

October 2019

## Speech Communication Techniques with the Adult Deaf-Blind

Lynne Kramer

*Audiologist, Franklin General Hospital, Valley Stream, Long Island*

Jill Rosenfeld

*Communications Instructor, National Center for Deaf-Blind Youths and Adults, New Hyde Park, New York*

Follow this and additional works at: <https://repository.wcsu.edu/jadara>

---

### Recommended Citation

Kramer, L., & Rosenfeld, J. (2019). Speech Communication Techniques with the Adult Deaf-Blind. *JADARA*, 8(4). Retrieved from <https://repository.wcsu.edu/jadara/vol8/iss4/10>

## **SPEECH COMMUNICATION TECHNIQUES WITH THE ADULT DEAF-BLIND**

---

**LYNNE KRAMER and JILL ROSENFELD**

In the agreement between the U.S. Department of Health, Education and Welfare and the New York Industrial Home for the Blind for the operation of the National Center for Deaf-Blind Youths and Adults, the term "deaf-blind" refers to "persons who have substantial visual and hearing losses such that a combination of the two causes extreme difficulty in learning." When both visual and auditory handicaps must be considered as jointly contributing to the total handicap, a number of qualities and degrees of communicative impairment present themselves. The age of onset of each handicap is, of course, a significant variable. In other words, we are dealing with four continuums: (1) the severity of the visual impairment; (2) the onset of this visual loss; (3) the severity of the auditory handicap; and (4) the age at onset of this hearing loss. Therefore, those individuals who meet the criteria of the definition of deaf-blindness can be placed at any point along each of these four continuums. This makes it impossible to describe the typical deaf-blind adult and the resultant speech and communication difficulties.

There are many methods of communication with the deaf-blind and many methods of developing language and communication skills.

Rather than discussing such methods, our intent is to illustrate work at the National Center for Deaf-Blind Youths and Adults in New Hyde Park, New York through a narrative case study approach. It is our hope that our approaches and results might be helpful to others facing similar problems. We have chosen four deaf-blind individuals who are, or who have been trainees at the National Center. They display many of the problems that are frequently seen, and in some cases, show unique and extreme problems relating to the specific handicap. It is felt that in describing the person, the

---

*Ms. Kramer is an Audiologist, Franklin General Hospital, Valley Stream, Long Island and Ms. Rosenfeld is a Communications Instructor, National Center for Deaf-Blind Youths and Adults, New Hyde Park, New York.*

**SPEECH AND COMMUNICATIONS TECHNIQUES**

---

techniques used, and our successes and failures with these techniques, we can present to you a more realistic picture of the development of language and communication in a deaf-blind adult.

Approximately fifty percent of the clients seen at the National Center have Usher's or similar syndromes. Typical of these syndromes is congenital deafness with progressive blindness which becomes apparent in early adulthood. The most common cause of blindness is Retinitis Pigmentosa, which is a gradual loss of peripheral vision resulting in "tunnel vision," night blindness and usually culminating in the total loss of vision. Ideally, a person with Usher's Syndrome begins rehabilitation before the onset of total blindness, making it possible to utilize the residual vision to advantage in the rehabilitation process.

Such was the case with Mr. B. who came to the National Center at the age of 30. He was referred by his state commission for the blind because he could no longer function at his job as a result of decreasing vision. He had been educated as a sighted child in a school for the deaf. When he came to the National Center his primary means of receptive and expressive communication was American Sign Language. He could receive sign language visually, with difficulty, only at a distance greater than six feet due to tunnel vision. He was able to read small print; however, because of his restricted fields he could only see a small portion of the print at a time. Elementary speech skills were present, as was some ability to speechread basic social conversation. Using conventional tests for the hearing-sighted, his language level was estimated at second grade. However, he could in no way be compared to a second grade child. His conceptualization and social maturity far exceeded his ability to use English. Communicating through sign language, he could make abstractions and could express himself on a level appropriate with his chronological age.

Mr. B. could adequately communicate with his peers; therefore, our goals were to enable him to communicate more efficiently with the hearing world. His total rehabilitative goal was for independent living and employment. His communication program was structured to convert his knowledge into a form applicable to his prospective environment. It was necessary to teach him a tactile reception of sign language and finger spelling. According to our observation records, his English was vastly improved, apparently as a result of using sign language as his major communication method. This involved learning the equivalent English word to the sign. This enabled him to communicate with a hearing person through written notes or print-on-palm. Print-on-palm is a method of communicating by which capital block letters are printed on the palm. It was also necessary to teach the syntax of English, since the syntax of sign, as used by most deaf individuals, differs significantly from spoken or written English. Mr. B. was able to grasp syntax to the level of comprehending English. However, he was not able to significantly improve the syntax of his expressive English. Although this was a time-consuming procedure, because of his normal intelligence, it was not an insurmountable task.

**SPEECH AND COMMUNICATION TECHNIQUES**

---

Once the conversion to basic English was made, the teaching of Braille was easily facilitated. Because he knew the printed alphabet, it was not difficult to convert this into a tactile alphabet, such as Braille. Although he could have learned Braille previously, on the basis of a letter-for-letter translation, this would have had little meaning for him prior to the acquisition of usable English.

Upon his arrival at the National Center, Mr. B.'s speech was basically unintelligible. In view of his past frustrations he was reluctant to use spoken communication with anyone. He was enrolled in a speech therapy program, with the emphasis being survival and social speech. Survival speech includes the intelligible production of name, address and emergency telephone number. Social conversation and other everyday words useful to him were included in this program.

The method used for teaching was a basic phonetic recognition of words. The most difficult concept to explain is that words are not necessarily spoken as they are spelled. Mr. B. had a relatively good ability to produce each speech sound; however, he was not able to refine this into the spoken word. Example: the word "daughter" might be pronounced as "dog-get-ter," or a name such as "Donna" being produced as "Don-na-na." Tadoma, tactile speechreading, was used to provide additional pronunciation cues. At the end of his program the goal of intelligible production of emergency and social words was achieved, although some misarticulations remained.

Mr. B.'s vocabulary was increased, taking into account his future goals. Because he had progressed more rapidly in other phases of the rehabilitation program, it was impossible to embark upon a total vocabulary enrichment program. Each instructor submitted a list of words which were necessary for independent functioning in that area. For example, a vocabulary was needed for successful competitive employment. These words included: income tax, labor unions, coffee break, holiday, vacation pay, overtime, etc. It was also necessary for him to learn words to ask for and receive instructions for proper mobility.

Mr. B. typified the National Center client whose major communicative difficulty was related to his deafness. His approaching blindness made instruction at the National Center necessary. After a one-year stay at the National Center, he was placed in competitive employment. The acquisition of additional communication skills significantly contributed to his placement. This is a prime example of one of our "fantastic successes."

In contrast to the client just described, Mr. N., aged 55, is a congenitally blind, adventitiously deaf man with normal verbal intelligence, according to results of earlier tests. A hearing loss of unknown etiology was first noted at age 10, progressing to total deafness at age 25. He graduated from a state school for the blind where he learned Braille. As his deafness became more apparent, reading Braille was his only method of receiving communication, and he learned to use the Tellatouch. The Tellatouch is essentially a small machine with a typewriter keyboard. As each alphabet key is depressed, the

**SPEECH AND COMMUNICATION TECHNIQUES**

---

corresponding Braille symbol is raised on the back of the device. Mr. N. is proficient in receiving messages via the Tellatouch, and no language adjustments are necessary to converse with him. Expressive communication is oral. His speech is normal although problems of loudness regulation are noted. It is quite difficult for Mr. N. to converse with other hearing-impaired trainees, making his social adjustment difficult. After graduation from high school, he remained at home and was not employed. His double handicap resulted in psychiatric problems and he was institutionalized for ten years in a state hospital. He was then placed on out-patient services and lived in a nursing home.

Mr. N. has great difficulty with spatial perception and orientation, mobility, body image and visual conceptualization. When Mr. N. is first presented with a task and the explanation is given, one would be impressed with his complete verbal repetition of these instructions. However, it is extremely difficult for him to follow through with these actions. For example, during the hearing test, Mr. N. was instructed to raise his hand when he perceived sound. Although there was no physical problem which restrained him from the movement of raising his hand, he did not associate this movement with the response to sound. It was necessary to reinstruct him to respond verbally. He was able to do this consistently. Similar problems were noted in the area of mobility. He was verbally able to repeat the instructions from the front door of the National Center to his locker. However, after one month of daily training in mobility, he was still not able to consistently find his way to his locker.

The Tellatouch is an efficient method for Mr. N. to communicate with the hearing world. However, it is grossly impersonal. All that Mr. N. knows of another person is how well he spells and how rapidly he types. There is no physical contact which is critical to the deaf-blind in developing inter-personal relationships. Instruction was immediately begun in the use of the one-hand manual alphabet. Out of necessity, most deaf-blind people have developed functional tactile skills. However, this was not the case with Mr. N. When presented with individual letters through finger spelling, he did not tactually investigate the hand of the sender, or reproduce the letter with his own hand.

Mr. N.'s limitations are the result of the congenital nature of his blindness and, more importantly, his lack of independent functioning. All indications are that Mr. N. had been dressed, fed and led to and from his destinations. Mr. N. is able to dress himself although his appearance is somewhat disheveled. He is able to take care of his immediate personal needs, such as, toileting, shaving and bathing. He is able to light a cigaret, however, his technique is somewhat unsafe for a blind person. He is aware of his other needs and will request assistance for those things which he cannot do for himself.

In the conventional sense, this man has no speech or language difficulties. However, language can only be deemed useful when the person is

**SPEECH AND COMMUNICATION TECHNIQUES**

---

able to follow through. He expresses a desire for a job and yet his motor skills make it impossible at this time for him to do anything but the most limited tasks. He can count from 1 to 3 million very well, if necessary. However, when he is counting objects, he is very likely to drop one and then count it again, drop another one and count it again. He does not use a system, nor is he aware that a system is indicated. He does not understand nor can he conceptualize or visualize the exact task. He is being taught systems for doing this type of work.

Mr. N. is continuing his training at the National Center. The prognosis for significant improvement in vocational placement appears poor at this time, although some minimal progress has been noted.

This case study was used as a direct comparison to that of Mr. B., whose language level is much lower than Mr. N.'s. However, Mr. B.'s experience, social maturity and ability to function independently makes him a more capable deaf-blind person. Language and speech skills are not the only factors in determining a person's independence and self-supporting ability.

Mr. G. was 40 years old when he entered the National Center. As a result of meningitis at 15 months of age, he became totally deaf and totally blind. He was enrolled in a school for the blind for ten years. He resided at home until his entry into the National Center and was never employed. He is able to take care of his own personal needs, such as, dressing, washing and feeding himself.

A communications evaluation revealed knowledge of the one-hand manual alphabet, Grade II Braille and intelligible speech. However, upon further investigation, it became increasingly evident that he did not possess the basic concepts behind the words he was using. He was able to read Braille orally and if a word was spelled to him he would say it. However, if asked a question, he would only repeat it. There is no evidence of comprehension of language and all responses are "echolalic" in nature. If a non-word is spelled to Mr. G., he will produce the phonetic equivalent of the word. For example, if you spell e-x-q-u-i-r-p, he will say "exquirp." It is also interesting to note that if a word is spelled to him that does not follow the phonological rules of English, he will adapt his pronunciation to follow these rules. He is able to function with simple stimulus response activities, such as naming objects. If he is given a Braille slate and stylus, he will write a syntactically correct sentence, consisting of subject — verb — object. However, the contents of these sentences demonstrate his lack of understanding of language usage. Typical sentences are: "Georgiana is a beautiful watch." or "The is soda pancakes."

Mr. G. has never been known to initiate any spontaneous language. He is aware of the location and time for all of his meals. However, if for some reason the meal is not there, he will go without food and make no attempt to ask for it.

In an effort to provide him with meaningful communication skills, need and emergency situations are set up. It was hoped that if something he needed

**SPEECH AND COMMUNICATION TECHNIQUES**

---

was taken away, he would initiate a response. For example, when he went into the work activity area, his chair had been removed from his workbench. He made a rudimentary search of the area to locate the chair and when he did not find it, started working standing up. When the instructor approached Mr. G. and signaled him to speak, he did respond with the word "chair." These need situations are very difficult to construct in a training facility. As the main goal of rehabilitation is to help a deaf-blind person become as independent as possible, creating need situations works against you in one way and for you in another. The program to create needs and desires for communication has proved to be a most difficult task. Mr. G. appears to be totally content in his world of isolation. It should be noted that he does derive pleasure from physical contact and interpersonal relationships, such as dancing, playing games, and contact with the instructional staff. However, under no conditions does he seek out or initiate these activities.

Minimal progress has been made with Mr. G. He now follows simple directions and will respond appropriately in structured situations. He also has made some progress in the work assembly area and it is felt he may be a candidate for an extremely sheltered workshop situation, such as a work activity center.

The prognosis for the development of any meaningful expressive communication at this time appears poor, although other approaches will be attempted.

It is felt that other handicaps in addition to deafness and blindness may exist. However, there are no diagnostic methods available which would indicate the presence of these specific disorders. It is apparent that many hours were spent teaching him to speak, and to read Braille. This is an excellent example of a communication method being taught without the underlying language concepts being understood.

Problems encountered in the rehabilitation process for the prelingually deaf-blind adult are severe. Equally severe problems are encountered in the adventitiously deaf-blind adult. The emotional effects of total isolation of the recently acquired deafness and blindness hinder the progress. Until the individual is able to accept the inevitability of his handicaps, it becomes impossible to successfully complete the rehabilitation process.

Born with a progressive loss of hearing, Ms. L. was able to function as a hard-of-hearing person until her high school years. At that time she entered a school for the deaf where she learned manual communication. Her speech and speechreading skills remained intact and she was able to function, if she chose, as an oral deaf adult. She attended a college serving the deaf and was entering the second semester of her senior year when she was involved in an accident. A head injury was sustained which initially resulted in total blindness and expressive aphasia. Subsequently, the language dysfunction became less severe and some light perception returned. After one year of recovery, she entered a rehabilitation setting in her home community where she learned Braille and tactile communication. She finished college with the

**SPEECH AND COMMUNICATION TECHNIQUES**

---

assistance of a tutor-companion. Ms. L. then came to the National Center for further rehabilitation.

Ms. L.'s goal was to enter graduate school to become a teacher of the deaf-blind. Therefore, she needed to achieve personal and academic independence. Audiological evaluation revealed bilateral anacusis. Her speech evaluation revealed essentially normal speech, although problems of volume control and pronunciation of unfamiliar words were noted. Kinesthetic and situational cues were provided to enable her to more accurately regulate the loudness of her voice. She was instructed in the reception of phonetic spelling of unfamiliar words. It was suggested that she ask an interpreter or friend to teach new words to her as they are spoken and then give the correct English spelling. This was supplemented by use of a Braille dictionary and its pronunciation keys.

Communication and language skills were excellent; however, some work was needed in rapid understanding of the tactile presentation of signs and finger spelling. It was also necessary to learn print-on-palm and use of the Tellatouch for communication with the public. To increase independent academic functioning, it was necessary for Ms. L. to learn to read those materials which were not available in Braille and to use the telephone for personal conversations.

The Optacon was introduced for the reading of non-brailled material. This is a machine which uses a small camera to transfer the printed letter into the identical tactile form. It is a long-term process to learn to use this device; however, Ms. L. had a tremendous advantage in that she had seen print and was familiar with the letter shapes.

She was also introduced to the Tactile Speech Indicator. A small device is placed on the receiver of the telephone. When sounds are produced they can be felt as vibrations by a deaf-blind person. A ringing of the telephone and a busy signal can be distinguished by this method. A telephone conversation then becomes a question-asking procedure on the part of the deaf-blind person. Responses of "no," "yes, yes," or "please repeat," can be distinguished by feeling the number of vibrations. This is a useful device for talking to friends and family who are familiar with this procedure. However, it has been Ms. L.'s experience that the general public can become confused by this method and may not respond appropriately. It is extremely useful for emergency situations. If it is necessary to call the police, she will know when someone has answered the phone and can continue repeating her message until the proper response is given.

The real problems that are encountered with a client such as Ms. L. are of an emotional and vocational nature. The job possibilities for a deaf-blind person are limited and when academic achievement is advanced, it becomes more difficult to find an appropriate and satisfying vocational placement. Also the psychological trauma of complete isolation and lack of social contacts, can and sometimes does, become overwhelming. The world of the

**SPEECH AND COMMUNICATION TECHNIQUES**

---

deaf-blind is extremely lonely and to the educated deaf-blind, the problems can be more intense.

We think that the most critical factor that we may have to convey to you is that no matter how advanced a person's communication skills are, it is impossible for a deaf-blind person to communicate with another human being without that other person using a special communication skill. All the communication skills in the world cannot help if there isn't another person to talk to. At this time, the world of the deaf-blind person is limited to the length of his arms. This is a critical factor which is very difficult for most of us to comprehend. Once there was a story of a deaf-blind man who was asked what his wish would be if he had only one to make, and he said, "I wish for arms a mile long."