

## MINNESOTA IMPORTANCE QUESTIONNAIRE: A TRANSLATION FOR THE DEAF

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**Carol Holm**

During the 1930's the Hawthorne Studies on industrial efficiency first called attention to the importance of job satisfaction among workers by showing that satisfied workers not only are more productive, but they cost an employer less for such industrial loss as absenteeism, personal injury, and property damage. Since that time the field of vocational adjustment has developed an increasing interest in worker satisfaction. Yet, as a general rule, this aspect of guidance counseling is deemphasized in work with deaf people.

Part of the explanation for this is the difficulty one has in finding jobs for deaf people in a society that considers the deaf retarded and behaviorally strange. Good jobs have always seemed to be available in such a narrow range of vocations for these people, that training a client and placing him in a paying position was, and is, the primary concern. Any dissatisfaction he might experience is outweighed by his status of wage earner and thus acceptable citizen. The same pattern is commonly found among the majority of workers when the total economy of a society is in a depression. Satisfactions other than money are left to be found in nonwork areas of life.

Recently, however, as new employment opportunities arise because of broader vocational training and better community awareness of deafness, there is an increasing need to explore ways of identifying deaf workers by dimensions other than ability and skill. As the sensitive counselor has always known, deaf clients also can be defined in terms of needs, attitudes, and values.

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Ms. Holm is a psychologist at the Hoikka House in St. Louis. Requests for reprints may be sent to her at 11524 Palmer Road, Bloomington, MN 55435.

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To determine the potential satisfaction of any worker for a particular line of work, needs, attitudes, and values must be measured against the reinforcer system of that specific job (salary, opportunity for advancement, congeniality of coworkers, etc.). For people who can hear normally, these traits are usually determined by psychological measurement instruments. One such measurement instrument designed for use in the vocational guidance situation to determine within individual value patterns of clients is the Minnesota Importance Questionnaire (Gay, Weiss, Hendel, Dawis, and Loftquist, 1971). Once administered and scored, the MIQ can be used in various ways. Scores can be matched with Occupational Reinforcer patterns (Rosen, Weiss, Hendel, Dawis, and Loftquist, 1972) to predict correspondence between the individual's needs and the reinforcers in a specific work situation. Results can also be used to prepare a counselor for a good helping relationship by indicating the direction of a client's attitude toward work in general. Two sets of scores for one individual over time can help assess changes in needs, e.g. scores from pre- and post-disability testing or pre- and post-therapy testing. Another possibility is to use the results to help a client find satisfying use of nonwork time.

Regardless of its potential, this instrument is not used with deaf clients. It is a questionnaire, and questionnaires generally are not considered appropriate tools for evaluating deaf people. Their verbal nature and their insensitivity to cultural deprivation make them invalid. As early as 1921 (Pinter and Patterson), educators and psychologists criticized the results of such testing as being artifacts of the measurement. Adjustment of instrumentation has been made from time to time, each adjustment usually improving the procedure to some degree, yet criticism continues (Levine and Wagner, 1974; Sachs et al, 1974; Vernon, 1968). The major problems specified in the literature are:

1. English language: Only ten percent of the deaf population is able to read at the level of grade five or above (Boatner, Stuckless, & Moores, 1964), although performance tests show mean intelligence to be equal to that of people who hear normally (Brill, 1962). Moreover, according to a study done by Hammermeister (1970), reading level does not improve over time among adults. Vocabulary increases, but comprehension does not. Therefore, nonlanguage tests are considered by most professionals as the only effective means of evaluation. There is a recent trend, however, which seriously questions the exclusive use of non-language testing (Levine, 1975; Ross, 1970).
2. Experience field: Cultural deprivation, the result of communication inadequacies, narrows the testee's experience range for those items that are culturally based.
3. Independent decision making: The evaluation of one's own ideas where no right or wrong answers are called for poses problems especially for young deaf people who have had little training or practice in making decisions for themselves.

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4. Multiple choice format: The use of several answer choices seems to promote confusion with people who have low reading levels and a tendency toward reduced short term memory (Levine, 1956).
5. Group testing: In addition to the obvious communication problems present when giving explanations and directions during test administration, further difficulties derived from a deaf person's dependence on peers to answer questions when an administrator cannot communicate well with him.
6. Separate answer sheets: Reading a question on one paper and answering it on another seems to add to the confusion and anxiety already present.
7. Fatigue: Excessive test taking anxiety and unaccustomed verbal concentration and eyestrain can cause levels of fatigue far above those for nondeaf clients.

The arguments against questionnaires in general are reasonable, yet in spite of its status as a questionnaire, the MIQ may be a potentially useful tool for vocational guidance work with the deaf. For the majority of clients the problems need not be insurmountable.

Undoubtedly, the most important problem is the first one, language. The MIQ is certainly a verbal test. The authors of the MIQ state that the reading difficulty of the twenty statements is at a fifth grade level (Weiss, Dawis, England, and Loftquist, 1964, p.20). If only ten percent of the population in question can read at a fifth grade level or above, most applicants for services would be incapable of taking the test. If, however, a translation having a second or low third grade reading level were developed, a much larger number could benefit. Only thirty percent are considered illiterate (Boatner, et al, 1964).

The second problem, experience field, may not be correctly applied to this test, for the concepts expressed in the items are easily understandable by an adult population. It is culture bound only to the extent that a testee has had experience with the world of work. With more work experience, more accurate understanding of the test would occur. This would apply equally to all populations.

In addition, the test is ipsitive (*SIC*), with the 210 items being composed of only twenty basic concepts, each of which is weighed separately against each of the others. If the language could be adjusted so that each concept is well understood at the first reading, repeated contact should result in a growing familiarity that could lessen the apprehension, and sometimes hostility, that deaf individuals often harbor toward verbal tests.

The third problem, independent decision making, may be related to experience also. Items which can relate at least partially to real past experience and emotion are more concrete, and thus more easily compared, than items which project into future and imagined experience.

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The fourth problem, multiple choice format, also may not be applicable here since there are only two possible answers to each question. If not non-existent, the problem is greatly reduced.

With certain adjustments the remaining problems could be eliminated, or at least minimized. First, individual testing, or working with two or three clients at the most, should be the standard practice. As most vocational counseling is done on an individual basis, this should be within the structure of an agency or school. Second, if separate answer sheets seem to cause undue stress, it might be possible to prepare a test booklet similar to the one used for Form R of the MMPI. In this way less testing confusion would be combined with easily scored responses. Finally, by establishing a standard division point, the test could be administered in two sessions when excessive fatigue seems to be a problem.

The primary problem, then, in administering the MIQ to deaf clients is language difficulty, making the primary adjustment the formulation of a translation into the lowest possible grade level of English. To develop such a translation was the goal of this study.

### TEST DEVELOPMENT

#### SUBJECTS

Thirty-eight subjects were chosen from post high school vocational programs for deaf students. Reading scores, which were needed to estimate the level of difficulty of the items, were available through the vocational programs. High school students were not used because of their lack of work experience and their immature views of the world of work.

Of the thirty-eight students, twenty-five attended the St. Paul Technical Vocational Institute in St. Paul, Minnesota, and thirteen subjects attended the Anoka Vocational School in Anoka, Minnesota. Twenty-three students took part in the development stages and fifteen were assigned to the evaluation of the final draft. Work experience among the group was varied but most subjects had not experienced permanent full time employment.

#### METHOD

Two deaf adults with good English and many years of experience in communicating in manual language acted as advisors to the author. Their help was invaluable in capturing the subtleties of the language variations of deaf people.

The translation was prepared in several repeated steps. First, the twenty statements of the MIQ, plus the introductory statement, were put into Ameslan

as locally understood. Next, these statements in Ameslan were signed to a small group of deaf vocational students whose reading scores on the Gates Test were at the third and fourth grade level. The students were asked to observe each signed sentence, one at a time, and then to write the English for each sentence in their own words. If the students did not understand the signed statement they were to report it. If they could not translate the signs into English they simply were to leave blanks for the words they did not know. It was felt that sentences which could be written by students with third and fourth grade reading levels could be read by those with second and third grade reading levels. The English on these papers then was compared with the original items and, on the basis of errors and omissions, revisions were made. New words and phrasing were substituted in troublesome areas.

At this time a sign translation was devised for the instructions. Although test administration could probably be entirely pantomimed, pantomime alone for deaf persons has been shown to be less effective than verbal instructions are for the nondeaf (Graham and Shapiro, 1953). Easily understood instructions not only would explain the test, but would help the deaf testee to feel more secure in the test taking situation.

The revised translation including the instructions was then administered to a different group of students who as yet were unfamiliar with the test. The process was continued for two more cycles. The results of the three cycles then were put into grammatically correct English as nearly like the sign sentences as possible. This was the foundation of the final instrument.

To determine understanding level, individual students with Gates Reading Test scores at second and third grade level who had not yet seen the test were worked with individually. These students were asked to read each sentence of the instructions and then sign the meaning to the examiner. When this was completed, they were briefly questioned on the meaning of the test and the test procedure. They then worked through the introductory statement and the concept statements in the same manner. Problem words and phrases were noted. Finally, each student was given a sample questionnaire of ten items and asked to complete it without help. Again, after each small unit of students had individually reviewed the sentences, more adjustments were made. There were three of these cycles.

During the last cycle the key word, "importance," was changed in the introductory statement to "want." Originally this word was retained and explained by providing the drawn sign for the word, but some of the students with lower reading levels continued to be confused. Since understanding the introductory statement is basic to the questionnaire, a simpler but parallel concept was essential. "Want" was chosen. "Importance," including the drawn sign, has been used in parts of the explanation for conceptual integration by more verbal testees.

It also was decided at this final stage to advise the testee of the repetition of items in the body of the test. This is not done on the original questionnaire.

Since most tests do not repeat items, a person with poor reading skills may lack the confidence to assume he has correctly understood preceding questions and realize those following are repetitions. He may suspect instead that he has missed slight verbal variations and answered earlier items incorrectly.

The final draft of the instructions, concept sentences, and sample test were reproduced. Students with reading comprehension levels of second, third, and fourth grades were given copies and asked to read the instructions and concept sentences, underlining unknown words and checking any sentences that were not understood clearly. They were directed to check only sentences in which concepts were unclear regardless of their understanding of the individual words. Each student then completed a sample test. The students, as they finished the sheets, were spot checked to be certain they had underlined all unknown words and marked every sentence which was not understood. Otherwise no personal assistance was offered.

### RESULTS

The results of the language level evaluation for the fifteen subjects is found in Figure 1. On the basis of these findings, it is concluded that the MIQ translation is valid for deaf individuals with a reading comprehension level of grade 3.3 or above in situations where the examiner is unfamiliar with the language of signs. For reading levels between 2.5 and 3.3 the test would be valid fifty percent of the time and could be used with caution for that group. One should keep in mind that this is an extremely limited study. The numbers are small and the sample population is selected from a narrow age and experience group. The results are meant only to show the possible usefulness of such a test.

### A SIGN TRANSLATION

Although no signing was used in the final evaluation, for purposes of standardization a sign language guide was constructed to be used by those examiners who are able to communicate manually. In using the guide one simply applies local signs to the words as indicated. Admittedly, unstructured Ameslan and natural expression by proficient signers is a superior means of communicating. Yet a structured form provides better reliability control, making it possible to norm the test more accurately on a deaf population regardless of the method of communication used. Signs of course do vary from locality to locality, but this could be an administrative advantage rather than a shortcoming. If signs and their exact meanings vary locally for specific words, to keep the concept stable the sign words should vary equally in the testing situation. In addition to the guide's value in normalizing results, it

FIGURE 1  
 SUBJECT UNDERSTANDING OF MINNESOTA IMPORTANCE QUESTIONNAIRE: A TRANSLATION FOR THE DEAF

Subject No.	Gates Reading Compr. Score	Understood Instructions	Did Not Understand Instructions	Understood ALL Words	Understood ALL Concepts	Did Not Understand 1 Concept	Did Not Understand 2 Concept	Did Not Understand 3 Concept
1	0.0	X					X	X
2	2.6	X		X	X			
3	2.6	X		X	X			
4	2.7	X		X	X			
5	3.0	X		X	X			
6	3.0	X					X	
7	3.1	X						
8	3.2	X					X	
9	3.3	X		X	X			
10	3.4	X		X	X			
11	3.7	X		X	X			
12	3.8	X		X	X			
13	4.0	X		X	X			
14	4.2	X		X	X			
15	4.6	X		X	X			
Total		15	0	7	11	0	2	2

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is expected that its use by skilled examiners, or interpreters, also would allow less literate deaf people to benefit from the information provided by the Minnesota Importance Questionnaire.

### SUMMARY

Because the Minnesota Importance Questionnaire may be a valuable tool for vocational counselors with deaf people provided the reading base is simplified, a translation was made, reducing the reading level from about grade five to grade 3.3. The instructions, the twenty concepts with their introductory phrase, and a sample test were given to a small number of post high school vocational students with reading comprehension scores between grades 2.6 and 4.6. Seventy-four percent of the students understood the test well. The other twenty-six percent understood it well enough to be used with caution. No thorough validating or standardizing has been done.

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