UNDESIRABLE SPEAKING HABITS AND SPEECH DEFECTS
OF ELEMENTARY GRADE PUPILS IN THE ALBANY,
TEXAS, PUBLIC SCHOOL

APPROVED:

[Signatures]

Major Professor

Minor Professor

Director of the Department of Education

Chairman of the Graduate Council
UNDESIRABLE SPEAKING HABITS AND SPEECH DEFECTS
OF ELEMENTARY GRADE PUPILS IN THE ALBANY,
TEXAS, PUBLIC SCHOOL

THESIS

Presented to the Graduate Council of the North
Texas State Teachers College in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

Jerry Alice Pittman, B. S.

Hico, Texas

August, 1939

76266
TABLE OF CONTENTS

LIST OF TABLES .................................................. iv

CHAPTER

I. INTRODUCTION ............................................. 1

II. SURVEY OF SPEECH DEFECTS IN THE ELEMENTARY
    GRADES ..................................................... 8

III. REMEDIAL METHODS AND MATERIAL .................. 13

IV. SUMMARY, FINDINGS, CONCLUSIONS, AND
    RECOMMENDATIONS ........................................ 46
<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Speaking Defects in the Elementary Grades of the Albany, Texas, Public School</td>
<td>9</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

Statement of Problem

The problem of this thesis is a study of undesirable speaking habits and speech defects of pupils in the elementary grades of the public school in Albany, Texas, with suggested remedial measures.

Origin of Problem

The need for making this a study arose from the writer's belief in the philosophy which implies that if students are to become working, effective forces in their respective communities, the school must help them to form desirable speaking habits for the new and enlarging activities in which they will engage. Speaking is humanity's universal means of communication. It is not enough to know what to say; we must know how to say it. For centuries, understanding people have realized that their success was measured equally by what they said and how they said it. More than two thousand years ago, Demosthenes, Athens' most famous orator, devised methods to improve his elocution. He practiced speaking by the seashore, and learned to make himself heard over the roar of the ocean waves. He placed pebbles in his mouth, and forced himself to speak distinctly, despite their impediment. Today teachers, personnel directors, and other public speakers realize the
importance of pronouncing every word with such clarity that their audience cannot fail to understand them.

The advent of the radio has deprived speakers of the use of gestures with their hands and the impressiveness of their appearance. This facility has forced orators to make their voices interesting if they want their invisible audience to continue listening. Franklin D. Roosevelt is an example of the new school of speakers who can successfully project personality over the radio. By means of his famous fireside talks, the President has been able to project a feeling of conviction and sincerity that was impossible to spread with printed matter.

A new understanding of the importance of good speech is spreading. People realize that poor speech is a handicap to their personality. Although the radio has made public speaking a more exacting art, it offers the audience and those desiring to correct poor speech, several aids. The high standards of speaking employed in broadcasting prove good examples for youthful listeners who are easily impressed by what they hear.

Over the radio or telephone the personality is projected by the sound of the voice. It is to be noted that the more refined and dignified the character represented, the lower, fuller, and more sympathetically vibrant are the tones of the voice. On the other hand, the more common, vulgar, malicious,
or ignorant the character, the thinner, flatter, and higher pitched the voice. Between these two extremes every personal characteristic is portrayed by sound as well as by appearance.

There always is a reason behind any concentrated effort, such as the better speech interest of this day. Effective speaking has come to be an economic problem. Now, it is the speaking habits that loom as a determining factor in employment circles. Good jobs are not so easy to find these days, and every feature that can be developed as a recommendation, must be considered by the applicant. People are beginning to realize that speaking habits are becoming the scale on which judgment is weighed. Most women look well today; most of them dress well; but all of them do not speak well; and the girl or woman whose speech expresses health, vitality, character, and culture, generally gets the preference.

The business person is realizing the importance of clear enunciation and good tonal quality. Groups have been formed and are forming all over the country to aid in instructing the faulty tongues. Classes for business, professional, and other groups are common; nurses are enrolling; in hospitals, too, the need of attendants with voices that soothe and calm the nerves is obvious. It is the smart and the wise thing to re-style the speaking habit; to take the voice out of the "yanh-yanh" class; and to put it where na-
ture intended it to be.

Women realize that is is no longer enough to be beautiful but dumb. A well-modulated voice, trained to sound interesting to listeners, enhances personality; distinct pronunciation of words, intoned carefully, makes listening to effortless. Men realize the importance of the impression they make on business associates. They know that slovenly speech makes them appear undisciplined and careless. It also makes communication of their ideas and their instructions doubly difficult.

Most persons who lispspeak with a dialect, or possess other speech faults are frequently unaware of their handicap. Yet, it is generally conceded that in order to bring ideas to life in the consciousness of listeners, the feeling tone of the words must be set off with clear, orderly enunciation of the consonants. Sounds that fumble "helter-skelter" out of the mouth confuse a listener. Such sounds become mumbled, scrambled, tangled and entirely disorganized. This may be due to bad habits of laziness, slovenliness, carelessness, or the mistaken idea that speech can keep pace with thought. It is not a matter of how much, how big, or how fast a person's thinking is that counts; it is how successful he is in communicating his ideas to others.

There is no one who can not improve his speaking habits; it is not a difficult thing to do. Each person has
his own beauty of speech, and the more ease and vitality his voice gains, the more attractive it will be. He may imitate many tones, but his voice will always be as different from another's as his fingerprints. Grooming it will not rob him of his individuality; on the contrary, it will heighten his personal charm to the point of doubling it.

The writer is convinced by the above statements, plus many others that time and space forbid using, that training in desirable speaking, and the correction of speech defects are valuable means of personality development. Because it is the privilege of teachers to contribute to that development in every pupil with whom they come in contact, this study has been made.

In the elementary public school of Albany, Texas, no courses in effective speaking are offered. Therefore, if any training in this field is to be given the students, it is necessarily done by the classroom teacher.

Source and Treatment of Data

A list of undesirable speaking habits and speaking difficulties has been compiled from text-books and other publications of speech authorities. Along with this list, there have been included definitions of technical terms and names of defects that might be unfamiliar to the average reader. Exercises offered by recognized speech's correctionists for the removal and cure of speaking difficul-
ties have been discussed and explained; and complete tabulations of all undesirable speaking habits and speaking defects have been made from data secured by making a survey of pupils in the elementary grades of the Albany Public School.

Method of Procedure

Much time was spent by the writer in reading the latest recognized authorities on effective speech. Finally, a check sheet was made which included undesirable speaking habits and speaking defects suggested as most common and most needful of correction by the speech specialists. Every teacher in the elementary grades was supplied with check sheets; and all the items listed were discussed and explained thoroughly. Each teacher accepted the responsibility of surveying her classes and making a list of all the undesirable speaking habits and defects that existed among the pupils. Most undesirable speech characteristics were easily detected, but if there were any doubt as to the exact nature of any defect, a careful examination was made by the writer, the principal of the school, and the classroom teacher.

It is obviously impossible to make an absolutely accurate statistical and technical report on undesirable speaking habits and speaking defects existing among approximately four hundred boys and girls without the aid of clinical ap-
paratus and the diagnosis of experts; and neither of these has been available in this study. The reports that follow are the results of careful study and examination of the groups contacted.

After all students in the elementary grades were checked, tables were made, showing the types and numbers of undesirable speaking habits and defects that were discovered in each grade. These tabulations are to be found in chapter II.

As soon as all the difficulties were listed, exercises and plans for their correction were adapted from accepted speech text-books and other publications. A discussion and explanation of this material is set forth in chapter III.

A general summary and recommendations complete this study. These data are contained in chapter IV. It is hoped that the facts and figures contained in this report will awaken the teachers and the public in general to the value of the formation of effective speaking habits by the pupils in the Albany Public School. Then, it is the wish of those interested in the work, that others may see the results, and that they will do research in the field of speaking in their respective schools, because speech is now a scientific study. It has been re-created; made over from a useless, time-consuming course, leading to affectation in the individual and criticism by the public, into a vitalizing, personality-developing instrument.
CHAPTER II

SURVEY OF SPEECH DEFECTS IN THE ELEMENTARY GRADES

The Survey

In order to determine the actual extent of undesirable speaking habits and speech defects existing among 520 pupils in the elementary grades of the Albany Public School, a survey was made by the writer in cooperation with the school superintendent, principal, and classroom teachers.

Table I contains the data which were secured.

Analysis of Data

Table I shows that among the 520 pupils enrolled, 339 speaking defects were in evidence. Careless speech led the list in frequency of occurrence, totalling sixty-two cases. Weak voice ranked second with thirty-one cases. Nasality was third with twenty-eight cases. Monotone speaking and loud voice defect tied for fourth place with twenty-five cases each. Lisp ing and slurring tied for fifth place, with nineteen cases each. Deafness ranked seventh with seventeen cases, and foreign accent ranked eighth with sixteen cases. The remaining fifteen defects listed on the check-sheet were found in the following cases: cleft palate, none; chorea, two; stuttering, nine; tongue-tie, four; deviate suptum, one; malocclusions, four; lalling, eight; hoarseness, ten; muffled speech, twelve; endentation, ten; denasal-
TABLE 1

SPEAKING DEFECTS IN THE ELEMENTARY GRADES OF THE ALBANY, TEXAS, PUBLIC SCHOOL

| Grade | Enrolled | Cleft Palate | Stuttering | Vowels in Place | Nasalization | Deafness | Adenoids | Velocirrhea | Lipping | Cluttering | Faltering | Foreign Accent | Carelessness | Guttural Speech | Monotone Speaking | Weak Voice | Loud Voice | Endodonta | Dorsalization | Aphasia | Aphonia | Chorea | Unpleasant Voice | Baby Talk |
|-------|----------|--------------|------------|----------------|--------------|----------|----------|------------|---------|------------|----------|----------------|--------------|----------------|----------------|-------------|------------|----------|---------------|-------------|-----------|
| I     | 63       | .            | .          | .              | .            | .        | .        | .          | .       | .          | .        | .              | .            | .              | .              | .          | .          | .        | .             | .           | .         |
| II    | 82       | .            | 3          | .              | .            | 4        | 1        | 2          | 2       | 2          | 4        | 5              | 5            | 3              | .              | 3          | 1          | 1        | 1             | 3           | 6         |
| III   | 69       | .            | 1          | .              | .            | 1        | 1        | 1          | 1       | 5          | 1        | 4              | 4            | 1              | .              | .          | .          | .        | .             | .           | .         |
| IV    | 70       | .            | 2          | .              | .            | 4        | 1        | 2          | 6       | 2          | 2        | 4              | 3            | 8              | 1              | .          | .          | .        | 5             | 2           | .         |
| V     | 74       | .            | .          | 1              | .            | .        | 1        | 1          | 1       | 3          | 4        | 1              | .            | .              | 1              | .          | .          | .        | .             | .           | .         |
| VI    | 79       | .            | 1          | 1              | 1            | 1        | 1        | 4          | 3       | 2          | 2        | 2              | 6            | .              | .              | .          | .          | .        | .             | .           | .         |
| VII   | 85       | .            | 3          | 5              | 4            | 8        | 2        | 1          | 2       | .          | 16       | 6              | 9             | 11             | 4              | 1          | 2          | 1        | 1             | 4           | 2         |
| Total 520 | .  | 9            | 4          | 17             | 28           | 4         | 19       | 19         | 8       | 10         | 16       | 62             | 11            | 25             | 25            | 31         | 25         | 10       | 6             | 4           | 1         | 2         | 15        | 13          |
ization, six; aphasia, four; aphonia, one; unpleasant voice, thirteen; and baby talk, thirteen.

First grade.—Among sixty-three pupils enrolled in the first grade, thirty-four speaking defects were found. lisping ranked first with five cases. Baby talk, foreign accent, and cluttering tied for second place with three cases each. Deafness, lalling, careless speech, and weak voice tied for third place with two cases each. Nasality, hoarseness, muffled speech, loud voice, denasalization, chorea, and unpleasant voice made up the remaining number of defects reported in the first grade with one case each.

Second grade.—Eighty-two pupils were reported on in the second grade, and forty-two speaking defects were in evidence. Monotone speaking and weak voices ranked first in frequency with five cases each. Deafness and adenoids (nasality) ranked second with four cases respectively. Stuttering, loud voices, and unpleasant voice quality tied for third, with three cases each. Lalling, hoarseness, foreign accent, and careless speech tied for fourth place with two cases each. Chorea, aphasia, and lisping accounted for the remaining number of speaking defects reported for the second grade with one case each.

Third grade.—Sixty-nine pupils were enrolled in the third grade. Twenty-two defects were reported among this group. Five cases of careless speech, four of weak voices,
four of loud voices, and one each of the following made up the third grade speaking defects: deafness, tongue-tie, adenoids (nasality), lisp, cluttering, hoarseness, foreign accent, monotone speaking, endentation, and denasalization.

Fourth grade.—Data show that seventy pupils were enrolled in the fourth grade, and that fifty-five defects were found to exist. Endentation, or marked irregularity in the plane of the teeth as they are set in the jaws, ranked first with eight cases. The remaining defects appeared in the following number of cases: stuttering, two; tongue-tie, one; deviate suture, one; deafness, four; adenoids, five; lisp, three; cluttering, four; lalling, one; careless speech, one; foreign accent, six; hoarseness, two; unpleasant voice quality, three; muffled speech, two; monotone speaking, two; weak voice, four; loud voice, three; denasalization, one; and baby talk, two.

Fifth grade.—Table I shows that seventy-four pupils were reported on in the fifth grade. Twenty speaking defects were in evidence. Cluttering and loud voice ranked first with four cases each. Weak voices were second with three cases. Aphasia, or temporary loss of speech, was third with two cases. The remaining number of defects reported for the fifth grade included one case each of the following disorders: lalling, hoarseness, careless speech,
muffled speech, monotone speaking, and denasalization.

**Sixth grade.**—Seventy-nine pupils were enrolled in the sixth grade, with seventy-four speaking defects reported among the group. They appeared in the following number of cases: stuttering, one; tongue-tie, one; deafness, one; adenoids (nasality), twelve; lisp, one; cluttering, five; lalling, one; hoarseness, one; foreign accent, four; careless speech, thirty-three; muffled speech, two; monotone speaking, two; weak voices, two; loud voices, six; and unpleasant voice quality, two.

**Seventh grade.**—Table I shows an enrollment of eighty-three in the seventh grade. Eighty-seven speaking defects were reported among the group in the following number of cases: stuttering, three; tongue-tie, one; deafness, four; malocclusions, four; adenoids (nasality), five; lisp, eight; cluttering, two; lalling, one; hoarseness, two; careless speech, sixteen; muffled speech, nine; weak voices, eleven; loud voices, four; endentation, one; denasalization, two; aphasia, one; aphonias, one; unpleasant voice quality, four; and baby talk, two.

The preceding data indicate the nature and number of speaking defects existing in the elementary grades of the Albany Public School.
CHAPTER III

REMEDIAL METHODS AND MATERIAL

Aim of Chapter

The aim of this chapter is to present practical, profitable, and entertaining methods and exercises that will assist the class-room teacher in meeting the needs of speech handicapped students.

Initial Speech Examinations

In the beginning of speech correction work, it is especially helpful to have the students who need training to report for an initial speech examination. Graded speech tests may be purchased from the C. H. Stallting Co., Chicago, Illinois. If the teacher does not desire to buy prepared tests, informal ones may be constructed. For an intonation test, ask the pupils to repeat sentences that express anger, joy, fear, enthusiasm and other emotions.

Conversation usually betrays the real speaking defects. Of course, the subject should be within the interest and experience of the child. As soon as the conversation is ended, the teacher may record the defects on a diagnostic chart. This chart should contain the family history as well as the child's life. Any unusual accidents, illness, or happening should be recorded since many things contribute to defects in speaking.
An oral reading test serves a purpose in examining for unpleasant speaking habits and defects. Ask the student to read a colorful passage and note the results on the diagnostic chart.

Labial Mobility may be tested by asking the child to open the jaws widely, pucker lips, smile, or bite the upper and lower lips.

An entrance examination in speech can be administered as part of the general physical examination to a good advantage. The following speech placement test has been recommended:

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>NAME OF PUPIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ng error</td>
<td></td>
</tr>
<tr>
<td>l</td>
<td></td>
</tr>
<tr>
<td>a as in man</td>
<td></td>
</tr>
<tr>
<td>u as in cue</td>
<td></td>
</tr>
<tr>
<td>t</td>
<td></td>
</tr>
<tr>
<td>i as ice</td>
<td></td>
</tr>
<tr>
<td>ts</td>
<td></td>
</tr>
<tr>
<td>u as in cup</td>
<td></td>
</tr>
<tr>
<td>ow as in now</td>
<td></td>
</tr>
<tr>
<td>st</td>
<td></td>
</tr>
<tr>
<td>iraas in bird</td>
<td></td>
</tr>
<tr>
<td>th as in father</td>
<td></td>
</tr>
<tr>
<td>z as in does</td>
<td></td>
</tr>
<tr>
<td>o as in long</td>
<td></td>
</tr>
<tr>
<td>s ndz ftl mply</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOUND</th>
<th>AS IN</th>
</tr>
</thead>
<tbody>
<tr>
<td>s</td>
<td>so</td>
</tr>
<tr>
<td>z</td>
<td>zero</td>
</tr>
<tr>
<td>sh</td>
<td>show</td>
</tr>
<tr>
<td>tsh</td>
<td>each</td>
</tr>
<tr>
<td>dzh</td>
<td>judge</td>
</tr>
<tr>
<td>l</td>
<td>law</td>
</tr>
</tbody>
</table>
The examiner, if not certain about the student's command of certain sounds, may, after the reading, ask the student to repeat such sentences as the following:

1. Please close the closet door quietly.
2. We go to church on Easter Sunday.
3. Please bring some brown bread before grandpa growls.
4. Are you still living on Long Island?

Intelligence tests often prove an aid in determining the type, extent, and effectiveness of a speech correctional program. If the school does not carry on an annual testing program, it is desirable for teachers who sponsor and direct the remedial work, to obtain copies and use them at the beginning and end of the correctional program.

An amazing variety of personality tests has appeared on the market the past few years. They are designed to indicate traits, reactions, and attitudes that affect the life of the individual. They often shed light on inferiority feeling, neurotic tendencies, dominance—submission, introversion—extroversion, confidence, sociability, and many other elements that affect the speaking habits.

---

Definitions of Defects, With Suggested Remedial Exercises

In the paragraphs that follow, the most frequently appearing speaking defects are defined and remedial measures are explained. An effort has been made to include only material that is practical and effective for the classroom teacher, and interesting, entertaining, and profitable to the speech-handicapped pupil.

3 Stammering.--This personality disorder is a form of social maladjustment, a collision between the two physiological forces of excitation and inhibition, or transient auditory amnesia. It is caused by a conflict between conditioned reflex and inhibition; the conditioned reflex initiates speech and inhibition impedes it. Stammering usually appears in childhood when the conditioned reflex of speech is insecurely established. Recent writers emphasize shock and other emotional disturbances as causes. They also emphasize the fact that toxic conditions and devility lead to physiological inhibition. It is certain that health has much to do with the stability or lack of stability of the conditioned reflex. Fear also plays a big role; because of past experiences, the stammerer is afraid to try to say his name or to pronounce a particular letter because they are "bug-a-boos" to him. Difficult words and difficult situations awaken emotional associations and fear associates it-

---

3 C. S. Blumel, Mental Aspects of Stammering, p. 17.
self with speech situations. Physical effort, such as throwing back the head, making faces, or clenching fists, is caused by a struggle to overcome the speech block.

Many stammerers use synonyms and circumlocutions. This is caused by the inability to say certain words. Some say "second" when unable to pronounce the word "two". Often they use "starters" such as, "er" or "aw"; this is caused by their effort to facilitate speech. Confusion of thought, when a direct answer is demanded, caused the stammerer to go into a frenzy in search for verbal escape. Abnormal respiration results from the speakers attempt to escape words that he cannot pronounce.

An appraisal of studies made warrants the conclusion that stammering may not be directly related to left handedness of manual reversal. Related disorders occur because inhibition (which evidently is the real cause of stammering) does not confine its devastation to the conditioned reflex of speech. There may be disturbances in reading, in eye-movement, or in breathing.

Many treatments for stammering have been offered. The first to be discussed is by Bluemel. This theory holds that stammering should be treated early; the author says to put the child to bed as though you were treating him for a ner-

---

4 Ibid., pp. 140-42.
vous ailment; permit much sleep and rest; allow no visitors, no stimulation, no excitement; keep conversation at a minimum; do not make the child conscious of his speech. Tranquility is a cardinal principal in the treatment of stammering. A child cannot acquire composure in a home that is in constant turmoil and excitement.

Often the patient's play needs supervision; do not allow over-exertion or strenuous and emotional games. The influence of playmates is sometimes harmful; it depends on the personality of the companion as to whether he is harmful.

Reenforcement of the speech reflex is afforded by speaking or reading in unison; this way, the child can hear the words as he speaks them. This is done in the speech class by having the entire class read in unison. Then the stutterer reads alone, but the class joins in immediately if he stammers or hesitates. This procedure may be varied by the teacher reenforcing the child instead of the class reenforcing him.

Unconditioning is another step in treating stammering. In ordinary conversation, a child may stammer but encounter no difficulty in whistling. Sometimes it is advisable to ask the child to repeat a sentence, first in whispered speech, with more lip movement and no voice; then ask him to add voice gradually as he repeats the sentence over and over again.

The telephone may be used in another procedure for unconditioning. In this method, a system of house phones is employed, and two pupils converse while secluded in separate
rooms; when stammering threatens, the stammerer may break connections momentarily. This way, he may overcome the influence of the telephone.

The blindfold is also valuable in unconditioning. The stammering pupil is blind-folded and taken to a room where he is assured that he will be alone; then he is asked to recite a poem. The procedure is repeated several times. Soon he is told that someone will be in the room in the near future. From this point on, he does not know whether he is reciting to solitude or to an audience. He is so conditioned to the situation by this time that he is not interrupted.

A classroom cure may imply nothing but a positive conditioning to a single environment, and if the child is to be helped permanently by his speech training, the work must be carried on into broader fields. Give the patient outside contacts, at first with people who are familiar with the speech training procedure. When strangers are to be contacted, the patient should be accompanied by a person to whom he is positively conditioned; feeling fortified, he will soon become positively conditioned to the stranger. Opportunities for positive conditioning should be segregated so they may take all their studies under teachers properly trained in speech correction.

A systematized program of speech training in the school will not be successful without cooperation of the home. Par-
ents should attend speech classes and familiarize themselves with the principles used. At the same time, the teacher and physician must see that there are no symptoms of pathological conditions of the organs, as hypertrophied tonsils, ad- noids, deviated septum. They retard correction by impairing vitality of the patient.

L. Raubiocheck suggests the following methods for treating stammering or stuttering: start the class work with language games in which a single phrase is repeated, such as "I sat down to dinner where we had apricots." The game may be carried on through the alphabet. (bananas, cherries). Guessing games, as "I am thinking of an animal whose name begins with 'R'", are interesting and profitable. These give practice in pronouncing a variety of words, and the interest of guessing distracts from disability or failure in speech production. Games of "authors" and "anagrams" are good material for club periods. Dramatization and impersonation may be avenues of escape for an inhibited stammerer who may be able to roar as a king in a play when he is unable to talk above a whisper in his own person.

Helen Peppard recommends additional exercises and procedures. She says that the teacher should help the pupil to

5

6

7
break the habits of using synonyms, and shrinking from words and sounds which he fears. When he has been taught to control speech, he should be confronted with the conditions that will recall his former stammering experiences; this will enable him to control the various fears that formerly controlled him.

In treating stammering, it is necessary to make a thorough examination to discover mental and physical ability and disability, to reeducate speech centers, to supply courage and optimism, to develop the patient's determination, to combine sympathy with constructive criticism, and to always use positive suggestion.

Intensive drill on the defective sounds of "m, p, b, w, l, d, t, k, g", generally proves valuable; combining the above sounds with "ah, ay, ee, as, oh, oo" is also profitable. A drill on sentences using difficult sounds is advisable. The following are good examples:

1. (M) Mother made a muff and mittens.
2. Miss Miller made some marmalade with malt.
3. Mix the milk with the mush and munch some crackers.
4. (P) "Peep, peep", said the chicken, "peep, peep."
5. Put the paper on the porch, please, Papa.
6. (B) Bye, bye, Baby boy, bye, bye.
7. (W) Will you wait for Walter, William?
8
R. C. Borden and A. C. Busse suggest that the stammering patient should be referred to a physician at once. This

---

8 *Speech Correction*, p. 278.
specialist will probably endeavor to cure his stammering by:

1. Discovering the nature of the buried mental processes in which the disease is rooted.

2. Making the patient aware of these processes through the analysis of dreams and the resusciation of infantile memories.

3. Prompting a normal, harmless discharge of the pent-up emotions.

4. Assuring the stammerer that his malady is due entirely to fear.

5. Increasing the confidence of the patient by requiring him to say over and over, "I can speak easily and fluently and I will conquer my fear."

Paralysis.—This defect is a lack of ability to perform coordinated actions. The affected area may be limited to a portion of the speech mechanism, such as the tongue, the trifacial muscle, or the vocal bands; again, it may be a general paralysis in which the vocal mechanism is involved. The most striking speech symptom is a thickening and inaccuracy of articulation. Tip-of-the-tongue sounds, "t-d-l-r-n", are enunciated with difficulty in lingual paralysis; "p-b-m-w-wh" and many of the vowels are affected in cases of labial paralysis. A disorder of the voice, which is frequently uncontrolled both in pitch and volume, often appears. It is frequently characterized by a tremulous, jerky production. If the vocal cords are paralyzed, hoarseness or aphonia may be present.

\[\text{Raubicheck, op. cit., p. 205.}\]
L. Raubicheck's suggested treatment for paralysis of the speech mechanism includes the following:

1. Muscular drill to secure maximum precision and flexibility in the impaired organism.
   a. Drill on sounds that are defective; show the patient the position of the tongue.
   b. Imitation of the teacher's model, and a clear auditory impression are the first techniques to be employed.

2. Phonetic reeducation, with special emphasis upon ear training rather than upon conventional organic production.
   a. Practice upon the sounds in isolation and in combination of syllables and words.
   b. Smoothness of articulation, crispness of consonant production, and rhythmic speech should be the three main objectives.
   c. A fair degree of intelligibility rather than dialectal accuracy should be aim of all exercises.

Cleft Palate.--This disorder is a birth defect, and L. Raubicheck defines it as a lack of closure in the

Ibid., 205.
palates. It ranges from a tiny pin-hole in the hard or soft palate to a wide fissure, extending from the base of the nose to the pharynx, causing nasality, accompanied by great inaccuracy in the production of all the sibilants and "k, g, ng".

The cause of a cleft palate has not been definitely explained. There is strong presumption of transmission through families, but no direct evidence exists to prove heredity conclusively. Many specialists contend that the cause is a blood disorder, but this is widely disputed. Probably the latest hypothesis advanced for the cause of the two rings not meeting or coming together in the embryo, has to do with the foetal position, but this has not been fully accepted.

Alice Wood recommends the following remedial exercises for cleft palate:

1. Have skillful physician perform operation.
2. Correct the speech defect by teaching correct positions for speech organs and the correct production of sounds.
3. Let the patient watch the teacher say "ah".
4. Then have patient take mirror and watch himself say "ah".
5. Have the patient yawn and see the palate rise and fall.
6. Play "upstairs-downstairs" game; sing "ah" without letting the sound go in the nose. If the pupil can do this, he wins the game; test by pinch-
ing the nose together while saying əh, then releas-
ing it while sounding the same syllable. There
should be no difference in the sound.

7. Play that ø is a squeaky mouse that must
not go upstairs (in the nose) or he will jump out
the window.

**Tongue-tie.** -- Tongue-tie is a speech defect in which an
insufficient proportion of the tongue is left free because
the fraenum (a cord which anchors the tongue to the floor
of the mouth) is too short, or because it is attached too
near the tip; this modifies articulation of all tongue-tip
sounds, affects the sibilants, and gives evidence of immature,
defective phonation.

Steps in treatment of tongue-tie defects are:

1. Have fraenum clipped.

2. Practise general relaxation exercises, ex-
pansion drills, and phonetic practise in the exact pro-
duction of all the sounds.

3. If the tongue-tie is slight, use tongue ex-
ercises daily, but if it is very noticeable, consult
the doctor; have the frenum clipped, and then learn
proper tongue positions for "t, d, n, l, and the sibilants.

---


15 E. Froschels, *Speech Therapy*, p. 70.
Sinusitis.—Chronic catarrh and sinusitis are conditions involving inflammation of membranes which line the nasal cavities and adjoining sinuses. This results in a swelling and a constant exudation of mucus. This may infect the entire tract from the frontal sinus to the lungs. These disorders result in impairment of the resonance, nasality, denasalization, and huskiness.

Treatment for sinusitis consists of improvement of physical condition under direction of doctor, education through ear training, practice of resonance exercises, breath support, and tone projection.

Malocclusion.—This defect is the imperfect closure of the jaws. Four types of malocclusion have been detected, and they may all lead to lisping:

a. If upper jaw protrudes above the lower one, it is called "overshot".

b. If lower jaw protrudes past upper one, it is termed "undershot".

c. If patient cannot touch the front teeth of one jaw with the corresponding teeth of the other jaw, the condition is called "open bite".

d. Any marked irregularity in the plane of the teeth as they are set in the jaws, is called "endentation".

16 Raubicheck, op. cit., p. 230.
The following treatment for malocclusions is recommended:

1. Direct patient to dentist and orthodontist.
2. The age of nine or ten is best time to begin regulation.
3. Postpone speech training while the mouth is full of braces.

The speech teacher should have the patient to do lip and jaw exercises and to observe as well as he can, the correct production of sounds.

Lisp ing.—This speech disorder is the mispronunciation of the sibilants, "s", "z", "sh", "sh", and "j". Lingual protrusion is the form of lisp ing in which the "th" sounds are substituted for the "s" and "z" sounds.

A suggested treatment for lisp ing consists of the following steps:

1. Practice tongue exercises; roll the tongue and blow through.
2. If necessary, put the tongue in position with a pencil.
3. Practice "t-t-t-t" then "s-s-s-s"; concentrate on position.

---

17 Ibid.

4. Drill on sentences containing the "s" sound:
   a. "See saw Sammie Daw."
   b. To sea, to sea, my sailor."
   c. "Then sing the song the sailor sang."    
   d. "The salt sea splashed and split the boat.

5. Teach position for the "th" sound; drill on sentences containing the "th" sound:
   a. Theo, thump, thump, thump, thumpity, thumpity, thump.
   b. Thin Thelma Thayer fell down the stairs and though she was through.
   c. I think I have a thorn in the thick of my thumb, Theodore.
   d. He was thumped on the head with a thimble and thread till then Thurber thought it thundered.

6. Drill on the "s" sound; practise sentence:
   a. Sly Simon slid slowly down the slope.
   b. Old Snicker Sneeze snoozed in the sun.

7. Drill on the "z" sound; place hand on throat and say "s", "z"--"s", "z"; drill on sentences:
   a. Zee saw a pretty Zebra at the Zoo.
   b. In our cold Zone you well may own an overcoat of leather with a zipper.

8. Review the "th" sound; practice sentences:
   a. I'll go there with thee, thin little thread-
bare boy.

b. Then we will all go together, Tom Thumb, Theo, and me.

9. Drill on "ch" sound; imitate sneeze; practice sentences;


b. "Choo, choo, choo," said the train.

c. The train went "Chug, chug," up the hill and "Chug, chug" down again.

d. The children like to chat, and chat, and chat.

The following additional methods for overcoming lisp-ing are recommended:

1. For defective "s" sound teach proper position--blade of tongue raised so that it nearly touches upper gumridge and air escapes over tip of it.....or place tip of tongue behind lower teeth.

2. Roll tongue and blow through it.

3. Use mirror so patient can see correct position.

4. If patient substitutes "th" for "s":

a. Push tongue back so it does not touch teeth.

b. Be sure he understands the difference in the positions of "s" and "th".

c. Have him put finger between teeth and say "s".
d. Drill on "t-t-t-t".

e. When "s" can be made, apply the sound to words, as "say, see, saw, some, same".

f. Compare the "s" sound with the "th".

5. If patient substitutes "w" for "r":

a. Have him groove tongue and blow through it.

b. Hold down middle of tongue with pencil and curl the sides with fingers if grooving is difficult.

c. Trill tongue.

d. Repeat: "Rye, ray, row".

e. Show the positions for "w" and "v" and compare with "r"; use mirror.

6. If patient substitutes "k" and "c" with a "t" as "tandy" for "candy", use the following measures:

a. Compare positions of the sounds.

b. Hold tip of tongue down while making a 19 "k".

Nasality.--When too great a proportion of overtones are made in the nasal cavities, nasality results. It is caused by a relaxed velum, allowing air to go in the nose when it

should come out the mouth; or it may be caused by a tension of all resonating surfaces of the mouth, the pharynx, and the nose, resulting in a "tinny" quality of voice.

For treatment, it is necessary to design exercises to strengthen velum, to restore its elasticity, and to enable it to press against the wall of the pharynx during phonation of oral sounds. Secure relaxed production of sounds with open throat, dropped jaw and easily raised palate. Practice rhythmic panting; repeat "aw" then "ah".

Another method of treatment for nasality requires the following procedure:

1. Have patient close nostrils by pinching them with fingers and then make the following sounds: "ah", "ay", "ee", "aw", "oh", "oo". If he has no nasality there will be no vibration in the nose.

2. Train the patient to think of vowels as coming through the mouth and not through the nose.

3. Place fingers lightly on the nose and feel the vibration while saying:
   a. mah--mah--mah
   b. may--may--may
   c. me--me--me
   d. maw--maw--maw

---

Raubicheck, op. cit., p. 230.
e. mo---mo---mo
f. moo--moo--moo
g. nah--nah--nah
h. nay--nay--nay
i. nee--nee--nee
j. naw--naw--naw
k. noo--noo--noo

4. Repeat the following sentences with nostrils pinched together; be sure there is not any nose vibration:

a. I have a box of rats.
b. Alice did her work quickly.
c. What do you see there, Lou?
d. I bought baby a hat at the store.

5. Close the nostrils when producing all sounds except "m", "n", "ng" in these sentences:

a. Mary will sing a song for us as soon as she can.
b. Many never came, but Mamie must leave anyhow.
c. My son's name is Sam.
d. No, Mary will not make the muffins, but mother will.
e. It will soon be time to climb the mountains, and my mother mustn't miss the trip.

21 Peppard, op. cit., p. 113.
Borden and Busse have used a test for determining the extent of nasality which is practical for classroom teachers. The following procedure is followed:

1. Have patient to say this sentence: (If the vowels are nasalized he is suffering from nasality)

   "Four score years ago our father fought courageously for the political liberty we have today."

2. Seat the patient in a slightly reclining position with his head tilted back; all the muscles of the mouth and throat relaxed; have him drop his jaw and say "ah" as in "star", while he alternates pinching and releasing his nostrils. If the pinching does not change the pitch of the sounds, any nasality present is not organic.

3. Ask the patient to blow out a lighted match two feet away; while he is blowing, hold a mirror beneath his nostrils. If the mirror clouds with exhaled breath, the nasality is probably organic.

Removal of -- This speech defect is the opposite of nasality; it results in a deadened sound. There seems to be no resonance in the nasal cavities and little vibration.

---

22

23
Alice Wood, op. cit., p. 57.
An effective treatment consists of the following exercises:

1. Hum
2. Drill on nasal consonants "m-n-ng".
3. Drill on:

"Moo! Moo! Moo!" mooed the muley cow,
One Monday morning in May.
"Mary may have a jug of milk,
May I have a mouthful of hay?"

They moan and they groan, and groan
and moan,
Those moping old mold stones;
But, oh, those doleful tones
When the cold gets into their bones.

Cluttering.—This defect is a rapid speech tempo, undecided articulation, repetition of syllables, swallowing of words, incongruity of thought accomplishment, and speech accomplishment. It is a speech disorder in which thinking hurries on ahead of expression.

To treat this defect it is necessary to slow down reading tempo; have patient read through perforated card so he


\[25\] *Froschels, op. cit.*, p. 150.
can see only one letter at a time; and teach him correct position for sounds.

Foreign Accent.--The incorrect pronunciation of English is called foreign accent. Children brought up in foreign atmosphere usually speak and hear nothing but a foreign language out of school. This constant use and hearing of foreign tongues produces a foreign articulation and develops a corrupt auditory concept of English vowels and consonants.

Treatment includes the following procedures:

1. Make a diagnosis to discover errors.
2. Drill extensively on tongue exercises.
3. Establish correct auditory verbal images of the vowel sounds; ear training is invaluable.
4. Teach diacritical marks as found in dictionary so patient may assist himself.
5. When a vowel has been taught, combine it with the foreigner's difficult consonants, as "May-Boy-Pay".
6. Teach correct positions of speech organs.

In treating foreignisms, it is necessary to make the patient conscious of the acoustic differences between the sound that he should make and the sound he does make; have him to

---

26 Helen Peppard, op. cit., p. 165.

27 Ibid.
listen critically as the teacher produces correct sounds; compare them with the patients incorrect productions of selected poems, prose, or list of words. Develop the muscular control necessary for the production of the new sound; employ mechanical devices that will help keep the organs in position. Drill on lip, tongue, jaw, and soft palate exercises. Develop a visual image of the position for every sound. Have the patient observe the teacher's position, then supply him with a mirror and let him see his own position.

It is often profitable to have the patient compile a phonetic dictionary for reference and study. He may become accustomed to English stress system by persistent drill on selected exercise.

Careless Speech.—This defect is evidenced by the patient's running certain sounds into those immediately joining them in such a manner that the first sound resembles the latter closely, as "det" for "dead", "wat" for "what", "gimme" for "give me". This defect is caused by lingual laziness.

To treat this disorder, it is necessary to convince the patient of the value of careful speech; give him a thorough course in phonetics; then help him to discover his own errors of carelessness.

Lalling.—This speech disorder is caused by the tongue muscles becoming weakened through misuse or disuse.

Treatment may be applied by using the following exercises:

---

28 Borden and Busse, op. cit., p. 224.
1. Slowly move the tip of the tongue about the oral cavity and in every direction. Touch every part (upper and lower teeth, right and left cheeks, hard palate surface, par of the soft palate, and inside the lips) that can be reached without undue muscular strain; repeat often.

2. Open jaws widely and extend the tongue outside the oral cavity between the upper and lower teeth. Slowly brush the tip of the tongue over the surface of the upper teeth; repeat often.

3. Without separating the lips, open the jaws; extend the tongue outside the oral cavity between the upper lip and teeth and between the lower lip and teeth. Move the tongue slowly in a semicircle, exerting pressure against the lips; repeat often.

4. Open the mouth, separate the lips widely, and raise the tongue so that the tip touches the hard palate. Without moving the lower jaw, gradually increase the pressure of the tongue against the hard palate; then relax the tongue.

5. Open the mouth widely, and press the underside of the tongue against the hard palate. Gradually increase the upward pressure of the tongue without moving the lower jaw and without permitting the tongue tip to move from its position against the hard palate; relax, and repeat often.
6. Open the mouth widely, and curl the tongue upward and back into the oral cavity until the tip touches the front portion of the soft palate or velum. Gradually increase the pressure of the tongue against the soft palate; then return it to a rest position.

7. Extend the tongue as far as possible, and curl it upward; return to rest position.

8. Extend the tongue, and curl it downward; return to rest position.

9. Extend the tongue; curl it upward and downward alternately five times; return to rest position; repeat often.

10. Round the lips as if to produce the vowel "oo" as in "noon". With the lips firmly puckered, thrust the tongue through the aperture thus formed so as to create a "u"-shaped, "longitudinal groove along the entire length of the tongue muscle. If necessary use the blunt end of a match stick to help shape the "u" groove in the tongue. While maintaining the groove, slowly withdraw the tongue and move it upwards in the mouth until the sides of the groove are firmly pressed against the palate, inside the molars. In its final position, the tip of the tongue should rest against the gum ridge. Repeat this exercise often or until the tongue groove can
be made easily and felt and considerable upward pressure exerted against the palate without cramp or fatigue.

When practicing tongue gymnastics, the student should be cautioned against over-exertion of weakened muscles. Rest periods must be provided between each drill in order to avoid muscular cramps in the speech organs.

*Muffled speech.*—Indistinct sound production is called muffled speech. This defect is caused by immobility of relaxed lips and a lazy tongue, or by a tight jaw, tight lip and a thick, stiff tongue.

Treatment consists of general setting-up exercises for the tongue, lips, and jaws. The following exercises have been recommended:

1. Papa sent Peter to the party wearing a paper hat.
   Polly laughed at Peter's paper hat!
   Poor Peter!

2. Billie bought Betty a bright blue ball.

3. Weary Willie wistfully wandered winding byways, wasting rewards in waiting.

4. Fancy Fanny's fluffy frill flapping funnily over a frying pan are floppy.

5. Cell-cellar-cent-center-sup-supper
   Set-setter-celery-sample-assist
   Race-efface-abrase-call-caller
6. Six sill sailors said, "Sail steadily South".

7. Callers came clattering across the courtyard.

Tongue-twisters have their place in developing nimble tongues and a rapid and delicate adjustment of the articulators. The final success depends upon freeing patient of inhibitions or conflicts that are evidenced by the disorder.

Hoarseness.—This speaking defect is unpleasant to the ear because of a coarse, "graty", harsh tone quality. It is often caused by uvular elongation. If the patient has a tickling sensation in his throat when he lies down, the uvula is probably too long. Other causes of the disorder include hypertrophied tonsils—an inflammatory enlargement of the tonsils, pharyngitis—a general inflammation of mucous membrane that lines the larynx, and singer's nodules—abnormal growths on the vocal chords.

The following remedial measures are recommended:

1. For elongated uvula:
   a. operation

2. For hypertrophied tonsils:
   a. refer to physician.

3. For pharyngitis and laryngitis:
   a. refer to physician.

4. For singer's nodules:
   a. Local treatment by throat specialist.

---


b. When cured of nodules by medical treatment, teach the patient the proper use of the voice; relax the larynx muscles.

Baby talk.--Infantile pronunciation is called baby talk. This defect is caused by an erroneous interpretation and production of sounds, resulting generally from the well-meaning but foolish prattle of parents.

The following errors are common among juveniles:

1. Substitution of letters:
   a. "t" for "k", as "tar" for "car".
   b. "d" for "g", as "doo" for "go".
   c. "f" for "th", as "fought" for "thought".
   d. "w" for "r", as "wan" for "ran".
   e. "w" or "y" for "l", as "wook"; "yook" for "look".

2. Elimination of letters:
   a. "r" after consonant sounds, as "buver" for "brother".
   b. initial "l", as "oook" for "look".
   c. "l" after consonants, as "psease" for "please".

To treat this disorder, it is necessary to individualize the difficulties because baby-talk defects vary. The following general procedures are recommended:

31
Ibid.

32
Ibid., p. 275.
1. Teach correct position for every sound.

2. Apply positions to single sounds, then to words which have association with familiar difficulties, as "cat"; "candy".

3. Treatment of substitution of "t" for "k":
   a. Hold tongue-tip down with depressor while saying "k".
   b. Ask patient to look in teacher's mouth as she says "k".
   c. Combine "k" with "ay", "ee", "aw", "oh", "oo".
   d. Apply the "k" sound to simple words.
   e. Apply words to sentences:
      1. I see a cow.
      2. Daddy caught the car.
      3. Let me look at the book.
      4. I will take the cake to the sick boy.

4. Treatment of substitution of "d" for "g":
   a. Do not call attention to position.
   b. Repeat: "gah, gay, gee, gaw, go, gee".
   c. Apply sounds to words: "go", "gone", "get", "gather", "goal", "goat".
   d. Apply sounds to sentences:
      1. Please get me an apple.
      2. We will gather all the good gooseberries.
3. Will you give me a ride in your goat wagon?

Monotone speech.--This defect is a failure to express thought with personal interest; it is a mechanical utterance unaccompanied by modulations of voice. Treatment may include the following exercises:

1. Hum down the scale to the lowest possible vocal tone that can be sustained comfortably.

2. Prolong this lowest tone and repeat several times.

3. Call the lowest tone "do" and sing up five tones to "sol" as "do-re-me-fa-sol".

Too-weak voice.--A too-weak voice is caused by lack of breath or lack of muscular tone; it may be due to inertia, fatigue, timidity, fear, or habits of disuse.

To overcome this disorder, it is necessary for the patient to develop a relaxed and well-poised body by practicing relaxation exercise, posture exercises, and breathing exercises. He should become voice-conscious by practicing phonation drills and by listening constantly to his own voice and the voices of others. Phonographic recordings and the radio are excellent devices for objectively studying and comparing vocal timbres and the personality characteristics of

It is advisable for the teacher to establish a norm of vocal projection called a twenty-foot volume. This is developed

33 Ibid., pp. 276-78.

34 J. F. Bender and V. M. Kleinfeld, op. cit., p. 97.
by arousing in the speaker an objective awareness of the distance between himself and an imaginary listener while he is speaking. The speaker is constantly reminded to contact a listener twenty feet away while talking, until he acquires the habit of projecting his voice without unusual muscular effort or strain.

\[ \checkmark \]

A too-loud voice.—A too-loud voice may be toned down by practicing correct breathing exercises, and by the patient's becoming conscious of the fact that he speaks too loudly.

Chorea.—Chorea is sometimes called "St. Vitus Dance". It is a disorder that requires the services of a physician.

Summary

In this chapter, remedial exercises and methods have been suggested for the use of classroom teachers in abating undesirable speaking habits and defects among their students. Since it is true that a child is motivated to learn facts or skills or to act if he feels that such learning will contribute to meeting some of his personality needs, it has seemed advisable to introduce material which has close relationship to children's experiences and needs.

The supply of available material has not been exhausted in this study. The writer recommends that all teachers interested in a speech correction program secure new books which appear from time to time and supplement this material as the need arises.
CHAPTER IV

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This study contains data on the speaking defects and undesirable speaking habits of pupils in the elementary grades of the Albany, Texas, Public School.

Data were secured by means of a speech survey, conducted by the writer in cooperation with the school superintendent, the principal, and thirteen classroom teachers. Results of the survey are incorporated in Chapter II of this study.

Remedial measures, designed to aid the pupils in overcoming their speech difficulties, were selected from leading speech clinic technicians and speech correctionists. A compilation of these corrective methods and exercises appears in Chapter III.

The final chapter contains a summary of the problem, the results of the research, conclusions, and the writer’s recommendations.

Findings

Investigation relative to the status of undesirable speaking habits and speech defects among the elementary pupils of the Albany, Texas, Public Schools, resulted in the following findings:

1. Three hundred thirty-nine speaking defects existed among 520 pupils enrolled.
2. The first grade contained thirty-four defects among sixty-three pupils.
3. The second grade contained eighty-two pupils and forty-six speaking defects were in evidence.
4. The third grade reported twenty-two defects among sixty-nine pupils.
5. The fourth grade contained seventy pupils and reported fifty-five speaking defects.
6. The fifth grade contained twenty defects among seventy-four pupils.
7. The sixth grade reported an enrollment of seventy-nine with a total of seventy-four speaking defects.
8. The seventh grade contained eighty-three pupils and reported eighty-seven speaking defects.
9. Careless speech ranked first in the number of cases reported, totalling sixty-two for all grades.
10. Weak voices ranked second in frequency with thirty-one cases.
11. Adenoids (nasality) ranked third with twenty-eight cases.
12. Monotone speaking and loud voices tied for fourth place with twenty-five cases each.
13. Liping and cluttering ranked fifth with nineteen cases each.
14. Deafness ranked sixth with seventeen cases.
15. Foreign accent ranked seventh with sixteen cases.
16. The remaining speaking defects checked on were reported to be less than fifteen cases each.

Conclusions

An analysis of available data regarding the undesirable speaking habits and speech defects of pupils in the elementary grades of Albany, Texas, Public School, warrants the following conclusions:

1. Three hundred thirty-nine pupils need remedial speech training.

2. Seventeen cases of deafness, four of tongue-tie, one of a deviate septum (crooked nose), twenty-eight of adenoids, ten of hoarseness, four malocclusions, ten of endentation, four of aphasia, one of aphonia, and two of chorea should have the attention of a physician or surgeon.

3. Nine cases of stuttering, nineteen of lisping, nineteen of cluttering, eight of lalling, sixteen of foreign accent, sixty-two of careless speech, twelve of muffled (indistinct) speech, twenty-five of monotone speaking, thirty-one of weak voices, twenty-five of loud voices, six of denasalization, thirteen of unpleasant voice quality, and thirteen of baby-talk can be successfully treated by class-room teachers.
4. Remedial exercises and methods described in Chapter III of this study are desirable for use by classroom teachers.

5. Speaking defects tend to become more numerous as the pupils advance in school grades. The ratio of defects to enrollment in the first grade is thirty-four to sixty-three, while in the seventh grade it is eighty-seven to eighty-three. For this reason remedial training should begin in the primary grades.

6. The number of speech defects among the primary pupils indicate that pre-school remedial speech training is desirable.

Recommendations

The following recommendations are based on the findings of the problem:

1. Speech correction should be made available to all pupils having a speech defect.

2. If no trained correctionist is supplied by the school, the classroom teachers should utilize the methods and procedures set forth in this study, and carry on a speech correction program.
BIBLIOGRAPHY

Barrows, Sarah Tracy, Games and Jingles for Speech Development, Boston; Expression Co., 1935.

Barrow, S. T., The Voice; How to Use It, With Exercises for Tone and Articulation, Boston; Expression Co., 1933.


Borden, R. C. and Busse, A. C., Speech Correction, N. Y.; F. S. Crofts, 1925.

Cole, Ida Mae, Speech Drills for Children in Form of Play, Boston; Expression Co., 1929.


Froschels, Emil, Psychological Elements in Speech, Boston; Expression Co., 1935.


Raubichau, Letitia, Improving Your Speech, N. Y.; Noble and Noble, 1934.


West, R. M., Disorders of Speech and Voice, Madison, Wis., College Typing Co., 1932.