

THE ROCHESTER METHOD

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I decided as I looked through some of the research on the "Rochester Method" that the way for me to approach my discussion today was to comment on the historical aspects of the use of finger spelling and not on the research. I want to say that I am not trying to defend the Rochester Method or any method, but simply to describe certain aspects of the development of the use of finger spelling in the United States and in the Soviet Union. I'd like to acknowledge the help of Dr. Ralph Hoag, Superintendent at the Rochester School, and Mr. Leonard Swick, the Principal, for giving me insight into some of the history and development of the use of finger spelling.

Zenas Westervelt was convinced that if a deaf child could be bathed in language day and night as was a hearing child that the deaf child could express himself in English equally as well. Shortly after Westervelt became Superintendent of the Western New York Institution for the Deaf Mutes, now the Rochester School for the Deaf, he proposed that finger spelling be used with speech as a way of improving the student's use of the English language by preserving strict English word order. He believed that English taught in the classroom could be effectively carried into daily communication through finger spelling. The thought of excluding sign language from the educational program was contrary to the teaching of that time and was openly opposed by most of the pioneers in the field of deaf education.

Westervelt argued that finger spelling offered the deaf student a visible representation of each letter of the alphabet in order that words, phrases and sentences could be spelled on the fingers to supplement each word as it was spoken. Westervelt believed that the students who were the most proficient in finger spelling also could become the most proficient in speech. The simultaneous use of speech with finger spelling, the Rochester Method, was an innovative method of instruction in 1878 because of the emphasis placed on correct English word order.

First, the use of sign language was excluded from use at the Rochester School for the Deaf. Imagine the problems, though, of students and staff changing to finger spelling after signs had been used. In addition, there were always older students transferring from schools where signs were used.

Second, the teaching of speech was included in the curriculum for all students. Many residential schools, as you may know, emphasized speech training only for the younger students or those with more residual hearing during those days.

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Third, language and vocabulary were developed through reading writing. Each student was expected to read four books a month. Wall charts showing frequently used phrases and sentences along with the school newspaper served as frequent visual reminders of the correct use of written grammar and syntax.

Finally, the use of finger spelling with talking was the required medium for communication in the classroom, in the residence halls and on the playground.

Beginning in 1876, Harriet Hamilton organized and supervised the oral teaching program. She was a well known authority on phonetics, speech and lipreading. Undoubtedly, the success of the speech program at the Rochester School for the Deaf was due to her experience, knowledge and devotion. She was a friend and a student of both Alexander Melville Bell and Alexander Graham Bell, an adviser to Anne Sullivan in the speech teaching program of Helen Keller and a consultant to Edmund Lyon in the development of his Lyon Phonetic Manual Alphabet. Specific analytic speech teaching was not used until the student developed some ability to approximate words and communicate ideas. One day a week, all classes were conducted without finger spelling. They were conducted orally, in order to give the student an opportunity to read the lips of more than one teacher and to provide them with the motivation to improve their speech and speechreading skills. Students were expected to use their speech skills outside of school and not require that others learn finger spelling in order to communicate with them. Parents and friends were encouraged to use finger spelling but only in place of writing on paper.

Alexander Melville Bell's visible speech symbols and the Lyon Manual Phonetic Alphabet were used as a way of teaching and correcting the speech of the students. The symbols used in the visible speech materials represented the position of the articulators during the production of each specific speech sound. These symbols were a graphic way of showing how the sound was pronounced.

The Lyon Phonetic Manual Alphabet was based on the various positions of the articulators described by the visible speech symbols. Lyon presented over 120 finger and hand positions to represent the articulatory placement for vowels, consonants, and glides. The technique enabled the student to see the incorrect sound just as others could hear that sound. The Lyon Manual Phonetic Alphabet is extremely complicated. Think of the movements, for example, of the thumb that would denote placement of the tongue at various positions on the hand. It was quite a complicated system.

The Phonetic Manual Alphabet was introduced at the school in the fall of 1890. A. G. Bell was very intrigued by the Lyon Alphabet and encouraged him to present his method at the first meeting of the American Association to Promote the Teaching of Speech now known as the Alexander Graham Bell Association for the Deaf.

In 1924 a nationwide testing program for deaf students age 12 and older, was sponsored by the National Research Council of Washington,

D. C. Out of 41 schools for the deaf participating, the Rochester School for the Deaf placed first in terms of student achievement. It was suggested on the basis of this test that emphasis on language through the use of the Rochester Method contributed to the educational success of the School in comparison with the other participating schools.

In 1937 the Rochester School for the Deaf established a preschool department. Following the philosophy of the time, the teaching in that department was oral with the use of the Rochester Method postponed until students reached the age of 10 to 12 years. Classroom amplification had been used incidentally in the 30's but really came into more general use during the 1950's, thus supplementing the Rochester Method by incorporating those language patterns perceived through residual hearing.

The Rochester School for the Deaf initiated the use of the Rochester Method in the preschool, beginning with a three year old child in 1968. The young children gradually learned to recognize the finger spelled word as a whole by noticing the general form of the word, the position of the hand at the beginning and the end of the word and the duration of the movement. The child learned to watch the lips as well as the spelled English. There were three basic reasons for the change from an oral only preschool to the combination of finger spelling with speech.

First, research from educators, linguists, and psycholinguists emphasized the importance of using the beginning years to establish basic language patterns. Second, research and comments from educators pointed to the superior language ability of students taught by the Rochester Method along with good speech and speechreading skills. Third, the flow of information from the Soviet Union indicated success with the use of finger spelling with very young deaf children.

Reports by Morkovin in 1960 and by Moores in 1972 have described various aspects of deaf education in the Soviet Union. It has been thought by some that the Russians were using the Rochester Method because they used a combination of finger spelling with speech. There are, in fact, a number of differences relating to implementation of the method that I would like to describe. The information to be presented is primarily from the Morkovin and Moores' articles.

According to Morkovin children attend schools for the deaf if they have an 80 dB or greater loss in the speech range. Individual hearing aids were infrequently used but classroom amplification was used in schools for the deaf. We were told that educators within the Soviet Union had been critical of the results of the oral educational method they had used for a number of years. They found that the children resorted to mime and gesture for communication because their vocabulary was inadequate. Since the educational program was restricted to information that could be perceived through speech and speechreading, it was necessary to use pre-selected vocabulary lists in order to enhance the student's ability to pronounce the word. The receptive and expressive language abilities of the students were limited as was spontaneous

oral communication. Their exposure to concrete learning activities was inadequate and, as a result, the Russians felt that the personality and the character of the student also was underdeveloped. To rectify these problems described above, a research project dealing with the preschool language achievement of the deaf was initiated in the Soviet Union in 1953 under the auspices of the Moscow Institute of Defectology. Neoralism, a new approach in teaching preschoolers to talk, focused on increasing language development by emphasizing children's experiences as the basis for communication. The investigators hypothesized that a deaf child can achieve the skill in language demonstrated by the hearing child if everyone around the child finger spells. This approach appeared to be similar to that of Westervelt.

As a result, the finger spelling of language became the basis of a three-year experimental program in order to demonstrate that a deaf child can obtain the tools for expressive communication at an early age. Finger spelling was used with very young children. As soon as a child under the age of three was identified as deaf, he was placed in a nursery program which emphasized parent counseling and parent education along with teaching the child. The parents were taught to finger spell and encouraged to spell complete sentences as the teachers did. This occurs before the child is even three years of age. During the first year of the experimental program with children aged three to four, the child did not receive formal lessons in speech or speechreading. Finger exercises were used to develop finger flexibility and to focus attention on finger movements. The teacher helped the children associate finger spelling with their names, objects, actions, and situations. After the word was spelled, it was pronounced by the teacher and then pronounced by the children. In addition, words were shown on flashcards and associated with the object or the situation.

It was found that children of this age were able to associate finger spelled words with the objects and activities within one to three months. The experimenters observed that children began to read and write without formal instruction because of their use of finger spelling. This probably was because many of the beginning textbooks had printed hand configurations in place of the printed letter. Gradually, the use of hand configurations, dactemes, was replaced by traditional orthography, graphemes.

The experimenters reported that by the end of the first year, the children understood all the words relating to their daily life and used many of them. They could finger spell approximately 400 words, could retell fairy tales that had been adapted to simplified language, and could recognize words in print. From those words which were learned, the children could pronounce 150 words intelligibly.

At the beginning of the next year, when the children were four to five years old, they had enough of a vocabulary for conversational talking. At that point finger spelling was used only to introduce a new or difficult vocabulary. The children received specific help in articulation, particularly for the sibilants and affricates. At the end of the second

year, the children had a 1000-1300 word vocabulary that could be used in speech as well as lipreading. In the third year, children aged five to six could pronounce all the sounds of the alphabet correctly. At the end of the year, students used more than 100 verbs and had mastered over 2000 words in speech and lipreading.

Rowe describes the concentric method of developing oral speech that is used in the Soviet Union. It is based on the realization that hearing children frequently substitute one sound for another as they develop articulatory proficiency. For example, [j], [w], and [r] may be substituted for the [l] sound, but the word can still be understood. Rowe used the principle of one sound substituting for a number of other sounds; and out of the 42 Russian phonemes, 17 basic sounds were selected at the beginning of speech training, five vowels and 12 voiceless consonants. The child could be understood by the teacher or the parent because of his simultaneous finger spelling and saying the word. A student was expected to pronounce all the sounds in the Russian language by the age of nine years.

In summary, it was found in Russia that language skills were successfully developed through the consistent expansion of activities and experiences which served as a basis for encouraging conversation from the students. Finger spelling helped the child acquire better speech and lipreading skills so that eventually students could communicate orally without the need of finger spelling. Finger spelling was dropped as speech improved.

The Soviet educators suggest that the neo-oralism method helps deaf students to become more oral because a strong language base is established and a means for communicating is available at a very early age. The flurry of research that is focused on student achievement as a consequence of different teaching methodologies has really not given educators in the United States definitive answers. It is almost impossible to document and control the variables in order to be convinced that we are seeing the results of a pure method.

If we look at the reported success with finger spelling and compare the system used by Westervelt with that of the Russians it seems that there are several common factors: first, a firm resolve that language is the foundation for learning and communication; second, the in-service education of all staff in theory and the skills is necessary; and, third, there must be a dedicated use of the educational method at all times. It is possible that each student can achieve success regardless of the educational program in which he is enrolled if energy and enthusiasm for the method or the approach exists among the staff, if administrators and staff are committed to the idea and if teachers are skillful, imaginative and maintain their professional competence.

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