyngeal wall. Drop the lower jaw slightly. Adjust the tongue as shown in the diagram. The tongue muscles should be lax so that the tongue retains its concavity.
Practice--ah, la, fa, ma, pa, ba, etc.

E

E as in ME, BE, SEE, MEET,
WHEEL, WEAL, FREE,
TREAT, SHEET, etc.



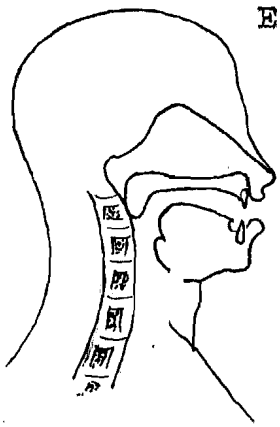


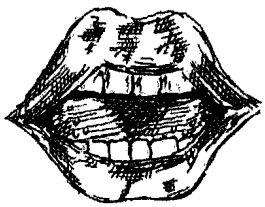
Raise the soft palate against the pharyngeal wall. Drop the lower jaw very slightly; the front teeth should be separated approximately one-eighth of an inch. Adjust tongue as shown in the diagram. The tongue muscles should be tense to largely overcome the concavity.

Practice--me me, ee ee, lee lee, see see, ree ree, etc.

E

E as in MET, SET, YES,
SHELL, KEPT, BED,
LESS, DEBT, etc.

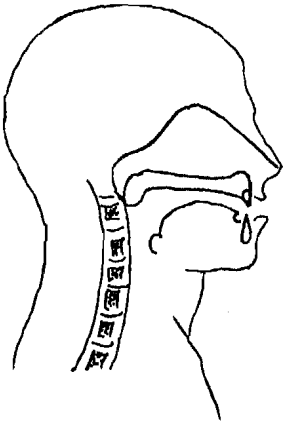


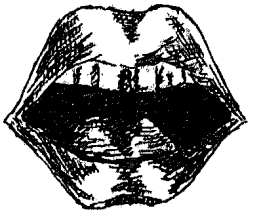


Raise the soft palate against the pharyngeal wall. Drop the lower jaw until the front teeth are separated about one-fourth of an inch. Adjust the tongue as shown by the diagram. Leave the tongue muscles lax so that the tongue holds it concavity.

E

E as in HER, PERCH, ALERT,
KERNEL, CERTAIN, VERB,
MERGE, etc.

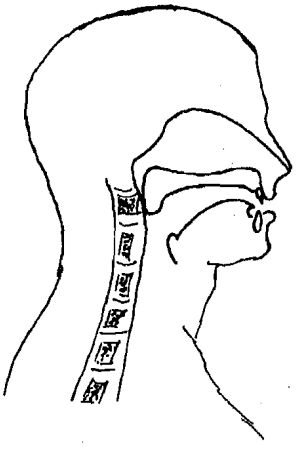


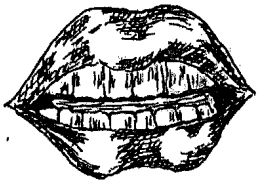


Raise the soft palate against the pharyngeal wall. Drop the lower jaw until the front teeth are separated approximately three-eights of an inch. Adjust the tongue as shown in the diagram with the muscles tensed so that there is little concavity of the tongue.

I

I as in IT, MISS, LIP, MILK,
CRIB, RIB, WILL, THIS,
THIN, etc.

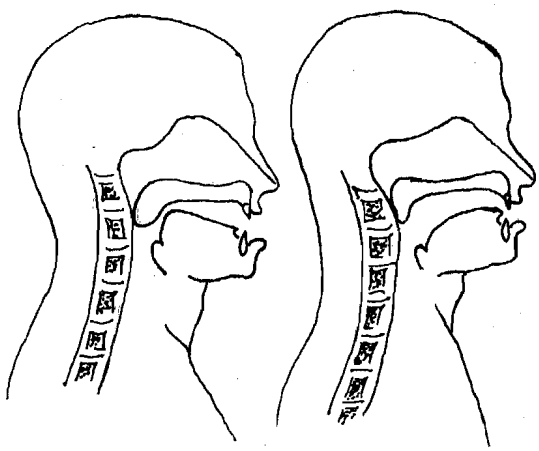


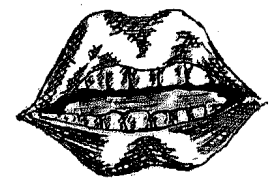


Raise the soft palate against the pharyngeal wall. Drop the lower jaw until the lower and upper front teeth are about one-eighth of an inch apart. Adjust the tongue as shown in the diagram, leaving the tongue muscles lax so that the tongue retains its usual concavity.

I

I as in KITE, TIME, MITE, SHINE,
MILE, TIGHT, FINE, etc.

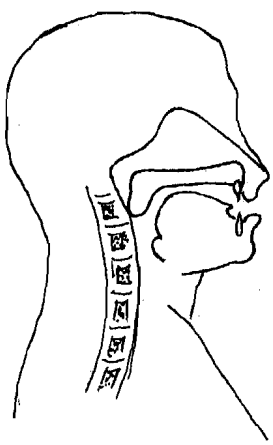


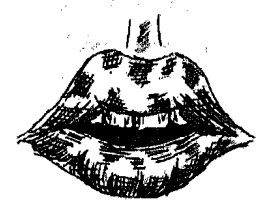


Fuse the two positions "a" as in "ask," and "i" as in "it" for the final production of "I". I is a dipthong for it is composed of two sounds "a" and "i".

O

O as in OLD, NO, NOTE, COLD, OWN,
JOKE, TONE, FROZEN, etc.

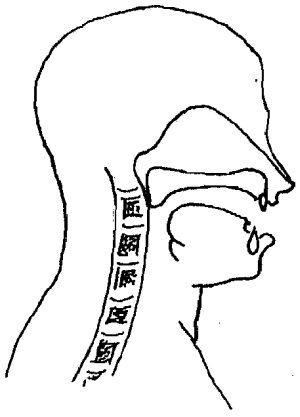


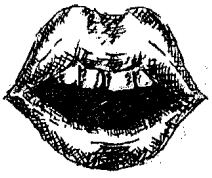


Raise the soft palate against the pharyngeal wall. Drop the lower jaw until the upper, and lower front teeth are separated from each other by about three-eighths of an inch. Adjust tongue as shown in the diagram. Tense the tongue muscles so that much of the side concavity is overcome.
Practice--o, lo, ro, mo, so, do, vo, fo, etc.

O

O as in HOT, ODD, CROP,
NOT, CHOP, OPERA,
CLOCK, DOLL,
FLOCK, etc.

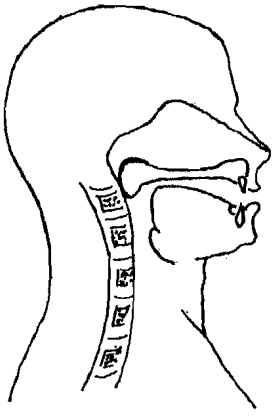




Raise the soft palate against the pharyngeal wall. Drop the lower jaw until the upper, and lower front teeth are separated by approximately five-eighths of an inch. Adjust the tongue as shown in the diagram. The lips are thrust forward and rounded slightly, and the tongue muscles are left lax so that the tongue retains its concavity.

OO

OO as in COOL, ROOM, BALLON,
BOOT, SPOON, DROPPED,
FOOD, CARTOON,
TOOL, etc.

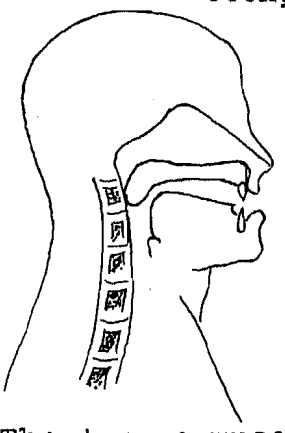


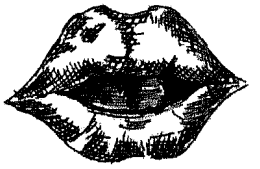
Raise the soft palate against the pharyngeal wall. Drop the lower jaw until the upper, and lower front teeth are separated by about one-fourth of an inch. Adjust the tongue as shown in the diagram. The tongue muscles should be tense so that there is little side-to-side concavity of the tongue. The lips are thrust forward and rounded.

Practice--loo loo, oo oo, moo moo, boo boo, soo soo, etc.

OO

OO as in GOOD, MISTOOK, BOOK,
COOK, SOOT, WOOL, COOKY, etc.

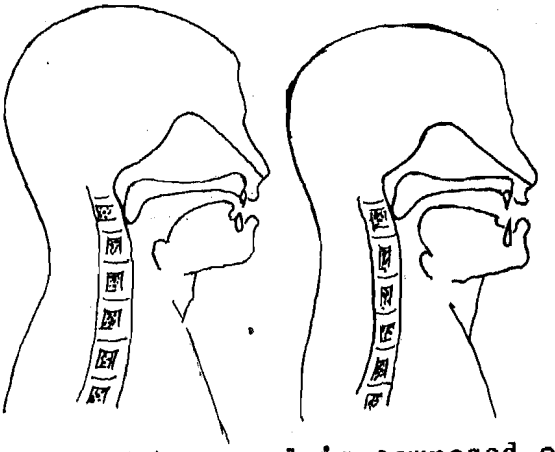




Raise the soft palate against the pharyngeal wall. Drop the lower jaw until the upper, and lower front teeth are separated by about one-fourth inch. Adjust the tongue as shown in the diagram. The tongue muscles should be lax so that the tongue retains its concavity. Lips thrust forward and rounded.

U

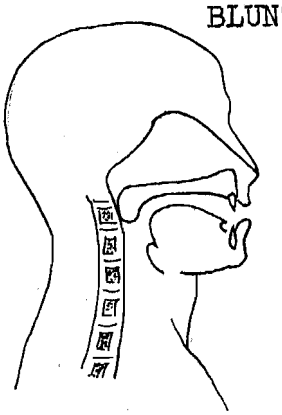
U as in BLUE, TUBE, HUE, FLUTE,
DUTY, MUSIC, AMUSE, FUME,
MUTE, etc.

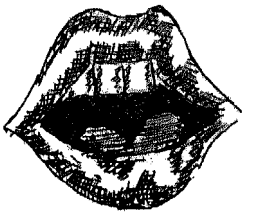


This sound is composed of the fusing of the sounds e (see) and oo (boot) and is a dipthong. See the diagrams for mouth positions. Fuse the two positions quickly together to make the sound u as in "Blue."

U

U as in CUP, UP, SUN, SHUN, RUN, STUB, BLUNT, CRUMB, SUDDEN, etc.

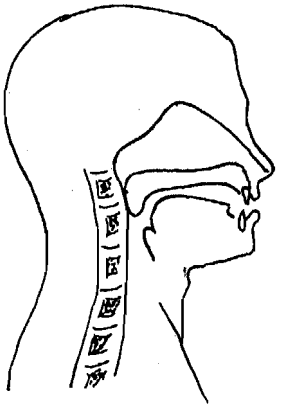


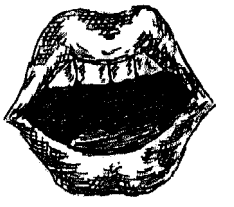


Raise the soft palate against the pharyngeal wall. Drop the lower jaw so that the upper, and lower front teeth are separated by about one half inch. Adjust the tongue as shown in the diagram. The tongue muscles should be lax so that the tongue retains its concavity.

U

U as in FUR, BURN, HURT, SURLY, LURK, TURN, BLUR, PURR, CURTAIN, etc.





Raise the tongue a little above middle position with the back raised towards the roof of the mouth, let the point touch the lower gums. Hold the tongue a trifle tense and lips slightly wide while emitting a vocalized current of breath.

Vowels and Consonants Combined into Easy Words.

This exercise should be given for distinctness of enunciation. Ask the subject to read slowly and distinctly. Read across the page thus: baby, bee, bicycle, etc.

b	- baby	- bee	- bicycle	- boat	- blue
ch	- chain	- cheap	- child	- chose	- church
d	- day	- deed	- died	- doe	- duel
f	- fairy	- feel	- fire	- found	- flue
g	- gate	- get	- give	- goal	- glum
h	- hay	- he	- hive	- how	- hue
j	- Jane	- jet	- jig	- job	- jump
k	- Kansas	- key	- king	- kodak	- ....
l	- lane	- letter	- line	- lock	- lump
m	- May	- men	- mine	- mole	- must
n	- nail	- neck	- nine	- not	- number
p	- pail	- pea	- pipe	- pole	- puff
q	- quail	- queen	- quiet	- quota	- .....
r	- race	- reel	- ride	- road	- run
s	- say	- see	- sigh	- so	- sun
sh	- shave	- she	- shine	- shone	- shut
t	- take	- tea	- tile	- toe	- tug
th	- thank	- theft	- thing	- thorn	- thumb
<u>th</u>	- that	- the	- thine	- though	- thus
v	- vane	- veal	- vine	- vote	- vulture
w	- way	- wee	- will	- wore	- would
y	- yarn	- yell	- Yiddish	- yolk	- yule
z	- Zane	- zebra	- zip	- zone	- Zulu

For further exercises in enunciation, combine the vowel sounds and consonant sounds in syllables and practice, thus: ba - be - bi - bo - boo, da - de - di - do - doo, fa - fe - fi - fo - foo, ga - ge - gi - go - goo, ha - he - hi - ho - hoo, ja - je - ji - jo - joo, la - le - li - lo - loo, etc.

Combine the initial and second consonant so that the separate sounds are blended together as one. For example, to the sound "bl" add the pure vowel sounds, a, e, i, o, u, and articulate in this manner--bla - ble - bli - blo - bloo, "dl" dla - dle - dli - dlo - dloo, "gl" gla - gle - gli - glo - gloo, etc. Sound the entire list of consonants using "l" as the second letter. Repeat the exercise using "r" as the second consonant, as: bra - bre - bri - bro - broo, dra - dre - dri - dro - droo, fra - fre - fri - fro - froo, etc. Continue the exercise changing the consonant combination each time. Work for clearness and distinctness in enunciation. Take the exercises slowly and easily, and watch for any defective articulation

Follow the syllables with word practice, choosing words to illustrate the various combinations, as: brake - breach - bribe - broth - brooch - brunt, etc. Drill may be given with sentences which are composed by the use of alliteration. Alliteration is the repetition of the same sounds or letters in each word of the sentence. The subject should read the sentences slowly and distinctly being careful to make the sounds pure.

B

1. Betsy Braker is the best bread baker.
2. Bad Bobby Brown bit Black's baby.
3. Buster Brown brought back biscuits and butter.
4. Billy Beg's big black bull bellowed blatantly.
5. Big, bare boughs bend in the blustery breeze.
6. Baby birds best beware of bad boys.

P

1. Peter Piper picked a peck of prickly pears;
   Peggy packed the prickly pears in a pretty pewter pail.
2. Polly Parson's pet parrot pecked poor Pussy's paw.
3. The people passed the Pope's palace to present the paper to Paul.
4. Playful Patty pouted, and put the pepper pods in the peasе porridge pot.
5. Plodding Peter picked purple pansies, pineapples, and peaches for Penelope.

M

1. Misty, moisty mornings make Mary melancholy.
2. Mary and Molly, Mabel and May, make many mansions of mud in their play.
3. My mother made my maroon mackinaw, and muffler.
4. The milkmaid marched merrily to market.
5. Many men make more money mixing in matters of much moment.

Wh

1. Whither went the witches with their white whips?
2. When the whistle went "who-oo," Walter whirled the wherry toward the west.
3. Wesley whittled and whistled the whole while.
4. Whitey wheeled the wheelbarrow of wheat to the wharf.
5. While the Whig whimpered, the whipper-snapper whispered.

W

1. Watch the wild waves wash the wet sea weed.
2. Women weep and wail while westerly winds whip the whale-boat.
3. Winnie wants a wee wren or a wild whippoor-will with white wings.
4. The weary wanderer watched the working women and wondered at their wit.

5. Wendell waited and wished for the washer-woman to wring out his wet waistcoat.

F

1. Fair is foul and foul is fair,
   Hover through the fog and filthy air.
2. Leaves like fairy fans flutter faintly in the forest.
3. Frank, fought his fight with fervid fury.
4. Funny, furry, feline friends frolic fitfully over the fens.
5. Forty-five fidgety fishermen filled their nets full with fifty, finny fish.

V

1. Viola's vocabulary is varied and vigorous.
2. Vivian covered her visage with a vivid violet voile veil.
3. Virtuous virgins voiced vespers in the vestal service.
4. Vines veil the veranda, and verdant vineyard from view.
5. The vicar vicariously visited the vicarage.

Th
(unvoiced)

1. The thorn thrust through the thin cloth.
2. Thrifty Timothy thought thrice before he threw the thousand thistles.
3. Thursday the thief sought the thug, and stayed with him through thick and thin.
4. Theophilus Thistle, the successful thistle-sifter, in sifting a sieve full of unsifted thistles, thrust three thousand thistles through the thick of his thumb.

Th
(voiced)

1. Father and Mother gathered heather together, and sent it thither to brother.
2. Thus thy thankworthy servant shall thenceforward be thanked.
3. They gathered the feathers themselves.

S

1. Sara sees Cy sowing with Sue.
2. Six, slimy, slithery snakes slipped into the sea.

3. She sells sea shells; shall she sell sea shells on the sandy seashore?
4. She saw a silver ship with shining sails setting out on a shimmering sea.
5. Sammy Samson wasn't same; he said scissors and snails were just the same.

Sh

1. She shouted a shrill, sharp shriek.
2. She shoved the shallop off the shore into the shimmering sea.
3. Shall she shuffle shoeless to the show?
4. Show the sheets to Sherry, and the shades, and shawls to Shem.
5. The shabby shopper shopped in the shoe shop.

Z-Zh

1. The zealot saw the zebra and the Zulu at the zoo.
2. Zack saw the many selling zithers, and zinc with zealous zest.
3. The zig-zaging Zepplin zipped past at an amazing speed.
4. In some measure, they received the azure treasure with great pleasure.

L

1. Long lanes lead to lonely lands.
2. Lovely lilies lie limp along the lake.
3. Leave the latest letters lying on the lowboy.
4. Little lame Lenord would like to leap lightly over the lawn.
5. The lovely lady languidly left the library, and listened listlessly to the lark.

T

1. Timid Timothy taught a titmouse to teeter-totter in a tall tree.
2. Telling untruthful tales is a terrible habit.
3. Telephone and telegraph are two methods of transporting news.
4. Twisting, twirling, the terrific current swept on its tortuous way.
5. Tell the tale to Tom as tactfully, tenderly, and truthfully as you can.

6. A tooter who tooted the flute,
Tried to tutor two tooters to toot;
Said the two to the tooter,
Is it easier to toot, or
To tutor two tooters to toot.

D

1. The day is dull and dark and dreary.
2. Doubting Dan dug deep ditches down dark roads.
3. The duchess demanded the duck, or drake to be served for dinner.
4. The date the deed was done did not appear on record.
5. A dormouse lived in a bed of delphiniums, blue, and geraniums red.
6. Double, double, toil and trouble,
Fire burn, caldron bubble.

Ch

1. Chip, Chip, Cheerie, chants the canary, high in the cherry tree.
2. The child chattered cheerily as he chased the chickens, and chipmunks.
3. Charles cheated at chess, but the Chief chose checkers.
4. Chinese children choose chrysanthemums.
5. Choice chops chosen by careful butchers are sold here.

J

1. Jolly Jim joked and jabbered with Jerry and Jane.
2. Joyce jingled her Japanese jade, and joined John in the jungle.
3. The jester jumped joyously, and juggled a jar filled with jasper.
4. The jury adjourned in June, and judged the jockey justly for jesting a Jew.
5. Jovial Jan likes juice, jelly, and jam.

Y

1. The yield of yellow yams is yearly greater.
2. Yes, yes, yelled the yeoman.
3. The youths yawned aboard the yacht.
4. Yesterday a young yokel yodeled yearningly.
5. Yonder in the bay a yellow yacht is lying.

R

1. Round the rough and rugged rocks ran the ragged, rollicking rascals.
2. Richard and Robin were two rough riders roving to Reims.
3. Ruefully, sorrowfully, Ruth reached for her ragged raiment.
4. Robin Hood came riding, riding, riding, right down the rough, dark trail.
5. Red roses, rich with perfume, grew in the rugged crags.
6. A great, grizzly, gray rat ran over the red roof.

K

1. Kate come quickly, and keep Carl cool.
2. Cooly and carefully, Clara carried the copper kettle to the cook.
3. The cook bakes cookies carelessly in the copper kettle.
4. Crafty Katherine kept the kiss from her cousin King Cole.
5. Can carburetors, and cars be cleaned successfully?
6. Carl kept his coat, and cap carefully clean.

G

1. Godfrey Gordon Gustavus Gore gathered grapes, and growled for more.
2. Great, greedy giants gazed gloatingly down on George.
3. The great, gray, greasy river glides gloomily along.
4. Grimes grew gloomier gradually, as he gathered the gold in bags.
5. Gaily Grace got her guitar, and sang to her guardian.

H

1. Harry, hurry here; Henry is in haste.
2. How happily Hugo holds his harp.
3. His house has huge doors with iron hinges.
4. He heaved a huge stone off the high hill.
5. Happy, healthy Hector hid his helmet and hung his hat on a hook.

N-Ng

1. Noisy Ned knocked at the neat, natty, new bungalow.
2. None need never know when Nell noticed the nine neat nurses napping.
3. Nurses naturally note nervousness in nearly all patients.
4. Ninety-nine neat nuns kneeled north of Nice.

5. Morning, noon, and evening, nineteen, twirling, twisting, swirling, swinging, singing, dancing maidens come tripping along the Nile.

Qu

1. Quaint, queer Queenie quite quietly quarreled about the quotient.
2. The Quaker quieted the queen by questions and quaint queries.
3. A quarter for a quire of quality paper is quite queer.
4. Quips and questions were quoted by queer, quiet, Quaker Quin.
5. The Quaker quieted the qualms of the quaint, queer, quarrelsome queen

Tongue Gymnastics.

Some speech defects (such as lalling, and defective articulation) are due to an inactive tongue. If the articulatory organs are inactive, a smooth, clear, distinct enunciation is impossible. For this reason it is necessary to train and exercise the muscles of the tongue to acquire agility and perfect control of that speech organ.

1. Relax the tongue, and let it lie perfectly quiet on the floor of the mouth.

2. Thrust the tongue forward as far as possible between the teeth (without touching the teeth) until you can feel a pull on the muscles. Repeat four times.

3. Swing the tongue from side to side touching the tip as far out on the cheek as possible. Repeat four times.

4. Stretch the tongue between the teeth, but not touching them, and thrust the tip upward as far as possible. Four times. Repeat the same exercise, this time thrusting the tongue tip downward.

5. Open the mouth wide, and touch the tip of the tongue first to the upper lip then to the lower lip, several times.

6. Raise the tongue and touch the tip to the center of the roof of the mouth, slowly at first; then more rapidly dot the roof of the mouth with the tongue tip

7. Place the tip of the tongue as far back on the roof of the mouth as possible. Do this four times. Take the same exercise except place the tip of the tongue as far back on the floor of the mouth as you can. Four times.

8. Place the tip of the tongue as far back on the roof of the mouth as possible, then bring it forward with a sweeping movement allowing tip to brush the roof of the mouth until it extends past the teeth. Do this several times. Small children like to play that they are cleaning house in this manner, and, that the teeth are doors through which they sweep with the tongue. Sweep both backward, and forward.

9. Thrust the tongue forward rapidly between the teeth with a lapping movement. Children enjoy pretending they are kittens or puppies lapping cream. Repeat several times.

10. Beginning at the extreme right, and extending to the extreme left sweep the edges of the upper teeth with the tip of the tongue. Repeat in the same manner for the lower teeth. Employ the same exercise, this time dotting each tooth with the tip of the tongue.

11. Round the tongue so that it has the appearance of being rolled, and extend between the teeth.

12. Roll the tip of the tongue upward and back against the upper teeth. Release quickly, and relax the tongue then repeat. Do this three times.

13. Practice trilling--trrr, trrr, trrr.

14. Drill on la, la, lay, lay, le, le, lie, lie, low, low, loo, loo.

Lip and Jaw Exercises.

1. Move the jaw from side to side on four counts--left, one, right, two, etc.

2. Relax, and let the lower jaw drop loosely.

3. Drop jaw loosely and vocalize "ah" striving for a full, round, steady tone.

4. Bite the lips, alternating, first upper, then lower lips.

5. Relax and yawn. Repeat several times.

6. Thrust jaw forward and relax. Repeat several times.

7. Protrude the lips as if to whistle, but merely blow through them. Tell children to blow out a candle.

8. Smile, then protrude lips to whistle.

9. Vocalize--ee-oo, ee-oo, ee-oo.

10. Vocalize--ee-oo-ah, ee-oo-ah, ee-oo-ah. (Exercises both lips and jaw).

11. Close the lips, and release quickly, causing the air to escape with an explosive puff.

12. Practice the lip consonants, p, b, m, f, v, and w. Combine these consonants with the vowel sounds, pa, pe, pi, po, poo, etc.

13. Whistle for a minute, relax, and repeat.

Exercises for Soft Palate.

1. Vocalize--m-m-m-m, n-n-n-n, ng-ng-ng-ng.
2. Vocalize--ah-nah, ah-nah, ah-nah,
3. Ch-ung, ah-ong, ee-ong, ee-ung, ah.

Delayed Speech.

Speech for the normal child begins at about fifteen months. It may begin even earlier; the time varies somewhat with different children. However, if speech is delayed longer than from twelve to eighteen months, the child should be examined by a physician, and a specialist in speech disorders. The Blantons list five common causes for delayed speech; these are:[37]

> "(1) Lack of mental development, (2) lack of necessity for speech, (3) continued illness with extreme malnutrition during infancy, (4) unhealthy emotional attitudes, and (5) deafness."

The grade teacher seldom encounters a case of delayed speech

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37. Smiley Blanton and Margaret Gray Blanton, Child Guidance, Century Company, New York, 1927. pp. 94-110.

in the school. But occasionally such a situation occurs among school children, and a child who cannot speak, or who speaks a jargon which cannot be understood enters the kindergarten or the first grade. In such case the pupil should be recommended for treatment, taken to a physician and also to an expert in speech pathology. The simplest type of delayed speech is caused by the lack of necessity for speech. This type occurs among children who are pampered and spoiled by having too much done for them. They have been able to satisfy their wants by pointing to objects, and uttering unintelligible noises which their parents interpret to mean definite things. The most effective cure can be made by refusing to grant the child's request until he attempts to say the word correctly. Often the child will have to be taught how to make the correct sounds, and the old habit of jabbering must be broken down, and replaced by correct speech habits. The process is difficult, and requires much persistence and drill. The classroom teacher can assist in the cure of this particular type of the disorder by making her own speech a model for the child, and by refusing to let him lapse into his accustomed jargon.

Foreign Dialect.

Foreign dialect is a defect often found among school children. The five ways in which foreign dialect manifests itself are wrong inflection, misplaced stress or accent, sound unit substitutions, sound unit omissions, and sound unit

additions. The following illustrations from Borden and Busse serve to illustrate some of the different types of foreign accent.[38] Only one example has been chosen from the author's list for the purpose of introducing each type, therefore the illustrations are not complete.

"German Dialect I haf no pleashur of dis chop.	Standard English I have no pleasure on this job.
French Dialect Zen you sink zis shanse is worsevile?	Then you think this chance is worthwhile?
Yiddish Dialect Vat iss diss men'ss vaise meashur-r-r, Mawr-riss?	What is this man's waist measure, Morris?
Ve pey less r-rent for-r fletss in Lonk Islend.	We pay less rent for flats in Long Island.
Spanish Dialect I theenk I should veesect thees seety fairst.	I think I should visit this city first.
Norwegian Dialect Ay hawp Yohn br-ring sheese hawm fr-rawm town.	I hope John brings cheese home from town.
Danish Dialect Diss iss a vonder-rfool occashun	This is a wonderful occasion.
Swedish Dialect Ay vorked tree monts in da big nort voots.	I worked three months in the big north woods.
Jugo-Slav Dialect America'ss Kohstomss are not eessy for foreignerss.	America's customs are not easy for foreigners.
Greek Dialect Cigarss! Candiess! Hot dokss!	Cigars! Candies! Hot dogs!

38. Richard C. Borden and Alvin C. Busse, op. cit., pp. 161-207.

Chinese Dialect Sam Lee'ss laundly washes clothess an'ironss collass.	Sam Lee's Laundry washes clothes and irons collars." [39]
Italian Dialect Som' mornin'-glor vines have creep eento da shed.	Some morning-glory vines have creeped into the shed.

The foreigner often seems to ask a question when he really wishes to make a statement; as, "We will come tomorrow?" He also misplaces the accent in many instances; as, "I had the car pen' ter fix the door." Or, "They say he iss an American ca pit'a list (capitalist).

An intensive study of foreign dialect would reveal that each particular language lacks certain sounds which are contained in standard English, and that some of the sounds of a foreign language are given an entirely different quality from the same sounds in the English.

The ultimate correction of foreign dialect is a job which only the speech teacher can fully accomplish. However, the classroom teacher may aid in the correction by keeping the pupil conscious of the difference between the standard English sound which the child should use, and the wrong foreign sound which he is using. Imitation assists in the process of correction. The subject should be taught to listen to the sound when it is produced correctly. Then he should attempt the sound himself.

The sound placements are sometimes unfamiliar to the subject, and the instructor will need to demonstrate correct

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39. Ibid., pp. 161-207.

tongue positions for the troublesome sounds. It is sometimes necessary to help the pupil achieve the proper tongue positions with the aid of a tongue depressor or a toothpick. Watching himself in a mirror while attempting to get the correct placements will also help the subject to make the difficult sound.

The pupil must first be made conscious of the difference between the instructor's production of the sound and his own. After a clear visual image of the sound is established for the child, the work for muscular control should begin. Constant watchfulness on the part of the teacher to see that the child does not lapse into his old habit of wrong production of the sound is most valuable in furthering the process of correction.

Defects of Carelessness.

Sound unit substitutions, sound unit omissions, and "run on" speech are the chief characteristics of careless speech habits.

Defects of carelessness are not difficult to correct, but persistence is required to achieve their lasting cure. The process of breaking down an old and undesirable speech habit, and the establishment of a new desirable one is not an easy task, nor is it one that can be accomplished quickly. The first important step in the process is to establish in the subject a consciousness of correctly spoken English. He must be made to realize the social, economic, and educational value of right speech habits.

Phonetic drills and exercises chosen to fit the subject's particular difficulties are the necessary tools for the treatment. Here, as in the treatment for foreign dialect, the instructor should make her own speech a model for the pupil. When the subject clearly understands his difficulty, and can make the proper corrections, the instructor should help him establish the habit through the use of selected exercises and persistent drill.

The following list illustrates some of the very frequent defects of carelessness.

Wha cha want?	What do you want?
Dad wont let chew go.	Dad wont let you go.
Wha sha gonna do?	What are you going to do?
Whoaza comin'?	Who is coming?
Wha smatter? (Sometimes, Wha smadder?)	What is the matter?
Nemmine, praps John gab'm one.	Never mind, perhaps John gave him one.
Been settin' 'roun' doin' nuttin' all mornin'.	Been setting round doing nothing all morning.
Wich pitchure kin a hev?	Which picture can (may) I have?
Uff course, I'd luff tu come.	Of course, I'd love to come.
Feature me a-goin' whin shees along.	Feature my going when she is along.
Snuff fer me.	That is enough for me.
Zebedder to-day?	Is he better to-day?
Giv'm hiss at.	Give him his hat.
He'sa goin' Sataday.	He is going Saturday.
Oozis letteh fum?	Who is this letter from?
Haddo!	How do you do.
H'lo	Hello.
Beauz or becauss	Because.
Wen, wat.	When, what.

The common use of slang is a type of careless or slovenly speech, and many of the numerous mispronunciations should be classed under this head.

It is not enough to merely correct the bad speech habits of a slovenly speaker. The instructor must persist in constantly demanding the use of these new habits in the classroom, for it is very easy for the subject to fall back into his old habits. The ultimate correction of careless speech requires much diligence, persistence, and patience on the part of both the pupil and the teacher.

Treatment for Simple or Negligent Lisping.

Ordinary lisping is the substitution of "th" or other sounds for "s" and any of its related sounds. The disorder frequently begins with the change in dentition. The lack of the upper front teeth allows the tongue to be thrust too far forward and the production of "s" and its related sounds is affected. Because lisping is the result of wrong tongue position, the first step in its treatment should be a demonstration of the correct tongue placement for the sibilant sounds. Follow this with drill in those sounds, carefully observing that the subject is making the right tongue placements. Tongue gymnastics to increase the freedom of tongue activity are valuable in the treatment of lisping. Practice should center on the following sounds, s, sh, zh, zh.

Exercises for S and Z.

1. Repeat S-S-S-S several times. Articulate S and prolong the hissing sound thus, S-ss, S-ss, S-sss, S-ssss.

I saw a ship a-sailing,
A-sailing o'er the sea;
Her masts were made of shining gold,
Her decks of ivory;
And sails of silk as soft as milk,
And silvern shrouds had she.
-Gabriel Seton.

Rising and leaping,
Sinking and creeping,
Swelling and sweeping,
Showering and springing,
Flying and flinging,
Writhing and ringing,
Eddying and whisking,
Spouting and frisking,
Turning and twisting,
Around and around,
With endless rebound.
-Southey.

Sea Shell, Sea Shell,
Sing me a song, O please!
A song of ships, and sailor men,
Of parrots and tropical trees,

Of islands lost in the Spanish Main
Which no man ever may find again,
Of fishes and corals under the waves,
And sea-horses stabled in great green caves.

Sea Shell, Sea Shell,
Sing of the things you know so well.
-Amy Lowell.

Of speckled eggs the birdie sings,
And nests among the trees;
The sailor sings of ropes and things
In ships upon the seas.

The children sing in far Japan;
The children sing in Spain;
The organ with the organ man
Is singing in the rain.
-Robert Louis Stevenson.

6. Practice sentences, and exercises.

1. "Brothers, sisters, husbands, wives-
Followed the piper for their lives."

2. Silent ships softly sail on a silver sea.
3. Six, slender saplings stand on a steep cliff.
4. I saw Esau saw wood in Arkansas.
5. See the six, silly squirrels scrambling after nuts.
6. "Silently, one by one, in the infinite meadows of heaven,
   Blossom the lovely stars, the forget-me-nots of the angels."
7. The sun is rising slowly over the misty sea.
8. "This is the forest primeval."
9. The steep height and the dazzle of the sun made Susan dizzy.
10. "Twas the night before Christmas and all through the house,
    Not a creature was stirring, not even a mouse.
11. How fresh the chrysanthemums look in the sun!
12. I've never sailed the Amazon, and I've never seen Brazil.
13. "I slip, I slide, I gloom, I glance,
    Among my skimming swallows;
    I make the netted sunbeam dance
    Against my sandy shallows."
14. The sheen of their spears was like stars on the sea.

Exercises for Children Having Difficulty

With the s, sh, z, zh, and ch Sounds.

1. See us, see us, as we march and sing with our singing combs. (Hiss through closed teeth and prolong the sound. Watch carefully the articulation of the "ng" sounds.)

2. Ze Zi Zo Zum! Bumble bees sing Zum, Zoom, Zum. (Prolong humming sound.)

3. Cheep, cheep, cheep, cries the little chicken.

4. Simple Simon met a pieman
   Going to the fair;
   Said Simple Simon to the pieman,
   "Please, let me taste your ware."

   Said the pieman to Simple Simon,
   Show me first your penny!
   Said Simple Simon to the pieman,
   "Indeed, I have not any."

5. The Grasshopper, the Grasshopper,
I will explain to you:-
He is the Brownies' racehorse,
The Fairies' kangaroo.
-Vachel Lindsay.

6. Sleep Baby, sleep!
The large stars are the sheep,
The little stars are the lambs I guess
The fair moon is the shepherdess.
Sleep Baby, sleep.

7. "With a chug and a chir and a choo-choo-choo," cried the little velocipede, "I'll beat you."

Articulation Exercises for Lower Grades.

M

1. "Mew, mew, mew," cries Miss Pussy;
"Moo, moo," answers the Moo-Cow-Moo
"If I did not give milk to you,
Tell me what would you do?"

2. Me, may, ma, maw, mo, moo.

3. Me me, may may, maw maw, ma ma, mo mo, moo moo.

P

1. Pah, pay, pe, paw, poh, poo.

2. Potatoes, potatoes, potatoes to-day
Parsnips, and pears, and peas for pay.

3. Purr, purr, purr, purr,
Bright green eyes and softest fur,
That is my pussy,
Purr, purr, purr, purr.

4. Pitter-patter, pitter-patter, falls the rain;
Pitter-patter, pitter-patter on the window pane.

5. Did the people pay for the paper?

6. "Pipe a song about a lamb,"
So I piped with merry cheer,
"Piper pipe that song again,"
So I piped, he wept to hear.
William Blake.

B

1. Ba, bay, be, bi, baw, bah, boo.

2. Boy Blue, Boy Blue, blew a blast on your bugle.

3. Bo Peep, Bo Peep, bring back your sheep;

Boy Blue, Boy Blue, you bring some to.

4. There are biffalo-buffalo-bisons, and a great big bear with wings.
There are badgers and bidgers and bodgers, and different kinds of things,
But I gave buns to the elephant when I went down to the zoo.
(Adapted from A. A. Milne)

W-Wh

1. Wah, way, wee, wi, waw, woh, woo.

2. Whah, whay, whee, whi, whaw, whoa, whoo.

3. Wee Willie went away to the west,

Whoop-a-la, whoop-a-la, Wee Willie Winkie.

4. Which little pig cried "wee, wee, wee?"

5. Wendy wandered far away. Whither are you

wandering, Wendy?

6. "Where the blackbird sings the latest,
Where the hawthorne blooms the sweetest,
Where the nestlings chirp and flee,
That's the way for Billy and me."
--James Hogg.

7. Read or recite the following lines, listening for the sound of whirling wheels in the words that begin with "wh".

"While he whistled what did he see?
Whirligigs whirling right merrily!
Whizzing and whistling as gaily as he!" [37]

F-V

1. Fah, fay, fe, fi, faw, foh, foo.

2. "Fe fi fo fum," cried the fussy giant.

3. Furl that banner, for 'tis weary,
Furl it, fold it,--it is best.

4. Filled the marshes full of wild fowl,
Filled the rivers full of fishes.

5. Forty flags with their silver stars,
Forty flags with their crimson bars.

6. I cannot forget with what fervid devotion,
I worshipped the visions of verse and of fame.

7. Over Barbara Fritchie's grave,
Flag of Freedom and Union wave.

Th

1. Thay, thah, the, thi, thaw, tho, thoo.

2. Breathes there a man with soul so dead,
Who never to himself has said,
This is my own my native land.

3. America

I love thine inland seas,
Thy groves of giant trees,
Thy rolling plains;
Thy rivers mighty sweep,
Thy mystic canons deep,
Thy mountains wild and steep,
All thy domains.

---

37. Emma Grant Meader, op. cit., p. 35.

Thy silver Eastern Strands,
Thy golden gate that stands
Wide to the West;
Thy flowery Southland fair;
Thy sweet and crystal air-
O, land beyond compare,
  Thee I love best!
        --Henry Van Dyke.

T-D

1. Tah, tay, tee, ti, taw, toh, too.

   Dah, day, dee, di, daw, doh, doo.

2. Thomas-a-Tattamus took two T's,
   To tie to tups to two tall trees,
   To frighten the terrible Thomas-a-Tattamus!
   Tell me how many T's there are in all THAT!

3. Tipsey, Topsey, Tiny Tim

   Tossed a top and made it spin

4. What shall I call
      My dear little dormouse?
   His eyes are small,
      But his tail is e-nor-mouse.
            --A. A. Milne.

5. There was a little man,
   And he had a little gun,
   And his bullets were made of lead, lead, lead;
   He went to the brook and he saw a little duck,
   And he shot it through the head, head, head.

6. Old Grammer Hipple-hopple hopped out of bed,
   She opened the casement and popped out her head;
   Oh! husband, Oh! husband, the grey goose is dead.

S-Sh

1. Sah, say, see, si, saw, so, soo.

   Sha, shay, she, shi, shaw, sho, shoo.

2. Bobby Shaftoe's gone to sea,
   Silver buckles on his knee,
   He'll come back and marry me.
   Pretty Bobby Shaftoe.

3. Wynken, Blyken, and Nod one night
Sailed off in a wooden shoe-
Sailed on a river of crystal light,
Into a sea of dew,
Where are you going, and what do you wish?
The old moon asked the three.
"We have come to fish for the herring fish
That live in this beautiful sea;
Nets of silver and gold have we."
Said Wynken,
Blyken,
And Nod.
--Eugene Field.

4. The shambling sea is a sexton old,

And well his work is done.
--Bliss Carmen.

5. The little toy dog is covered with dust,
But sturdy and stanch he stands;
And the little toy soldier is red with rust,
And his musket moulds in his hands.
Time was when the little toy dog was new,
And the soldier was passing fair;
And that was the time when our little Boy Blue
Kissed them and put them there.
--Eugene Field.

Z-Zh

1. Zah, zay, ze, zi, zaw, zo, zoo.

2. Behind him lay the gray Azores,
Behind him lay the gates of Hercules;
Before him not the ghost of shores,
Before him only shoreless seas.

3. A haze is on the far horizon.

4. There are bridges on the rivers,
As pretty as you please,
But the bow that bridges heaven,
And overtops the trees,
And builds a road from earth to sky,
Is prettier far than these.
--Christina Rossetti.

Ch-J

1. Jack be nimble,

Jack be quick,
Jack jump over the candlestick.

2. Jogging into Jericho,
Jig, jog, jiggety, jog,
Jig, jog, jog.

3. They're changing guard at Buckingham palace-
Christopher Robin went down with Alice.
A face looked out, but it wasn't the King's.
"He's much too busy a-signing things,"
Says Alice.
--A. A. Milne.

4. One of the chairs is South America,
One of the chairs is a ship at sea,
One is a cage for a great big lion,
And one is a chair for ME.
--A. A. Milne.

L

1. La, lay, le, li, law, lo, loo.

2. I do not like thee, Doctor Fell
The reason why I cannot tell;
But this I know and know full well,
I do not like thee, Doctor Fell

3. In The Fashion.

A lion had a tail and a very fine tail
And so has an elephant, and so has a whale,
And so has a crocodile, and so has a quail-
They've all got tails but me.

If I had a sixpence I would buy one;
I'd say to the shopmen, "Let me try one";
I'd say to the elephant, "This is my one."
They'd all come around to see.

Then I'd say to the lion, "Why, you've got a tail!
And so has the elephant, and so has the whale!
And, look! There's a crocodile! He's got a tail!
You've all got tails like me!"
--A. A. Milne.

R

1. Rah, ray, re, ri, raw, ro, roo.

2. Robin Redbreast sang in a tree,
"Chip, chip, chi ree, chip, chip, chi ree,
Chi-a-ree, chi-a-ree."

3. Into the street the piper stept, ...
And ere three shrill notes the pipe had uttered,
You heard as if an army muttered;
And the grumbling grew to a mighty rumbling;
And out of the houses the rats came tumbling-
Great rats, small rats, lean rats, brawny rats,
Brown rats, black rats, gray rats, tawny rats,
Grave old plodders, gay young friskers,
Fathers, mothers, uncles, cousins,
Cocking tales, and prisking whiskers,
Families by tens and dozens,
Brothers, sisters, husbands, wives-
Followed the piper for their lives.
--Robert Browning.

K-G

1. I come from haunts of coot and hern
I make a sudden sally,
And sparkle out among the fern,
To bicker down the valley.
--Tennyson.

2. Oh, the green things growing, the green things growing,
The faint sweet smell of the green things growing!
I should like to live whether I smile or grieve,
Just to watch the happy life of my green things growing.
--Dinah Mulock Craik.

H

1. Home, Home, sweet, sweet Home,
Be it ever so humble,
There's no place like home.

2. Home is the sailor, home from the sea,

And the hunter home from the hill.

Y

1. Old year you must not die.
You came to us so readily,
You lived with us so steadily,
Old year you shall not die.
--Tennyson.

Suggestive and Imitative Sounds

for the Lower Grades.

Consonants and vowels are included in these imitative sounds.

1. What does the little chicken say? Answer, peep, peep, peep. (p)

2. Let us pretend that we are honey bees. Buzz-buzz-buzz-zzz. (b)

3. How does the little dog sound when he barks? Bow wow, Bow wow. (b)

4. Hum like an aeroplane, and place your finger tips on the sides of your nose, and "feel" the tone there. Mmmmm, Mmmmm, Mmmmm. (m)

5. Play that you are a clock. What will you say? Tic-tock, tic-tock. (t)

6. This time be a tiny watch. Softly, tic, tic, tic. (t)

7. How does the big bell sound? Ding-dong, ding-dong. (d,ng)

8. This time make a sound like the tiny bell on a velocipede. Ting-a-ling, ting-a-ling, ting, ting, ting. (t-ng)

9. Have you ever heard a pony neigh? The pony sounds like this, Nnnn, Nnnn, Nnnn. Now you do it, and hold your finger tips on the sides of your nose, and "feel" the sound. (n)

10. How do you call your kitty? Kitty, kitty, kitty. (k)

11. Pretend that you are street venders and call out full and strong--
Potatoes, potatoes, potatoes, (p)
Peaches, peaches, peaches, (p)
Pears, pears, pears, (p)
Apples, apples, apples, (pl)
Cherries, cherries, cherries, (ch)
Bananas, Bananas, (b)

12. Growl like the bear. Grrr-Grrr, Grrr. (j-r)

13. How does the water come out of the faucet? Gurgle, gurgle, gurgle, gug, gug. (g)

14. How does the pony trot? Gallop-a-trot, gallop-a-trot, (g)
or, jig, jog, jiggety-jog, jiggety-jog. (j)

15. How does mother hush the baby? Sh-sh-sh-sh-sh. (sh)

16. Bark like a little puppy. Yip, yip, yip, yip. (y)

17. Let us make the wind sounds.
Yoo-oo, yoo-oo, yoo-oo. (y-oo)
Whoo-oo, whoo-oo, whoo-oo. (wh-oo)
Whee, whee, whee-ee. (wh-ee)

18. Make a very soft sound for the merry little breezes.
Softly, eeoo-oo, eeoo-oo. (ee-oo)

19. Be little Buster Bear. Woof, woof, woof. (w-f)

20. How did the old Troll cross the bridge? Trip, trap, trip, trap. (tr)

21. Pant like the little puppy who has run too fast. Huh-huh-huh, huh-huh-huh. (h)

22. Be an engine that is pulling a big load. Pouf, pouf, pouf. (p)

23. How does the little drum sound? Rat-tat-tat, rat-a-tat-tat. (r-t)

24. Now make a sound like a big drum. Boom, boom, boom. (b-oo)

25. Sometimes a drum makes another kind of sound. What is it? Rub-a-dub-dub, rub-a-dub-dub. (r-d-b)

26. Have you ever heard a wheel turning so fast that it made a sound? What was the sound? Whirr, whirr, whirr. (wh-r)

27. Let's see how many different ways we can laugh.
Ha! ha! ha!
Hee! hee! hee!
Haw! haw! haw!
Ho! ho! ho!

28. Have you heard the duck on grandfather's farm? What does it say? Quack, quack, quack. (qu)

29. Let us be Indians. Whoopee-whoopee-whoopee. (wh-oo-p)

30. What do the tiny birds in the nest say? Tweet, tweet, tweet. (tw)

31. Make a sound like the sky rocket. Whiz, whiz, whiz, whizzz. (wh, z)

Exercises and Games for Speech Correction.

1. Raggity Doll.

Let's play rag doll,
Don't make a sound!
Fling your arms and bodies
Loosely around.
Let your heads go free!
Be the raggest rag-doll
You ever did see.[40]

This rhyme is to be read to the children by the teacher, then reread while they pantomime it. Direct the pupils to be as limp and relaxed as they can.

2. Bow, wow, wow,
Whose dog art thou?
I'm Tommy Tinker's dog
Bow, wow, wow.

If this exercise is given to several pupils at the same time, it may be used as a game. The first child says "Bow, wow, wow," and asks the question, then goes to the next one until each has had his turn.

3. Bottle, Bottle tell me true,
Who likes butter better than I do?

This exercise may also be used for a game. Seat the children on the floor in a circle. Let one spin a bottle in the center of the circle. While the bottle is spinning, the child says the rhyme. The child to whom the bottle points when it stops replies, "I like butter better than you do." He then is "it", and spins the bottle. The spinner must change the word beginning

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38. Margaret Gray Blanton and Smiley Blanton, Speech Training for Children And The Hygiene of Speech. New York: Century Company. 1918. pp. 210-256.

with "b" each time. Many different words may be used such as, bananas, berries, balls, baskets, boxes, etc. In the use of both exercises stress the "b" sound.

4. Purr, purr, purr, purr,
Pussy says when I rub her.
When I stop she rubs on me,
Rubs and rubs against my knee,
With a purr, purr, purr.

5. If all the world were apple pie,
And all the sea was ink,
And all the trees were bread and cheese,
What would we have to drink?

The above exercise is especially good for training in lip movement.

6. The Squirrel.

Frisky, brisky, hippity hop,
Up he goes to the tall tree top;
Whirly, twirly, round and round,
Down he scampers to the ground.

7. Ding-dong, ding-dong rings the great big bell,
Ting-a-ling, ding, ding, tinkles the tiny bell,
Singing, ringing, ting-a-linging,
Merry, merry bells.

8. Ting-a-ling, ling, ting-a-ling-ling,
I am a tricycle,
Ting, ting, ting.

9. Cling-clang, cling-clang,
Listen to the fire gong ring;
Cling-clang, cling-clang,
Cling, cling, cling.

10. Listen to the cuckoo in the clock,
Coo-koo, coo-koo, coo-koo.

11. Down in the cornfield sits Blackie, the crow,
And the song he sings is "Caw, caw, caw."

12. "Cluck, cluck, cluck," calls Mother Hen to her Chick,
"Cluck, cluck, cluck, Chick come quick."
"Cock-a-doodle-doo," the rooster answers too.

13. There's a great big turkey on grandpa's farm

And he talks all day like this-
"Gobble, gobble, gobble, gobble."

14. The engine rushes by with a choo, choo, choo.
So fast that it almost frightens you.
With a chug, chug, chug, and a choo, choo, choo,
I'd like to ride on an engine
Wouldn't you?

15. "Yoo-oo-oo, yoo-oo-oo,"
Wails the wind in the trees.
"Ee-oo, ee-oo,"
Answers the merry little breeze.

16. "Eek, eek, eek," said the little white mouse.
"Naughty pussy has found my house.
I shall have to tell my mother,
So that she may find another.
Eek, eek, eek."

17. The spotted pig cried, "Wee, wee, wee."
And the lamb went, "Ba, ba, ba."
The field mouse squeaked, "Me, me, me,"
And the black calf said, "Ma, ma."

The barnyard dog began to growl,
And the house dog grumbled too.
The animals were making a lot of noise,
But what could anyone do?

18. The auto's big engine is humming inside,
Mmmmm, Mmmmm, Mmmmm.
And the horn sounds a honk, honk, honk,
As we go for a ride.

These exercises are intended for memory work. When the child is repeating them, watch carefully the enunciation, emphasizing the outstanding sounds in each selection.

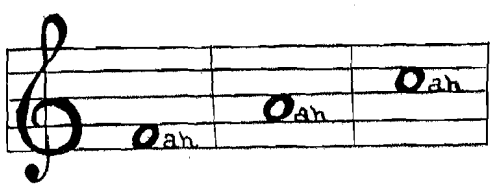
Voice Exercises for the Upper Grades.

These exercises are intended for increasing the volume of the voice, and for drill in pitch, and inflection. There is very often a sameness of tone quality in the voices of children from about the fifth grade age into the high school age.

This may be due in part to incorrect habits acquired in oral reading and to various other causes. Boys of the fifth grade age are usually entering the period of puberty which undoubtedly has much influence on the development of the voice. The adolescent boy's voice lacks stableness of pitch, often being wavery, sliding from one pitch to another--a factor which the boy is unable to control. The training of children's voices should never be forced, but should be directed toward the production of easy, natural tones. The emphasis being placed not on loudness, but on good quality with a pleasing inflection which gives the voice its color. The exercises should be kept as informal as possible, and the instructor should work for open, well rounded vowels and clear, distinct enunciation. Exercises such as the ones given below, in which a certain pitch is to be taken and maintained should first be demonstrated by the instructor, for the pupil will not be able to acquire the desired pitch alone.

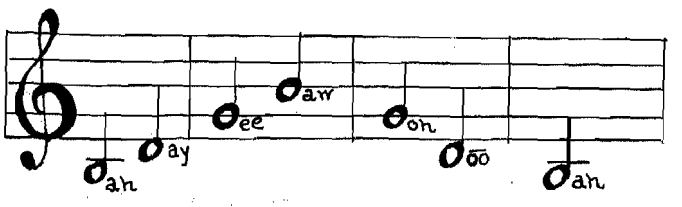
First prepare for the work by giving several breathing exercises (See page 97 ff) then follow with the voice work.

1. Take a deep full breath--be careful that the breath isn't forced--and beginning on an easy low tone vocalize "ah, ay, ee, aw, ow, oo."
2. Take "ah" in three different tones thus:

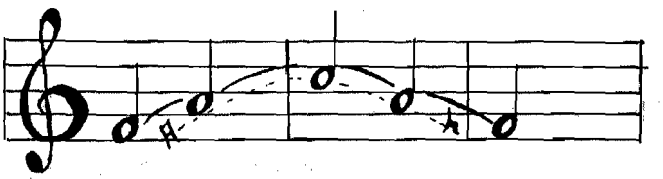


Practice five times.

3. Take "ah, ay, ee, oh, oo, as follows: Practice five times.



4. Take "ah" for four steps sliding the tone from one step to the next, thus:



Perform the same exercise with "oh," "oo," and "ee". Begin the tone quite soft and low, then swell the tone on the upward slide, and soften the voice on the downward slide. Practice five times.

5. Take the syllable "me" letting the voice run upward in a slide then back to the original tone. Imitate a fire siren. Take the same exercise with "ne".

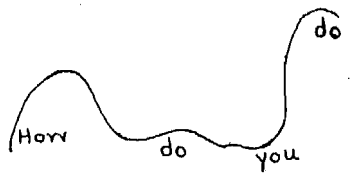
6. Practice the siren drill using the syllable "ah," then "oh," then "oo."

7. Have the pupil hum "me" with lips lightly closed. The vibration should cause a tickling sensation in the lips. Do the same using "ng."

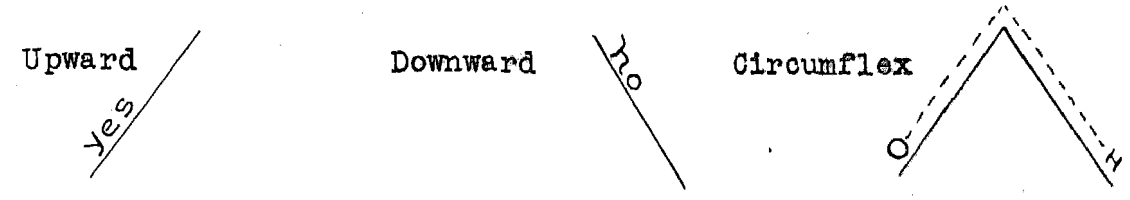
8. The following diagram represents the rise and fall of the normal voice in speaking the phrase "How do you do." (After Scripture)[39] Demonstrate the exercise by first

39. E. W. Scripture, Stuttering and Lisping. The Macmillan Co., 1912. p. 76.

repeating it to the pupil, then ask him to say it.



9. Emphasize the inflection in the following:



Practice the following sentences and words for force, and variety of inflection.

1. O, look at the lovely roses!
2. Roll on, thou deep and dark blue ocean, roll.
3. Say "bowl" letting the word come out with much force--in an explosive manner.
4. Say "go" three times, each time more forcefully than before, thus: Go! Go! Go!
5. Say "hello!" to a friend who is near, to one across the street, to one some distance away, thus: "Hello!" "Hello!" "HELLO!"
6. Speak the following giving the correct thought:

(Boys)	(Girls)
Good Morning, Richard!	Good Morning, Betty!
Are you going fishing?	Is that your new hat?
Steve caught five yesterday.	It's beautiful.

7. Read giving attention to expressing the intended thought.

"Say, Piggy, what you got? Say, Pig, get your ball pants in that bundle? O, you needn't be so smart about your old bundle now. Honest, Piggy, what you got in it?"

(Piggy) "Soft soap, Take a bite. Good for your appetite."

8. Look out for the horses! Look out!

9. What! Our team was beaten? O, I can't believe it.

10. Boy! That's a keen ball. Where did you get it?

11. You say he did? Well, I know he didn't. Haven't I eyes? Can't I see?

12. Sh! ...Here comes the teacher. If she catches us we are in for it.

13. Aren't you brilliant? Really, it is a wonder you're not President! Oh, yes!

14. When is she coming? Really? O, I am tickled to death!

15. I am almost afraid to open the door. Sh...!

Selections for Speech Correction for the Upper Grades.

1. The Blue and the Gray.

By the flow of the inland river,
Whence the fleets of iron have fled,
Where the blades of the grave-grass quiver,
Asleep are the ranks of the dead;
Under the sod and the dew,
Waiting the judgment day,
Under the one, the Blue:
Under the other, the Gray.
--Francis Miles Finch.

(Good for inflection.)

2. Destruction of Sennacherib.

The Assyrian came down like the wolf on the fold,
And his cohorts were gleaming with purple and gold,

And the sheen of their spears was like stars on the sea,
When the blue wave rolls lightly on deep Galilee.
--Lord Byron.

(May be used for consonant and vowel practice.)

3. When banners are waving,
And lances a-pushing
When captains are shouting,
And war-horses rushing,
When cannons are roaring,
And hot bullets flying,
He that would honor win
Must no fear dying.

(Watch the enunciation of "ing" in this selection.)

4. The Sea Gypsy

I am fevered with the sunset,
I am fretful with the bay,
For the wander-lust is on me
And my soul is in Cathay.

There's a schooner in the offing,
With her topsails shot with fire,
And my heart has gone aboard her
For the Islands of Desire.

I must forth again tomorrow!
With the sunset I must be
Hull down on the trail of rapture
In the wonder of the sea.
--Richard Hovey.

(Good for consonant drill.)

5. It's a warm wind, the west wind, full of birds' cries;
I never hear the west wind but tears are in my eyes.
For it comes from the west lands, the old brown hills,
And April's in the west wind, and daffodils.
--Masefield.

(Emphasize W.)

6. The Highwayman.

The wind was a torrent of darkness among the gusty trees,
The moon was a ghostly galleon tossed upon cloudy seas,

The road was a ribbon of moonlight over the purple moor,
And the highwayman came riding--
  Riding-riding--
The highwayman came riding, up to the old inn-door.
--Alfred Noyes.

(For vowel and consonant practice.)

7. The Fairies.

... ...

There are fairies at the bottom of our garden!
  They often have a dance on summer nights;
The butterflies and bees make a lovely little breeze,
  And the rabbits stand about and hold the lights.
Did you know that they could sit upon the moonbeams
  And pick a little star to make a fan,
And dance away up there in the middle of the air?
  Well, they can.

There are fairies at the bottom of our garden!
  You cannot think how beautiful they are;
They all stand up and sing when the Fairy Queen and King
  Come gently floating down upon their car.
The King is very proud and very handsome;
  The Queen--now can you guess who that could be
(She's a little girl all day, but at night she steals away?)
  Well--it's me!

--Rose Fyleman.

(Vowel and consonant practice. Emphasize the inflection and expression of thought.)

8. The Owl and the Bell.

"Bing, Bim, Bang, Bome!"
Sang the Bell to himself in his house at home.
Up in the tower, away and unseen,
In a twilight of ivy, cool and green;
With his Bing, Bim, Bang, Bome!
Singing bass to himself in his house at home.

Said the Owl to himself, as he sat below
On a window ledge, like a ball of snow,
"Pest on that fellow, sitting up there,
Always calling the people to prayer!
With his Bing, Bim, Bang, Bome!
Mighty big in his house at home!

"I will move," said the Owl. "But it suits me well;
And one may get used to it,--who can tell?"

So he slept in the day with all his might,
And rose and flapped out in the hush of the night,
When the Bell was asleep in his tower at home,
Dreaming over his Bing, Bim, Bang, Bome!

... ...

--George MacDonald.

(Read for resonance.)

9. The Apple Blossoms.

Have you seen an apple orchard in the spring?
in the spring?
An English apple orchard in the spring?
When the spreading trees are hoary
With their wealth of promised glory,
And the mavis pipes his story
In the spring!

Have you plucked the apple blossoms in the spring?
in the spring?
And caught their subtle odors in the spring?
Pink buds bursting at the light,
Crumpled petals baby-white,
Just to touch them a delight!
In the spring!

Have you walked beneath the blossoms in the spring?
in the spring?
Beneath the apple blossoms in the spring?
When the pink cascades were falling,
And the silver brooklets brawling,
And the cuckoo bird is calling
In the spring!

Have you seen a merry bridal in the spring?
in the spring?
In an English apple orchard in the spring?
When the brides and maidens wear
Apple blossoms in their hair;
Apple blossoms everywhere,
In the spring?

If you have not, then you know not, in the spring,
in the spring,
Half the color, beauty, wonder of the spring.
No sight can I remember,
Half so precious, half so tender,
As the apple blossoms render
In the spring!

--William Martin

(Bring out the vowel sounds in the above selection.)

10. Go Down to Kew in Lilac-Time.

Go down to Kew in lilac-time, in lilac-time, in lilac-time;
Go down to Kew in lilac-time (it isn't far from London!)
And you shall wander hand in hand with love in summer's wonderland;
Go down to Kew in lilac-time (it isn't far from London!)
The cherry-trees are seas of bloom and soft perfume and sweet perfume,
The cherry-trees are seas of bloom (and oh, so near to London!)
And there they say, when dawn is high and all the world's a blaze of sky
The cuckoo, though he's very shy, will sing a song for London.

... ...

--Alfred Noyes.

(Read for good tone quality. Bring out the vowel sounds.)

The reader will note that there has been no mention made of such devices as the test for eyedness, handedness, the use of the kymograph, and other complicated measures for locating and treating major defects. However, this study does not intend to offer suggestions for the treatment of major defects. Obviously those should be left to the experts and specialists in the field, and even they are not satisfied with their own discoveries, but are working intensively and scientifically to perfect new measures of treatment, and to discover new methods of diagnoses, and to detect new underlying and basic causes for major speech disorders.

In administering the remedial exercises, the teacher must constantly be aware that each child presents a different problem and use the treatments accordingly. And the cooperation of the parents of a speech defective is not only desirable, but necessary for a successful treatment.

SUMMARY AND CONCLUSIONS

Summary.

This study has had four major objectives, namely: to present the status of speech correction in the public schools of United States and Canada, to classify speech defects according to the classifications of speech experts, to offer suggestions, and exercises that might be used by the average grade teacher for the discovery and treatment of speech disorders, and to supply an annotated working bibliography which will afford the classroom teacher with sources of information and further material for use in the correction of minor speech defects.

The survey of the status of speech correction in United States and in Canada is not as specific as the writer desired, due to the fact that the office of the State Superintendent, in many instances, was unable to supply definite data on the subject. However, the situation revealed and the conclusions reached are authentic for the data received. A more conclusive study might have been obtained by securing information from each city school superintendent in each of the larger cities in the major portion of United States. It is doubtful, however, whether such a survey would have conveyed the general trend as successfully as the one used. It was shown in the reports from the forty-eight states that:

1. Nineteen states are carrying on some kind of program of

corrective speech in their schools.

2. The states found to be outstandingly active in the work are California, Wisconsin, Michigan, New York, Pennsylvania, New Jersey, Washington, Massachussets, and Wyoming.
3. Twenty-one states reported that they were doing nothing in the field of speech correction.
4. Reports from eight states were too indefinite to permit anything but general conclusions as to their situation. However, the data seemed to indicate that there was no movement for corrective speech in these states.
5. Eleven states reported that surveys to discover the number of speech defective children within their borders had been made or were in the process of being made.
6. Twenty-eight states had made no surveys along the line of speech disorders, and the remaining nine states gave no data pertaining to surveys.

With regard to those states which are making a concentrated effort to discover the number of physically or mentally handicapped children among their numbers these may be listed as being foremost in the movement: New York, New Jersey, Massachusetts, Maryland, Wisconsin, Michigan, California, Pennsylvania, and Wyoming.

The data indicated that several states which were not doing anything at present were becoming interested in the movement, and planning surveys to ascertain their need for the work.

CANADA.

The data for the survey of speech correction in the public schools of Canada revealed these findings:

1. The movement for speech correction was not a concentrated one throughout the provinces.
2. The province of Ontario was outstanding in the work, in that it had speech correction carried on in three of its principal cities, Toronto, Hamilton, and Ottawa.
3. There have been no recent surveys in Canada to ascertain the need for a program of corrective speech in the public schools.
4. The data indicated that a more careful selection of teachers with regard to their speech habits was required in Canada than in United States.
5. An effort was made to ascertain, from the Canadian data received, whether speech training in the Canadian schools was influenced by American or English methods. From the data on hand, no definite conclusion could be reached. However, the practice of including courses in speech training in the Normal Schools of the provinces tended to reveal something of the influence of English methods in those schools.

Teachers who have had no training whatever in speech pathology do not understand the technical vocabulary of the speech specialist. For that reason, in the classification of speech disorders, those of several authorities were listed, with no attempt at presenting the "best classification," but

rather to choose one simple enough to be usable for the average classroom teacher.

The classification takes into account all the organic defects such as result from malformations, disease, or injury to the speech mechanism; the different dialects--provincial dialect, and foreign dialect; defects of carelessness, namely, letter substitutions, and omissions, slovenly speech, lip-laziness, and negligent lisping; infantile perservation or "baby-talk," and the neurotic defects which include stuttering, level intonation, and aphonia.

The classification is made as simple as possible to enable the average teacher, untrained in speech pathology, to recognize both major and minor defects when they occur among her pupils.

The exercises and suggestions offered in Part III were selected for their ease of application, simplicity of treatment, and, because they were not too technical for the untrained teacher to use. All exercises and tests that required scientific clinical equipment were excluded. In selecting the exercises, some of which are original, others are compiled from various sources, the childrens' interests were kept in mind. With that aim, the exercises were selected for their qualities of interest for the pupil and their applicableness to the defect for which they were intended.

The primary object of the original device designed for a speech test was to secure spontaneity of response as well as an adequate test for speech defects.

The game was tried out on fifty children picked at random from the kindergarten to the intermediate grades. The device was tested to ascertain the amount of time required in its application, the number of errors made by each child in naming the objects or making the required sounds, the number of repeat spins necessary during the game, and the age of the children to whom the test made the most decided appeal. The following findings were recorded:

Average time required for giving the test---8 min. and 13 sec.
Average number of errors made by each child-5
Amerage number of repeated spins----------11
Average age of the children tested----------6 yrs. and 10 mths.

It was found that children ten years old were interested, and wanted to "play the game," while many of those who took the test asked to do it again. The device secured good spontaneity.

Conclusions.

Some conclusions drawn from the foregoing summary of this study are:

1. There is a slow but consistent growth throughout this nation toward the installation of measures for the correction of speech difficulties in the public schools.
2. There is need for more surveys revealing the necessity for the inclusion of a program of corrective speech in the curriculums of the public schools.
3. The fact that "4 per cent of the children of United States

between the ages of five and eighteen are so defective in speech that they require remedial treatment and training"[40] proves the need of speech correction in public schools is an immediate and necessary one.

4. "Eighty-five to eighty-six per cent"[41] of children having speech disorders have been found to have defects that will yield to standard methods of treatment. Therefore, a great help could be given these children if treatment were made possible through the system of the public schools.

5. The average annual cost per child for speech correction has been estimated at ten dollars.[42] Thus, it may be seen that the expense for treatment is not too costly for the results which are attained.

6. No state has any requirement in its school laws which designates that before prospective teachers are issued teaching certificates they must have had some speech training in their college courses. Such a provision would greatly facilitate securing better conditions for the promotion of speech correction work in the public schools.

7. The establishment of elementary courses in the study of speech disorders as a part of the training of primary teachers would enable them to recognize speech defects

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40. Sub-Committee of White House Conference on Child Health and Protection, "Physically Handicapped Speech Defectives." Bulletin issued by White House Conference on Child Health and Protection, Washington, D. C. 1931. pp 3-4.

41. Ibid., pp. 3-4.

42. Ibid., pp. 3-4.

among their pupils, and in many instances, grade teachers thus trained, could treat and cure minor speech defects.

8. A clearer understanding of the nature of speech defects, and their effect upon children would enable grade teachers to more efficiently help such pupils make a normal school adjustment.

9. The educational system of United States should take more cognizance of the need for corrective speech work in the early school grades, and make provision for such work by placing a speech teacher or supervisor in each school system, or by establishing speech centers wherein school children might go for treatment.

10. The employment of mental hygiene, and an attempt to make the schoolroom and playground situations as pleasant as possible for the speech defective child will aid greatly in alleviating his suffering.

11. The situation pertaining to corrective speech work in the schools of Canada is not greatly different from that in United States. However, the work does not seem to be as far advanced in Canada as in our own nation.

12. A more careful selection of teachers with regard to their speech habits is practiced by the Canadian Normal Schools.

PART FOUR

Bibliography

Appelt, Alfred, Stammering and Its Permanent Cure, Chicago Medical Book Company, Chicago, Illinois, 1920, 234 pages.

Describes the symptoms and causes of stammering, and presents methods of treatment for its permanent cure.

Barnard, Raymond H., "The Relation of Intelligence and Personality to Speech Defects;" in ELEMENTARY SCHOOL JOURNAL, Vol. XXX, No. 8, (April, 1930), pp. 604-620.

Gives some very interesting conclusions relative to intelligence, and speech defects. An article of interest to any teacher.

Blanton, Smiley, and Blanton, Margaret Gray, Child Guidance, Century Company, New York, 1927, 299 pages.

Discusses the process of learning to talk, and speech disorders. The classroom teacher should find the work helpful. It is not too technical to be readily understood, and presents a good deal of mental hygiene which is necessary for the training of children.

Blanton, Smiley, and Blanton, Margaret Gray, Speech Training for Children and The Hygiene of Speech, Century Company, New York, 1919, 261 pages.

The title indicates the nature of the work. It is a good book for grade teachers, for it gives precise and easily understood methods for speech training for children

Blanton, Smiley, M. D., "A Survey of Speech Defects;" in THE JOURNAL OF EDUCATION, Vol. VII, No. 10, (December, 1916), pp. 581-592.

Report of a personal survey of all children in the public and parochial schools of Madison, Wisconsin.

Blanton, Smiley, "Why Children Stutter;" in PARENTS MAGAZINE, Vol. VI, No. 11, (February, 1931), pp. 26-27, 61-66.

A simple explanation of stuttering, and the treatment of stuttering.

Blanton, Smiley, "A Workable Bibliography for the Beginner in Speech Correction;" in QUARTERLY JOURNAL OF SPEECH,

Vol. 10, (1924), p. 37.

The article contains a very usable annotated bibliography.

Bluemel, C. W., Stammering and Cognate Defects of Speech--The Psychology of Stammering, G. E. Stechert and Company, Vol. I, 1913, 365 pages.

Quite technical. Speech teachers should find it interesting.

Bluemel, C. S., Stammering and Cognate Defects of Speech, G. E. Stechert and Company, New York, Vol. II, 1913, 391 pages.

In this volumne the writer presents a synoptical view of the various systems employed in Europe, and America for the treatment of stammering. Theories, opinions, and various remedial measures are discussed.

Borden, Richard C., and Bussee, Alvin C., Speech Correction, F. S. Crofts and Company, New York, 1925, 295 pages.

This work is a textbook, and is more valuable to the college teacher of speech than to the grade teacher.

Brummeler, Marguerite, "The Vocal Treatment of Stuttering;" in PEDAGOGICAL SEMINARY, Vol. 25, (March, 1918), pp. 97-104.

The title of the article indicates its nature.

Conradi, Edward, "Speech Defects and Intellectual Progress;" in THE JOURNAL OF EDUCATIONAL PSYCHOLOGY, Vol. III, No. 1, (January, 1912), pp. 35-38.

An investigation of 87,440 school children in six American cities. Findings show relation of speech defects to school progress.

Conradi, Edward, "Psychology and Pathology of Speech Development in the Child;" in PEDAGOGICAL SEMINARY, Vol. III, (1904), pp. 328-380.

The article compares and criticises numerous observations and interpretations that different workers have made of the language development of both normal and abnormal children--a highly technical article.

Dannenburg, Marion L., "How Does Your Child Talk;" in HYGEIA, Vol. 8, No. 2, (February, 1930), pp. 141-142.

Discusses the nature of speech defects, and offers suggestions for their treatment.

Dunlap, Knight, "The Stuttering Boy;" in JOURNAL OF ABNORMAL PSYCHOLOGY, Vol. 12, (1917), pp. 44-48.

Contains a discussion of the underlying causes for stuttering as they have been found in the case of stuttering boys.

Fletcher, John Madison, "An Experimental Study of Stuttering;" in AMERICAN JOURNAL OF PSYCHOLOGY, Vol. XXV, (April, 1914), pp. 201-205.

The study gives a brief history of the treatments for stuttering with the opinions of various writers up to that date.

Fletcher, John Madison, The Problem of Stuttering, Longmans, Green, and Company, 1928, 326 pages.

Discusses many important studies of stuttering, including Parson's study of left-handedness, studies of speech defects and pedagogical retardation, and others.

Gifford, Mabel Farrington, Course of Study for Correction of Speech Defects and Disorders, Department of Education, Bureau of Correction of Speech Defects and Disorders, California, 1930.

The title of the article indicates its contents. It is very usable for any school that is to have a corrective speech course in its curriculum.

Gifford, Mabel Farrington, "Speech Correction Work in the San Francisco Schools;" in QUARTERLY JOURNAL OF SPEECH EDUCATION, Vol. XI, No. 4, (November, 1925), pp. 377-381.

This article outlines the work of speech correction as practiced in the San Francisco schools, and gives the results being accomplished by the work there.

Glassburg, John A., "Overcoming Vicious Speech Habits;" in HYGEIA, Vol. 6, No. 8, (August, 1928), pp. 449-451.

Discusses incorrect speech habits, and suggests methods to correct them.

Gray, Giles Wilkeson, "Straight Talk;" in EDUCATIONAL REVIEW, Vol. 69, (February, 1925), pp. 68-71.

The article recommends the indirect method in the correction of speech disorders, and gives a warning to locate the fundamental causes before treating a defect. A good article for beginners in speech work.

Greene, James S., and Wells, Emilie J., The Cause and Cure of Speech Disorders, The Macmillan Company, New York, 1927, 458 pages.

Not so technical as some texts in speech correction. Contains some very good exercises.

Gullan, Marjorie, Speech Training in the School, Evans Brothers Limited, London, 55 pages.

A very interesting little volume containing some excellent exercises, and presenting speech training from the English viewpoint.

Healy, William, The Individual Delinquent, Little, Brown and Company, Boston, Massachusetts, 1915, 830 pages.

Contains an interesting discussion of stuttering and its relation to delinquency in the individual.

Heltman, H. J., "Some Educational Aspects of Speech Correction;" in QUARTERLY JOURNAL OF SPEECH, Vol. XVI, No. 2, (April, 1930), pp. 221-225.

Discusses speech defects in an understandable way. A very good article for grade teachers who have had no work in speech correction.

Ide, Gladys G., and Broome, Edwin C., Division of Special Education, The Board of Public Education Report, Philadelphia, Pennsylvania, June, 1929, 170 pages.

The report concerns special education including speech improvement classes for the city of Philadelphia.

Langdon, Anna G., Speech Improvement in Seattle, Washington, in Service Bulletin, No. 11, Speech Improvement Number, Vol. III, March, 1928, pp. 9-10.

Outlines the plan of speech improvement used in Seattle.

Laselle, Mary, The Home and Country Reader, Book I, Little, Brown, and Company, 155 pages.

Contains some very good stories, and poems which might be adapted for exercises for the early grades.

Mandel, Sibyl, "The Psychology of Stuttering;" in QUARTERLY JOURNAL OF SPEECH EDUCATION, Vol. XVI, No. 2, (April, 1930), pp. 200-208.

The article defines stuttering and discusses the psychology of the disorder.

Martin, Frederick, Prevention and Correction of Speech Defects, National Education Association Year Book, Vol. 60, 1922, pp. 594-598.

Discusses stammering, stuttering, lisping, cognate defects, etc.

Martin, Frederick, What Are You Doing for the Speech Defective? Reprint from the Bulletin of the University of the State of New York. Service Bulletin No. 15, Vol. IV, April, 1929, pp. 1-5.

The article discusses various defects and suggests type of remedial treatment.

McCullough, Grace A., and Birmingham, Agnes W., Correcting Speech Defects and Foreign Accent, Charles Scribner's Sons, New York, 1925, 232 pages.

The work is not too technical to be useful to the average teacher who does not have special speech training. It contains some very good exercises.

McDougal, William, Outline of Abnormal Psychology, Charles Scribner's Sons, New York, 1926, 572 pages.

The writer explains stuttering in the terms of a phobia pp. 278-304.

McDowell, Elizabeth, The Educational and Emotional Adjustments of Stuttering Children, Teachers College Columbia Publications, New York, 1928, 59 pages.

The title indicates the nature of the article which is an interesting study for those who are interested in the study of speech disorders.

Meader, Emma Grant, Teaching Speech in the Elementary School, Teachers College Columbia, New York, 1928, 129 pages.

A dissertation based on a study of speech in the elementary schools of United States, and England. Some very interesting comparisons are made in this study.

Meredith, A. B., Keator, Maude, and Others, A Discussion of the Methods and Results of the Biennial Enumeration of Educationally Exceptional Children in Connecticut, State Board of Education, Hartford, 1928, 55 pages.

The contents of the Bulletin is indicated by the title.

Michigan State Board of Library Commissioners. Poems Arranged by Grades, and Recommended for Memorizing and Reading,

Lansing, Michigan, 186 pages.

Contains good material which may be adapted for exercises in speech training.

Milne, A. A., When We Were Very Young, E. P. Dutton and Company, New York, 1924, 100 pages.

Contains poems that children will love, and which can be easily adapted for exercises.

Morgan, John B., The Psychology of the Unadjusted School Child, Macmillan Company, New York, 1924, 300 pages.

Every teacher should read this book which concerns the child who cannot make the necessary adaptations to school life.

Morton, Katharine A., Biennial Report of the State Department of Education of Wyoming, 1926-1928, 112 pages.

A report of the status of special education, and speech correction in Wyoming.

Pillsburg, Walter B., and Meader, Clarence L., The Psychology of Language, D. A. Appleton and Company, 1928, 306 pages.

A very scientific work useful to the trained speech teacher.

Richardson, Frank Howard, "The Nervous Child--Speech Disturbances;" in HYGEIA, Vol. 5, No. 7, (July, 1927), pp. 353-355.

A study of speech defects in connection with the nervous child.

Robbins, Samuel D., "A Pelthysmographic Study of Shock and Stammering in a Trephined Stammerer;" in AMERICAN JOURNAL OF PHYSIOLOGY, Vol. 52, (May, 1920), pp. 1-24.

A highly technical article interesting to those who are specializing in the treatment of speech disorders.

Root, A. R., "A Survey of Speech Defectives in the Public Elementary Schools of South Dakota;" in ELEMENTARY SCHOOL JOURNAL, Vol. XXVI, No. 7, (March, 1926), pp. 531 ff.

The nature of the article is indicated by the title. A questionnaire study was made of 14,072 pupils. While not as authentic as a personal investigation would have been, the study is worthwhile, and has some interesting conclusions.

Root, A. R., "Special Education and the Speech Defective;" in EDUCATIONAL ADMINISTRATION AND SUPERVISION, Vol. XIII, No. 4, (April, 1927), pp. 255-265.

The purpose of this article is to present information on the questions: To what extent does the speech defective constitute a problem in special education to the educational system? What is being done by public school education in the way of a definite program for this class of abnormal pupils? What is the apparent success of such programs?

Scripture, May Kirk, and Glassburg, John A., "The Hygiene of Speech;" in THE JOURNAL OF THE NATIONAL EDUCATION ASSOCIATION, Vol. XIV, No. 9, (December, 1925), p. 269.

The title indicates the nature of the article. It offers some excellent suggestions for the treatment of speech defective children.

Scripture, E. W., Stuttering and Lisping, Macmillan Company, New York, 1912, 251 pages.

This book contains some very good exercises. However, it is not recent enough to contain the newer methods of treatment for stuttering.

Stinchfield, Sara M., Speech Pathology with Methods in Speech Correction, Expression Company, Boston, Massachusetts, 1928, 266 pages.

The first part of this text is quite technical, however, it contains some of the finest exercises obtainable for speech correction in the early grades.

Stoddard, Clara B., "A Program of Speech Education for the Elementary Grades;" in QUARTERLY JOURNAL OF SPEECH EDUCATION, Vol. XI, No. 2, (April, 1925), pp. 164-169.

The article contains excellent games and exercises for the lower grades.

Swan, Fredrick W., Improved Methods of Treatment of Atypical Children as Applied to Speech Defectives in Boston Schools, Pamphlet, March, 1930, 5 pages.

A lecture delivered at the Second Conference of Elementary School Principals, Amherst, March 26, 1930. It gives a brief history of speech correction work in the Boston schools, and an outline of the manner in which the work is carried on in Boston.

Terman, Lewis M., and Almack, John C., The Hygiene of the

School Child, Houghton, Mifflin Company, New York, 1929, 518 pages.

This book should be read by every public school teacher. Chapter XVIII, "Speech Defects and the Hygiene of the Voice," is of special interest to speech teachers. The chapter summarizes some of the best studies that have been made in research pertaining to speech disorders.

Thompkins, Ernest, "Stammering and Its Extirpation;" in PEDAGOGICAL SEMINARY, Vol. XXIII, (June, 1916), pp. 153-154.

An interesting article on stammering. Suggests the attitude that one should assume toward the stammerer.

Travis, Edward Lee, "Muscular Fixation of Stutterer's Voice Under Emotion;" in SCIENCE, Vol. LXII, No. 1600, (August, 1925), pp. 207-208.

The article deals with experiments with stutterer's and non-stutterer's under emotional stimulus. An excellent article which should interest students of speech.

Wallin, Wallace, J. E., A Brief Survey of Special Education in the Schools of Baltimore, Department of Education Bulletin, Baltimore, Maryland, 1929, 57 pages.

Contains the findings of a survey of the Baltimore Public Schools.

Wallin, Wallace, J. E., "A Census of Speech Defectives Among 89,057 Public School Pupils;" A Preliminary Report, in SCHOOL AND SOCIETY, Vol. III, No. 58, (February, 1916), pp. 213-216.

The questionnaire method was used in this study to ascertain the following facts: The number of stutterers, lispers, and other types of speech defectives, with their sex, age, years of pedagogical retardation, degree of severity of the defect, age of onset, ascribed cause, and relation of left-handedness to the defect. A very comprehensive study.

Ward, Ida C., Defects of Speech Their Nature and Cure, E. P. Dutton and Company, New York, 1925, 79 pages.

This work contains some interesting methods of correction as well as good exercises.

Watson, John B., Psychology from the Standpoint of a Behaviorist, J. B. Lippincott Company, Philadelphia, Pennsylvania, 1919, 445 pages.

Chapter IX discusses the anatomical basis of language.

West, Robert W., Diagnosis of Disorders of Speech--A Clinical Manual of Methods and Apparatus, H. C. Wetherwood, Madison, Wisconsin.

The work is most valuable to the teacher of speech pathology or the director of a clinic.

Young, H. H., "Speech Clinic Case with Mis-conduct as a By-product;" in JOURNAL OF APPLIED PSYCHOLOGY, Vol. 9, (December, 1925), pp. 371-381.

The nature of the article is indicated by the title.

APPENDIX

APPENDIX

The following is a duplicate of the letter which was sent to each of the State Superintendents of Instruction in United States and to the Ministers of Education in each of the nine provinces in Canada. The problem being to ascertain the status of speech correction in the elementary and secondary schools of United States and Canada.

1304 Market Street,
Emporia, Kansas,
June 21, 1930.

The State Superintendent of Instruction,
Bureau of Education.

My dear Sir:

What are you doing in the field of speech correction in the schools of your state? Are you carrying out a program of corrective speech in your public schools? If so, how is it being accomplished?

Has there been a recent survey (say, in the last five years, or quite recently) of defective speech in your schools? If there has been such a survey, can you give me the statistical results?

Are the teachers of your public schools required to take a college course in speech training?

Very truly yours,

Fifty-six such letters were sent out and fifty-six replies were received. Below are excerpts quoted from the letters which the writer received.

ALABAMA.

The original letter was returned with "No" written after each question asked.

ARIZONA.

Phoenix, Arizona,
July 17, 1930.

The only work being done in the state is being done by the individual schools.

C. O. Case,
Superintendent.

ARKANSAS.

Little Rock, Arkansas,
June 26, 1930.

We do not have a program in this state for corrective speech in the public schools. No survey has been made of defective speech in our public schools nor are the teachers required to take a college course in speech training.

H. T. Steele,
Assistant State Superintendent.

CALIFORNIA.

Sacramento, California,
July 21, 1930.

Your questionnaire relative to work being done in California public schools in the field of speech correction was forwarded to Mrs. Mabel F. Gifford, Chief of our Bureau of Speech correction, at 435 Powell Street, San Francisco.

Walter E. Morgan,
Chief, Division of Research
and Statistics.

Note: Mrs. Gifford's reply is quoted, Part I, in the body of the thesis.

NORTH CAROLINA.

Raleigh, North Carolina,
June 25, 1930.

I regret to say that we do not have in available form the information which you desire.

J. Henry Highsmith,
Director Division School Inspection.

SOUTH CAROLINA.

The original letter was returned with "No" written after each question.

COLORADO.

Denver, Colorado,
June 24, 1930.

No state survey of defective speech. Local schools have such classes. No data in State office.

Office of the State Superintendent
of Instruction.

CONNECTICUT.

Hartford, Connecticut,
June 25, 1930.

So far as I know no concerted effort is being made to do speech correction work in the schools of this state. I am positive that the members of this staff are doing nothing concerted in that line. We have made several surveys as will be indicated in the bulletin which we are sending you.... A similar survey of educationally handicapped children is now in the process of being collected.... You will note that the work that has been done so far has been done with registered elementary school pupils in the public schools. The teachers of our public schools are required to take no college courses whatever of any type, which, of course, would mean that they are not required to take courses in speech training.

Maude Keator,
Director.

NORTH DAKOTA.

Bismarck, North Dakota,
July 17, 1930.

The North Dakota State Course of Study for elementary schools contains three directions for correcting speech. Page 123, intermediate grades, mentions "Correct speech should be carried into every recitation"...."Special drill in the eradication of these errors of speech should be given in the language classes." Page 125, "Phonograph records which give excellent examples of correct speaking prove a great inspiration

to children. Drills in pronunciation of words with which the children apparently have difficulty should be given frequently." Followed by a list of twenty-five words. Page 135, "Pronounce correctly words and groups of words such as history, library, just, at all, don't you, give me; words ending in t, d, g; words beginning with y, and j; other words of similar nature that are habitually mispronounced in the community."

No course in speech training is required for teachers. There has been no survey of defective speech made in the state.

Bertha R. Palmer,
Superintendent.

SOUTH DAKOTA.

Pierre, South Dakota,
June 26, 1930.

We are not carrying out a program of corrective speech in the public schools of South Dakota. There has been no recent survey of defective speech in this state either in the secondary or elementary schools.

E. C. Giffen,
Superintendent.

DELAWARE.

Dover, Delaware,
June 25, 1930.

....Only in the City of Wilmington are there schools in Delaware that undertake work in the field of corrective speech. That is more than can be done by the classroom teacher. We have no surveys available.

H. V. Holloway,
State Superintendent of Public
Instruction.

FLORIDA.

In the reply received from the office of the State Superintendent, data were given for remedial English work, but not for work in speech correction. "No" was the answer given to the question "Are the teachers of your public schools required to take a college course in speech training?"

GEORGIA.

Atlanta, Georgia,
June 25, 1930.

This office is not informed as to just what is being done in the way of corrective speech in the schools of Georgia because each school system in this State is a law unto itself so far as its curriculum is concerned beyond the fundamentals. I am sure, however, many of the school systems are doing something in this line, probably with their own teaching force who study this problem in the summer schools. No survey of defective speech has been made.

Teachers in Georgia's public schools are not required to take a course in speech training.

Gordon G. Singleton, Director,
Div. Information and Statistics.

NEW HAMPSHIRE.

Concord, New Hampshire,
July 16, 1930.

New Hampshire has no organized program of corrective speech work in the public schools of the state nor are its teachers required to take a college course in speech training.

No recent survey has been made of speech defects except as such are incidentally reported in connection with our regular physical examination. We have, however, had such an inquiry under consideration and shall probably make it this fall

James N. Pringle,
Acting Commissioner.

IDAHO.

Boise, Idaho,
June 26, 1930.

....At the present time Idaho is not doing any special work in this line, however, a great deal is being accomplished in our school for the deaf and blind at Gooding, Idaho.

You may receive information pertaining to a survey which was made in this state recently by writing to Mrs. Emory

Doane, Grangeville, Idaho.

Myrtle R. Davis,
State Superintendent of Public Instruction.

Note: No reply was received from Mrs. Doane.

ILLINOIS.

Springfield, Illinois,
June 24, 1930

....I suppose it is true that practically every teacher engaged in public school work in Illinois has a program in language and tries to correct defective speech.

I regret to say that there has been no recent survey of work of this kind.

All teachers are required to have special preparation in English before they can teach in the public schools of the State. It may be that you would not call that a course in speech training.

W. S. Boothe,
Assistant Superintendent.

INDIANA.

Indianapolis, Indiana,
July 1, 1930.

....I am unable to give you any information concerning any definite program of defective speech in our state. Nothing along this line has been planned on a state wide basis. There is no survey of this work with which I am familar.

Virgil Stinebaugh,
Director of School Inspection.

IOWA.

Des Moines, Iowa,
June 25, 1930

....The State of Iowa has no program of corrective speech in the public schools. A few of our larger cities are conducting speech correction classes, but we have no data as to their extent.

This department is at present in the midst of a state-wide survey of physically and mentally handicapped children, which includes those with defective speech. The results of this will not be available until next fall.... Because we have no organized work in speech training our laws and regulations make no reference to special preparation for teachers of such subjects.... We are anticipating expansion of this type of work in our state in the future.

Agnes Samuelson,
Superintendent of Public
Instruction.

NEW JERSEY.

Trenton, New Jersey,
June 27, 1930.

....In New Jersey, each municipality has control of its own course of study, so we have no State program for defective speech correction. Many of our towns are doing splendid work along this line.... Newark, Summit, Jersey City, and Trenton.

We have had no survey in our state along this line. Neither are our teachers required to take a college course in speech training.

John A. Skargo,
Assistant Commissioner of
Education.

KANSAS

Topeka, Kansas,
June 23, 1930.

There is no organized movement in the field of corrective speech in the schools of Kansas. This department does not sponsor such a program.

....It is quite possible that in some of the larger cities of the state some program of this sort is being attempted.

Geo. A. Allen, Jr.,
State Superintendent.

Wichita, Kansas,
July 6, 1931.

We do not have a department for corrective speech in our

schools. The only special work which we are doing is for the mentally defective, the deaf, the hard of hearing, and pre-tubercular.

L. W. Mayberry,
Superintendent.

Topeka, Kansas,
July 3, 1931.

....We have one teacher of corrective speech who works chiefly in the elementary and junior high schools. She goes from building to building making appointments with these children and they are excused from classrooms for a certain length of time and are given instructions and advice regarding home practice.

A. J. Stout,
Superintendent of Schools.

KENTUCKY.

Frankfort, Kentucky,
June 27, 1930.

There are no Kentucky Statutes relating to curative speech.

G. Young,
Assistant Superintendent.

LOUISIANA.

Baton Rouge, Louisiana,
August 7, 1930.

....As no provision has been made for speech correction in the schools of this State, we are unable to answer the questions asked in your letter.

Rex Beard,
Secretary to State Superintendent.

MAINE.

Augusta, Maine,
June 26, 1930.

We have not attempted any work at all in the field of corrective speech in the schools of Maine, neither has there

been any recent survey of the need for such a program in our public schools.

Edward E. Roderick,
Deputy Commissioner.

MARYLAND.

Baltimore, Maryland,
June 27, 1930.

....I am sending you a copy of Dr. Wallin's "Brief Survey of Special Education in the Public Schools of Baltimore," together with a short article on speech defective classes.

While teachers of speech classes are not required to take college courses, they are required to take courses in speech training.

Elsie M. Saulsbury,
Administrative Assistant.

MASSACHUSETTS.

Boston, Massachusetts,
July 17, 1930.

We do not have a survey of the work which is being done in the State. Teachers are not required to take college courses in speech training. The only cities to my knowledge offering training in speech defects as a part of the public school course are Boston, Cambridge, and Lynn. I am enclosing a report which was given at one of our recent conferences by Headmaster Swan of the Abraham Lincoln School, Boston.

A. B. Lord,
Supervisor of Special Schools
and Classes.

NEW MEXICO.

Santa Fe, New Mexico,
June 25, 1930.

....We have no material on speech training in this office.

Atanasio Montoya,
Superintendent of Public
Instruction.

MICHIGAN.

Lansing, Michigan,
June 27, 1930.

The law in Michigan is silent on speech correction work in the public schools. Under the permissive clause, however, any board of education may provide this instruction but the same would be done on their own responsibility and outside of state supervision. Several cities in the state, notably Detroit, Highland Park, Grand Rapids, and Jackson, are carrying on speech correction work. We do not have a survey covering their field of Special Education.

....We are making an intensive survey covering all phases of Special Education after schools open this September.

John J. Lee,
Director.

MINNESOTA.

Saint Paul, Minnesota,
July 9, 1930.

....There has been no survey in our public schools in regard to speech defectives. I am enclosing the figures for the speech correction classes for the year 1928-29. We have not yet compiled the figures for last year, 1929-30.

The teachers are required to take college work in preparation as indicated in the rules for certification.

Kenneth Nilson,
Director of Special Classes for
Defectives.

MISSISSIPPI.

Jackson, Mississippi,
July 1, 1930.

We do not have a formal organized program for corrective speech work in the schools of our state.

We have not had a survey of defective speech in the public schools of the state.

M. E. Morehead,
Assistant State Superintendent.

MISSOURI.

Note: Missouri sends merely a booklet of the Rules and Regulations of the State Department of education. No mention is made pertaining to speech correction.

MONTANA.

Helena, Montana,
July 17, 1930.

Any program for corrective speech in the public schools of the State of Montana is carried on by each individual district.

Elizabeth Ireland,
Superintendent of Public
Instruction.

NEBRASKA.

Lincoln, Nebraska,
June 30, 1930.

So far as I know, nothing is being done outside the cities of Lincoln and Omaha in carrying out a program of corrective speech in the schools of Nebraska.

Charles W. Taylor,
State Superintendent.

NEVADA.

Carson City, Nevada,
June 25, 1930.

There is no special program outlined in this State for corrective speech.

Mrs. C. H. Luke,
Office Deputy.

OHIO.

Columbus, Ohio,
July 8, 1930.

....Concerning what Ohio is doing in the field of corrective speech, I may say that as a State Department we are not

functioning in this regard. Some of the cities have local programs. Among these are Cleveland, Cincinnati, Toledo, Columbus, and I believe some work has been done in Dayton. So far as I know, there has never been a definite state survey to determine the amount of defective speech in the public schools. I cannot answer your question in regard to the standards set up by the local communities for teachers who expect to teach in this field.

Hazel C. McIntire,
Director of Special Classes.

OKLAHOMA.

Oklahoma City, Okla.,
June 23, 1930.

We wish to advise that Oklahoma is not carrying out a program of corrective speech in the public schools.

Clay W. Kerr,
Assistant Superintendent.

OREGON.

Salem, Oregon,
June 26, 1930.

....There has been no official act taken in the State of Oregon relative to corrective speech and programs dealing with that aspect of education.

C. A. Howard,
Superintendent of Public
Instruction.

PENNSYLVANIA.

Harrisburg, Pennsylvania,
June 26, 1930.

.....There are several school districts in our State carrying out a program for corrective speech. These districts are

Philadelphia	with 55	corrective	speech	teachers;
Pittsburg	" 5	"	"	"
Reading	" 5	"	"	"
Johnstown	" 1	"	"	"
Erie	" 1	"	"	"
York	" 1	"	"	"
Cheltenham Twp.	1	"	"	"

In 1919 when Dr. Finegan reorganized the Department of Public Instruction, he assigned a supervisor of speech correction to the Special Education Section. Miss Peppard, now Mrs. Moore, devoted all her time to the institution of corrective speech training throughout the State. Miss Peppard trained teachers and conducted demonstrations and clinics. Late in 1924....Miss Peppard left the Department to engage in private speech work.

There has been no recent survey in either the secondary or the elementary schools to ascertain the incidence of speech defects.

Frank H. Reiter,
Director of Special Education.

RHODE ISLAND.

Providence, Rhode Island,
July 8, 1930.

In Rhode Island, courses of study are prescribed by the town or city school committee in charge of each system.

No state drive for corrective speech has been undertaken.

Walter E. Ranger,
Commissioner of Education.

TENNESSEE.

Nashville, Tennessee,
June 24, 1930.

Regarding speech training, you are advised that nothing has been done or is being done in this State in that particular line.

Teachers are not required to take a college course in speech training.

James A. Roberts,
Assistant Commissioner.

TEXAS.

Austin, Texas,
June 24, 1930.

There is no program of corrective speech in the public schools of Texas. We have no data here on what may have been

accomplished in any of our schools in this work.

Mary Nash,
Second Assistant,
State Superintendent.

UTAH.

Salt Lake City, Utah,
June 25, 1930.

....Corrective speech is cared for in English classes as well as in classes of speech. We have comparatively few if any classes giving only the special work mentioned in your letter of the 21.

A. C. Mathison,
Assistant Superintendent.

VERMONT.

Montpelier, Vermont,
July 2, 1930.

I regret to say that we are doing no special work in the field of corrective speech.

The teachers of our public schools are not required to take any special college training in this line.

Charlotte M. Lowe,
Secretary to the Commissioner.

VIRGINIA.

Richmond, Virginia,
July 17, 1930.

I am writing to advise that no special program of corrective speech has been carried out in our public schools. Of course, our elementary course of study provides for a definite program of correct speech training in each grade through oral and written composition. This program is also carried through our English course of study for high schools, and a rather definite procedure is set up for guiding teachers in this program. ....No campaign of corrective speech has been carried on in our schools as such.

As far as our knowledge goes, no survey of defective speech has been made in Virginia.

Thomas D. Eason,
Secretary State Board of Education.

WEST VIRGINIA.

Charleston, West Virginia,
July 22, 1930.

I regret to advise you that nothing is being done in West Virginia in the field of corrective speech in the public schools.

T. P. Hill,
Assistant, Director of
Rehabilitation.

WASHINGTON.

Olympia, Washington,
July 18, 1930.

....There is some work in corrective speech in this state. Tacoma has a department. Special training on the part of the teacher is required. It is safe to say that Seattle and Spokane have such departments also. There has been no survey made by this state, however.

There are state schools for the deaf who need speech training. Some cities of the first class maintain such schools also.

Jeannette Donaldson,
Department of Elementary
Supervision.

WISCONSIN.

Madison, Wisconsin,
July 9, 1930.

....The State of Wisconsin has been giving some aid and special education to children with speech disorders for many, many years. In 1885 the legislature appropriated a sum for the education of deaf children in day schools. These day schools for the deaf developed rapidly the first ten to fifteen years and very early in their history children with no speech or

seriously defective speech came into these schools for help. But not until 1913 were they provided for by the legislature. Up to this time there were one or more children receiving special help because of defective speech in every day school for the deaf in the state. Following this the number receiving special help increased rapidly.

At the present time we have classes for the correction of speech disorders in twenty of the cities and towns of the State with an enrollment of about 6,000 pupils and 35 teachers. The organization of the work on the whole is uniform. The teacher goes from school to school meeting children in periods of fifteen to forty-five minutes in groups of one to eight or ten. She usually spends half a day in a school and meets children in about four schools. In many places it is impossible for the teacher or teachers to cover the entire school system. They usually work in the school for a year and in some places it is possible that certain schools will be carried on from year to year for an indefinite time. There are only two or three cities in the State where it is possible for us to cover, in any satisfactory manner, the entire system. In the other cities the teachers work in one group of schools one year and pass on to another group the next year. The average teaching load at any one time is from 100 to 150 pupils, but many of our teachers enroll as high as 200 pupils during the year.

Since I have been in the State the work has been organized in two or three cities. One or more schools in the city would be surveyed in order to show the need of the work. These results have not been published....In March or April the sub-committee of the Whitehouse Conference on the Child Defective of Speech made a thorough survey of the schools of Madison. ...This information will not be ready for distribution for some time.

Lavilla A. Ward.
Supervisor--Deaf, Blind and
Correction of Speech Disorders.

WYOMING.

Cheyenne, Wyoming,
June 24, 1930.

I am sending you under separate cover a copy of our last Biennial Report....

Beatrice McLeod,
State Director of Special
Education.

Note: Data from this Report are quoted in Part I in the body of the thesis.

NEW YORK.

Albany, New York,
July 2, 1930.

....Except in a few localities in the State no systematic program has been adopted for attention to defective speech. Excellent work is being done in Schenectady, New York. In this city all children on first entering school are given a test as to their speech and when found with any defect are placed at once in charge of a special teacher for that work. In Jamestown they have a special teacher who deals more especially with individual cases as found in the school. From 150 to 200 children are always under the direction of their special speech teacher. Some very good results have been accomplished by this plan. In New York City a more extensive plan has been in operation for several years. There they employ quite a staff of special teachers for defective speech.

....In our general program of school medical inspection and health service we have for fifteen years given some attention to defective speech and have stimulated an increasing amount of attention to this condition. Several times I have attempted to get an Assistant to take charge of this phase of our work but thus far have failed to do so.

Our pupil teachers are not given any special instruction in this work, but I hope some day we will be able to introduce it into all our teacher training institutions. Personally I have been greatly interested in speech improvement as I have seen some remarkable cases re-educated, retrained, and restored to a normal condition.

Wm. A. Howe,
Chief, Medical Inspection Bureau.

EDMONTON, ALBERTA, CANADA.

Edmonton,
June 30, 1930.

....The Department of Education for the Province of Alberta is carrying on no special campaign with regard to corrective speech in the schools of the Province. The Normal School staffs demand that each student who wishes to enter the teaching profession must have a good knowledge of the English language and can speak it fluently and correctly. The question

of corrective speech is dealt with in the Normal Schools and the Inspectors call attention to any defect in the teachers' speech when making their regular report.

There has been no survey along this line in the schools of Alberta, and no Literature published with regard to this question.

J. T. Ross,
Deputy Minister of Education.

VICTORIA, BRITISH COLUMBIA, CANADA.

Victoria,
June 30, 1930.

No definite programme of corrective speech is followed in our schools, nor has any recent survey of speech defects been made either in the secondary or elementary schools.

Careful attention is given in our Training Schools for teachers to the matter of correct speech, but the teachers are not required to take a college course in speech training before they are eligible to teach.

S. J. Willis,
Superintendent of Education.

FREDRICTON, NEW BRUNSWICK, CANADA.

Fredricton,
June 27, 1930.

....The only work being done in the field of corrective speech in the schools of this Province is that given by the teachers in teaching English Grammar and Composition. The teachers, however, correct wrong forms of speech in all the phases of their work in the public schools.

No recent survey has been made of speech defects in either our secondary or elementary schools.

Teachers in our schools are not required to have a college course in speech training before they are eligible to teach.

W. S. Carter,
Chief Superintendent.

WINNIPEG, MANITOBA, CANADA.

Winnipeg,
July 4, 1930.

....We pay special attention to the matter of corrective speech in our Normal Schools with a view to having our teachers well trained in that respect.

We have never instituted any survey of speech defects in our schools.

R. Fletcher,
Deputy Minister of Education.

HALIFAX, NOVA SCOTIA, CANADA.

Halifax,
June 28, 1930.

....There has been no recent survey of speech defects in the public schools of Nova Scotia. Whatever is done along this line is done while the teachers are in training at the Provincial Normal College. Under separate cover I have sent you a copy of the Normal College Calendar. From it you will gather just what is attempted in respect of the correction of speech defect.

On the whole there is no special course in English training in the schools of Nova Scotia.

H. R. Skinner,
Assistant Superintendent of
Education.

TORONTO, ONTARIO, CANADA.

Toronto,
July 24, 1930.

....I now enclose, for your information, copy of a memorandum which may be of some interest to you in connection with the preparation of your thesis.

MEMORANDUM RE SPEECH CORRECTION WORK, ONTARIO.

There is a provincial school at Belleville for the teaching of deaf mutes. The age of admission is seven years. A

small fee in charged payable by the parents or municipalities so that no deaf mute is refused an education.

There are three classrooms, accomadating sixteen pupils each, in Toronto for the deaf under ordinary school regulations.

In Toronto there are two, in Hamilton one, and in Ottawa one, speech correction teachers who take small groups of pupils in various schools throughout the city.

The only teacher training along that line in Ontario is provided by a five weeks' summer course given once every three years with the summer course for auxiliary teachers. The teachers at Belleville are mostly graduates of English of American institutions. Most of the public school teachers engaged in this work have received training either at Belleville or in other institutions outside the Province.

There has been no scientifically organized survey in speech defects throughout the Province of such a nature that the results would be valuable for statistical purposes.

A. H. W. Colquhoun,
Deputy Minister of Education.

CHARLOTTETOWN, PRINCE EDWARD ISLAND, CANADA.

Charlottetown,
June 24, 1930.

....No specially designated program for speech except English language and grammar.

No survey has been made. Teachers are not required to have special college course in speech training.

H. H. Shaw,
Superintendent of Education.

QUEBEC, PROVINCE OF QUEBEC, CANADA.

Quebec,
July 18, 1930.

....We have no definite programme of speech correction in the schools of this Province, but the teachers are expected to correct faulty speech whenever it is used. Teachers in training receive speech training in English. They also receive instruction in phonetics, pronunciation, intonation, and fluency in the course in French.

There has been no recent survey to discover speech defects in the children attending the schools of this Province.

W. F. Percival,
Director of Protestant Education.

REGINA, SASKATCHEWAN, CANADA.

Regina,
July 3, 1930.

....A definite program of corrective speech is not being carried out in this Province nor has there been a survey of speech difficulties in our schools. Speech training is carefully carried on in the normal schools while the teachers are taking their professional course.

Augustus Ball,
Deputy Minister.

The following letters are excerpts from communications received in answer to inquiries by the writer.

New York City,
Bord S. S. "DE GRASSE,"
August 12, 1930.

....Speech correction is gradually being placed on the curriculum of schools throughout the country. There has been a great demand for information this summer. There will be a greater demand next year.

You may quote me ad libitum.

Dr. Frederick Van Doren Martin,
Director Clinic for Speech Defects,
Ithaca, New York.

Mount Holyoke College,
South Hadley, Mass.
July 12, 1930.

....I should say, first of all, that you should ask some Psychologist who is engaged almost exclusively in the Psychometric Measurements in Clinical use, for a fair opinion of testing material. We do not attempt to try out all tests that come out, and in fact I fear I rather tend to keep to those

which I know best, and can give most accurately, in the short time available, for my own testing work. My only testing is with an occasional speech case, and with children who come to the Child Guidance Clinic in Holyoke or Springfield once a week in the forenoon. You should not take my judgement therefore on mental tests. I am a specialist in speech tests, and of course use the Blanton-Stinchfield tests for such testing, as I am working to improve their standardization for the publishers, C. H. Stoelting & Co. of Chicago. I can speak with more assurance about speech testing, therefore, than about mental tests.

I use the Stanford Revision for children of three years and over, generally, and sometimes the Stanford Terman Group Tests if I wish to test an entire grade. For children under three years of age I use the Kuhlman tests, tho I understand the Merrill-Palmer Tests are more recent and better in some ways. I do not know the publishers however. For deaf children I use the Pintner-Patterson Manual, "A Scale of Performance Tests."

June Downey gives some motor tests for speech defectives, and Alice Descoudres, in France, used some mental tests for her speech cases, but I have not found such tests of any aid to me, in diagnosing the exact speech difficulty. I use the Blanton-Stinchfield Tests because they are intended for just that purpose,--to enable one to find the articulatory difficulty in whatever condition the speech may be,--and to get at the Vocabulary thru the vocabulary test, and to find out the speed in motor speech reaction and thinking, thru a Silent Reading test, an Oral Reading test and a Spontaneous speech test.

Sara M. Stinchfield,
Associate Professor,
Dept. of Psychology,
Mount Holyoke College.

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