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ABSTRACT

The purpose of the project was to train parents and teachers of hearing impaired children in the use of cued speech and to provide support services to 10 schools and programs to enable them to serve as models. During 1968-69, 3537 parents and teachers attended workshops and demonstrations, and 486 parents in 41 classes received an average of 15.7 hours of instruction. During the followup program, 1969-71, resident services averaging 1.5 instructor months each were provided to 10 schools and programs. Materials developed and distributed included demonstration films, recorded lesson, handbooks for teachers and parents, and other printed materials. Correlation between extent of use of cued speech and reported beneficial effects on receptive and expressive language, speech and speechreading was significant at the 0.01 confidence level. Impact of the dissemination and parent training program seemed adequate, resulting in initiation of use of cued speech by enough schools and programs to give it a chance to prove its value. Impact of the followup program was insufficient to bring the participating programs to the level of models of use of the method. Several of the programs appear to be capable of reaching this level in another year or two. (Author)

AUTHOR'S ABSTRACT

CUED SPEECH PARENT TRAINING AND FOLLOW-UP PROGRAM

CONTRACT NO. OEC-8-009137-4348(019) and (615)

The purpose of this project was to train parents and teachers of hearing-impaired children in the use of Cued Speech and to provide support services to ten schools and programs to enable them to serve as models. During 1968-69, 3537 parents and teachers attended workshops and demonstrations, and 486 parents in forty-one classes received an average of 15.7 hours of instruction. During the Follow-up Program, 1969-71, resident services averaging 1 5 instructor-months each were provided to ten schools and programs. Materials developed and distributed included demonstration films, recorded lessons, handbooks for teachers and parents, and other printed materials.

Correlation between extent of use of Cued Speech and reported beneficial effects on receptive and expressive language, speech and speechreading was significant at the 0.01 confidence level.

Impact of the Dissemination and Parent Training Program seemed adequate, resulting in initiation of use of Cued Speech by enough schools and programs to give it a chance to prove its value. Impact of the Follow-up Program was insufficient to bring the participating programs to the level of models of use of the method. Several of the programs appear to be capable of reaching this level in another year or two.

Final Report

Contract No. OEC-8-009137-4348(019) and (615)

Cued Speech Parent Training and Follow-up Program

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Gallaudet College
Washington, D.C.
August 15, 1972

The training project reported herein was carried out pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. Department of Health, Education, and Welfare
Office of Education
Bureau of Education of the Handicapped
Media Services and Captioned Films

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CHAPTER I

INTRODUCTION AND SUMMARY

This report covers activities carried out under contracts OEC-0-8-001937-4348(019) and OEC-0-8-001937-4348(615) during the contract period June 13, 1968, through August 10, 1971, and subsequent activities and developments recorded during the preparation of this report.

The purpose of the project was, during the first year, to train parents and teachers in the use of Cued Speech utilizing special materials and training films developed for that purpose and, thereafter, to concentrate support services, materials and guidance in ten key programs or schools in order to demonstrate the potential of Cued Speech when used correctly and effectively.

Cued Speech is a combination of oral speech with twelve simple correlated gestures, or cues, developed by the Project Director during 1966 and first put in use in September of that year. Four of the cues are positions of one (either) hand, near the face, used to identify groups of vowel phonemes that are (within groups) clearly different from each other as regards their visible manifestations during speech. Eight of the cues are configurations of the hand used to identify groups of visually contrastive consonant phonemes. The design of the system is to make all the phonemes used in speech visibly different from each other, either on the lips or on the hand. Cued Speech is as rapid as normal deliberate speech and is held by its advocates to be unambiguous, useful at any age, unlimited as to vocabulary, and psychologically sound as a phonemically-based system of encoding and decoding language for the deaf.

Specifically, Cued Speech is designed to overcome the following problems encountered by a large majority of children with severe hearing impairment.

1. The problem of limited communication in the early years, resulting in retarded personality development and delayed social maturation.

2. The problem of delayed acquisition of verbal language. Rapid verbal language growth rarely occurs in the congenitally deaf child, if only oral-aural methods are used, until he is beginning to read.

3. Failure to acquire an accurate mental model of the spoken language. Such a model is indispensable for accurate speech patterns as well as for maximum development of speechreading ability and reading skill.

4. The lack of a convenient method of clear communication in the classroom and elsewhere, for use in instruction, for clearing up misunderstanding, and for clarifying pronunciation.

Judging from the results observed and reported during the period of the project, Cued Speech appears to help solve all of the problems listed above, for some hearing impaired children, when it is used consistently with them. The results reported do not prove, though in many cases they strongly suggest (in the opinion of those reporting), that Cued Speech is more effective than other methods in solving the problems indicated. The reason is that no long-term, controlled experiments comparing results obtained with Cued Speech with those obtained with other communication methods have been completed. Some controlled experiments have been carried out to evaluate specific limited effects of Cued Speech, as on lipreading of consonant-vowel syllables, as will be reported.

Initially, Cued Speech was designed with the following requirements in mind:

1. It must be oral, in that there is complete use of and dependence on the information available from the lips.

2. Any information added to that available from the lips must be compatible (in meaning, rhythm, etc.) with spoken language.

3. It must make evident all the essential details of spoken language, contributing to the gradual absorption of full understanding of language from the act of communication.

4. It must be learnable by a very young deaf child through the simple process of exposure to communication in the home, without formal teaching.

5. It must be capable of being learned by average parents who are willing to make a reasonable effort to help their child.

Results reported during the project appear to confirm that Cued Speech meets fully the first three of these requirements. They strongly suggest that it meets also requirement number 4, except in cases in which the child suffers from perceptual or learning disabilities in addition to hearing impairment. The results indicate that a majority of highly-motivated parents are successful in learning and using Cued Speech. The fact that only an estimated 25 to 30 percent of parents who attended classes in Cued Speech actually followed through to continued use of it with their children is due to a number of factors, including the methods controversy, division of opinion among teachers, and insufficient follow-up and assistance. It is impossible to determine, at this point, the extent to which difficulties encountered by parents in learning Cued Speech are significant. The percent of parents (of children in a school or program using Cued Speech) learning and using it with their children varies from zero to one hundred per cent, and appears to reflect clearly the extent of commitment of the teachers in the program. For example, in one program in which all parents of children with whom Cued Speech is used

by the teachers have learned and are using it, the teachers went to the individual homes to teach the method to each set of parents. Some parents have learned the method with no help from anyone, simply using the tape recorded lessons. Others have given up after a few lessons. At this point it is reasonable to conclude that Cued Speech is capable of being learned and used by a majority of parents if they are highly motivated and if they receive support and encouragement from the teachers.

During the initial year of the project, twenty-six instructors provided an average of 15.7 hours of class instruction to 486 parents of hearing-impaired children. This does not include short-term workshops or demonstrations serving a total of 3537 people. In the opinion of the Project Director, the parent training classes were reasonably successful. Limitations in addition to those already indicated included the fact that the initial instructional materials were of less than desirable quality and, indeed, the most successful methods and materials for teaching Cued Speech to hearing persons were developed toward the end of the first project year.

The Follow-up Program of concentrated services, support, materials and guidance for ten programs and schools was not of sufficient duration to produce the results envisioned, although several of the programs developed enough momentum to get support from other sources and appear to have good prospects of becoming models of effective use of Cued Speech. In addition, some of these have been instrumental in developing new methods of instruction and evaluation, or of adapting programs designed for hearing children for use with deaf children through Cued Speech. An important development in several programs (only one among the ten selected for the project) has been the integration of hearing-impaired children in classes with hearing children, for a substantial fraction of class time, through the use of Cued Speech by the teachers of hearing children, and by the children themselves, as necessary.

One difficulty experienced in the Follow-up Program was the almost universal reaction, in the participating programs, that evaluation during the second and third project years (which were for some of the programs their first and second years of use of Cued Speech) was too early. Only five of the ten programs actually completed the more elaborate of the two evaluation schedules utilized. Several others provided narrative evaluations or developed their own evaluation formats.

In summary, though the Follow-up Program resulted in development of improved methods, materials, and guidance for instruction and use of Cued Speech, these apparently came too late to result in the development of models of effectiveness among the ten participating schools and programs during the second and third project years. The degree to which the desired results will be achieved in time by some of the participating programs remains to be seen.

Two of the ten schools have essentially shifted to Total Communication, indicating that they will continue to use Cued Speech for special purposes, such as clarification of pronunciation and teaching of speechreading.

CHAPTER II

CUED SPEECH DISSEMINATION AND PARENT TRAINING PROJECT, 1968-69

Objective

The objective of this phase of the project was to make available to the parents of deaf children in many parts of the country instruction in Cued Speech and guidance on how to utilize it in the home. Emphasis was put on explaining the principles of Cued Speech and helping parents learn the method. In cases in which parents did not have access to organized classes in Cued Speech, materials and assistance were provided by mail.

The program involved demonstrations, workshops, parent education classes, and follow-up through correspondence and supplementary materials, all provided in response to specific requests for them. In order to facilitate these activities, the staff developed and distributed informational, instructional, and demonstration materials. These included sets of the thirty-one 8 mm silent cartridge films produced in 1967 in collaboration with the Midwest Regional Media Center, and the tape-recorded lessons also produced in 1967. During 1968-69 the staff also collaborated with the Midwest Regional Media Center in the production of a set of sixteen 8 mm sound instructional films in cartridges, but these were not available for distribution until near the end of the parent education program.

Staff and Facilities

Headquarters for the Cued Speech Dissemination and Parent Training Program were in Chapel Hall, Gallaudet College, where offices, storage, and instructional space were provided. Mr. Van C. Porter of the Department of Education, State of South Carolina, was employed as Assistant Project Director for the year beginning August 26, 1968. His primary responsibility was to serve as Field Director for the Parent Training Program. During the year he conducted workshops and organized classes to instruct parents of deaf children in the use of Cued Speech throughout the United States.

Miss Kathleen M. Tansey, whose employment commenced on August 6, 1968, worked in a dual capacity as instructor and office secretary. She was responsible for the dissemination of materials and information, the arrangements for and records of workshops and classes, and for the instruction of people who came to Gallaudet College to learn Cued Speech.

Parent Training Classes

Since the objective of this project was the instruction of parents, efforts were focused primarily on series of classes set up across the country by schools for the deaf, clinics, and parent groups. Qualified instructors in Cued Speech were paid for their services through this project.

Procedures and forms were developed by the staff and records of enrollment and attendance were required of all instructors before payment was authorized. Most classes were scheduled for twelve two-hour sessions, one session weekly for eight weeks, followed by four monthly sessions.

The rate of pay for instructors was $2 per parent per contact hour, up to a maximum of $10 per hour. Thus, if a class included five or more parents, the instructor received $10 per hour for his actual instruction. Transportation costs for the instructors were also paid.

Twenty-six instructors were approved on the basis of their experience with Cued Speech and their understanding of its purpose, value, and potential. A total of 486 parents of hearing-impaired children were enrolled in forty-one classes. Approximately 7600 parent hours of instruction were given. The average class size was 11.9 and the average attendance rate was 65%.

Summary of Additional Activities

During the first project report period, June 25 to September 30, 1968, eight workshops and demonstrations were held with attendance totaling 880, counting each person once for each day in multiday workshops. Twenty conferences were held with administrators and teachers of schools and programs interested in learning about Cued Speech. This included visits by the staff enroute to workshops and visits to the Cued Speech office at Gallaudet.

During the second report period, October 1, 1968 through January 31, 1969, twenty-seven presentations were held. These ranged from 1 1/2 hour explanation-demonstration sessions to two-day workshops. A total of 773 persons were exposed to the sessions conducted by the Assistant Project Director. The Project Director made presentations to an additional 325 teachers and parents of hearing-impaired children. Mr. Porter presented Cued Speech at the convention of the Council of Hearing Consultants in State Departments of Education, which was held in Denver, Colorado.

In the period covered by the third report, February 1, 1969 to March 31, 1969, Mr. Porter conducted eight workshops and demonstrations to serve 229 persons, and Dr. Cornett held four workshops and presentations for the benefit of 128 people.

During the fourth reporting period, April 1 to August 10, 1969, twenty-three field workshops and demonstrations were held to serve 855 people. In addition eighty-seven people received instruction on the Gallaudet campus. On June 25, an entire afternoon section meeting was dedicated to Cued Speech at the 44th Biennial Convention of American Instructors of the Deaf in Berkeley, California.

A total of 3190 people were served by workshops or demonstrations during the project year, outside the Washington, D.C. area. In addition, 347 were accommodated in demonstrations in the Washington area or came to the Gallaudet campus for instruction.

CHAPTER III

CUED SPEECH FOLLOW-UP PROGRAM, 1969-71

Objective

The objective of this program was to concentrate support, services, materials, and guidance in ten key programs or schools, raising the extent and quality of use by teachers and parents in order to demonstrate the potential of Cued Speech when used correctly and effectively. The program also provided for observation, evaluation, and recording of performance and progress.

The Cued Speech Follow-up Program provided ten schools with concentrated assistance and guidance in order to develop their programs to model effectiveness. The staff worked with teachers, parents, and students in the target schools. Emphasis was put on furnishing reliable instructions on how to use Cued Speech effectively and on development and distribution of materials to facilitate effective use of the system.

This program was hampered by the misconceptions about use of Cued Speech which were held by many people who had learned the system during the previous year. In some schools Cued Speech had been used only with the ''bright'' pupils, on the theory that only the bright children are capable of learning it. In other schools it was used only with slow students, on the theory that only slow learners need it. Some maintained that it was only for those who have severe hearing losses. In many places it was used only as an aid for teaching and clarifying pronunciation. Unless Cued Speech is used fully, that is, virtually everything said to the deaf child is cued, it will produce little improvement in language acquisition over ''key word'' methods (such as unsupported lipreading) which provide fractionated, incomplete language development. During the year of this program an attempt was made to eliminate all erroneous ideas about the use of Cued Speech and encourage people to use it correctly and with maximum effectiveness.

Staff

Working under the supervision of the Project Director were the two Field Instructors, Miss Christine Lykos and Miss Pamela Hardy, both of whom had previously used Cued Speech in a teaching capacity. On August 11, 1969, they began their duties of developing support materials and supplying instruction, assistance, and guidance to parents, teachers, and students at ten chosen schools.

Research Associate David L. Knight worked as a half-time coordinator of evaluation to develop evaluative instruments for use by the schools and to work on techniques for recording and interpreting meaningful data relating to the use and effects of Cued Speech.

Instruction in the Cued Speech Office at Gallaudet College and dissemination of materials were handled by Mrs. Mary Elsie Henegar. She also collaborated with the Project Director in writing a handbook for parents.

Summary of Activities

The Field Instructors provided periods of full-time on-site assistance to the key centers. They provided training for parents and teachers, observed, evaluated and recorded progress and performance. Each center received a set of the new instructional films, a supply of the recorded lessons, and other helpful materials.

During the first report period, September 1 to November 31, 1969, the Field Instructors completed ''Instructions for Adapting the Peabody Language Development Kit, Level P, For Use With Hearing-Impaired Children'' (through Cued Speech). These instructions were distributed to interested teachers, and the Field Instructors demonstrated their use in the schools they visited.

Miss Hardy provided resident services to the following schools from September 15 to November 26: Montrose Elementary School, Houston; Mary E. Bennett School for the Deaf, Los Angeles; and Hawaii School for the Deaf and the Blind, Honolulu. Miss Lykos spent the same period of time at these schools: Montrose Elementary School; Oklahoma School for the Deaf, Sulphur; and Tarrant County Day School for the Deaf, Fort Worth.

During the period of time covered by the second report, December 1, 1969, through February 28, 1970, Miss Hardy provided services at St. Paul's Oral School in Richmond and Oklahoma School for the Deaf, spending a month in each place. Miss Lykos spent the month of December at Tarrant County Day School for the Deaf and at the Oklahoma School for the Deaf. In January she was at St. Paul's Oral School in Richmond.

Resident services during the third reporting period were provided by Miss Hardy to the following schools: Abilene Public Schools, Abilene, Texas; Tarrant County Day School; and Oklahoma School for the Deaf. Miss Lykos spent most of this period assisting these programs: Mary E. Bennett; Sacramento City Unified School District; Mistletoe School, Redding, California (Shasta County); Ruby Thomas School, Las Vegas; and Edward Markham School, Fairfield, California (Solano County).

In all, resident services were provided to eleven schools during the first year of the project. In several of these cases, the initial services were provided on an exploratory basis, after which a decision was made as to which schools would continue to receive resident services. The number of schools receiving resident services was finally reduced to nine. A tenth school, the New York School for the Deaf, was included among the model programs without provision for resident services because it employed a full-time Cued Speech supervisor as a member of its own staff.

In addition to rendering these resident services, the Field Instructors supplied other interested people in the areas with demonstrations and explanations of Cued Speech. One of these was a presentation by Miss Lykos at

the meeting of the California Speech and Hearing Association in April, 1970, at Fresno.

Mr. Knight completed the tentative evaluation schedule in November, 1969, and field-tested it in mid-December at St. Paul's Oral School, Richmond, Virginia. It was revised and prepared for distribution in January. A difficulty was encountered in connection with the evaluation schedule, in that few schools felt that they had reached a point at which it would be profitable to carry out so detailed an analysis. The general reaction seemed to be that such a schedule would be relevant only after the program had gone on for several years, since in most cases the percentages of parents and teachers using Cued Speech consistently was rather low at that point in time. In most cases each school preferred to make its own informal evaluation and submit a narrative report. Eventually, however, five of the ten participating programs filled out the evaluation schedule.

The Field Instructors began working on a manual for teachers in January, 1970. They incorporated both materials they developed and materials they found in use in the schools they visited.

Materials and Media

The ten centers were provided all materials developed during the Parent Training Program. Additional materials were developed especially for the ten participating programs, though they were made available also to other schools and programs on request. All of these materials are described in detail in Chapter IV, Materials Development and Dissemination. Unfortunately, some of the most helpful materials were not available for distribution until near the end of the contract period.

Each participating program was furnished with one or more sets of the thirty-one 8 mm silent film cartridge lessons, one or more Technicolor Model 500 projectors, a set of the sixteen 8 mm sound film cartridge lessons and a Technicolor Model 1000 projector (unless they were already so equipped), several sets of the recorded lessons (on tape for school use and discs for parent use), copies of the Cued Speech Handbook for Teachers and the Cued Speech Handbook for Parents, as needed. In addition, they were supplied with schedules for evaluation of attitudes toward Cued Speech and of the extent of their use of Cued Speech by teachers and parents. Many articles on the implications of Cued Speech and suggestions for its use were communicated to them either through or with issues of Cued Speech News. The latter was used for dissemination of information helpful to a wider group of users of the method.

Teachers in the participating programs made significant contributions to materials and ideas for teaching and using Cued Speech. Many of these were announced to all the participating programs, primarily through Cued Speech News, and distributed on request. They are discussed in Chapter VI.

Participating Schools and Programs

The ten schools chosen for participation in the project were selected on

the basis of apparent interest and commitment, geographical location and kind of program. Three are state residential schools for the deaf, two are public day schools for the deaf, three are large day class programs in regular public schools (two of them assisted by grants), and two are small day class programs in public schools.

New York School for the Deaf, at White Plains

This is the school which first adopted Cued Speech, in January, 1967. The administration of the school has strongly supported the use of Cued Speech from the beginning. Even though progress has been slow (due apparently to the long-time entrenchment of manual communication, as in most residential schools), use of the method has been gradually spreading upward throughout the school.

The student body of the New York School for the Deaf numbers 292. Of that number 67 are in the preprimary department where all the teachers cue about 70 percent of what they say to the children. Included in the elementary department are 82 pupils. One class here has received cuing consistently for four years (beginning in the preprimary). All the elementary teachers cue, several consistently, and the others for selective purposes. In the Junior-Senior High School, there are two classes in Cued Speech. In addition, it is being used in some English classes and in special subjects such as homemaking and art.

The administration has tried to promote a policy of cuing by everyone on the staff, and this has been extended gradually to nurses, supervising teachers, substitute teachers, administrative officers, and houseparents. Speeches in the preprimary building are interpreted through Cued Speech.

Mary Haney, Supervising Teacher of Speech and Director of Language Curriculum, conducts an on-going program of instruction in Cued Speech. Parent classes are held twice a week, and individual instruction is available for all staff members. In addition there have been several special projects during the past school year (1971-72) designed with the ultimate aim of broadening the number of cuing contacts of the deaf children.

The Volunteer Dormitory Cue Program enlisted the services of thirty hearing youngsters from local junior and senior high schools to assist in exposing the resident students to the natural language that is learned in normal play situations by hearing children. The volunteers learned Cued Speech and were taught how to expose the deaf children to natural language. They each devoted one afternoon a week (two hours after school) to playing with and talking to the children.

Kiddie Cue was the name of a series of Saturday morning classes for brothers and sisters of the deaf students. This was another part of the N.Y.S.D. effort to increase language input for the deaf child by providing for him the natural language experiences that hearing children have. It is hoped that through these classes Cued Speech will provide an opportunity for better family relationships.

The ''Summer Happening'' at N.Y.S.D. was a special residential program for twenty-four of the deaf students, which was held for six weeks during the summer of 1972. The unique feature of this program was that each deaf youngster (aged 9 to 13) brought a hearing friend from his home neighborhood. These hearing children learned Cued Speech and assisted the deaf children in learning language. Given special emphasis was the language involved with all the recreational and artistic activities during the day. It is hoped that many of these hearing and deaf children will continue their friendships, thus establishing for the deaf students real communication with their peers in English. This is another vital link in the chain of natural language acquisition.

Since the New York School for the Deaf was able to furnish its own staff for supervision in the area of Cued Speech it did not request the services of the Field Instructors. Services provided it through the project included materials and equipment, consultation by telephone and at Gallaudet College, and an occasional brief visit for the purpose of comparing methods and exchanging ideas.

Sacramento City Unified School District

Over 100 hearing-impaired students are served by this school district at two elementary, one junior high, and one senior high school. Fifteen teachers of the aurally handicapped classes, in addition to tutors and other staff members, teach the students in regular schools.

The use of Cued Speech in Sacramento was begun early in 1970, and Miss Lykos assisted in its implementation by providing her resident field services for about three and a half weeks in several periods during the ensuing months.

In the fall of 1970, the school district was awarded nearly $80,000 for a one-year project under Title VI-A, ESEA. The purpose of the project was to train teachers, tutors, parents, family members, and other interested persons, with the goal of introducing Cued Speech into classrooms on all levels and into homes of the students and the community-at-large. In addition to extensive training programs carried out through the year, training materials were developed and specific lessons were created for tutors and parents. An important part of the program was the development of assessment and evaluation procedures.

Approximately sixty hearing-handicapped children were included in the program, ranging in age from the nursery level through the primary grades. People from other schools in the area attended training sessions; and, as a result, more than 100 hearing-handicapped children, from age 3 to 18, learned to use Cued Speech. Their progress in both receptive and expressive vocabulary exceeded expectations. The students were tested in October of 1970, February of 1971, and finally in May of 1971. The final results showed that 77.6 per cent of the students achieved or exceeded expectations in receptive vocabulary. The predetermined objective was for 75 per cent of the pupils to attain 75 per cent accuracy on reception of an appropriate vocabulary list. In expressive vocabulary the objective was for 60 per cent of the pupils to achieve 50 per cent accuracy in the expression of appropriate vocabulary. In fact, 75.9 per cent attained the goal.

The project was refunded for the school year 1971-72, and progress continues to be made in most areas. Cued Speech is being used with about seventy students by twelve teachers on the preschool and intermediate levels. It is estimated that fifty parents are using it.

Ruby Thomas Elementary School

This regular elementary school in Las Vegas, Nevada, is attended by sixty-five hearing-impaired students from Clark County School District. Fifty-five of these pupils are taught with Cued Speech by nine of the eleven teachers (two teachers use manual communication with the remaining ten students).

Miss Lykos spent twenty-four days at Ruby Thomas at the end of the school year in 1970, to help launch the use of Cued Speech there. She conducted a three-week workshop during that summer for teachers, parents, children, and other relatives. She also prepared and made a series of video tape recordings to be used for future instruction.

During the summer of 1971, five hearing high school seniors learned how to cue to prepare them for work as tutors for deaf junior high school students. Each of the five tutors, who were selected from the twenty Valley High students who applied, were assigned to work with a deaf student attending William E. Orr Junior High. The tutors were paid $180 each semester through a grant from the Nevada Society for the Aurally Handicapped. They worked with the junior high students at least two hours each day.

A grant was received by the Aurally Handicapped Program in Las Vegas for a three-year project using Cued Speech, beginning with the school year 1971-72. The grant was conferred by the Department of Health, Education and Welfare (Office of Education, Bureau of Education for the Handicapped) through the Title VI Handicapped Children's Early Education Program, and specifies that this will be an oral program using Cued Speech as the method of communication. Miss Lykos is employed as Project Manager.

The major objective of the project is to plan, organize and staff a centralized parent training center for the state of Nevada. The center is to serve as a model for parent centers in sparsely populated areas. The need for the parent training center is based on the premise that parental involvement is necessary in the oral education of the aurally handicapped child, especially the child between the ages of 1 month and 5 years. This training program is designed to assist and train parents so they will be knowledgeable in the necessary procedures and to involve them in actually working with their own child. Training is being conducted in the areas of Cued Speech, natural language development, auditory training, speech, and general growth and development. Efforts are being made to correlate and unify the communications approach used both at home and at school and to extend the total time during each day in which a consistent method of communication is presented to the child.

Staff and parent training was conducted during the past year, and the training effort has been extended to other teachers and students in classes for the normal hearing at both Ruby Thomas and William E. Orr Schools. It is considered important that these teachers and students be able to communicate with the aurally handicapped using Cued Speech in order to support both social and

academic integration in the schools. The student tutors have contributed to the success of this endeavor.

An important aspect of this program has been the self-evaluation provided for teachers and parents through micro-teaching techniques. During the past school year, eleven teachers were trained in the use of Cued Speech. In November, 1971, and May, 1972, their proficiency at cuing words, phrases and sentences was assessed, using an observational system developed for this purpose. Twenty-five selected items (including all problem areas) were cued by each teacher with the results recorded on video tape. All eleven teachers had attained an accuracy level of 85 to 99 per cent by May, 1972.

This program will continue for the second year, 1972-73, beginning with a two-week workshop for siblings during the summer. There will also be a one-week workshop for teachers and other professionals immediately before the opening of school in September, 1972.

Mary E. Bennett School for the Deaf

This is a public day school in Los Angeles, California, with a student body of approximately 150. There are nearly thirty people on the educational staff. Mrs. Evelyn M. Stahlem, Principal, was one of the participants in the original Cued Speech Training Project in July, 1967. She introduced the system at her school the following year, emphasizing the conjunctive use of Cued Speech and the Initial Teaching Alphabet. This joint use of a written phonetic method and a spoken phonetic method provides an important consistency in the learning process.

During the Follow-up Program of 1969-70, both Miss Lykos and Miss Hardy spent time at Mary E. Bennett as resident instructors and assistants.

Mrs. Stahlem, who died in March, 1971, after a prolonged illness, was succeeded in the fall of 1971 by a principal strongly committed to "pure" oral methods. Accordingly, the policy establishing Cued Speech as the recommended mode of communication at Mary E. Bennett School was discontinued. Information supplied in the reply to the November, 1971 Questionnaire indicates that Cued Speech was being used with thirty students by six teachers at that time.

The extent of use of Cued Speech at Mary Bennett School before the change in policy, and the attitudes of the teachers toward it, are summarized in a paper presented by Margaret T. Highnote, a Bennett teacher, at the 45th Annual Convention of Instructors of the Deaf, Little Rock, Arkansas, July, 1971. The following material is reprinted from the Proceedings:

> A survey, concerning teachers' evaluation of Cued Speech at Mary E. Bennett, was taken in May, 1971. Of the 25 faculty members who received questionnaires, 17 returned completed questionnaires. Some of the questions and answers...were as follows:
>
> Do you use Cued Speech in your classroom?
> 15 teachers replied yes; 2 no.

What types of children do you feel benefit most from a Cued Speech program?

The answers ranged from good lipreaders to poor lipreaders, bright students to slow students. For the 17 questionnaires there were 17 different answers to this question. The same holds true for the next question.

What types of children do you feel don't benefit from a Cued Speech program?

The results of these two questions show the need for more research on Cued Speech.

By what method do you teach Cued Speech?

Three replied that they taught cues analytically. 10 teachers cued to their class but did not expect the students to cue in return. Most teachers taught the vowels and vowel cues analytically.

How do you use Cued Speech in your classroom?

One teacher used Cued Speech in teaching language. 13 teachers used Cued Speech in teaching language and speech. Three used cues for correctional purposes only. One teacher did not use Cued Speech at all. Another teacher used Cued Speech only for commands.

One final question of interest from the questionnaire was: Do you wish Cued Speech to be continued at Mary E. Bennett?

Of the 17 teachers who returned questionnaires, 13 said yes. Three (3) did not answer this question; 1 was "not sure." Some of the answers were qualified by classroom experiences.

Oklahoma School for the Deaf

This is a state residential school with a staff of over fifty people and a student body of more than 250. The use of Cued Speech was instituted there with workshops for staff, parents, and students in September of 1968 (under the Parent Education Program). During the year of the Follow-up Program, resident Field Instructor services were provided for extensive periods by Miss Lykos and Miss Hardy.

In the spring of 1970, Mr. Richard Youngers, Superintendent, estimated that Cued Speech was being used in two-thirds of all his classes. He indicated that it was being used on all levels to some extent, primarily with the oral classes. It was being used for specific purposes, such as speech therapy, throughout the school.

A tutoring program was begun at Oklahoma School for the Deaf by Field Instructor Pamela Hardy. The tutors, who were middle and upper school students, worked after school and during evening hours in the dormitories using Cued Speech with preschool and kindergarten children. They all cued when working with the younger children. At times as many as sixteen tutors were engaged in this program.

During the 1971-72 school year manual communication was taught to the staff of the Oklahoma School for the Deaf because of ''the pressure for total communication,'' according to the superintendent. He indicated that Cued Speech will continue to be used for special purposes.

Mistletoe School

This school in Redding, California, is part of the public school system in Shasta County. Of the approximately twenty hearing-impaired students in the program, Cued Speech is used with eleven children (ages 2 to 8 years) for continuous instruction and communication. Two teachers and approximately ten parents use the method, and the Monterey language development program is utilized in conjunction with Cued Speech. Miss Lykos assisted this program with its institution of Cued Speech in May of 1970 for six days.

Miss Arlynn Orr, one of the teachers using the method, reported on the November, 1971 Questionnaire that her students' receptive language had tripled during the past six months. She stated that their expressive language was gradually increasing, and that their speech and speechreading were ''much better!''

Edwin Markham School

This is a public elementary school in Fairfield, California, attended by eighteen hearing-impaired students of Solano County. The use of Cued Speech was instituted at this school in 1969-70 by Mr. and Mrs. Stanford Rupert, participants in the original workshop at Gallaudet in 1967. They were assisted in May of 1970 by Miss Lykos. During the summer of 1970, the Ruperts conducted a home-oriented program for thirteen deaf children under six years of age at Markham School. The program, which stressed making the deaf child's language environment as much as possible like that of a hearing child, also included young hearing brothers and sisters, teenagers, and parents. All were given instruction in Cued Speech and practice in adopting its use in everyday situations in the home.

Mrs. Rupert reported after the six-week summer session for her students in the summer of 1971 that she had given her children the Peabody Picture vocabulary test at the beginning of the period and again on the last day. After only six weeks, they showed gains of from two months to eight months on the test.

During the past school year, 1971-72, the twenty-one pupils were divided into three groups for different teaching approaches. Mrs. Rupert continued using Cued Speech with her four pupils, SEE (Seeing Essential English) signs were used with another group, and the third group was taught by the ''pure''

oral method. Teachers of the first two groups used the Monterey language development program of the Behavioral Sciences Institute in Monterey, California. This is a programmed language conditioning method which is used for twenty minutes a day with the students. (See ''Methods of Teaching).

Reports are that response rates of the Cued Speech and Total Communication groups are about the same. The former are required to produce the spoken forms in the program, while the latter are not. Mrs. Rupert reports that there is only a small drop in the accuracy count of her students when cues are temporarily eliminated while using the Monterey program, demonstrating that development of speechreading is keeping pace with language development.

Montrose Elementary School, Houston County-Wide Day Program

Three members of the staff of this program attended the Cued Speech Training Project in July, 1967. Two were teachers, Miss Christine Lykos and Mrs. Catherine Moss, and the third was Mrs. Kathlyn Harston, Supervisor of the program, who instituted the use of Cued Speech at Montrose the following September. Miss Lykos and Mrs. Moss conducted weekly learning and practice sessions for the other twenty-six teachers.

Cued Speech was used ''full-time'' with all beginning students the first year it was used, 1967-68. Four of the teachers used the method with thirty-two children on the preschool and lower school levels. The remaining twenty-four teachers used the method to some extent so that a total of 224 children were exposed. Some parents were also taught the system. The Initial Teaching Alphabet was used in conjunction with Cued Speech in the primary grades.

Although Mrs. Harston recently said, ''We are thoroughly sold on Cued Speech,'' she feels several problems have kept the program from developing as desired: difficulties with in-service training and the high rate of turnover in the program, both on the part of the teachers and the students.

During the coming school year, 1972-73, Cued Speech will be used in the preschool and in two classes of the elementary department. These elementary classes will serve as control classes so that a systematic comparison may be made between those using Cued Speech and those not using it. Eight teachers and sixty-four students will be using the method.

Hawaii School for the Deaf and the Blind

This state school has an enrollment of nearly 160 students, most of whom are day students, and an educational staff of about thirty. Three members of this staff attended the original workshop at Gallaudet in July of 1967 and began the use of Cued Speech that fall with the younger children in the school. They were Mrs. Tomiko J. Yamashita, Supervising Teacher, Mrs. Mildred Zabriskie, and Mrs. Margaret Murphy.

Classes were held for staff and parents and Cued Speech was considered a vital part of the new preschool department which was started at the same time, the fall of 1967.

Mrs. Zabriskie reported in 1969, two years after Cued Speech was introduced at Diamond Head School, that a survey of teachers, houseparents, and parents was encouraging in twenty-three out of twenty-five cases. Parents and teachers alike were enthusiastic and outspoken about the benefits evident among the individual children and about the ease of classroom learning and social acceptance of Cued Speech.

Miss Hardy spent 18 days at Diamond Head in the fall of 1969, assisting with the program there.

In 1972 Total Communication was adopted as the official school policy. Cued Speech continues to be used with seventy-five students in the primary department. Ten teachers cue to these children, most of whom were first exposed to Cued Speech in preschool. It was reported on the November, 1971 Questionnaire that they are doing very well and showing ''tremendous improvement'' in all areas of development.

Richmond Oral School

This public day school program in Virginia, formerly St. Paul's Oral School, has an enrollment of forty-three hearing-impaired students in special classes in a public school. The staff of eight is attempting to use it throughout the hearing-impaired program for all instruction and communication.

This program was assisted by Miss Hardy for 18 days in December of 1969, by Miss Lykos for three days the following January, and by the Project Director in two visits in 1970 and 1971.

Two classes were taught with Cued Speech during the school year 1970-71 with such success that use of the method was continued. Mrs. Edith Usher, head of the program reported on the November, 1971 Questionnaire that the students have made rapid improvement in all areas of development.

South Carolina Project

An important project outside the ten participating programs was carried out during 1969-71 in South Carolina by Mr. Van C. Porter, Assistant Project Director during 1968-69. After his return to his permanent position as Consultant for the Hearing Impaired, State of South Carolina Department of Education, Mr. Porter set out to use Cued Speech to upgrade programs in regular schools where small numbers of hearing-impaired children were being accommodated with limited special services. In some of these schools the deaf children were in a single class of six to eight children ranging in age as much as from 5 to 13 or so, with a teacher provisionally certified to teach the deaf.

Mr. Porter initiated use of Cued Speech in programs in Beaufort, Bennettsville, Darlington, and Olanta, aiming at use of Cued Speech by parents, teachers, and hearing children. Initially, the goal is for the special teacher, the deaf children, and the parents to reach a reasonable level of communication in Cued Speech. At the same time teachers and hearing children in classes in which the deaf children will begin to spend increasing amounts of time begin

to develop proficiency so that they can better accommodate the deaf children. The ultimate objective is to have the teacher of the deaf serve as a resource teacher, with the deaf children spending as much time as is best for them in regular classes in which the teachers and hearing students are able to use Cued Speech. Mr. Porter reports encouraging progress in most of the programs, especially in Beaufort where the older children are spending increasing amounts of time in regular classes and the preschool children are reported to be making rapid progress. New programs are scheduled to start in September in Columbia and Aiken. All the programs now have teachers certified to teach the deaf. Mr. Porter reports that parent participation and support has been the key to success in these programs, and a major factor in getting them started. He also reports that in every instance the children at the top of the class are profoundly deaf children whose parents use Cued Speech with them, or are hard-of-hearing children.

CHAPTER IV

MATERIALS DEVELOPMENT AND DISSEMINATION

Materials utilized in the project and distributed to the participating programs included demonstration films and tape recordings, instructional films, recorded lessons, handbooks for parents and teachers, instructions for adapting the Peabody Language Development Kit, Level P, for use with hearing-impaired children, and numerous printed articles and essays dealing with various implications of Cued Speech and its use.

Demonstration Materials

These included two films and one demonstration tape recording, as follows:

Film of the Henegar Family - 16 mm color, dubbed sound, 11 minutes. This film shows the Henegar family in communication with Leah Henegar at the age of 2 1/2 years, six months after they began use of Cued Speech.

St. Gabriel's School Film - 16 mm color, silent, four minutes. This film, made on the playground at St. Gabriel's School for Deaf Boys, near Sydney, Australia, shows the use of Cued Speech among deaf pupils for whom it is the habitual method of face-to-face communication.

Orientation-Demonstration Tape - 20 minutes, 3 3/4 i.p.s. A brief presentation of the rationale for Cued Speech, followed by sample recordings illustrating its readability, its effectiveness in providing needed feedback, and its use in correcting pronunciation.

Instructional and Support Materials

Most of the materials used in the project were developed specifically for it and were therefore not available at or near the beginning of the contract period. There were three notable exceptions, as follows:

1. One hundred sets of thirty-one 8 mm silent instructional films, 3 minutes each in cartridges, made in collaboration with the Midwest Regional Media Center for distribution to the participants in the initial Cued Speech Workshop in July, 1967 (Contract OEC-2-7-002704-2704). These films are intended primarily for use with deaf persons, but were used with hearing persons until media materials designed specifically for them could be produced.

2. Sixty sets of recorded practice exercises, on 1200 ft. two-track tapes, 3 3/4 i.p.s., used during the first year of the project, until the improved recorded lessons were developed.

3. Twenty-six sets of sixteen 8 mm sound filmed lessons in Cued Speech, 9 minutes each, in cartridges, also made in collaboration with the Midwest Regional Media Center. These were available at the end of the first year of

the project, in August, 1969. They have been particularly useful in providing a model for cuing, and in achieving appropriate linkage of visual and auditory aspects in learning Cued Speech, as will be explained in detail in Chapter V. These films incorporate a stimulus-response-confirmation pattern developed during the early months of the project and found to be effective.

Beginning Lessons In Cued Speech - These are revised recorded lessons employing the stimulus-response-confirmation pattern utilized in the instructional films. These were made available both on tape (1200 ft, 3 3/4 inches/sec., two-track) and phonograph discs (16 2/3 rpm), the latter specifically for self-instruction of parents because they are more likely to have access to record players than to reel-type tape recorders.

The scripts for the revised recorded lessons were completed during the Fall of 1968. Taped copies were field tested in February and March, 1969, and revisions incorporating results of field testing were completed in early April. The completed records were received in late April when distribution was begun. As of June, 1972, 1228 records with accompanying instructions had been distributed.

These recorded lessons turned out to be the most effective single learning aid for hearing persons. A good many persons, particularly in other countries, have learned Cued Speech through these lessons alone, with no face-to-face or filmed instruction. Most persons using both the instructional films and the recorded lessons indicated that the latter helped them more than the films. Most felt the recorded lessons were less tiring.

Instructions for Adapting the Peabody Language Development Kit, Level P, for use with hearing-impaired children who know Cued Speech, thirty-three pages, 8 1/2 by 11 inches, multilithed, were first available in October, 1969.

Cued Speech Handbook for Teachers, by Christine Lykos, 281 pages, 8 1/2 by 11 inches. All members of the project staff assisted on this handbook, but Miss Lykos had the principal responsibility and was listed as sole author. Distribution was begun in May, 1971.

Cued Speech Handbook for Parents, by Mary Elsie Henegar and R. Orin Cornett, 217 pages, 6 by 9 inches. This handbook required much longer for production than was anticipated, since early drafts did not satisfy the authors. As a result, it was not available until a few months before the end of the contract period. It has been very well received since publication.

Assorted articles and materials on the implications and applications of Cued Speech, and its use. Many of these were distributed with or published in Cued Speech News.

Evaluation Materials

Cued Speech Institutional Evaluation Schedule, 13 pages, 8 1/2 by 11 inches, multilithed, distributed in 1970. This schedule is described in detail in Chapter V and reproduced in full in Appendix I.

Cued Speech Use and Effects Questionnaire, November, 1971, 3 pages, 8 1/2 by 11 inches, multilithed, also described in Chapter V, and reproduced in Appendix II. Six samples of this questionnaire are reproduced in Appendix II to illustrate favorable responses of professionals and parents. The substance of both favorable and unfavorable responses is summarized in Chapter V.

CHAPTER V

EVALUATION

In planning for the evaluative phase of the project, the Director wrote to five recognized leaders in the education of the deaf and its evaluation. The purpose was to solicit opinion on the length of time required to demonstrate significant differences, if they exist, in the effects of different communication methods on language development, expressive speech and speechreading in hearing-impaired children. Four indicated that a minimum of five years would be required. The other expressed unwillingness to indicate a specific time period, but when pressed agreed that a period of at least five years would be a likely requirement for demonstration of significant differences.

In this project, no attempt was made to assess scientifically the cumulative effects of Cued Speech upon hearing-impaired pupils. It was recognized that such an evaluation, to be reliable, would require much more funding and a longer period. Instead, efforts were made to evaluate (1) the attitudes toward Cued Speech of the teachers and parents in the programs, (2) the extent and consistency of use of Cued Speech by teachers and parents in the programs, and (3) the relationship, if any, between the consistency of use of Cued Speech by teachers and parents and their estimates of the effects of Cued Speech on the development of receptive and expressive language, speech and speechreading of their hearing-impaired children.

Controlled studies carried out as a part of the project included the following:

1. a study of the readability of Cued Speech

2. a study of the effects of short-term training in Cued Speech on the syllable lipreading ability of normally-hearing subjects

Summary descriptions of these two studies appear later in the chapter. The first demonstrated that, at the level of consonant-vowel syllables, Cued Speech can be read and phonetically transcribed as accurately, without sound, as spoken consonant-vowel syllables can be heard and transcribed by normally-hearing subjects. It demonstrated also that Cued Speech is significantly more readable than syllables given without cues, a fact obvious to users of the method. The difference observed is significant at the .01 confidence level.

The second study demonstrated that after an average of fifteen hours of instruction in Cued Speech, normally-hearing subjects performed significantly higher on a syllable lipreading post-test than on the pretest. The difference was significant at the .01 level of confidence.

Major efforts at evaluation in the project include the Cued Speech Institutional Evaluation Schedule, developed by Mr. David L. Knight, Research Assoc-

iate, and a questionnaire distributed after the end of the contract period (November, 1971) to collect information on extent of use of Cued Speech and to determine the degree of correlation, if any, between usage and reported effects on pupil development. These two evaluative efforts will be described in detail in this chapter.

A substantial amount of evaluation was done by the Field Instructors during their visits to the participating programs. This was recorded in their narrative reports and formed a basis for guidance and assistance to the programs, but does not lend itself to documented analysis or publication, particularly in view of assurance given that information on individual teachers would be confidential.

Contributions to evaluation and evaluative techniques were made in several of the participating programs, though most of these are as yet incomplete. In the Clark County, Nevada, program a videotape system for evaluating extent and accuracy of use of Cued Speech by teachers was developed. Termed the Cued Speech Accuracy Observation System, it is in process of further development and will possibly be published in the form of a handbook. The system was developed with the aid of EPIC Diversified Systems Corporation, of Tucson, Arizona.

In the same program two kindergarten classes of normal children, to one of which was added four hearing-impaired children, were taught by the same teacher. In the afternoon class, which contained the four hearing-impaired children, the teacher used Cued Speech in teaching phonics. Test results at the end of the school year yielded comparisons of performances on phonics material of the two groups of normal children and the deaf children. The latter scored at or above the average of the hearing children, and the normal students in the class in which Cued Speech was used in teaching phonics scored higher than those in the other class taught phonics by the usual method. Details are given at the end of this chapter.

CUED SPEECH INSTITUTIONAL EVALUATION SCHEDULE

The Cued Speech Institutional Evaluation Schedule was designed to indicate attitudes toward Cued Speech and the extent of its usage. It is primarily a means of self-evaluation which provides an institution with a basis for determining the status of Cued Speech in its program.

The schedule is comprised of four subsections. The General subsection indicates attitudes towards Cued Speech and is intended to be answered by all respondents. In addition to this subsection, each respondent is requested to answer the specific subsection which pertains to his status in relation to deaf children: Parent, Teacher, or Administrator. These three subsections provide a more detailed evaluation than the general schedule and an indication of Cued Speech usage. They can furnish a basis for inter-institutional comparison.

A summary of the evaluation scores of the institutions responding is presented below (see table). As no normative data is currently available, the information presented in the table needs additional explanation before accurate interpretation can take place.

In lieu of empirically determined norms, a comparative measure is provided through the construction of a construed mean and standard deviation symbolized $\bar{C}$ and σ_C respectively. In the case of the General subsection, the items are largely Likert-type scaled items. The response alternatives for each item in the subsection range from one that indicates an extremely negative attitude to one that indicates an extremely positive attitude. The extreme alternatives are assigned values of 1 and 5 respectively with the middle or neutral response alternative being assigned a value of 3. It is on this neutral response alternative that the construed mean is based. In other words, the construed mean ($\bar{C}$) for the General (attitudinal) subsection is simply the sum of the values of the neutral responses. It represents, therefore, a score indicating a neutral attitude towards Cued Speech and Cued Speech usage.

In interpretation then, an institution having a mean score above the $\bar{C}$ would be exhibiting a positive attitude and one scoring below the $\bar{C}$ would be exhibiting a negative attitude. The degree of the positive or negative attitudinal indication depends on the magnitude of the difference between the $\bar{C}$ and the actual mean score the institution achieved, positively or negatively.

The same general procedure was followed for the $\bar{C}$ of the usage portions of the evaluation schedule (Administrators Only $\bar{C}_A$; Teachers Only $\bar{C}_T$; and Parents Only $\bar{C}_P$). The difference between the $\bar{C}$ and the $\bar{C}_A$, $\bar{C}_T$ and $\bar{C}_P$ is not in how it was obtained but in what it represents. The usage subsections refer to the degree to which Cued Speech is being used rather than the attitudes toward Cued Speech. The $\bar{C}_A$, $\bar{C}_T$, and $\bar{C}_P$ then represent a score that indicates Cued Speech is being used 50% of the time. It is, of course, possible that this figure may be unrealistic (i.e., the average usage of all institutions

using Cued Speech may actually be 75% or 25%), and it should be used cautiously. However, it does provide a means for interpretation given that all of the above factors are taken into account.

The construed standard deviations represent the degree of variability among scores reported assuming a normal distribution of scores is achieved. It is again theoretic but taking this into account will aid in interpretation. Generally speaking, the smaller the standard deviation is in relation to the mean, the closer the agreement among those responding. For example, two groups have a mean of 10 with the first group having a σ of 1 and the second a σ of 5. It would be safe to say that the first group was in closer agreement amongst themselves than the second group because of less variability among scores.

Keeping these items in mind, the interpretation of the scores submitted by participating institutions is generally positive on the General subsection and slightly below the $\bar{C}$ for the special subsections, Teachers and Parents. As there were only four responses to the Administrator Only subsection, little can be said except that those that did respond showed a mean score higher than the $\bar{C}_A$ (see table).

Comparing with the $\bar{C}$'s listed at the top of the table, all of the General subsection scores (Administrator, Teacher, Parent) showed positive attitudes towards Cued Speech and Cued Speech usage both intra- and inter-institutionally. The overall usage scores being slightly lower than the $\bar{C}$'s for the Teachers and Parents does not indicate negativity, but rather that the institutions responding are averaging slightly less than 50% usage.

More specific information can be obtained from the table if so desired. The above information should be sufficient to guide the reader through any interpretations that he may wish to make from the information presented on the table. A copy of the complete evaluation schedule appears in Appendix I.

SUMMARY OF EVALUATION SCORES OF INSTITUTIONS PARTICIPATING IN THE CUED SPEECH INSTITUTIONAL EVALUATION

Institutions		Evaluation Response Categories: Administrator General (Attitude)	Administrator Special (Usage)	Teacher General (Attitude)	Teacher Special (Usage)	Parent General (Attitude)	Parent Special (Usage)	Total School Attitude
	$\bar{C}$'s	34.5	23.0	34.5	25.0	34.5	25.5	34.5
	$\sigma_{C's}$	9.00	6.00	9.00	6.67	9.00	6.67	9.00
NYSD	$\bar{X}$	70	32.5	46.15	28.42	–	–	47.29
	σ	–	–	14.56	8.42	–	–	14.75
	N	1	1	20	19	–	–	21
Las Vegas	$\bar{X}$	64	22.5	48.65	30.25	46.92	21.47	48.10
	σ	–	–	16.26	2.31	8.69	7.29	11.87
	N	1	1	10	8	18	15	29
Richmond	$\bar{X}$	–	–	44.25	35.0	42.0	24.25	42.38
	σ	–	–	19.45	–	13.82	5.38	13.84
	N	–	–	2	1	10	4	12
OSD	$\bar{X}$	–	32.25	35.80	18.70	41.7*	–	39.90
	σ	–	–	12.95	5.02	8.3	–	10.40
	N	–	2	21	21	35	–	58
Houston	$\bar{X}$	–	–	40	25.0	–	19	40
	σ	–	–	–	7.33	–	–	–
	N	–	–	1	7	–	1	1
Overall Institutions	$\bar{X}$	67.0	29.87	42.40	24.74	43.06	21.90	43.39
	σ	–	–	15.38	8.05	10.54	6.89	12.52
	N	2	4	54	56	63	20	121

* Represent attitudes of the OSD houseparents rather than the actual parents.

TEACHER AND PARENT USE AND EFFECTS QUESTIONNAIRE

NOVEMBER, 1971

In order to assess the extent and quality of use of Cued Speech at the end of the contract period, a questionnaire (see Appendix II) was mailed to the 725 people on the Cued Speech News mailing list in November, 1971. Replies were received from 272 people. The results derived from the replies should not be taken as a reliable indication of the full extent of the then current use of Cued Speech, but only as a sample including a substantial share of the programs in which Cued Speech is used. It represents a relatively small sample of parents using the method since only a small percentage of them are on the mailing list, judging by the numbers of parents reported by the professionals as using Cued Speech. The opinions given in the questionnaire replies by the professionals represent the opinions of the (usually) one or two such persons in such a program who are on the mailing list. They do not represent a concensus of the staff of each program.

Fifty-two professionals indicated that they are presently using the system. Responses were received from six of the fourteen foreign schools or centers, in Australia, Canada, and Hong Kong, known to be using Cued Speech. In most of these schools it is reportedly used throughout, for all students and by all teachers.

Positive responses (responses indicating use of Cued Speech) were received from twenty-seven schools or programs in the United States where Cued Speech is employed to varying degrees. It is used in two state residential schools, New York School for the Deaf in White Plains and Hawaii School for the Deaf and the Blind, in Honolulu.

Eleven public day schools or day school programs reported that they are using Cued Speech to some extent. Included are: Mary E. Bennett School for the Deaf in Los Angeles, California; Tarrant County Day School in Fort Worth, Texas; Richmond Oral School in Richmond, Virginia; Ruby Thomas Elementary School in Las Vegas, Nevada; Mossy Oaks School in Beaufort, South Carolina; Wheelock Elementary in Lubbock, Texas; Mistletoe School in Redding, California. It is also being used in the Sacramento City Unified School District, and schools in Solano County, California; Olanta, South Carolina; and Prince Georges County, Maryland. It is used in private day classes at the Preschool at Gallaudet College, the University of North Dakota in Grand Forks, Texas Christian University in Fort Worth, and Washington State University in Pullman.

Many of the children in these programs are in self-contained classrooms where they receive cuing exclusively. Others are exposed to it only intermittently. In some programs the children are integrated into hearing classes where some of the regular teachers use Cued Speech.

It is used by some for "specific purposes," in many cases for speech work, or for resource help in certain subjects such as spelling or phonics.

People reporting this type of use are located in Ohio, Utah, Missouri, Virginia, Oregon, and the Model Secondary School for the Deaf at Gallaudet College, where it is being utilized to teach conversational Spanish.

In addition, Cued Speech is included in teacher training programs at least eight locations. Several other people reported using it for private therapy or religion classes.

Of those people who sent in their questionnaires, forty-seven professionals, including teachers, therapists, and administrators, stated that they had used Cued Speech but do not at present. Three said their reason for stopping was to change to total communication. The use of Cued Speech was discontinued in twelve cases because the teacher left or moved to a school where it was not used. Lack of students accounted for seven places ceasing of the method, and lack of skill or instruction motivated four places to Lack of interest was the problem on the part of the parents in aid on the part of the teachers or administrators in seven cases. ce of a follow-up program for students who are promoted prompted three s to discontinue the use of the method. Two respondents judged Cued Speech too difficult for parents and teachers, one considered it ineffective, and two did not cite why they discontinued the use of Cued Speech.

Sixty parents indicated that they are using Cued Speech with their deaf children who range in age from 3 to 17 years. Twelve of these children are in school situations where Cued Speech is not used. The other children are in all types of schools where Cued Speech is being utilized: residential schools, day schools programs, regular hearing schools, and clinics.

Sixteen parents reported that they did use Cued Speech but have stopped. Seven of these have changed to total communication, in most cases because the child's school advocated it. One parent said he is still in favor of Cued Speech but would "rather switch than fight." Three dropped it because of learning or usage problems and three because it is not being used in school. The three remaining parents discontinued the use of Cued Speech because they feel their children no longer need it. They commented, "It helped tremendously," and "I am still a believer!"

Correlation of Use of Cued Speech and Results Reported

The information supplied by questionnaire respondents suggests that the degree of success with Cued Speech is affected greatly by the extent of use and by the amount of enthusiasm for the method which is felt by the user. Cued Speech will not produce the results for which it was designed unless it is used completely and consistently. People usually do not expend the necessary effort to learn and implement effectively a new system of communication unless they are completely sold on the system and convinced of its potential. Those who espouse Cued Speech without a substantial degree of conviction as to its worth are likely to discontinue its use for a variety of stated reasons, after a brief period of half-hearted use. The correlation of extent of use and beneficial results reported is treated statistically on page 35.

Positive Professional Replies

The need for commitment is illustrated by the questionnaire replies from twenty-four of the schools or programs indicating use of Cued Speech. The questionnaire asked respondents to state whether they cue occasionally, considerably, or constantly; and what they cue: words, phrases, sentences, or most of what they say. Respondents from thirteen of the schools indicated that they are constantly cuing most of what they say. All of these respondents reported the students' development in the areas of receptive language, expressive language, speech, and speechreading to be excellent or good. Seven of the respondents indicated that they are cuing considerably but less than all of what they say, usually words or sentences. These seven people reported good results. One person who reported cuing considerably for most of what he said stated that excellent results are being achieved. In three places Cued Speech is only used occasionally for words or phrases and in these situations the reported results are poor. Eliminated from the total count of thirty-three were nine of the responding programs who either did not complete the evaluative section of the questionnaire or who indicated that they have not been using Cued Speech long enough to make a definite statement regarding change in the students' development.

Positive Parental Replies

The replies of the forty-nine parent users of Cued Speech who completed their forms (if any respondents did not attempt to evaluate their child's development, they are not included in this summary), indicated that extent and consistency of cuing determine, to a great degree, the results obtained with the children. Fifteen parents indicated that they constantly cue most of what they say. These people categorized their children's development to be excellent or good in all the areas specified. Each parent evaluated his child's progress in the four areas of receptive language, expressive language, speech, and speechreading. Thus, fifteen parents supplied sixty ratings of their opinions of the effects of Cued Speech in four areas. Of the sixty ratings, thirty-two were adjudged excellent, twenty-four good, two poor (both in reference to speech, which may take longer to develop), and two undecided. Three of the children of these parents did not receive cuing from their teachers.

For the sixteen parents who replied that they cue considerably, either most of what they say or sentences, results reported were still good, but with fewer ratings of excellent. Of the sixty-four ratings, eight were excellent, forty-six good, four poor. Two people said they cued phrases considerably, but the ratings of the two persons were markedly different. In one case the teacher did not cue or provide encouragement and the results were considered poor in three of the areas and completely lacking in the other. In the other case, it was reported that the child cues "very well," the teacher cues "a lot," and the child's development was assessed to be excellent in all areas. The parent's enthusiasm was apparent in a remark about the improvement in receptive and expressive language: "improved tremendously."

Sixteen parents replied that they cue only occasionally, either words, phrases, or sentences. Of the ten people who cue mostly phrases and sentences,

only seven of the possible forty answers were excellent. Seventeen were good, five were poor, five were none, and six were undecided. The six people who only cue words produced only one excellent answer out of twenty-four. There were eleven good, four poor, two none, and six undecided.

It must be remembered that the small number of negative answers among comparatively infrequent users probably indicates that many of these people do have some enthusiasm for Cued Speech.

Negative Professional Responses

Of the forty-seven professionals who ceased the use of Cued Speech and completed the form, all reported poor results or none at all. Three people claimed to have used Cued Speech considerably but of these only one said she used it for most of what she said. Inconsistent or incomplete use typifies the other respondents who stopped using Cued Speech.

Negative Parental Responses

As might be expected, of those parents who have stopped using Cued Speech, but who did finish the form, all indicated that they had achieved no results in improving their child's language and communication abilities. Only one of these people said he had cued considerably – but then only words.

It probably can be assumed that many of those who have negative attitudes toward Cued Speech and, as a result, are achieving little with their children, did not bother to send in their questionnaires. This would mean that had they submitted questionnaires, the correlation between degree of use and degree of results would have been even more evident; that is, that the more constant and consistent the use of Cued Speech is, the better the results in the child's development are likely to be.

STATISTICAL ANALYSIS, NOVEMBER, 1971 QUESTIONNAIRE

Statistical analysis of the information supplied in the subject questionnaire confirmed qualitatively the correlation which is apparent in the narrative summary. The correlation between reported extent of usage of Cued Speech by professionals and their reports of effects on receptive language, expressive language, speech and speechreading was significant at greater than the .01 level of confidence ($r=0.84$).

The correlation between reported extent of usage of Cued Speech by parents and their reports of effects on receptive language, expressive language, speech and speechreading was also significant at greater than the .01 level of confidence ($r=0.59$).

Samples of the questionnaire appear in Appendix II.

EFFECTS OF CUED SPEECH ON LEARNING PHONICS IN KINDERGARTEN CLASSES FOR HEARING AND DEAF CHILDREN CLARK COUNTY (LAS VEGAS, NEVADA) PROGRAM*

From October 11, 1971, to May 15, 1972, Cued Speech was taught in 3 classes for hearing children on an average of 3 times per week, for 15 minute sessions. Forty 4th, 5th, and 6th graders were combined in one class. Sixty first graders were in another class and thirty-five kindergarten students were in the third class. The kindergarten class being taught Cued Speech and another kindergarten class of forty-four normally-hearing students were evaluated to measure the effects of Cued Speech upon a child's learning of beginning and ending consonants and long vowel sounds. Both kindergarten classes were taught by the same teacher using a phonetically based reading series. Students were randomly placed in morning or afternoon classes according to parent's preference. The p.m. class included four deaf students, five non-English speaking, and twenty-six hearing children. Students of both classes were evaluated with the same test (developed in Clark County, Nevada, by Dr. Tom Wilson at U.N.L.V.). Students' receptive knowledge of beginning and ending consonants and long vowels was evaluated. The mean scores for the groups are presented in the table following.

* This material is from the progress report for March 1 – July 15, 1972, from the project ''Parental Involvement in the Oral Education of Young Deaf Children,'' Ruby Thomas Elementary School, Las Vegas, Nevada [(OEC-0-71-4732 (616)].

MEAN SCORES IN RECEPTIVE KNOWLEDGE

SUB TEST	a.m.-44 hearing no Cued Speech	p.m.-26 hearing with Cued Speech	p.m.-total class-35	p.m.-class 4 deaf	p.m.-class 5 non-Eng.
beginning consonants 15 items	10.34	12.08	11.94	11.25	11.40
ending consonants 20 items	13.18	15.38	14.91	16.00	11.60
long vowels 13 items	4.14	3.42	3.63	6.25	2.60

It should be noted that the four deaf students did achieve at or above the average class levels. The hearing children who were being taught Cued Speech did achieve somewhat above the overall mean scores of the morning kindergarten class, who did not use Cued Speech.

THE EFFECTS OF TRAINING IN CUED SPEECH ON SYLLABLE LIPREADING SCORES OF NORMALLY-HEARING SUBJECTS

by

Nedra Ann Sneed

This study was designed to investigate the effects of training in the reading of Cued Speech upon performance on a filmed syllable lipreading test of normally-hearing subjects.

Summary

Ten normally-hearing subjects, ages 18 to 23, were trained in phonetic notation in an average of four hours, reaching an accuracy of 85 to 95% in transcription of spoken consonant-vowel syllables. They were then given the filmed syllable lipreading test.

Over a period of six weeks, the subjects were given an average of fifteen hours of instruction and practice in Cued Speech, all reaching a level of 75 to 95% accuracy in reading cued consonant-vowel syllables without sound. They were then given the same syllable lipreading test (twelve films with twenty-nine syllables each) with the films in a different order from that used in the pretest. One of the films was used as a practice film before the post-test in order to test for learning effects.

Mean performance on the pretest was 11.0% accuracy (range 6.6% to 14.4%) and on the post-test 14.9% (8.6% to 18.4%). A syllable was scored as correct only if both phonemes were transcribed correctly. The difference between pretest and post-test scores is significant at the .01 level of confidence. One subject scored slightly higher on the pretest than on the post-test.

Mean performance on consonants was 24.4% for the pretest (range 20.4% to 30.7%) and 27.4% on the post-test (range 23.6% to 31.9%), Mean performance on the vowel phonemes was 42.0% (range 26.9% to 57.0%) for the pretest and 54.0% for the post-test (range 37.3% to 59.5%). The differences are significant at the 0.01 confidence level.

Procedure

Ten normally-hearing college students, ages 18 to 23, were instructed in phonetic notation using a slightly modified version of the Project Director's Foenetik Speling. During the instruction care was taken to avoid any indirect effect upon lipreading skills. The instructor used tape-recorded materials for dictation as much as possible. Subjects were given practice and instruction until they reached a minimum of 85% accuracy in transcription of spoken syllables. Some reached a level of 95%. This range corresponds roughly to Fletcher's indication that normally-hearing subjects can transcribe CV syllables, through hearing alone, at an accuracy of 80 to 96%, with 96% as an upper limit.

Twelve silent cartridge films, containing twenty-nine syllables each, were shown to the subjects with a Technicolor Model 500 8 mm cartridge projector. Six of the films were made with a male speaker (M) and six with a female (F) speaker. One film (6 F) was used as a practice film at the beginning of the pretest. Results scored on the practice film were not included in the pretest scores. The subjects were told to transcribe phonetically each syllable which appeared on the film, to leave the space blank if they felt they could not even hazard a guess as to what the syllable was, and to enter a dash if they did not look up in time to see a syllable. The syllables were presented at a rate of eight per minute, with each syllable repeated twice. This provided about five seconds for phonetic transcription of each syllable, in addition to two and a half seconds for viewing.

Following the pretest, the subjects received an average of about fifteen hours of practice and instruction in Cued Speech, concentrating on learning to read speech, with cues, without sound. The instructor stood behind a glass partition in order to stop any sound not completely suppressed. In addition to face-to-face instruction, the teacher used instructional films. At the conclusion of their instruction, the subjects ranged from 75% to 95% in accuracy in reading consonant-vowel syllables without sound, with cues.

In the post-test, the films were shown in a different order than in the pretest. The film used as a practice film in the pretest (6 F) was shown at the beginning of the post-test, and again later in the test, the extra viewing serving as a test for learning effects. The scores on film 6 F the second time it was shown during the post-test were slightly (1.4%) higher than the scores made on it at the beginning of the post-test, but the difference was not significant at either the .01 or .05 confidence level. Since this demonstrated that there was negligible learning effect in showings of this film within the space of less than an hour, it was reasoned that no learning effect was involved in using the same films for the post-test as for the pretest, particularly since they were given in different order and the tests were nearly two months apart. The subjects were divided into two groups during the post-test, one viewing the films made by the male speaker first, the other viewing the films made by the female speaker first. Differences were not statistically significant.

The test results were scored by dividing the number of syllables (or consonants, or vowels) transcribed correctly by the total number of syllables (or consonants, or vowels) given on the films. Syllables for which dashes or blanks were entered, indicating either failure to observe the syllables or insufficient impression to warrant a guess, were scored as incorrect.

Results

Results obtained on the pretest and post-test are summarized in Tables 1, 2 and 3. They show differences between performances on the post-test and pretest which are all significant at the .01 level of confidence.

Conclusion

Training of normally-hearing subjects in Cued Speech, to a point at which they can read consonant-vowel syllables at an accuracy of 75% to 95%, produces

a significant increase in their ability to lipread consonant-vowel syllables without cues. The results of this experiment do not, in themselves, establish that training in reading Cued Speech produces significant increases in the ability at lipreading complete words or connected language, although it does suggest that this might be the case.

TABLE 1

Performance of Subjects on the Syllable Lipreading Test
Before and After Cued Speech Training

Subject	Pretest	Post-test	Difference
P.H.	14.4%	12.3%	-2.1%
P.M.	14.1%	15.8%	1.7%
B.C.	12.5%	16.4%	3.9%
M.S.	11.6%	15.2%	3.6%
V.S.	11.0%	17.5%	6.5%
J.M.	10.6%	17.0%	6.4%
K.R.	10.6%	12.3%	1.7%
A.H.	10.3%	18.4%	8.1%
D.W.	8.8%	15.5%	6.7%
R.G.	6.6%	8.6%	2.0%
Means	11.0%	14.9%	4.1%*

Scores are presented as a percentage of syllables in which both phonemes are correctly identified.

* Difference is significant at 0.01 confidence level.

Table 2

Consonant Scores of Subjects on the Lipreading Test
Before and After Cued Speech Training

Subject	Pretest	Post-test	Difference
J.M.	30.7%	31.3%	0.6%
P.M.	28.2%	29.6%	1.4%
V.S.	27.6%	27.3%	-0.3%
D.W.	25.1%	31.9%	6.8%
P.H.	24.4%	25.3%	0.9%
M.S.	23.8%	29.6%	5.8%
K.R.	22.0%	24.1%	2.1%
A.H.	21.6%	28.2%	6.6%
B.C.	20.7%	23.6%	1.4%
R.G.	20.4%	23.6%	3.2%
Means	24.4%	27.4%	3.1%*

Scores are presented as a percentage of consonants correctly identified.

* Difference is significant at 0.01 level.

Table 3

Vowel Scores of Subjects on the Lipreading Test
Before and After Cued Speech Training

Subject	Pretest	Post-test	Difference
P.H.	57.0%	55.2%	-2.3%
B.C.	51.4%	63.2%	11.8%
K.R.	47.0%	60.6%	13.6%
V.S.	43.6%	59.5%	15.9%
A.H.	43.0%	57.2%	14.2%
P.M.	41.1%	52.3%	11.2%
D.W.	40.4%	46.0%	5.6%
M.S.	38.5%	48.6%	10.1%
J.M.	30.7%	56.3%	25.6%
R.G.	26.9%	37.3%	10.4%
Means	42.0%	54.0%	11.6%*

Scores are presented as a percentage of vowels correctly identified.

* Difference is significant at 0.01 level.

SCRIPT FOR LIPREADING TEST FILMS
(Foenetik Speling)

Film 1

chaw thoo yur tHue yah zue zah bee shee pue

rur hue mur too tah --- poe fi luh woo bah

naw thi vaw jah vi zhuh dur la theh

Film 2

whee nue thoo vue ya tHuh kur wa tuh fue suh

sue paw deh sha --- wuh shoo whah baw koe saw

juh gee da fee teh sah zhee shue

Film 3

na lee koo zi cheh joo geh chee mue fur deh

wah loe whi law --- va thee yuh chue gi jur

tHi ta mee ha ree due peh shi

Film 4

poo mee ra hur deh lah shaw nuh ba lur voo

yeh koo zue yee --- cheh jaw pa fuh taw roe

haw pur daw weh bue nee vah ka

Film 5

ga tHa koo noe wee doe woe thaw zoe nue leh

deh sa ti wah --- peh bur ki chur thi zhue

mee suh raw pur wue baw hi zur

Film 6

taw hoe feh foo duh tHur naw lur pi sa goo

juh rah tue pur --- vee boe ja yoe sur fee

pa ji sha zee shuh wi zhi wur

A STUDY OF THE READABILITY OF CUED SPEECH

R. Orin Cornett, Ph.D.

The rationale for use of Cued Speech with hearing impaired persons rests on the assumption that it is a clearly readable phonetic analog of spoken language. Presumably, a deaf child who is proficient at reading Cued Speech receives an accurate impression of the pronunciation of each word and the rhythmic patterns of each phrase to which he is exposed in Cued Speech. Presumably, also, a profoundly deaf but otherwise normal child, if exposed consistently to natural language in the form of Cued Speech, will acquire an accurate mental model of the spoken language useful as a base for both speechreading and expressive speech (the latter after he is taught to make speech sounds).

The readability of Cued Speech has not been seriously questioned by anyone familiar with it. Those who have had experience with it cite the ability of deaf children to parrot nonsense syllables and new words given them in Cued Speech as evidence that it fulfills all reasonable expectations in this regard. However, because of growing attention to the usefulness of Cued Speech in correcting speech patterns, and to the crucial importance of an accurate mental language model as a base for speechreading and expressive speech, it seems advisable to evaluate specifically the reliability with which Cued Speech can be read, syllable by syllable and word by word.

Two subjects were utilized for the evaluation which was carried out on July 31, 1970. Subject A was a fifteen-year-old girl, profoundly deaf since birth, who was exposed to Cued Speech in school during the academic year 1967-68, and who participated in a refresher course during the period July 6-24, 1970. Subject B was an eight-year-old girl with

normal hearing whose family has used Cued Speech consistently with a profoundly and prelingually deaf sibling for nearly four years.

The two subjects were exposed separately to four video-taped presentations, as follows:

1. Forty-eight normal syllables consisting of a consonant followed by a vowel, presented in Cued Speech, without sound.

2. The same forty-eight syllables, in a different order, presented without cues or sound.

3. Forty-eight words, most of which were familiar, presented in Cued Speech, without sound. The words varied from 3 to 6 phonemes.

4. The same words, in different order, presented without cues or sound.

The subjects viewed the video monitor at a distance of five feet, which made the presentation approximately life size. The audio output of the video presentation was connected to one channel of a stereo tape recorder, and a microphone near the subject was connected to the other, for simultaneous recording of the audio presentation and the attempt to reproduce it.

In presentations 1 and 2, each syllable was spoken twice, and the subject then repeated it twice, after which there was a pause of ten seconds to give the subject time to write the syllable in a phonetic notation (the Pitman Initial Teaching Alphabet).

In presentations 3 and 4, the same procedure was followed, except that the time allotted for phonetic transcription was increased to fifteen seconds. In only six cases was the time allotted for phonetic transcription insufficient. Subject B missed two words in presentation

3 and three words in presentation 4 by failing to look up in time to see the next word. Subject A missed one word the same way in presentation 4. These words were not counted in the tabulation.

With each subject, the Cued Speech presentation preceded the presentation without cues, in order that any learning effect would favor the lip-reading performance rather than the reading of Cued Speech.

The correctness of each response was judged primarily on the basis of the phonetic transcription, though the spoken reproduction was used as a check. A syllable or word was recorded as correct only if all the phonemes in it were transcribed correctly, except in 4 cases with subject A and 3 with subject B, in which both judges and the principal investigator agreed that the spoken reproduction was clearly correct and that an error in phonetic transcription had definitely been made. For example, subject A recorded ðæz instead of ʃæz, writing the breath th instead of the voiced th. The spoken reproduction contained a clearly voiced th. Similarly, in one case, subject B wrote rɑu instead of the correct i.t.a. form rœ. The recorded spoken form was clearly the correct response, which would be written [roU] in I.P.A. Subject B, eight years old, was taught the phonetic alphabet used (the i.t.a.) on July 23, one week preceding the experiment, and had had no more than an hour or two of transcription experience. Subject A was taught and used the i.t.a. in 1967-68, but had not used it since, except for practice on July 23 with subject B when the latter was learning it. Subject B required appreciably more time for transcription than subject A.

The data obtained in the experiment are summarized in Tables I and II.

Table I

Subject A
(15 years old, prelingually deaf)

	correctly transcribed	% correctly transcribed	phonemes correct	% phonemes correct
Presentation 1 - SYLLABLES, CUED	46 of 48	96%	94 of 96	98%
Presentation 2 - SYLLABLES, NOT CUED	11 of 48	23%	40 of 96	42%
Presentation 3 - WORDS, CUED	43 of 48	90%	162 of 168	96%
Presentation 4 - WORDS, NOT CUED	13 of 47	28%	90 of 164	53%

Table II

Subject B
(8 years old, normal hearing)

	correctly transcribed	% correctly transcribed	phonemes correct	% phonemes correct
Presentation 1 - SYLLABLES, CUED	42 of 48	88%	89 of 96	93%
Presentation 2 - SYLLABLES, NOT CUED	13 of 48	27%	38 of 96	40%
Presentation 3 - WORDS, CUED	44 of 46	96%	158 of 160	99%
Presentation 4 - WORDS, NOT CUED	6 of 45	13%	68 of 158	43%

Subject B did not even guess at ten of the words given in presentation 4 (without cues). This can be attributed to the subject's lack of experience in unaided lipreading, since she has normal hearing. As a result, her per cent of phonemes correctly transcribed in presentation 4 was lowered somewhat. Had she attained the same per cent of phonemes correctly transcribed in the ten words omitted as in the other words she transcribed incorrectly in presentation 4, subject B would have had an overall correct phoneme per cent of 53% in words not cued, instead of 43%, thus matching subject A in this respect.

The word list used in presentations 3 and 4 included a few words inserted specifically for the purpose of testing readability of alternate pronunciations of similar words, for example, sundi and mundæ. Both subjects recorded these two words correctly when they were presented with cues. Subject A also recorded these two words correctly when they were presented without cues. This possibly reflected a learning effect, since she also recorded sundi for two other words, saki and tuhi, when presented without cues. As is seen from the inclusion of saki , the list also included a few words likely to be unfamiliar to either an 8 year old hearing girl or a fifteen year old congenitally deaf girl. Actually, there were only four such words: rœb (rube), vet, saki, and veks. Subject A wrote all of these correctly except saki, which she wrote as suki, when they were presented with cues. Without cues, she missed them all. Of the 8 phonemes missed by subject A, from a total of 264 phonemes presented with cues, 6 resulted from failure to distinguish (from the lips) between the two sounds

represented by ɑ and u in i.t.a, or [a] and [ʌ] in I.P.A. As a result, subject A was later taught to make this distinction, which she soon learned, and which will help her in speechreading.

Statistical analysis of the results obtained in this experiment is hardly relevant. Application of the null hypothesis (that there would be no significant difference in the numbers of syllables, words and phonemes transcribed correctly with and without cues) through a T-test results in its rejection at the .001 level of confidence for syllables, for words, for phonemes in the syllables, and for all measurements combined. For total phonemes in the words it is rejected at the .01 level of confidence. But the question to which this experiment is addressed is not whether Cued Speech without sound is significantly more readable than speech without cues or sound. It is, rather, whether Cued Speech is readable with sufficient accuracy to justify its use with hearing impaired persons for teaching them the spoken language. Thus, the question to be answered is whether the readability of Cued Speech compares favorably with the readability of spoken language by listeners with normal hearing.

Measurements of the accuracy of reception of consonant-vowel syllables by listeners with normal hearing range from 80% to as high as 96%. The latter figure is regarded as a probable limit achieved under near-ideal conditions of high fidelity, using listeners who have had extensive practice with all the syllables to be encountered, under the actual conditions used in measurement.[1] In this experiment there was no prior practice under the actual conditions of the experiment (video

[1]Fletcher, Harvey. Speech and Hearing in Communication. New York: D. Van Nostrand, 1953. Fig. 209, p 389.

presentation, use of microphone) nor was there prior practice with the specific lists of syllables and words used, though all the syllables and most of the words had likely been encountered many times before.

It is significant that subject A, with considerable experience in reading Cued Speech, reached the very top of the range cited, or 96%. Subject B, with limited experience in reading Cued Speech (because she has normal hearing), but with extensive experience in its expressive use, was still well within the range cited, at 88%.

One factor which possibly contributed to the high score of subject A was the fact that the speaker used for the video presentation was one of four persons giving her the refresher course in Cued Speech, July 6-24, so that she was accustomed to his lip movements. That the effect of this factor was probably not large, however, is indicated by the fact that subject A did not score as high as subject B on the reading of the syllables without cues.

It will be necessary to conduct trials with larger numbers of subjects in order to establish the precise level of readability of Cued Speech. This experiment, however, strongly supports the assumption that Cued Speech is sufficiently readable to be useful (1) in the acquisition of an accurate mental model of the spoken language as a base for both speechreading and expressive speech, and (2) in face-to-face communication.

It should be kept in mind that this experiment tested the readability of Cued Speech only for isolated syllables and words. It does not establish that Cued Speech can be read accurately at normal conversational speed, though there is abundant evidence that this is true.

SYLLABLES USED IN READABILITY TEST*

Cued

mi	tue	ke	fi	pee	da
zoe	yee	bah	si	vee	kue
ge	shoo	roe	ne	luh	hoe
sue	ti	wa	bee	hah	dur
lee	gur	see	poe	zah	raw
muh	ni	buh	la	whee	nue
zee	loo	ki	taw	vur	ha
bur	jue	shee	doe	soo	di

Not Cued

di	ha	pee	vee	luh	hah
zah	whee	soo	vur	fi	si
ne	bee	poe	la	doe	taw
ke	ba	roe	wa	see	buh
shee	ki	tue	yee	shoo	ti
gur	ni	jue	loo	mi	zoe
ge	sue	lee	muh	bur	zee
da	kue	hoe	dur	raw	nue

*Notation used is Foenetik Speling

CHAPTER VI

METHODS OF TEACHING AND USING CUED SPEECH DEVELOPED IN OR RECOMMENDED TO PARTICIPATING PROGRAMS

The Cued Speech Handbook for Teachers, by Christine Lykos, summarizes most of the methods of teaching and using Cued Speech recommended to teachers in the participating programs. Many of the techniques and materials in it were picked up through observation of and reports from the participating programs. Similarly, much of the material in the Cued Speech Handbook for Parents, by Mary Elsie Henegar and R. Orin Cornett, came from communication with parents in the programs, or reports from those programs. Neither of these publications, however, deals in detail with methods of teaching Cued Speech to hearing persons or with the relative merits of different methods of using Cued Speech with deaf persons of different ages and characteristics. The remainder of this chapter will be devoted to a summary of aspects of teaching and using Cued Speech not treated specifically in the handbooks, and to a listing of specific contributions to teaching methods or materials by the participating programs not mentioned in the handbooks.

Methods of Teaching Hearing Persons

Prior to the beginning of this project Cued Speech was taught to hearing persons by the methods developed for the initial workshop in July, 1967. These included study of the cue groups through charts, and memorization of them by continued practice and reference to the charts. Lists of practice syllables and words arranged to fit the groupings of the cues facilitated the practice. Similar tape-recorded syllable sequences, words, and sentences were used to enhance auditory association. Hearing persons were encouraged to use also the sets of thirty-one silent instructional cartridge films. These, although they demonstrate and identify the cue groupings, syllable and word patterns, do not afford sufficient repetition to constitute the sole teaching medium. They do serve, however, to provide a model for cuing. Also, they represent the only media materials available for use by deaf persons for self-instruction except written materials.

During the first month of this project (August, 1968) members of the staff developed a stimulus-response-confirmation method of instruction designed to make it possible for hearing persons to learn Cued Speech by direct association of sounds and cues – that is, without reference to letters. The first use of this approach indicated that persons learning this way were able to cue more fluently than persons memorizing the cue groups through letter symbols. The apparent reason, of course, is that any extraneous material, such as written forms, charts, etc., tends to become a necessary part of the memory pattern by which the cues are recalled. When each cue is associated only with the sounds with which it is used, the act of cuing simultaneously with speech becomes semi-automatic with practice.

The stimulus-response-confirmation approach is as follows, in the case

of face-to-face instruction. The instructor calls out a sound, then repeats it with the appropriate cue one second later. The learner at first simply imitates the instructor, calling out the sound immediately after him, and then imitating the sound and the cue together after the instructor. The instructor uses different sounds and cues, but arranges for sufficient repetition that the learner soon begins to remember the appropriate cue before it is demonstrated. When this happens, the impulse to say and cue the sound before the instructor does begins to build up. The learner is instructed to yield to this impulse after he feels it a few times, and thus speak and cue after the sound is called out, but before the instructor repeats it with the cue. When this happens, the cuing by the instructor furnishes confirmation or correction.

It should be noted that the procedure just described adjusts automatically to the pace of learning. In a given group of learners, some will be cuing after the instructor, thus receiving instruction, while others will be cuing ahead of the instructor, thus receiving confirmation or correction of their practice efforts. Workshop experience has borne out that large groups representing a wide range of learning speeds can be taught together this way.

The basic principle of the method explained above was employed in the instructional sound films produced in collaboration with the Midwest Regional Media Center. Each sound, syllable, or word is first called out by a person off camera. Then, one second later (more for words or phrases) the on-screen model repeats and cues the sound, syllable or word. The films seem to be just as effective as face-to-face instruction for short periods of time in all respects except two. The face-to-face instructor can catch errors, particularly with a small group, and correct them. Also, the face-to-face instructor can vary the pace to fit the learner and can stop to give explanations, to emphasize specific points, or to provide a rest period when it is needed.

The same basic principle was employed in the design of the revised recorded lessons in Cued Speech, though it was necessary to provide written instructions and illustrations showing the appropriate cue positions and handshapes. In order to prevent association of the cues with letters or charts, the positions were identified by the words side, throat, chin, and mouth, and the eight handshapes were simply numbered.

In the recorded lessons, a vowel sound is made, then the position in which to cue it is indicated. Thus one might hear "ah, side," and be expected to put his hand in the side position and say "ah." The learner is instructed to watch himself constantly in a mirror when using the recorded lessons, in order to be sure he is cuing correctly and in order to help him get the visual association (including the lips) required in reading Cued Speech. As in the films, the learner soon begins speaking and cuing before the instruction – in this case, before he hears the instruction as to where to cue.

A number indicating the appropriate illustration identifies the appropriate handshape for the learner. The syllable "see," for example, is followed by "two, mouth." Reference to the illustration shows that handshape two is the three-finger handshape, which is made in the mouth position when followed by the vowel "ee."

Most hearing learners found the recorded lessons more useful than the instructional films. They seem to be less tiring. Further, they seem to place more responsibility on the learner and give him a greater feeling of accomplishment. A good many people, especially in locations where a person proficient in Cued Speech is not available, have learned Cued Speech through use of the recorded lessons, with no face-to-face instruction.

Hearing learners using the sound films, the recorded lessons, or face-to-face instruction are cautioned not to "try" to memorize. Instead, they are told to rely on the fact that when they have repeated a cue with the appropriate sound enough times (interspersed with other sounds - not successive repetitions) hearing the sound will elicit the impulse for the right cue, automatically. While this may require more time than simply memorizing the groups of phonemes with the appropriate cues, it leads more quickly to fluent cuing with natural (though deliberate) speech.

Methods of Teaching Cued Speech to Deaf Persons

In general, hearing-impaired persons who have a reasonable idea of the sound system of the language learn Cued Speech readily. This is particularly true as regards learning to read Cued Speech. For several reasons, in most cases deaf persons learn to read Cued Speech more quickly than hearing persons. First of all, most of them have made enough use of lipreading to be able to recognize most of the groups of sounds that are homophenous. Second, most of them are accustomed to watching the lips and seeing the hands peripherally. The hearing person learning to read Cued Speech has to acquire these two skills.

The deaf person with a reasonable idea of the sound system of the language can, in most cases, learn Cued Speech most rapidly by being taught the cues analytically. The individual sounds must be identified for him, usually through some type of phonetic notation or phonetic fingerspelling, and the appropriate cues associated with them. In the silent films, which are intended for use with and by deaf persons, the sounds are identified by the use of the Initial Teaching Alphabet (ita). In most cases the deaf person learns best through face-to-face instruction and memorization of the charts that combine phonetic spelling and illustrative key words.

After the deaf learner begins to grasp the principle of Cued Speech and knows most of the vowel group cues and a few of the consonant group cues, he is likely to learn rapidly through conversation with a hearing user of Cued Speech if he is an average speechreader and if the hearing instructor can either understand his speech or read his sign language. At this point, the deaf person will be able to cue very little, but he can fill in enough speechreading to understand the Cued Speech user well enough to begin to pick up the system receptively. The first adult deaf person, with understandable speech, to learn Cued Speech learned to read it through only six hours of conversation with a hearing user, with very little instruction in the specific cues. Only the adventitiously deaf person is likely to do this without first learning the basics through specific teaching of the cues.

Using Cued Speech with the Very Young Child

Ideally, the child with a severe hearing impairment should be exposed to Cued Speech from the age of six months, if not earlier. A good many reports have been received indicating that deaf children below the age of twelve months have begun to acquire language through Cued Speech, some showing initial evidence of understanding a few words at nine months. One family, in Queensland, Australia, wrote that their hearing-impaired daughter (who had been exposed to Cued Speech from seven months on), at eleven months understood the following words and phrases, and at age fourteen months knew and used 35 words and phrases.

Up

Janette

Where's Mummy/Daddy/Teddy/the ball/the car?

Come to Mummy/Daddy.

Get the ball/the car/the fish.

Give the ---- to Mummy/Daddy.

Miss Marjorie Moore, Supervisor of the Program for the Deaf at Texas Christian University, has been using Cued Speech for five years with infants six months to two years of age. She indicates that a few children show evidence of understanding at nine months, a good many at twelve months, and most by eighteen months.

All this is not intended to suggest that most deaf children should be expected to respond to Cued Speech at so early an age. The point is that no one knows how early a given child will begin learning. Hence, exposure in the home should begin as early as possible.

Like any other communication method, Cued Speech alone will teach the young deaf child nothing. Initially, it must be invariably associated with meaningful situations – situations in which the meaning is clear without the Cued Speech. Only after a language base has been acquired can language be used to convey meaning. Parents, teachers, siblings – all who use Cued Speech with a deaf infant must show what they mean when they address the infant with Cued Speech.

The young deaf child should not be expected or required to vocalize during the initial stages of his expressive use of Cued Speech. If he does, fine, but expressive language should not have to wait on speech. He will, of course, have to move his lips appropriately (even if approximately) in order to be understood, since the cues alone will not make his meaning clear except in the very beginning when by process of elimination teachers and parents can tell what he means.

Once the young deaf child has a vocabulary of a hundred words or so, if he is not vocalizing with his expressive efforts an effort should be made to

develop this by positive reinforcement of any babbling, and by the efforts of a skilled speech teacher trained to work with young deaf children.

Using Cued Speech with the Hard-of-Hearing

It was assumed initially that the usefulness of Cued Speech to a child with a moderate hearing loss (50 db or less) may be expected to be slight if his loss can be substantially corrected with a hearing aid, and that time and effort spent in learning and using Cued Speech might be largely wasted in such a case. Not enough evidence has been accumulated to indicate just how and how much Cued Speech should be used with a child who has a moderate loss, or what degree of loss should exist to warrant use of Cued Speech.

The suggestion given to parents and teachers of hard-of-hearing children in the participating programs is that they cue for the child only words he has difficulty in recognizing, and to encourage him to cue words from which he tends to omit sounds. For example, the child with a high-frequency loss, who has trouble recognizing (and remembering to produce) fricatives, should have these cued to him consistently and should be encouraged to cue them, at least until they are firmly fixed.

Relation of Cued Speech to Auditory Training

While Cued Speech is designed to develop a language model that is consistent with spoken language and therefore may be expected to help the child make more effective use of audition after he is trained to use it, Cued Speech does not make it possible to take audition for granted. In fact, because Cued Speech makes it possible for the hearing-impaired child to understand without hearing, there is no reason to think that it will of itself cause him to develop use of audition without special training. Teachers and parents in programs participating in this project were advised to make sure that good auditory training and auditory support were provided to children in the programs.

Importance of Full Cuing

Results obtained with the use of Cued Speech depend greatly on whether or not everything is cued. Teachers and parents in participating programs were encouraged to make the transition as soon as possible from the cuing of key words and phrases to the stage in which everything said to the child is cued.

There are two reasons why this is important. First, skill and accuracy in cuing come much faster when everything is cued. Second, if Cued Speech is fragmented in its use with hearing-impaired children, it will presumably produce the same limited pattern of language growth in the early years that results when one uses any method conveying only the key words, such as gestures or unsupported lipreading.

Cued Speech can give more support to speech and speechreading than other methods, but it was designed primarily to produce natural language acquisition. Unless it is used to convey the complete language pattern, however, it will

not produce the linguistic results for which it was designed. For this reason it is essential that parents and teachers reach the stage of complete cuing as soon as possible. Speech has to be slowed a bit in the beginning, but as the cuer gains proficiency he will acquire enough speed to cue at a normal rate of deliberate speech.

Methods of Instruction Developed in the Participating Programs

Several important contributions to the techniques of teaching and using Cued Speech were made by the participating programs. Miss Christine Lykos wrote most of the Cued Speech Handbook for Teachers after her year as Field Instructor for the project, while she was employed in the Sacramento program. As indicated in the preface of the handbook, many of the ideas, techniques, and materials in it were picked up from observation of and reports from the participating programs. The following are some of the most important contributions not listed in the handbook.

1. The New York School for the Deaf developed a Kiddie Cue program designed to stimulate use of Cued Speech by hearing siblings of deaf children. They also utilized volunteer high school students to increase exposure to verbal communication in the dormitories, and developed a "hearing buddy" program featuring Cued Speech.

2. The Oklahoma School for the Deaf used older deaf students as tutors in Cued Speech for younger pupils.

3, The Shasta County program, Redding, California, initiated use of the Monterey Programmed Language Acquisition program with deaf children through Cued Speech.

4. The Clark County (Nevada) program in Las Vegas brought about substantial integration of deaf children in hearing classes (for varying amounts of time) in which the hearing children were taught Cued Speech. This program also experimented with the use of Cued Speech in teaching phonics to a combined kindergarten class of hearing and deaf pupils. Results are reported in Chapter V, page 36.

5. The Solano County program, Fairfield, California, set up two Monterey classes, one using Cued Speech, the other using Seeing Essential English, for comparison. Preliminary reports are that response scores from the two classes are about the same. The children on Cued Speech are required to produce the spoken words (with cues) in the program sequence, while those on Seeing Essential English are required only to produce the signs. The children using Seeing Essential English are presumably taught speech and written language separately.

Developments Outside the Ten Participating Programs

1, The Behavioral Sciences Institute at the Monterey Speech and Hearing Center, Monterey, California, developed a programmed language conditioning method for non-language preschool children. It has been used successfully for at least six years with hearing children with various types of problems

resulting in language deficiencies.

The Monterey approach combines conditioning procedures and programmed instruction into a delivery or instructional system for language acquisition at practical levels of cognition and syntactical competence. Rather than leading the child to emit memorized or stereotyped word chains, the program builds patterns in a way that causes the child to internalize syntactical rules as he learns the patterns.

No modification of the program from its form as used with hearing children is necessary when it is used with deaf children through Cued Speech. Our opinion is that the combination of this program with Cued Speech is an extremely promising one. It carries built-in documentation on the progress of each child, it provides the teacher with a clearly defined methodology and a specific program to follow, and it is based on what appear to be very sound linguistic principles.

2. At the Model Secondary School for the Deaf, Gallaudet College, deaf students are learning Spanish through the conversational method without use of English or the language of signs. Written forms are introduced only after the spoken form is clearly understood and made a part of active vocabulary, through Cued Speech. The purpose of this effort is to determine whether learning Spanish this way will result in ability to produce patterns in which the functional words which give the students so much trouble in English are used correctly. Also, an effort will be made to determine whether the students can think Spanish sentences without association with either English words or signs.

The project is based on the hypothesis that the students' use of signs to express English causes a carry-over of the syntax in which they customarily use the signs, into their expressive English patterns. Since they are learning and using Spanish without reference to English or signed equivalents, there should be no such confusion in their Spanish patterns.

3. At St. Gabriel's School for Deaf Boys, Castle Hill, New South Wales 2154, Australia, Cued Speech was introduced in 1968 by the principal, Reverend G. J. McGrath, who learned it from written materials and a brief interview with the Project Director. St. Gabriel's is a small residential school operated by the Christian Brothers. Before the introduction of Cued Speech it operated an oral program in the classroom, and signs and fingerspelling were used by the boys among themselves in the dormitories and on the playground.

At St. Gabriel's the language patterning techniques used at St. Joseph's School, St. Louis, Missouri, were introduced at about the same time the use of Cued Speech was begun. The principal reports this to be a very effective combination.

Like the reports received from other schools that appear to be getting good results, those from St. Gabriel's are largely subjective observations. The principal reports, however, that in sixteen months one class of fourteen-year-old boys learned 800 new idioms.

One bit of compelling evidence supports strongly the subjective evalua-

tions received from St. Gabriel's. According to the principal, sign language has disappeared from the school, and the boys communicate with each other exclusively in spoken English, through Cued Speech. The principal furnished a four minute film, made on the playground, which supports this report and leaves no doubt in the mind of the viewer that the boys are communicating easily and naturally through the method. The principal emphasizes that this consistent use of English has a profound effect on language development.

4. In two additional schools in Australia, use of Cued Speech is reported to approach the level at St. Gabriel's. These are both schools operated by the Dominican sisters. Thus, it is possible that the closely-knit, highly-motivated, united staff in these schools is in part responsible for the effectiveness of use of Cued Speech, as it is judged to be at St. Gabriel's. The schools referred to are St. Mary's School for the Deaf in Portsea, Victoria, and School for Deaf Girls, Waratah, New South Wales.

CHAPTER VII

CONCLUSIONS, NEEDS FOR THE FUTURE

At the present time sufficient numbers of schools and programs are using Cued Speech to ensure that it will have time to prove itself. There is no need to extend its use further. On the other hand, the objectives of this project during its second phase, to develop programs to serve as models of the use of Cued Speech, has only begun. Those programs in the United States which seem to have the best chance of serving as models are those which have secured grants themselves. It is hoped that other programs will do likewise, adding to the number in which sufficient resources and personnel are concentrated to develop the quality of program required for a model. This project seems to have been useful primarily in providing a start, but full achievement of the objective of developing a model program appears to require full-time resource and supervisory personnel on the site. Curiously, a few schools in Australia (three or four of the twelve using Cued Speech there) seem to have come closest to the model program level, without the resources and personnel suggested - in fact, without most of the advantages of the schools participating in this project. For some reason, they seem to have been able to reach a level of staff unanimity and commitment not achieved in any of the programs in the United States. Still, they have furnished us little quantitative evidence of their success. As the principal of the St. Gabriel's School for Deaf Boys put it: ''We are not so given to counting as you in the United States. Had I known you considered numbers so important, I would have got more for you.'' It is to be hoped that more model programs for use of Cued Speech can be developed and brought to a level which makes clearly evident the potential of the method.

By far the most urgent need in connection with Cued Speech is for controlled research projects comparing its effects with those of other methods. Without such research the choice of methods and their evaluation continues to be dictated entirely by subjective means, susceptible to pressures and campaigns. The lack of such research has not been due to lack of availability of funds. For several years the Bureau of Education of the Handicapped has encouraged and even specifically invited proposals for such projects. But it is extremely difficult to design such a project for proper control of variables and comparability of subjects. Statistically significant differences in language, speech and speechreading are not likely to be demonstrated in a shorter time than five years, according to professionals consulted. It is difficult to maintain comparable control and experimental groups of appreciable size for so long. If small groups are used, the impossibility of matching members of a clinical population can be cited.

The Monterey Programmed Language Acquisition program seems to offer the best hope for documentation of progress in language, speech and speechreading development of deaf children using different methods of communication. It does not avoid the difficulties of securing comparable control and experimental groups, but it does substantially reduce the teacher factor and largely eliminate the program factor.

It has been demonstrated that deaf children can achieve response rates on the Monterey program that are quite comparable with those of language deficient hearing children at the same level, using either Cued Speech or Seeing Essential English. There seems to be no reason that it cannot be used with any clear communication method available for the deaf. Whether it can be used with the traditional oral and oral-aural methods remains to be seen. At any rate, the Monterey program should be utilized by a substantial number of schools using Cued Speech and other clear communication methods for the deaf.

APPENDICES

APPENDIX I

CUED SPEECH

INSTITUTIONAL EVALUATION SCHEDULE

Cued Speech Program
Gallaudet College
Kendall Green
Washington, D. C. 20002

Cued Speech Institutional Evaluation Schedule

The purpose of this evaluation schedule is to enable you to evaluate the status of Cued Speech in your institution. The information you provide will be used to compile data useful for correction of the problems uncovered and to provide a basis for comparison with other institutions using Cued Speech.

It is asked that before making your final choice of response for any particular question asked, you read all possibilities carefully. Please choose the response that best represents your feelings or situation and answer as objectively and as completely as possible.

The first section deals with general questions to be answered by all respondents. In the last section you will find subsections entitled "PARENTS ANSWER ONLY," "TEACHERS ANSWER ONLY," and "ADMINISTRATORS ANSWER ONLY." These are included in order to provide a more detailed evaluation. Respondents may wish to read through all these sections, but it is requested that you respond only to that subsection for which you qualify. Respondents who hold a special relationship with deaf children (see question 1, page 2), may answer either the teacher or administrative subsection; whichever is the most representative of the respondent's duties.

Take as much time as is needed to complete the Evaluation Schedule. The information you provide will be kept in confidence and any compilations or reports will avoid identification by individual institution. If you have any questions, please ask the proctor now.

Cued Speech Institutional Evaluation Schedule

1. What is your relationship to deaf children?
   ___Administrator of institution for the deaf
   ___Parent of deaf child(ren)
   ___Teacher of deaf children
   ___Special relationship with deaf children
   (i.e., psychologist, audiologist, speech therapist, or any relationship other than the above mentioned)

2. For what length of time have you been using Cued Speech?
   ___Less than six months
   ___Six months to a year
   ___A year to a year and one half
   ___A year and one half to two years
   ___More than two years

3. Through which of the following is Cued Speech being implemented in your situation?
   ___Specific teachers
   ___Institutional policy
   ___Parental usage
   ___Teacher and parent efforts
   ___Institutional, teacher, and parental efforts

4. Which of the following characterize your training in Cued Speech (check as many as are applicable)?
   ___Self-taught through materials provided by Cued Speech Program (Please check which: /__/ films, /__/ written materials, /__/ records)
   ___Trained by a parent or teacher from your institution
   ___Trained through a workshop conducted by Cued Speech staff at your institution
   ___Trained through a workshop conducted by Cued Speech staff at Gallaudet College

5. To what extent is Cued Speech currently being used (check as many as are applicable)?
   ___To some extent by the teacher(s)
   ___To some extent by the parent(s)
   ___To some extent in both the school and home(s)
   ___To a considerable extent in the school
   ___To a considerable extent in the home(s)
   ___To a considerable extent in both home(s) and school

The following questions refer to the deaf children with whom you are associated as indicated in question 1, page 3.

6. Since the introduction of Cued Speech to your child(ren), do you feel it has enabled them to speechread more effectively?

___No
___I don't think so
___Uncertain
___I think so
___Yes

7. Since the introduction of Cued Speech to your child(ren), has there been any evidence to suggest that he (they) acquires vocabulary more rapidly?

___No
___I don't think so
___Uncertain
___I think so
___Yes

8. Since the introduction of Cued Speech in your situation, do you feel that your child has been better able to retain vocabulary?

___No
___I don't think so
___Uncertain
___I think so
___Yes

9. Since the introduction of Cued Speech to your child(ren), do you feel it has interested them in attempting to speak more?

___No
___I don't think so
___Uncertain
___I think so
___Yes

10. Has there been any evidence to suggest that Cued Speech is enabling the deaf child(ren) to pronounce words more accurately?

___Detrimental evidence
___No evidence
___Uncertain
___Some evidence
___Strong evidence

11. Since the introduction of Cued Speech to your child(ren), do you feel that it has caused him (them) to rely more on verbal (spoken) language as a means of communication?

___No
___I don't think so
___Uncertain
___I think so
___Yes

12. Do you feel that Cued Speech has generally enabled your deaf child(ren) to rely on verbal (spoken) language as his (their) primary means of communication?

___No
___I don't think so
___Uncertain
___I think so
___Yes

13. Do you feel that for Cued Speech to be truly effective it is necessary to use it 100% of the time?

___Strongly disagree
___Disagree
___Uncertain
___Agree
___Strongly agree

14. What type of training in the usage of Cued Speech (i.e. ability to cue) has your deaf child(ren) had (check as many as are applicable)?

___None
___Informal encouragement by the teacher
___Informal encouragement by the parent
___Formal training by the teacher
___Formal training by the Cued Speech Field Instructors
___I don't know

15. Does your deaf child(ren) cue as a means of communication?

___No
___On certain words only
___Makes a general effort to cue without much accuracy
___Cues several words accurately and attempts other words
___Generally uses cuing as the method of communication

16. Does your child(ren) use Cued Speech to communicate with other deaf children?

___No
___Doesn't cue
___Uncertain
___Uses it some
___Uses it considerably

ADMINISTRATORS ANSWER ONLY

1. What is your average percentage of annual teacher turnover?
   ___Greater than 40%
   ___31% to 40%
   ___21% to 30%
   ___11% to 20%
   ___10% or less

2. (a) What procedures are implemented to train incoming (new) teachers in the use of Cued Speech?
   ___None
   ___The new teachers are largely left to their own devices
   ___The new teachers pick up Cued Speech through faculty meetings, meetings with cuing faculty members, etc.
   ___The new teachers undergo formal in-service training
   ___The new teachers attend workshops designed specifically to train them in Cued Speech usage

   (b) If training procedures are implemented through one of the above, at what time during the academic year do they generally occur?
   ___Occasionally throughout the year
   ___Within the first few weeks of entering the classroom
   ___During teacher work days prior to the opening of school

   (c) Are teachers paid additionally for their participation in the training sessions?
   ___No
   ___Yes
   ___Not applicable

3. What percentage of your parents utilize Cued Speech in any way in the home?
   ___Less than 20% of the parents
   ___21% to 40% of the parents
   ___41% to 60% of the parents
   ___61% to 80% of the parents
   ___Greater than 80% of the parents

4. (a) Of the parents that cue in the home, what percentage cue less than 25% of the time?
   ___Less than 20%
   ___21-40%
   ___41-60%
   ___61-80%
   ___Greater than 80%

(b) . . . between 25 and 49% of the time?
___Less than 20%
___21-40%
___41-60%
___61-80%
___Greater than 80%

(c) . . . between 50 and 74% of the time?
___Less than 20%
___21-40%
___41-60%
___61-80%
___Greater than 80%

(d) . . . 75% of the time or more?
___Less than 20%
___21-40%
___41-60%
___61-80%
___Greater than 80%

5. What percentage of the teachers in your school are currently using Cued Speech in some manner?
___20% or less
___21-40%
___41-60%
___61-80%
___Greater than 80%

6. (a)Of the teachers that cue in the school, what percentage cue less than 25% of the time?
___20% or less
___21-40%
___41-60%
___61-80%
___Greater than 80%

(b) . . . between 25 and 49% of the time?
___20% or less
___21-40%
___41-60%
___61-80%
___Greater than 80%

(c) . . . between 50 and 74% of the time?
___20% or less
___21-40%
___41-60%
___61-80%
___Greater than 80%

(d) . . . 75% of the time or more?
___20% or less
___21-40%
___41-60%
___61-80%
___Greater than 80%

7. Which of the following are problems you are currently facing at the administrative level in implementing Cued Speech?
___Inconsistent teacher usage
___Inconsistent parental usage
___Lack of interest in Cued Speech
___Faculty uncooperative concerning Cued Speech
___Insufficient teacher training
___Lack of supervisory personnel
___Teacher turnover and consequent problems in training new personnel
___Other (please specify)_____

8. In your opinion, the primary purpose of Cued Speech is to aid in the development of:
___Speech
___Lipreading (speechreading)
___Reading
___Language

9. In your opinion, Cued Speech has been most helpful to the children in your institution in the development of:
___Speech
___Lipreading (speechreading)
___Reading
___Language

TEACHERS ANSWER ONLY

1. Do you use Cued Speech yourself?
   ___No
   ___Yes
   If no, please do not answer any more questions.

2. (a) Which of the following characterizes your classroom situation?
   ___Self-contained
   ___Rotating

   (b) If you answered "rotating classroom" above, what percentage of the total teacher to pupil communication time involves communication through Cued Speech in the one class in which you use Cued Speech the most?
   ___20% or less
   ___21-40%
   ___41-60%
   ___61-80%
   ___Greater than 80%

   (c) If you answered "rotating classroom" above, what percentage of the total teacher to pupil communication time involves communication through Cued Speech in the one class in which you use Cued Speech the least?
   ___20% or less
   ___21-40%
   ___41-60%
   ___61-80%
   ___Greater than 80%

   (d) If you answered "self-contained classroom" above, what percentage of your total teacher to pupil communication time involves communicating through Cued Speech?
   ___20% of the time or less
   ___21-40%
   ___41-60%
   ___61-80%
   ___Greater than 80%

3. Which of the following categories would best characterize your usage of Cued Speech?
   ___Used occasionally in structured learning situations
   ___Used occasionally in informal situations
   ___Used occasionally in both structured and informal situations
   ___Used considerably in structured learning situations
   ___Used considerably in informal situations
   ___Used considerably in both structured and informal situations

4. What percentage of the parents whose children are involved in Cued Speech through your usage of it in the classroom are currently using Cued Speech in some manner?

___20% or less
___21-40%
___41-60%
___61-80%
___Greater than 80%

5. When you are cuing in the classroom, do you generally cue:

___Single words
___Phrases
___Sentences

6. Which of the following examples characterize your use of Cued Speech in the school and classroom (check as many as are applicable)?

___Structured language lessons
___Lipreading or speechreading lessons
___Speech training
___Spelling lessons
___Pledge of allegiance, prayer, or other standardized response
___Emphasis and clarification of single words
___Storybook reading
___Names of the children
___Short standardized directions (stand up, sit down, etc.)
___Spontaneous conversation with the class or individuals in the classroom
___Spontaneous conversation with the class or individuals outside the classroom
___Other (please specify)_____

7. Which of the following represent problems you are currently facing in your use of Cued Speech?

___Cuing at the normal conversational rate
___Getting the child to cue
___Lack of administrative support
___Remembering to cue the majority of the time
___Lack of parent support
___Inconsistent parental usage of Cued Speech
___See little or no progress as a result of Cued Speech
___Difficulty in maintaining normal intonation and inflection while using Cued Speech
___Do not believe Cued Speech is an effective method of communicating with the deaf
___Other (please specify)_____

8. Since the introduction of Cued Speech, do you feel that after vacation periods those students whose parents cue retain and/or show improvement in communication skills?

___No
___I don't think so
___Uncertain
___I think so
___Yes

9. In your opinion, the primary purpose of Cued Speech is to aid in the development of:

___Speech
___Lipreading (speechreading)
___Reading
___Language

10. In your opinion, Cued Speech has been most helpful to your children in the development of:

___Speech
___Lipreading (speechreading)
___Reading
___Language

IF YOU RESPONDING AS A TEACHER, PLEASE STOP HERE.

PARENTS ANSWER ONLY

1. Do you use Cued Speech yourself?
   ___No
   ___Yes
   If no, please do not answer any more questions.

2. What percentage of your total communication time with your child involves the use of Cued Speech?
   ___20% of the time or less
   ___21-40% of the time
   ___41-60% of the time
   ___61-80% of the time
   ___Greater than 80% of the time

3. Which of the following categories would best characterize your communication with your child involving the use of Cued Speech?
   ___Used occasionally in structured situations
   ___Used occasionally in informal situations
   ___Used occasionally in both structured and informal situations
   ___Used considerably in structured situations
   ___Used considerably in informal situations
   ___Used considerably in both structured and informal situations

4. When you are cuing at home, do you generally cue:
   ___Single words
   ___Phrases
   ___Sentences

5. Which of the following examples characterize your use of Cued Speech in the home (check as many as are applicable)?
   ___Explanation of occurrences; past, present, and future
   ___Everyday family conversations
   ___Storybook reading
   ___Explanation of T.V. programs
   ___Explanations while shopping
   ___Explanations while traveling
   ___Directions to the child (i.e. go to bed, drink your milk, etc.)
   ___Disciplining the child
   ___Formal lessons
   ___Other (please specify)_____

6. Which of the following represent problems you are currently facing in your use of Cued Speech (check as many as are applicable)?

___Getting and/or keeping deaf child's attention
___Getting deaf child to cue
___Getting spouse to cue
___Getting other children to cue
___Using Cued Speech at the normal conversational rate
___Using Cued Speech the majority of the time
___Inconsistent usage in the school
___Feeling ill-at-ease when using Cued Speech outside the home
___Lack of confidence concerning the use of Cued Speech
___Lack of interest among other parents to encourage cuing
___Insufficient training in the usage of Cued Speech
___Lack of conviction regarding Cued Speech by teachers and administrators
___Haven't used Cued Speech enough to answer
___Other (please specify)_____

7. Do both parents of the family use Cued Speech?

___Yes
___No
___Not applicable

8. (a) Do any of your children other than your deaf child(ren) use Cued Speech in any way?

___Yes
___No
___Not applicable (no other children)

(b) If so, how many cue?

___one
___two
___three
___four
___five or more

(c) Which of the following would best characterize their cuing ability?

___Cue names and single words occasionally
___Cue names and single words frequently
___Cue phrases occasionally
___Cue phrases frequently
___Cue sentences

9. In your opinion, the primary purpose of Cued Speech is to aid in the development of:

___Speech
___Lipreading (speechreading)
___Reading
___Language

10. In your opinion, Cued Speech has been most helpful to your child(ren) in the development of:

___Speech
___Lipreading (speechreading)
___Reading
___Language

IF YOU ARE RESPONDING AS A PARENT, PLEASE STOP HERE.

Schedule Administrator's Manual

The purpose of the Cued Speech Evaluation Schedule is to provide a basis for determining the status of Cued Speech in your institution. Upon subsequent administrations, the Schedule will provide an index of progress regarding Cued Speech usage. The Schedule was developed under a grant from the Department of Health, Education, and Welfare and is offered as a means of self-evaluation.

Schedule Description

The Schedule consists of four subsections. The first subsection is general in nature and is to be answered by all respondents. The remaining three subsections are specific in nature and are directed toward "PARENTS ONLY," "TEACHERS ONLY," and "ADMINISTRATORS ONLY." These latter subsections have been included to provide a more detailed evaluation and to provide a basis for inter-institutional comparison. It is comprised mainly of Likert-type scaled items with a few problem checklists and general information items accounting for the rest.

Although empirical validation procedures have not been carried out, the Schedule has been field tested and judged valid by four experts in the area of Cued Speech.

Schedule Administration

The Schedule should be administered under the generally agreed upon test conditions. These should include administration in a comfortable room with adequate lighting and writing surfaces and the use of pencils to facilitate the changing of alternative choices. It is preferable that the Schedule be administered during the middle portion of the week if possible in order to minimize the effect of certain extraneous variables. The Schedule generally takes 15-25 minutes to complete and all respondents should be offered ample time to complete the Schedule.

Schedule Scoring

A scoring template system is provided in order to facilitate the scoring of the Schedule. It consists of a template sheet for each page of the Schedule with each alternative's numerical value listed to the left of the cut-out. The scorer matches the checked alternatives with their numerical value to the left and records the item score. Items requiring special scoring techniques have the procedure outlined to the right of the cut-out.

The scoring procedure for the Schedule is as follows:

(1) The majority of the items follow the traditional 5 point Likert scale. Each alternative is assigned a numerical value ranging from 1 through 5. The respondent's item score is simply the assigned value of the chosen alternative.

(2) Items 5 and 14 allow respondents to choose either one or two alternatives. The scoring of these items follows the formula

$$S = H + \frac{L}{2}$$

so that the item score (S) is equal to the value of the greater alternative (H) plus one-half the value of the lesser alternative (L). In other words, if a respondent had checked the fifth alternative (assigned value of 5) and the first alternative (assigned value of 1) of Item 5, the formula would yield an item score (S) of 55:

$S = H + \frac{L}{2}$ $\qquad$ $S = 5 + 1/2$

$H = 5;\ L = 1$ $\qquad$ $S = 5\ 1/2$ or 5.5

(3) Item 4 is scored by assigning each alternative a value of 1 and summing the number of alternatives chosen. (If one alternative is checked the item score is 1, if two are checked the item score is 2, etc.)

(4) Items P-5 and T-6* are scored by totaling the number of alternatives chosen and dividing by 2.

(5) Items P-6, T-7, and A-7 are scored according to the formula:

$$S = \frac{T - \Sigma A}{2}$$

so that the item score (S) is equal to the sum of the number of alternatives chosen (ΣA), subtracted from the total number of alternatives (T) for that item and divided by two. If 6 alternatives were checked on Item P-6, which has 14 alternative choices, the item score would be 4.

$S = \frac{T - \Sigma A}{2}$ $\qquad$ $S = \frac{14 - 6}{2}$

$T = 14;\ \Sigma A = 6$ $\qquad$ $S = \frac{8}{2} = 4$

* The letters preceding the item numbers indicate the subsection in which the item is found (e.g., Parents - P; Teachers - T; Administration - A).

(6) Items A-4 and A-6 are items requiring a loading factor. Both items are four-part questions and have identical loading factors for each of the four parts of the items. The loading factors are:

(a) part (a) of both items = .5
(b) part (b) of both items = 1.0
(c) part (c) of both items = 1.5
(d) part (d) of both items = 2.0

The following formula is followed to get the appropriate item score:

$$S = A(F)$$

so that the item score (S) is the product of the value of the alternative chosen (A) multiplied by the loading factor (F). This operation has been carried out on the scoring template and the correct score for each part of the item is shown to the left of the cut-out.

(7) Items T-2(b) and T-2(c) are scored together as one item. This is accomplished through the formula:

$$S = \frac{B + C}{2}$$

so that the item score (S) is equal to the sum of the value of the alternative chosen in part b (B) and the value of the alternative chosen in part c (C) divided by 2. If the value of the alternative in part (b) is 4 and the value of the alternative in part (c) is 2, the item score is 3.

$$S = \frac{B + C}{2} \qquad S = \frac{4 + 2}{2}$$

$$B = 4;\ C = 2 \qquad S = \frac{6}{2} = 3$$

Items that have NOT BEEN ANSWERED receive a score of ZERO. The total Schedule score is the sum of all the item scores.

Interpretation of Schedule Scores

Normative data on institutions involved in Cued Speech usage is not currently available. Norms will be onstructed through the information received as a result of the first evaluation and will be revised as additional information is received.

A rough comparative measure is provided, however, in the form of a construed mean score.* This is, essentially, the

* The construed mean score is symbolized $\bar{C}$ so that $\bar{C}g$ symbolizes the construed mean of the general subsection, $\bar{C}p$ -- the parent subsection, etc.

sum of the theoretic average scores of the items making up the Schedule. The $\bar{C}$ for each of the subsections is as follows:

(1) $\bar{C}g = 34.5$
(2) $\bar{C}p = 25.5$
(3) $\bar{C}t = 25.0$
(4) $\bar{C}a = 23.0$

The Schedule interpreter should utilize the $\bar{C}$ cautiously as it is theoretic and has not been verified empirically.

For total Schedule $\bar{C}$ add the $\bar{C}g$ to the appropriate subsection so that the parent total Schedule $\bar{C}$ would equal 60.0, the teacher $\bar{C} = 59.5$, and the administrator $\bar{C} = 57.5$.

Scoring Template System

The scoring template system provides a separate keyed template sheet for each page of the Schedule. The assigned value of each alternative is printed on the left of the cutout and special scoring procedures are outlined on the right of the cutout (see page 2).

General Scoring Procedure

1. Place the template sheets in an order corresponding to the order of the Schedule sheets you are scoring.

2. Place the appropriate template sheet over the Schedule sheet so that the cutout portion and the page numbers at the bottom of the sheets are alined.

3. Record the value of the alternative that was chosen for each item on that page.

4. Remove template sheet and place face down so that when a Schedule has been completely scored the template sheets will be in the correct order to begin scoring the next Schedule.

5. Repeat above procedure until Schedule has been completely scored. Then total the recorded item scores to provide the Schedule score.

Recording Item Scores

It is suggested that a small note pad be used to record the item scores. This can be placed directly on the extreme right-hand portion of the template sheet or to the right or left of the sheet. Item scores should be recorded in columns to facilitate totaling.

It is important that the Schedule administrator staple the general section and the subsection of each individual taking the evaluation together after the Schedule is completed. This makes it possible to compute a total Schedule score (see page 4), as well as a general Schedule and specific subsection Schedule score.

Residential School Evaluation

Residential schools utilizing "houseparents" should take note of the fact that no special subsection is provided for "houseparents," per se. It is suggested that houseparents be administered the PARENTS ONLY subsection, eliminating items 7 and 8.

It is further suggested that the houseparents be advised that certain changes in the grammatical structure of the items is permitted. For example, Item 4 reads: "When you are cuing at home . . .." The houseparent should be instructed to change the wording of the item to: "When you are cuing in the dorm .... When the houseparent comes upon the word "child" in an item, he should be instructed to change it to "children," etc. In other words, certain grammatical changes in the wording of the items are necessary for the questions to be meaningful to the houseparents.

Conclusion

Questions concerning the administration of the Schedule should be addressed to David L. Knight, Cued Speech Office, Gallaudet College, Kendall Green, Washington, D. C. 20002. The completed Schedules should be returned to the address on the title page of the Schedule.

APPENDIX II

TEACHER AND PARENT USE AND EFFECTS QUESTIONNAIRE
(FAVORABLE SAMPLES)

CUED SPEECH QUESTIONNAIRE

November, 1971

Name St. Gabriel's School for Deaf Boys,

Address Old Northern Rd.,

CASTLE HILL. N.S.W. 2154.

Yes Administrator of school or program for the deaf

_____Teacher of the deaf

_____Parent of deaf child(ren)

_____Other (specify)_____

Do you use Cued Speech? YES

If the answer is no: Did you ever use Cued Speech?___

If so, when and why did you stop?

Is it used by any of your students' parents at home?_____

(IF YOU DO NOT USE CUED SPEECH, STOP HERE AND MAIL YOUR QUESTIONNAIRE.)

If the answer is yes: Where and how did you learn to cue?
From the first printed diagrams

How long have you used Cued Speech?
4 years

TEACHERS OR ADMINISTRATORS: Continue questionnaire with Teachers section, page 2.

PARENTS: Continue questionnaire with Parents section, page 3.

TEACHERS

Check the statement which best describes the use of Cued Speech in your school:

✓ We are ~~attempting to use~~ using it throughout our program for all instruction and communication.

___ We are using it in some of our classes: preschool__ lower__ upper__

___ We are using it only for specific purposes, such as speech therapy.

Are you conducting formal research on Cued Speech? NO

Do you teach the parents how to cue? YES

Do the parents receive continuing encouragement and guidance in the use of Cued Speech? YES

Do you have teacher trainees? YES Are they taught to cue? YES

Number of students in school or program 40

Estimated number of students using Cued Speech 40

Number of teachers in school or program 8

Estimated number of teachers using Cued Speech 8

Estimated number of parents using Cued Speech 12- 15

With what age level children do you use Cued Speech?

When do you cue? Occasionally___ Considerably___ Constantly ✓

What do you cue? Words___ Phrases___ Sentences___

~~Most~~ ALL of what you say ✓

List any problems you have encountered in the use of Cued Speech.

Instruction of parents after the first twelve or so hours of learing it through to the complete fluent Cuing/

Do you feel your students are benefiting from the use of Cued Speech?

How has their development changed in these areas with regard to Cued Speech?

Receptive language Incredible change/ We hardly limit the language we use.

Expressive language This has been most obvious to visitors

Speech In some cases quite marked others not so.

Speechreading We have broken the communication barrier.

CUED SPEECH QUESTIONNAIRE

November, 1971

Name Major and Mrs. Joseph J. Sarakaitis

Address 2269 Time Drive
Gambrills, Md. 21054

____Administrator of school or program for the deaf

____Teacher of the deaf

__✓__Parent of deaf child(~~ren~~)

____Other (specify)_____

Do you use Cued Speech? yes

If the answer is no: Did you ever use Cued Speech?___

If so, when and why did you stop?

_____

Is it used by any of your students' parents at home?_____

(IF YOU DO NOT USE CUED SPEECH, STOP HERE AND MAIL YOUR QUESTIONNAIRE.)

If the answer is yes: Where and how did you learn to cue?
Gallaudet Preschool - Mrs. Barnett

How long have you used Cued Speech?
7 months

TEACHERS OR ADMINISTRATORS: Continue questionnaire with Teachers section, page 2.

PARENTS: Continue questionnaire with Parents section, page 3.

PARENTS

Hearing-impaired child's name Cathy Sarakaitis

birthdate Nov. 1, ~~1969~~ 1967

Do both parents cue? yes

Do brothers and sisters cue? a little

When do you cue? Occasionally___ Considerably___ Constantly ✓

What do you cue? Words___ Phrases___ Sentences___
Most of what you say ✓

Does your hearing-impaired child cue? yes

List any problems you have encountered in the use of Cued Speech.

No problems other than my own personal problem of being slow to cue everything I say to her.

Do you feel your child is benefiting from the use of Cued Speech? yes!

How has your child's development changed in these areas with regard to Cued Speech?

Receptive language yes. She understands all familiar words and quickly learns new ones.

Expressive language yes, she can actually communicate her thoughts to us by using rather than pantomime

Speech yes, she is very vocal while using and recognizes new words and familiar cues and sounds

Speechreading yes - because she is constantly watching the face with the cues. She has lipread sentences not spoken to her and not cued.

Where does your child attend school? Gallaudet Preschool

Does his/her teacher cue? yes

Dr. Cokenett, A year ago I wouldn't have believed such excellent communication with our Cathy was possible. Cued speech is fabulous!!

CUED SPEECH QUESTIONNAIRE

November, 1971

Name Mrs Marie J. McCudden, Speech and Hearing Centre for Children. W.A. (Inc)

Address 78 King's Park Rd, West Perth, Western Australia. 6005.

✓ Administrator of school or program for the deaf

____ Teacher of the deaf

____ Parent of deaf child(ren)

____ Other (specify) _____

Do you use Cued Speech? Yes.

If the answer is no: Did you ever use Cued Speech? ___

If so, when and why did you stop?

_____

Is it used by any of your students' parents at home? _____

(IF YOU DO NOT USE CUED SPEECH, STOP HERE AND MAIL YOUR QUESTIONNAIRE.)

If the answer is yes: Where and how did you learn to cue?
Perth Jan. 1970. Tutorials at a workshop.

How long have you used Cued Speech?
Two full academic years.

TEACHERS OR ADMINISTRATORS: Continue questionnaire with Teachers section, page 2.

PARENTS: Continue questionnaire with Parents section, page 3.

TEACHERS

Check the statement which best describes the use of Cued Speech in your school:

✓ We are attempting to use it throughout our program for all instruction and communication.
___ We are using it in some of our classes: preschool__ lower__ upper__
___ We are using it only for specific purposes, such as speech therapy.

Are you conducting formal research on Cued Speech? No.
Do you teach the parents how to cue? Yes
Do the parents receive continuing encouragement and guidance in the use of Cued Speech? Yes.
Do you have teacher trainees? Yes Are they taught to cue? Yes.

Number of students in school or program 50+
Estimated number of students using Cued Speech All are attempting to use Cued Speech.
Number of teachers in school or program 9
Estimated number of teachers using Cued Speech 9.
Estimated number of parents using Cued Speech 35 sets of parents.

With what age level children do you use Cued Speech? Diagnosis to 10+.
When do you cue? Occasionally___ Considerably___ Constantly ✓
What do you cue? Words___ Phrases___ Sentences___
Most of what you say ✓

List any problems you have encountered in the use of Cued Speech.

Developing natural fluency and accuracy

Do you feel your students are benefiting from the use of Cued Speech?
Yes
How has their development changed in these areas with regard to Cued Speech?

Receptive language We feel that Cued Speech has indeed accelerated the growth of

Expressive language both receptive and expressive language to a very marked degree.

Speech Speech is better, and corrections are carried out more easily.

Speechreading We must assume that because of greater receptive language, the children do lipread other people more readily.

CUED SPEECH QUESTIONNAIRE

November, 1971

Name Mr. & Mrs. Robert L. Beadles

Address 5435 Lakeview Drive
Durham, N.C. 27705

_____Administrator of school or program for the deaf

_____Teacher of the deaf

✓ Parent of deaf child(ren)

_____Other (specify)_____

Do you use Cued Speech? yes.

If the answer is no: Did you ever use Cued Speech?___

If so, when and why did you stop?

_____

Is it used by any of your students' parents at home?_____

(IF YOU DO NOT USE CUED SPEECH, STOP HERE AND MAIL YOUR QUESTIONNAIRE.)

If the answer is yes: Where and how did you learn to cue?
Barwell's workshop & by record

How long have you used Cued Speech?
7 months

TEACHERS OR ADMINISTRATORS: Continue questionnaire with Teachers section, page 2.

PARENTS: Continue questionnaire with Parents section, page 3.

PARENTS

Hearing-impaired child's name Edith Elena Beadles

birthdate 5-24-67

Do both parents cue? yes

Do brothers and sisters cue? some

When do you cue? Occasionally___ Considerably___ Constantly ✓

What do you cue? Words___ Phrases___ Sentences___
Most of what you say ✓

Does your hearing-impaired child cue? no

List any problems you have encountered in the use of Cued Speech.

I seem very slow!

Do you feel your child is benefiting from the use of Cued Speech? YES!

How has your child's development changed in these areas with regard to Cued Speech?

Receptive language Seems greatly improved

Expressive language Uses verbs & adjectives, rather than just nouns.

Speech Very rhythmical. - Thinks before she speaks, rather than just spitting

Speechreading Watches more closely with cuing.

Where does your child attend school? yes

Does his/her teacher cue? no

CUED SPEECH QUESTIONNAIRE

November, 1971

Name Mrs. Arlynn Orr

Address 5094 Old Alturas Road (home) Redding, Calif.
1225 Mistletoe Lane (school) Redding, Calif.

_____Administrator of school or program for the deaf

_X_Teacher of the deaf administered by Shasta County Schools Office

_____Parent of deaf child(ren)

_____Other (specify)_____

Do you use Cued Speech? yes

If the answer is no: Did you ever use Cued Speech?___

If so, when and why did you stop?

Is it used by any of your students' parents at home?_____

(IF YOU DO NOT USE CUED SPEECH, STOP HERE AND MAIL YOUR QUESTIONNAIRE.)

If the answer is yes: Where and how did you learn to cue?
@ workshop presented by Chris Lykos

How long have you used Cued Speech?
1½ years

TEACHERS OR ADMINISTRATORS: Continue questionnaire with Teachers section, page 2.

PARENTS: Continue questionnaire with Parents section, page 3.

TEACHERS

Check the statement which best describes the use of Cued Speech in your school:

___We are attempting to use it throughout our program for all instruction and communication.
___We are using it in some of our classes: preschool__ lower__ upper__
___We are using it only for specific purposes, such as speech therapy.
X Using it preschool & lower for instruction & communication – for speech therapy in upper classes, but beginning to use it for instruction also.

Are you conducting formal research on Cued Speech? no
Do you teach the parents how to cue? yes
Do the parents receive continuing encouragement and guidance in the use of Cued Speech? yes
Do you have ~~teacher~~ trainees? high school work experience students Are they taught to cue? yes

Number of students in school or program approx. 20
Estimated number of students using Cued Speech 11 continuous instruction & communication
Number of teachers in school or program 3
Estimated number of teachers using Cued Speech 2 on a continuous basis (3 know how)
Estimated number of parents using Cued Speech 10

With what age level children do you use Cued Speech? 2 years to 8 years
When do you cue? Occasionally___ Considerably___ Constantly X
What do you cue? Words___ Phrases___ Sentences___
Most of what you say X to the children.

List any problems you have encountered in the use of Cued Speech.
Parents usually need several sessions of listening practice to hear various sounds that are similar eg. (e i æ). Sometimes they never learn to discriminate betw. finer sounds. The (ing) sound is difficult to learn to cue. Dropping the hand on the shwa is hard to remember. Other than practice, these are hard concepts to teach. Learning by rote seems to be the only way. Another thing that seems to frustrate attempts to use cueing constantly is the slowness, which with you have to talk at first → it leads to only cueing one word language.

Do you feel your students are benefiting from the use of Cued Speech? yes

How has their development changed in these areas with regard to Cued Speech?

Receptive language has tripled in Gweath's time. Confusion on similar statements, commands is gone. Following directions can now consist of several tasks instead of just one.

Expressive language Is gradually increasing. Nouns are no problem. They are now picking up articles and adjectives, but verbs are still not coming and plurals are sticky. Pronouns are just now coming (you).

Speech Much better! It is even carrying over to reading the ITA symbols in words and trying to sound out words.

Speechreading Much better!! Just no comparision to the old or I only method of speechreading. Still, they can drop cues and speechread when they once are sure of a sentence structure. (The old stereotypes such as "How old are you." "How are you?" "what's your name?" "Where do you live." etc.

CUED SPEECH QUESTIONNAIRE

November, 1971

Name Hedwig Schwartz

Address 154 N. Broadway, White Plains, N.Y. 10603

_____ Administrator of school or program for the deaf

_____ Teacher of the deaf

__X__ Parent of deaf child ~~(Pres)~~

_____ Other (specify) _____

Do you use Cued Speech? yes

If the answer is no: Did you ever use Cued Speech? ___

If so, when and why did you stop?

_____

Is it used by any of your students' parents at home? _____

(IF YOU DO NOT USE CUED SPEECH, STOP HERE AND MAIL YOUR QUESTIONNAIRE.)

If the answer is yes: Where and how did you learn to cue?
New York School for the Deaf, White Pl.

How long have you used Cued Speech?
1 year

TEACHERS OR ADMINISTRATORS: Continue questionnaire with Teachers section, page 2.

PARENTS: Continue questionnaire with Parents section, page 3.

PARENTS

Hearing-impaired child's name Patricia Anne Schwartz

birthdate Oct. 26th 1964

Do both parents cue? no

Do brothers and sisters cue? no

When do you cue? Occasionally___ Considerably___ Constantly X

What do you cue? Words___ Phrases___ Sentences___
Most of what you say X

Does your hearing-impaired child cue? yes

List any problems you have encountered in the use of Cued Speech.

Do you feel your child is benefiting from the use of Cued Speech? yes

How has your child's development changed in these areas with regard to Cued Speech?

Receptive language vastly improved

Expressive language improved

Speech Her improvement in speech was in no way as spectacular as in her lipreading ability

Speechreading vastly improved

Where does your child attend school? New York School for the Deaf
White Plains, N.Y.

Does his/her teacher cue? yes

CUED SPEECH QUESTIONNAIRE

November, 1971

Name [1] Joan Rupert

Address 1877 Southwood Drive
Vacaville, California 95688

____ Administrator of school or program for the deaf

_X_ Teacher of the deaf

____ Parent of deaf child(ren)

____ Other (specify) _____

Do you use Cued Speech? Yes

If the answer is no: Did you ever use Cued Speech? ___

If so, when and why did you stop?

_____

Is it used by any of your students' parents at home? _____

(IF YOU DO NOT USE CUED SPEECH, STOP HERE AND MAIL YOUR QUESTIONNAIRE.)

If the answer is yes: Where and how did you learn to cue?
Gallaudet College - 67

How long have you used Cued Speech?
4 years

TEACHERS OR ADMINISTRATORS: Continue questionnaire with Teachers section, page 2.

PARENTS: Continue questionnaire with Parents section, page 3.

TEACHERS

Check the statement which best describes the use of Cued Speech in your school:

___We are attempting to use it throughout our program for all instruction and communication.
___We are using it in some of our classes: preschool X lower__ upper__
___We are using it only for specific purposes, such as speech therapy.

Are you conducting formal research on Cued Speech? - Data at Monteray Inst. of Behavioral Sciences
Do you teach the parents how to cue? attempt to.
Do the parents receive continuing encouragement and guidance in the use of Cued Speech? no
Do you have teacher trainees? no Are they taught to cue?_____

Number of students in school or program 18
Estimated number of students using Cued Speech 4
Number of teachers in school or program 4
Estimated number of teachers using Cued Speech 1
Estimated number of parents using Cued Speech 2

With what age level children do you use Cued Speech? 3 → 6
When do you cue? Occasionally___ Considerably___ Constantly ✓
What do you cue? Words___ Phrases___ Sentences___
Most of what you say ✓

List any problems you have encountered in the use of Cued Speech.

With the children having profound losses, whose Speech is unintelligible — Parents find the children too difficult to understand..... these are parents who do not understand Cued Speech —

Do you feel your students are benefiting from the use of Cued Speech? - yes -

How has their development changed in these areas with regard to Cued Speech?

Receptive language Children understand abstract Questions which require higher levels of thinking Cognitavely —

Expressive language Children also can express more abstract ideas — I find them able to "brain storm" -

Speech Have acquired Speech from Conv. practice rather than formal drill —

Speechreading — are more aware and fascinated by "Sound alike" words - differences in Syllabication and showed interest in the analysis of the Cued-Speech System itself —

* am sending you the spontaneous Data sheets on all 4 students —