

VOCATIONAL ASSESSMENT OF SPECIAL POPULATIONS: VOCATIONAL ASSESSMENT OF DEAF AND HEARING IMPAIRED PERSONS

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ABSTRACT: Vocational assessment of deaf and hearing impaired individuals offers vocational evaluators a number of challenging problems. This paper examines general characteristics of deaf and hearing impaired persons, problems associated with the vocational assessment of these persons, methods and procedures which can be effectively used in accomplishing the assessment, and preparation by staff needed to accomplish an effective vocational assessment of the population.

Deaf and hearing impaired persons, while being a somewhat diverse group, share common characteristics such as the client's inability to communicate, the client's lack of understanding of the purpose of vocational assessment, less than full participation by the deaf client in assessment tasks, and limitations of assessment instrumentation. An indepth review of the procedure and methods used by the evaluation unit at the E. H. Gentry Technical Facility of the Alabama Institute for the Deaf and Blind is presented as a structure for assessment that has proven effective with a variety of deaf and hearing impaired persons. The importance of planning and advanced preparation by the evaluation staff in the assessment of deaf and hearing impaired persons is discussed in terms of communication ability, proper referral information and its review, program orientation and client initial interviews.

The vocational evaluation of the deaf and hearing impaired individual offers unique and challenging problems to a vocational evaluator. Because of the nature of the disability and its associated language acquisition problems, the evaluator is immediately confronted with the problem of communication. It is likely that the deaf or hearing impaired person may have difficulty understanding what evaluation is and why it is important. He may have difficulty in understanding instructions, the reasons for assigned tasks, and the relationships between tasks assigned and real work situations.

Deaf rehabilitation clients have been described as falling within three broad categories across a continuum from lower functioning to higher functioning (Watson, Anderson, Marut, Ouellette, and Ford, 1983). Lower functioning clients are described as severely disabled and/or multi-handicapped, generally with limited social, academic and vocational skills and fall at one end of the continuum. The opposite end of the continuum represents higher functioning individuals who are capable of post secondary and academic skills are better developed than the lower functioning group but who have not attained the levels represented by the higher functioning group. This description provides a very general framework for viewing deaf clients as a group; however, when viewed as individuals within the group, placement into a category is not so easy. Many individual clients possess characteristics from two or more groups. It is sometimes helpful to speak of groups in generalities; however, one must agree with Gary Austin's (1983) statement that each person is an individual and must be treated with a respect for that individualism if we intervene in their lives. Evaluators then, must plan evaluations on an individual basis, using procedures that best fit that individual. Vocational evaluation of a deaf client begins before he physically enters a center.

A considerable amount of planning and staff preparation is necessary in order to formulate an evaluation plan for the individual. It is not possible to overemphasize the importance of good referral data and staff communication ability. Both are of paramount importance to effectively serving this client population and obtaining suitable outcomes.

Communication is necessary to the evaluation process and must be effected if valid assessment is to be achieved (Watson, 1976). Accepting this premise, the ability to use sign language effectively is a prerequisite for any evaluator who works with deaf individuals. This goes beyond the mere ability of the evaluator to sign English words or phrases and to fingerspell. Deaf clients arrive for evaluation with varying degrees of sign language ability and must be dealt with on their respective levels. More often than not, the client uses some level of American Sign Language, often accompanied by many "homemade" signs and gestures. The evaluator must be skilled enough with sign language to effectively communicate on the client's level. This skill is not easy to develop, and without constant use, is even harder to maintain. The basics of sign language expression are easy to learn; however, a considerable amount of experience with a variety of deaf individuals is necessary to develop proficient expressive and receptive communication skills and frequent exposure is necessary to maintain these skills. The evaluator who has contact with only an occasional deaf person will find it difficult to develop and maintain good manual communication skills. In this situation, it is advisable to use a qualified interpreter to aid in the evaluation.

It is difficult to locate and employ a qualified vocational evaluator who has good manual communication skills; thus, most evaluation centers will find it necessary to train evaluators in the use of manual communications. In centers with a large population

of deaf and hearing impaired individuals, the attainment of a specific level of competence in manual communication within a reasonable time frame should be a condition of employment for all staff. This can be accomplished by requiring individual in-service courses in manual communication and giving the evaluator the opportunity to work directly with deaf clients under the supervision of a skilled peer. Since communication is basic to the acquisition of accurate evaluation data, and this data is a fundamental part of the rehabilitation plan development, it is imperative that the communications link between the deaf client and the evaluator be established.

Also of substantial importance in effective service delivery to deaf clients is the advance review of good referral information and the utilization of this information in formulating an individual's evaluation plan. Watson recommends the following elements of biographical referral data: personal data, medical information, ophthalmological and optometric information, audiological and otological information, educational information, communication skills and narrative information (Watson, 1976). To this list should be added previous employment information. To the evaluator who is experienced in working with deaf clients, this information begins to give him a picture of the client's past experiences and helps him to begin to devise an evaluation plan, tentatively select instruments, and list points to be clarified later. This gives the client and evaluator common ground on which to begin an evaluation program. It is the responsibility of the evaluator to make the rehabilitation counselor aware of the importance of the information requested and to demonstrate its importance by using it to the advantage of the client and counselor. Counselors are more inclined to make extra effort to supply substantial referral data when tangible evidence of its use is demonstrated.

Another element of planning that makes a contribution to effective service delivery is extensive client orientation, not only to the physical plant and services, but more important, to the reasons for his being at the center. Clients often arrive at a rehabilitation center with a variety of conceptions regarding why they are attending. For many, it is the first time away from home. Explanations of reasons for rules and regulations, answers to the client's individual concerns, given by a person who is skilled in communication, can help to insure understanding on his part and facilitate his full participation. The evaluator gains benefit from observations made by the person conducting client orientation. Significant observations regarding communication levels, social interaction, and adaptability to new situations can be made at this time.

In the evaluation department at the E.H. Gentry Technical Facility of Alabama Institute for the Deaf and Blind, evaluations were performed on a total of 117 deaf clients between January, 1983, and July, 1984. Of this group, 76 were high school students who attended the Alabama School for the Deaf, and 41 were regular Vocational Rehabilitation clients. During this time period, the typical deaf client was a male, 20 years of age, who had completed 9 1/2 years of formal education. He had a measured I.Q. of 90, performed math operations at the 5.0 grade level and had a vocabulary grade level of 4.2 with a comprehension level of 4.4. He had minimal (less than 1 year) work experience in a laborers job.

New clients enter the Gentry facility once each month. Each evaluator is assigned a case load of incoming clients and reviews all available case referral information on his clients. From this information, a tentative evaluation plan is conceived, and a list of questions to be covered in the initial interview is prepared.

When the client arrives, he is given a thorough orientation to the facility and a brief tour of the city. Orientation also includes interviews with medical personnel, dormitory staff, social services staff. The orientation phase lasts two full days and is supervised by the client's case manager who, in the case of deaf clients, is a person highly skilled manual communication. A part of orientation is a visit to the evaluation unit where the client has an opportunity to meet his evaluator.

The initial interview with the client is extensive and serves a number of purposes. The client's mode of communication is established, and observations of communication competence begin. Rapport is established with the new client, and a thorough explanation of the evaluation program is presented to him. It is in this session that the evaluator begins to determine the client's communication level. The evaluator also elicits information to clarify any questions generated by the referral information and attempts to ascertain other information that may have been omitted. Whenever permitted by the client's level of communication, he explains the referring counselors questions in order to make clear to the new client why he is being evaluated. In cases where the communication level is so low that meaningful explanations are not possible, the interview may consist of the client and evaluator touring the evaluation unit in a thorough orientation to work stations in order to help the client gain some knowledge of what to expect. In all cases, an attempt is made to elicit information regarding the client's interests and future goals. This serves as a springboard for placing the evaluation plan into operation.

Evaluation tasks used with deaf clients at the Gentry Facility not only produce hard data related to specific skills, but also give the evaluator ample opportunity to observe

the client firsthand in the testing situation. This observation is critically important since it provides key information regarding work habits and job readiness. Factors such as persistence, time economy, appropriate social interactions, reaction to criticism and to praise, and the degree to which direct supervision is needed are readily apparent. It is important to the acquisition of accurate data to determine if a deaf client is participating to his fullest on the tasks. Close observation provides clues to help the evaluator make this determination. It is important that the evaluator maintain good rapport with the client and offer continued encouragement and explanation of tasks to insure the client's full participation. It has been our experience that the majority of deaf clients respond positively to this extra personal attention.

Whenever possible, the evaluation begins with academic testing. Reading vocabulary and reading comprehension are measured by the Gates-MacGinitie Reading Test, Level E, Form I. This test provides norm groups for comparison from fourth grade through twelfth grade completion. Since our clients are to be competing for employment with the general population, it yields more accurate information to compare them with general population norms. The Level II math portion of the Wide Range Achievement Test is the instrument of choice when measuring ability in arithmetic. On occasion, it is of advantage to use the Level II reading portion of the WRAT with persons of very low reading ability in order to obtain some measure of functioning below the level measured by the Gates--MacGinitie.

Intellectual assessment is accomplished through individual testing using the Performance section of the Wechsler Adult Intelligence Scale--Revised. On occasion, when the client's interests indicate college training, the Verbal Section is also administered. When college training is in question, we agree with Falberg (1983) that,

without assessment of the deaf client's current verbal functioning skills, insufficient data is available upon which to base a prediction. Another instrument often used is the Raven Standard Progressive Matrices.

Because often a deaf person's store of vocational knowledge is limited, interest testing is important. If the client's reading level is sufficient, the Kuder General Interest Survey is used. For lower language level clients, the Geist Picture Interest Inventory (REV.) is administered. Occasional language interpretation is necessary on both tests. This is permissible since the objective is to measure interests, not reading skills. Interpretation of the results is important for either test. Since interest inventories are essentially self-report instruments, the client is the final judge of the validity of the results.

The assessment of independent living skills is a critical factor. A client may have solid aptitudes and potential for scores of jobs; however, his chances for maintaining successful employment are often dependent on his ability to live independently. It is the policy of our facility to assess the person's skills in the critical phases of independent living and recommend remediation of weaknesses either prior to or in conjunction with vocational training. Phases assessed are money management, occupational adequacy (work habits, job acquisition skills), family life, community living, health and safety, communications, transportation, personal and home management. Assessment is through a variety of measures including direct observation, evaluator--developed tasks and tests, formal measures such as the Street Survival Skills Questionnaire and Valpar Unit #17, and by direct one to one questioning of the client, using questions phrased in such a way that the client must demonstrate basic knowledge in his answers.

Standardized dexterity testing is accomplished through the use of the Pennsylvania Bimanual Work Sample, the Crawford Small Parts Dexterity Test, and the Purdue Pegboard. All of these instruments can easily be explained or demonstrated and provide a measure of manual and finger dexterity. These often are viewed by the clients as competitive, thus insuring full participation.

As a measure of a person's ability to work in a purely physical task requiring prolonged standing and rapid manipulation of objects and as a measure of physical stamina to maintain pace, the evaluation unit at E.H. Gentry employs one or more of a group of work samples developed by National Industries for the Blind research. While these samples were originally developed for blind clients, only slight modification gives them general application to most kinds of cases, and they have proven beneficial with deaf clients. Two of the samples are termed electro-mechanical and employ a work pace-timer developed to give the client instant feedback when he slows his pace. Another is an assembly task in which the client is required to use both hands to complete two assemblies simultaneously. All these work samples require prolonged standing and rapid, accurate hand and arm movement. Performance is measured against a production standard based on average sighted workers.

Aptitude identification is a key factor in vocational evaluation and receives considerable attention in our unit. The Dictionary of Occupational Titles identifies eleven critical aptitudes and uses these, along with other factors, to construct job profiles. Aptitude identification is accomplished at Gentry through the use of several instruments. The General Aptitude Test Battery is employed in all cases except extremely low functioning deaf clients and we have experienced very good success with its use. It provides an excellent

vocational counseling tool and basis for occupational exploration.

An additional aid in identifying aptitudes is found in the more global components of the Valpar Component Work Sample Series. These units, used with video-taped instructions, have proved popular with the deaf clients at Gentry and have provided very useful data. A wide variety of norm groups. Performance on individual component units can be related to a variety of existing occupations and provides more supportive information for vocational counseling.

Once information regarding all factors outlined has been gathered and organized, a frank discussion of the client's strengths and weaknesses form the basis for program recommendations. It is occasionally necessary to allow the client a trial period in a vocational training area. More often, the client has made a decision and is ready to make a commitment to a program of training or adjustment that will enable him to advance.

To determine the effectiveness of the evaluation program at E.H. Gentry, the same group of deaf clients previously mentioned was selected for study. Since most of the high school students returned to school, no data was available for comparison with this group. For this reason, only the full-time rehabilitation clients were selected for study. Evaluation findings and recommendations were compared to the actual training programs selected by the clients who had experienced the evaluation procedures as outlined. The criteria used was successful program completion or average progress ratings on monthly progress reports. Of the group who did not complete training or adjustment, approximately 50% self-terminated for reasons other than training related, and the other 50% were facility terminated for disciplinary reasons. The study group was comprised of 41 persons, 28 males and 13 females. Ages ranged from 16 years to 47 years with an average age of 24 years. Fifteen

percent of the group were multi-handicapped. Aside from the average age, there was no appreciable difference between the group of 41 and the total group described earlier.

Of the study group, 10% chose to leave the facility program after evaluation, and information is not available regarding the outcome of evaluation. An additional 5% left the facility program; however, follow-up information was available. They were counted within the group who entered vocational training. Fifty-four percent of the group was referred for vocational training and entered training in the recommended area or in a closely related area based on evaluation information. While the majority entered training at E.H. Gentry Technical Facility, four other trade schools, technical colleges or junior colleges were chosen. Thirty-six percent were referred full time to the Rehabilitation Center section of E.H. Gentry for remediation of deficits in independent living skills or for work adjustment problems.

Of the group who was referred for vocational training, 28% have successfully completed the training, and 36% actively being trained. The remaining 36% terminated during training.

Of the group who were referred to the Rehabilitation Center, 36% have completed adjustment programs and have moved into vocational training or employment, or are actively seeking employment. Twenty-eight percent of the group remains in adjustment or independent living skills training. Coincidentally, the same percentage (36) of persons terminated as in the vocational training group.

Because the adjustment services figure only reflects the accuracy of identified adjustment needs and not the accuracy of the entire evaluation insufficient follow-up information after adjustment is available to test the accuracy of vocational recommendations with this group. Follow-up will continue. Of the group who was referred for vocational training, it has been determined from training progress reports that

evaluation findings and recommendations were accurate in 86% of the cases. We think that this represents an excellent success rate.

In summary, we at the E. H. Gentry Technical Facility believe that there are several key factors in constructing a vocational evaluation unit which can effectively service deaf clients. First, and most important, is the ability to communicate with the client on his level. This is not only basic to the evaluation process, but is an absolute necessity in order to provide the feedback and day-to-day counseling necessary to maintain the client's participation. Pre-planning and a good orientation to the facility is necessary to get the client started in a positive frame of mind. Rapport between client and evaluator is absolutely essential with deaf clients, and the client should be provided with explanations and feedback on a continual basis to maintain his interest and assure his participation. A wide variety of good instrumentation is necessary for use with many levels of deaf and hearing impaired clients. With these factors in place and conscientiously applied, successful evaluations can be performed with deaf persons with consistency. We consider the evaluation program at E.H. Gentry to be a successful program as demonstrated by the study quoted in this paper; and we take pride in the belief that we are making a worthwhile contribution to the rehabilitation of deaf individuals.

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