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THE ADAPTATION OF ASSESSMENT CENTER GROUP EXERCISES FOR DEAF JOB APPLICANTS

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Abstract

This article proposes a model for adapting Assessment Center group exercises for deaf job candidates. A major Fortune 500 Corporation authorized the formation of an Exercise Adaptation Team with deaf professionals and deaf employees. The team's primary responsibility was to adapt an existing behavioral assessment group exercise for deaf job applicants who prefer to communicate in sign language. Four trials were conducted with this exercise using deaf subjects as assessment candidates. As a result of this research, several adaptations were made, including the use of laptop computers for assessor notetaking, the translation of exercise instructions into American Sign Language, and the placement of deaf candidates into separate exercises that excluded hearing candidates. The final result was the proposal of an Assessment Center Deaf Exercise Adaptation model.

The Adaptation of Assessment Center Group Exercises for Deaf Job Applicants

The Americans With Disabilities Act of 1990, signed into legislation by President George Bush, requires companies to provide several accommodations for individuals with special needs. Such accommodations include accessible work facilities, support services, and an equitable

employment screening process. For some companies, a key element of job screening is the vocational or behavioral assessment tool, a test or procedure that is employed to identify job performance abilities of potential employees. Even though each special needs group requires different adaptations of a testing instrument, making assessment accommodations for deaf job applicants poses several challenges (Nester, 1984; Steffanic, 1982; Zieziula, 1982). Though much has been written on adapting academic and work sample assessments for deaf applicants (Watson, 1976; Zieziula, 1982), vocational behavioral assessment research for hearing-impaired job candidates is scarce. For those companies utilizing the Assessment Center model, there is a paucity of information available on its applicability to deaf job applicants. The purpose of this study was to present a model for adaptation of group behavioral assessment exercises for deaf applicants, based on live trials conducted at a major corporation.

For the past few decades, a limited number of attempts were made to adapt vocational assessment tools for a deaf population. A review of the literature revealed seven vocational assessment tools receiving such adaptation: (a) General Aptitude Test Battery (GATB) (U.S. Department of Labor, 1983), (b) VALPAR Component Work Sample Series (VALPAR International Corporation, 1974), (c) Micro-TOWER Work Sample Evaluation (Institute for Crippled and

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Disabled Rehabilitation and Research Center, 1977), (d) Singer Vocational Evaluation System (Singer Company, 1986), (e) INSIGHT (VALPAR International Corporation, 1988a), (f) Street Survival Skills Questionnaire (SSSQ) (McCarron & Linkenhoker, 1983), and (g) Minnesota Importance Questionnaire (MIQ) (University of Minnesota, 1981). Descriptions of these adaptations are provided in the following paragraphs, and only standardized adaptations are discussed.

The GATB is a vocational assessment battery that measures nine vocational aptitude factors. The original oral instructions were changed to written form for deaf subjects, using 4 x 6 cards with language primarily below a third-grade level. Performance differences on the GATB using the modified card format administered individually vs. a group manual communication system were studied using deaf high school juniors from the North Carolina School for the Deaf (U.S. Department of Labor, 1973). One deaf group ($n = 27$) received instructions through the adapted cards. This group received no manual or oral communication. During the instruction period, questions were answered through written communication between the administrator and the subject. A second deaf group ($n = 27$) received instructions through a sign language interpreter. There were no significant performance differences found between these two groups.

In addition to the GATB, Commercial Vocational Evaluation Systems (CVES) have also been adapted for a deaf population. These systems use work samples to assess vocational aptitude or work performance. Three such systems are: (a) Singer Vocational Evaluation System, (b) Micro-TOWER Work Sample Evaluation, and (c) VALPAR Component Work Sample Series. Singer Vocational Evaluation System includes 25 work samples, and the original non-adapted instructions are administered through audio tape and filmstrip presentation. For deaf individuals, seven of these samples include specially adapted filmstrips with

captions to replace some of the audio instructions (Sligar, 1983).

In lieu of filmstrips, videotapes were developed for deaf subjects taking the Micro-TOWER Work Sample Evaluation. Videotaped signed instructions replaced the standard audio taped instructions normally used for the 13 work samples in this system (Sligar, 1983).

Another developer of videotaped instructions is the VALPAR International Corporation. This company offers a package of signed instruction videotapes for the VALPAR Component Work Sample Series. These videotapes replace oral instructions for 14 of their 23 work samples (VALPAR International Corporation, 1986). Also from the VALPAR International Corporation is a minor adaptation for deaf individuals taking the INSIGHT, a combination computer-generated and pencil-and-paper vocational test battery. The computer portion includes tests for academic skills, manual dexterity, eye-hand-foot coordination, and size discrimination. All instructions for this portion are generated on the computer screen. When hearing subjects choose a correct answer, they hear a beep from the computer. A buzz indicates a wrong selection. For deaf subjects, a special computer adaptation generates a check mark in the bottom right-hand corner of the screen to indicate a correct response. An 'X' on the lower left-hand corner indicates a wrong answer (VALPAR International Corporation, 1988b).

In contrast to the CVES adaptations described above, which all rely on technology, McCarron-Dial Systems provides a non-technological adaptation for the SSSQ, a test designed to evaluate vocational and life functioning. Standardized ASL instructions and test questions translated from the original oral administration were developed for this questionnaire (Sligar, 1983).

All of the previously-described instruments test vocational aptitudes, knowledge, and skills. The MIQ evaluates work attitudes by matching a

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subject's needs, attitudes, and values with the reinforcers in the work place for a given environment. Holm (1975) created several adaptations for the MIQ for deaf subjects, including: (a) the reduction in group size for a test administration, (b) the combination of separate answer sheets and test booklets into one book, (c) the addition of a break mid-way through the test session, (d) the translation of the test into standardized ASL, and (e) the rewriting of the fifth-grade reading level instructions and test questions to be read at a second- to third-grade level. (It should be noted that Items (d) and (e) are two separate administration methods.)

Although the above review included a variety of vocational tests, it is interesting to note the absence of studies describing vocational group behavioral assessment instruments adapted for deaf subjects. This type of evaluation can be valuable because it allows the evaluator to observe subjects interacting with their peers. Such observations are important because social skills are a component of job success (Backman, 1977). Social skills, as well as other vocationally related behaviors, can be evaluated by the behavioral group exercises used with the Assessment Center model.

The Assessment Center Model

Before describing the exercise that was adapted, it may be useful to provide information about the Assessment Center model which is used by approximately 2,000 organizations (Gaugler, Rosenthal, Thornton III, & Bentson, 1987). Research has established that assessment center ratings demonstrated predictive validity with respect to employment-review and other performance-based criteria (Gaugler et al.; Howard, 1974; Schmitt, Schneider, & Cohen, 1990). With this model:

Candidates for a position participate in a series of . . . experiences designed to

simulate conditions of a job and to show if they have the skills and abilities to perform that job. This is done by eliciting, observing, and evaluating those behaviors relevant to the position to be filled. (Niehoff, 1983, p. 353)

In order to assess the behavior of job candidates, a combination of group and individual exercises are conducted. The intellectual abilities of a candidate are evaluated through individual exercises (e.g., an in-basket simulation). Interpersonal skills are evaluated during group exercises as the candidates interact while solving a problem or building model toys (e.g., cars).

During each exercise, certified assessors sit in the room and take notes on one or two candidates, recording exact quotes and observed behaviors. Upon the completion of an exercise, the assessors classify candidates' quotes and behaviors under behavioral dimensions, such as Team Skills and Initiative. They give each candidate a one-to-five scale rating for each dimension. A candidate typically participates in three or four exercises during the course of one day. To control for assessor bias, a candidate is evaluated by a different assessor in each exercise.

At the conclusion of all exercises the assessors gather for a consensus meeting. For each candidate, the entire group must agree on an overall rating for each behavioral dimension. These ratings are included in the candidate's report that is supplied to a manager who makes hiring or promotional decisions.

The Existing Exercise

Based upon the Assessment Center model, a model building group exercise for hearing job candidates was used at the Fortune 500 corporation where the author was employed.

When company management realized the need to adapt this model for individuals with

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disabilities, the author was asked to develop an adaptation of an existing group behavioral Assessment Center exercise for deaf job applicants. To protect the security of the test, specifics about the exercise itself cannot be discussed. There were several elements of these, however (e.g., seating arrangements and delivery of instructions), that could be used in adapting other behavioral assessment exercises for deaf applicants. The exercise was administered as follows: Four to six job candidates were seated around a table. Two or three assessors took written notes. After the pre-exercise instructions were read by one of the assessors, enough plastic pieces to build four models were placed on the table, along with four sets of model building instructions. The candidates were told to build the models either individually or as a group. The subjects were informed that they had 30 minutes to build the models and were instructed to begin.

Need for Adaptation

During the original administration of the exercise at this corporation, a hard-of-hearing assessor expressed his opinion that this was not a valid assessment tool for hearing-impaired individuals. The author, who possesses knowledge in deafness and sign language, was asked by management to establish an Exercise Adaptation Team (Team) that would be responsible for adapting this exercise for deaf job candidates.

The Adaptation Process

Test Adaptation Team

The Team consisted of the author, who was a member of the Assessment Center staff; an outside deaf employment specialist, who was hearing impaired; a certified sign language interpreter; and two deaf employees from within the corporation. Weekly meetings of the Team were conducted at the Assessment Center. At the first meeting, it

was determined that the Team would adapt the existing model building assessment exercise for deaf applicants who primarily communicate in sign language. Deaf individuals preferring oral communication would be the subjects of a future assessment adaptation study.

Exercise Trials

In the course of developing this adaptation, four exercise trials were conducted as follows:

Exercise Trial 1. The first trial took place on October 10, 1989, with two hearing and two hearing-impaired candidates who were members of the Team. All communication was in ASL. A certified hearing assessor with no knowledge of sign language observed and provided feedback.

Exercise Trial 2. A second trial was conducted on November 28, 1989. Two model building exercises were videotaped. The videotape was produced in sign language without voice. There were four deaf candidates in each exercise. One non-certified deaf assessor took notes on one candidate in each exercise using WordPerfect on a personal computer.

Exercise Trial 3. On January 5, 1990, two exercises were conducted, each with four deaf candidates. The eight subjects had no prior experience with the exercise. A deaf employee or deaf professional sat in each of the four assessor chairs. They were not recording candidate comments, but merely observing.

Exercise Trial 4. A fourth trial was conducted on March 16, 1990. There were two exercises, each with four deaf subjects and four observers.

Trial Observations and Adaptations

The adaptations that appeared in the final exercise instructions for deaf candidates were the result of observations during the trials and feedback from deaf participants. Comments and opinions were obtained during post-exercise

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interviews. The following five sections describe observations that were made during the exercise trials: (a) Separate Exercises, (b) Assessors, (c) Number of Candidates, (d) Instructions, and (e) Furniture Arrangements.

Separate Exercises

One of the first issues discussed by the Team was whether groups of deaf and hearing applicants should be tested together or groups of deaf job candidates should be tested separately. The literature on deaf employment revealed that effective working relationships between deaf and hearing individuals require a considerable investment of time and effort for all parties involved (Rochester Institute of Technology, 1986). There may be an initial awkwardness and discomfort for both groups when deaf and hearing individuals are placed together in a working environment (Foster, 1987). There was some concern that mixing these two groups in an exercise may cause uneasiness for all candidates and thus affect the outcome. It was suspected that deaf individuals placed in a hearing group may tend to feel inhibited and their true behavioral characteristics may not be measured. Communication problems and misunderstandings could confound the results of an assessment with deaf and hearing applicants. It was determined that a separate assessment would be developed for deaf applicants.

Assessors

Interpreters vs. Assessors who Sign. Another issue considered was whether to use assessors without signing skills who depend on sign language interpreters, or assessors skilled in sign language without interpreters. If non-signing assessors were to be used, interpreters would be required to use expressive and receptive interpreting skills. Expressive skills would be required for interpreting pre-exercise instructions read by the assessor. Receptive skills

would be used to voice the deaf candidates' signs for the hearing, non-signing assessors. It was believed by the Team that although a skilled interpreter could provide an accurate translation, direct communication between candidates and assessors, without an intermediary, was the optimal choice. The Team decided to use assessors skilled in ASL. Interpreters would not be used for this exercise.

Computer Keyboards. With hearing assessors and hearing candidates, the assessors write most of the time and have little opportunity to look up at the candidates. During the first adaptation trial for deaf persons, it was determined that an assessor would have difficulty looking at the signer and taking written notes at the same time. A lot of quotes would be missed while writing and not looking at the candidate.

To solve this problem, the Team decided to experiment with computer keyboards and word processing systems for the assessors. It was determined that assessors skilled in ASL and touch typing could be utilized. These assessors would be able to avoid looking at the keyboard while candidates were signing.

Assessor-to-Candidate Ratio. The Team needed to determine how many deaf candidates an assessor should take notes on during an exercise. It was decided that an assessor should only take notes on one candidate, not two or more. The following reasons are given for this decision:

1. It appeared important that the assessor have a direct frontal view of a candidate in order to read all signing accurately and clearly. With two candidates the assessor would often be reading signs from side angles and missing quotes.
2. If the two candidates were to move to separate areas during the exercise it would be impossible for one assessor to watch the signing of both. It would not be appropriate to restrain candidate movement. It would be possible for an assessor to follow one candidate around the room, but not two.

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After considering these problems, the Team determined that there would be one candidate per assessor.

Number of Candidates

Because the assessor-to-candidate ratio would be one-to-one, it was determined that there should be a limit of four candidates in one exercise. More than four assessors in the room would not be comfortable or practical. Another consideration for this decision was that more than four candidates would result in the assessors' inability to view their candidates from a full frontal angle without obstruction from other candidates. The seating arrangement, which will be discussed in a later section, will illustrate this principle.

Instructions

Comprehension of Instructions. In one of the trials, the administrator presenting the pre-exercise instructions did not take the time to make sure that everyone understood the instructions. This resulted in confusion and misunderstanding by some of the candidates. Nester (1984) explained that a test instruction period should not be rushed. The test administrator should ask the test takers questions to determine whether they understood the instructions clearly. A test should not start until it has been determined that all test takers comprehended the task at hand. This is standard procedure for testing deaf subjects. Based on this information, it was determined that an unrushed question and answer period, with a check for candidate comprehension, would become a crucial part of the exercise adaptation.

Preference for ASL. It was determined through candidate feedback that pre-exercise instructions should be delivered in ASL. The original concept of the Team was to sign the pre-exercise instructions in PSE with voice. When PSE was used, many of the candidates did not

understand the instructions. Several candidates confirmed this during post-exercise interviews and expressed a preference for ASL communication.

After receiving this feedback, the instructions for the exercise were translated into ASL. This was performed by deaf professionals and deaf employees fluent in both English and ASL.

Furniture Arrangements

Seating Arrangement. By the third exercise trial a seating arrangement was designed for clear viewing of all candidates by the assessors. A diagram of the seating arrangement is included as Figure 1. All observers in the third and fourth trials agreed that the seating arrangement was optimal and allowed a clear view of each assessor's candidate.

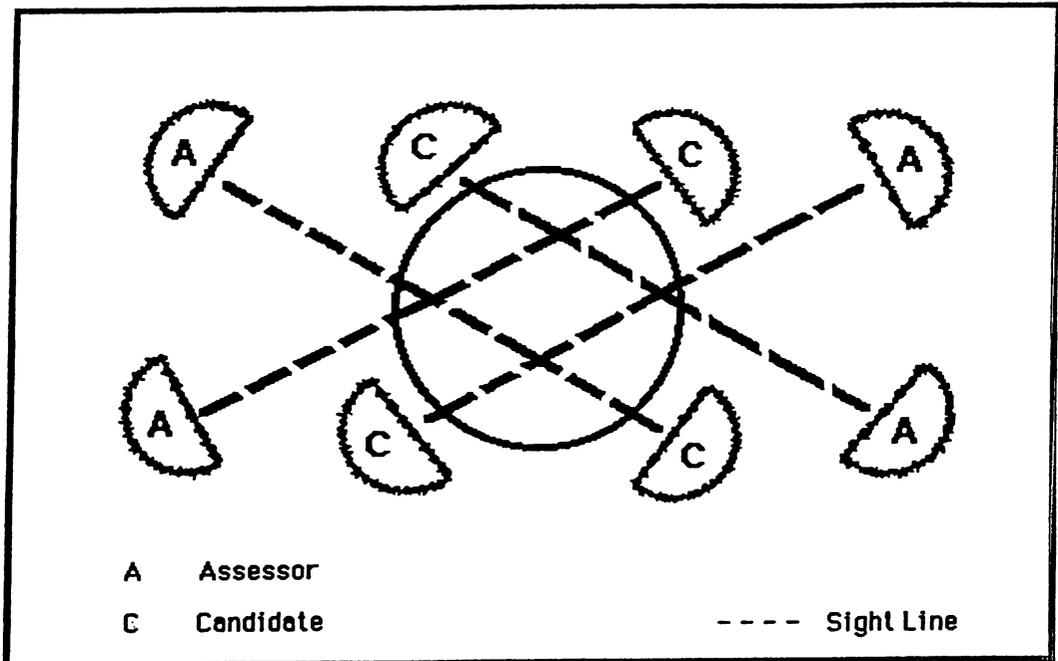
Assessor Chairs. One concern that arose from the third trial was that stationary chairs did not allow assessors to re-adjust their seats when candidates changed positions. This became apparent when a candidate offered to help another candidate. She got up and walked to the opposite side of the table. She stood in that position for most of the exercise, blocking the view of two assessors.

It was decided that one possible solution would be to have rolling assessor chairs that could allow the assessors to re-adjust their positions when candidates moved. Along with these chairs, the assessors would need portable lap-top computers for notetaking, as regular personal computers are not portable.

Smaller Table. It was determined that another possible solution to the problem of candidate movement was the use of a small table. The large table in the third trial forced the candidate to get up in order to help the candidate across from her. A small table would have allowed her to reach across the table and stay in her seat.

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Figure 1. Seating Chart for Deaf Behavioral Group Exercise



Discussion

As a result of the above trials, observations, and feedback, the Assessment Center Deaf Exercise Adaptation model was proposed. This model featured all of the adaptations described in the previous sections. Because several adaptations were developed, the effects of adapting a standardized test must be discussed. Sligar (1983) reviewed 10 work samples on a case-by-case basis to determine the extent to which test instrument adaptations for deaf subjects may have violated standardization procedures rendering an instrument invalid. Factors involved in making such a determination were related to the nature and structure of the tests and the types of adaptations that were made. In the current investigation, the group behavioral assessment exercise for deaf candidates was only examined at

the pilot level. Thus, it is difficult to determine the extent to which the adaptations (changes in instructions, candidate numbers, seating arrangements, to name a few) might effect the standardization and validity of the assessment. Further research to examine the possible effects of such test adaptations is recommended.

With proper guidance, this proposed adaptation model can assist assessment centers across the country in the adaptation of behavioral assessment exercises for deaf job candidates. It is cautioned that the successful adaptation of any assessment tool for deaf applicants will require the services of deaf individuals or deaf professionals knowledgeable in sign language and deaf vocational testing. An attempt should not be made to develop such tools without the proper expertise.

In addition to adapting exercises for deaf candidates, it is recommended that those with

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expertise in employment of other special needs groups, such as the blind or learning disabled, adapt assessment exercises for those individuals.

It is the author's belief that equal access to

employment testing is a major step in the direction of equal access to employment for those with special needs.

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