
Structured Interviewing: Avoiding Selection Problems

Maximizing the effectiveness of personnel selection is vital to organizational health.

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tions have historically used tests and other selection procedures to assist in making these important personnel decisions.

Legal Developments Influencing Testing— A Return to the Traditional Interview

There have been three major legal developments that have severely influenced the use of testing in industry. First, Title VII of the Civil Rights Act of 1964, as amended in 1972, prohibited employment discrimination based on race, color, religion, sex or national origin. This Title does not prohibit the use of professionally developed ability tests, but the tests must not be designed, intended, or used to discriminate against protected groups. This legislation laid the groundwork for submitting testing to closer legal scrutiny.

The second legal development was the impact of court cases that resulted from Title VII. Particularly noteworthy of these were *Griggs vs. Duke Power Co.*¹ and *Albemarle Paper Co. vs. Moody*.² The net consequence of cases like these is that tests and other selection criteria are prohibited if they have an adverse impact on protected minorities and are not directly job-related.

The third legal development significantly affecting testing was the Uniform Guidelines on Employee Selection Procedures.³ These Guidelines define stringent procedural and documentation requirements for the design and implementation of selection systems. In essence, these Guidelines operationally define job-relatedness and validation.

The implication of all these legal developments is that the test user, or potential test user, must be in-

Companies can no longer afford the luxury of making poor personnel selection decisions. Organizational goals are clearly affected every time a personnel selection decision is made. These selection decisions include the hiring, transferring, promoting and terminating of employees. Maximizing the effectiveness of these decisions directly affects training time, turnover, absenteeism, safety and satisfaction—in addition to job performance. Organiza-

creasingly more sophisticated in the technical aspects of personnel selection. Not only must the test user be thoroughly knowledgeable about the details of test development and validation, but must also keep up with the rapidly changing legal and scientific milieu of personnel selection.

Due to the increased difficulty of developing and maintaining tests and other structured and validated

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selection procedures, and due to the lack of awareness of their cost/benefit utility, many personnel specialists are returning to the traditional (subjective) interview as their only selection device. They apparently feel that testing has too high a legal risk and that test validation requirements are too extensive. What they fail to realize is that traditional informal interviews are considered as tests. They are subject to the same validation requirements and are accompanied probably by a greater legal risk due to their subjective nature.

Problems with Traditional Interviewing

The traditional interview has a host of additional problems aside from its being susceptible to the same legal scrutiny as any other test. Early reviews on the reliability and validity of the traditional selection interview were not encouraging.⁴ The reliability of the interviewers was very low, and evidence of validity was either scarce or non-existent.

Research on the selection interview has attributed a large part of this poor performance to rating or evaluation errors in the judgment of interviewee responses. The various types of errors identified and studied include halo, first impression, contrast effect, similarity, leniency or severity, central tendency and stereotypes.

As noted earlier, the traditional interview may be accompanied by a high degree of legal risk due to its subjectivity and susceptibility to bias. In a recent analysis of unfair discrimination in the employment interview it was concluded that, "the interview is highly vulnerable to legal attack and one can expect more future litigation in this area."⁵

Some of the disadvantages of the traditional, informal selection interview are that:

- **It is highly susceptible** to distortion and bias.
- **It is highly susceptible** to legal attack.
- **It is usually indefensible** if legally contested.
- **It may have apparent validity**, but no real validity.
- **It is rarely totally job-related** and may incorporate personal items that infringe on privacy.
- **It is the most flexible** selection technique, thereby being highly inconsistent.
- **There is a tendency** for the interviewer to look for qualities that he or she prefers, and then to justify

the hiring decision based on these qualities.

- **Often, the interviewer** does not hear about the selection mistakes.
- **There is an unsubstantiated confidence** in the traditional interview.

The Structured Interview— An Alternative

Given that the employment interview is here to stay, probably has little operational utility in its present form, and is likely to be the subject of much future legal focus, improvement of the interview is a high-priority personnel issue. Both the early research on the interview⁶ and more recent research⁷ have recommended the use of a "structured" interview format since it increases reliability and accuracy by reducing the subjectivity and inconsistency inherent in the traditional, informal interview. A structured interview may be defined as a series of job-related questions with predetermined answers that are consistently applied across all interviews for a particular job.

The structured interviewing process can be described as having the following characteristics. It

- **Is based exclusively on job duties and requirements** that are critical to job performance.
- **Has four different types of questions** which may be used: situational questions, job knowledge questions, job sample/simulation questions and worker requirements questions.
- **Is actually a selection test** and may include three sections: oral, written and physical. Each job requirement is measured in one or more of these three sections depending on the most appropriate assessment mode.
- **Has sample answers to each question** determined in advance. Interviewee responses are rated on a 5-point scale defined explicitly in advance.
- **Has an interview committee** so that interviewee responses are evaluated by multiple raters. Committee members might include managers from different levels of supervision above the job to be filled, job incumbents, and personnel representatives thoroughly familiar with the job.
- **Is consistently applied to each applicant.** For example, the same committee members are used; one member asks all the questions each time; and the same scoring method is used. All procedures are consistently followed to insure that each applicant has exactly the same chance as every other applicant.
- **Is documented for future reference** and in case of legal challenge. Components of the process which should be documented include the completeness of the job analysis, the job-relatedness of the questions, the fairness and consistency of application, and other important components of the process.

Job Analysis

The objective of the job analysis is to generate a description of the job in terms of job duties, required

knowledge, skills, abilities and other worker characteristics (KSAOs). Job analysis is not only essential to test development, but the legal guidelines⁸ surrounding employee selection procedures require some form of a job analysis as a necessary component of all types of validation. Further, there is evidence that a selection system developed on the basis of job analysis is more valid and less biased against minorities than a selection procedure developed without the benefit of job analysis.⁹

The actual techniques used to collect job information, such as questionnaires, interviews or observations, depend on the specific job and selection situation. However, the following points should be noted about any job analysis. Firstly, do not randomly recruit job analysis participants. Select them on the basis of their extensive knowledge of the job. Inclusion of both supervisors and incumbents is often useful. Also, since the same job may vary slightly with respect to location or shift, make sure that the participants are familiar with all aspects of the job. Secondly, produce specific job-duty and job-requirement information. Job duties and requirements that are too general (for example, assists the machine operator or requires knowledge of data processing) are of little use. Thirdly, the purpose of the job analysis is to get a picture of the job as it exists at the present time, not how the job could be changed or improved. Fourthly, identify all the job requirements which are needed to perform all the specific job duties. This latter step is necessary since once the job duties are evaluated on relevance to the job, there must be a means of identifying which KSAOs are required to perform each of the job duties.

Evaluating the Job Duty Information

The Uniform Guidelines on Employee Selection Procedures require that KSAOs assessed in a selection procedure be necessary prerequisites to performance of *critical work*.¹⁰ In order to determine the importance of the work, the job duties could be evaluated by using a job duty information form. Essentially, each job duty is rated on its importance to job success and in terms of the amount of time required to perform it compared to other tasks. These two ratings constitute an evaluation of importance. Several supervisors and incumbents should provide these ratings in order to obtain assessments from different perspectives.

When combining the multiple evaluations, a summary rating is developed by calculating an average-importance rating and an average-time-spent rating for each job duty. This summary importance rating would be displayed on the job duty chart. The job duty chart is divided into four sections:

- The number of the job duties which are important and which consume a large amount of time.
- The number of the job duties which are important, but do not consume a large amount of time.
- The number of the job duties which are lower in importance, but do consume a large amount of time.

- The number of the job duties which are lower in importance and do not consume a large amount of time.

Since these sections are ranked from the most critical to the least critical, they provide assistance in the development of the interview questions.

Development of Interview Questions

The employees who helped to develop and evaluate the job duties and requirements are used in the development of interview questions. Interview questions are based on the job requirements which correspond to the important job duties. The important job duties are identified on the job duty chart.

A structured interview typically contains the following four types of questions:

- **Situational questions.** These are questions that pose a hypothetical job situation to the applicant. The applicant must respond with what he or she would do in the situation. The critical incident job analysis technique¹¹ readily lends itself to the development of this type of question. Recent empirical evidence has validated interviews based exclusively on this type of question (for both supervisory and entry level production jobs).¹² Situational questions are usually oral.
- **Job knowledge questions.** These questions assess job knowledge that is both essential to job performance and must be known prior to entering the job. These questions often deal with the technical aspects of the job or basic knowledge that is essential to learn the job. Depending on the level of the job and its requirements, these questions may merely assess basic educational skills such as reading, writing and mathematics, or they may assess very complex scientific or managerial skills. Questions of this nature are often posed in a written form as well as orally.
- **Job sample/simulation questions.** In general, the closer the questions approximate the content of the job, the more valid the selection instrument becomes. Sometimes it is possible to have the applicant actually perform a sample task from the job. When carefully developed and properly standardized, job samples¹³ are apparently valid and lack racial bias.¹⁴ Frequently, however, an actual job sample is not possible, and a simulation of critical aspects of the job, therefore, becomes an alternative. Job simulation questions may range from mock-ups of job samples to questions using the terminology of the job. In fact, most questions should be developed in such a way as to represent, in content and language, example job tasks. Job sample and simulation questions may require some physical activity. Therefore, questions of this nature are often administered in the physical section of the structured interview.
- **Worker requirements questions.** These usually take the form of "willingness" questions. Examples often

include questions on the applicant's willingness to work in various environmental conditions, willingness to do repetitive physical work, and willingness to travel or relocate. These questions are frequently placed at the beginning of the oral section of the interview, since they act as good "warm-up" questions and help put the applicant at ease. Furthermore, since these questions often refer to the characteristics and duties of the job, they serve as a realistic job preview for the applicant and may aid self-selection.

There are seven essential criteria for the development and evaluation of interview questions:

- **Questions must be accurate, complete and unambiguous.** Having to clarify questions during the interview reduces standardization and introduces bias.
- **Questions must be strictly and clearly job-related.** "Nice to know" questions are not permitted.
- **Questions must assess only KSAOs that are needed at entry into the job.** KSAOs which will be learned during training on the job should not be assessed. However, KSAOs that are necessary in order to be able to learn the job should be assessed.
- **Questions must assess only job requirements directly related to job duties which are significant in terms of importance and the amount of time spent on them.**
- **Questions should reflect as nearly as possible the content of the job.** For example, questions can often be stated in terms of example job tasks to increase job-relatedness. Further, job terminology can often be used when it is a prerequisite to learning the job.
- **Questions should be geared to the appropriate complexity level of the job.** In other words, the questions should assess the job requirements at the same level as the job requirements needed on the job.
- **Questions must be carefully reviewed to eliminate any bias that might tend to make them discriminatory.**

Every question must be developed with these criteria in mind, and every question should be reviewed by independent job experts with respect to these criteria. Also, care should be taken to avoid any questions that can be answered with a simple yes or no.

As discussed, structured interviews can contain written and physical sections, as well as an oral section. The interview developer should be aware that certain types of questions are more appropriately administered in one way rather than in another. To the extent that reading and writing ability may bias (positively or negatively) scores on a written question which is not intended to measure reading or writing, that question should be revised or placed in the oral section. Conversely, if speaking ability might affect scores on an oral question which is not measuring speaking, that ques-

tion should be revised or placed in the written section. The choice of the most appropriate section in which to place a question depends ultimately on the job duties and requirements, and on the nature of the question.

Development of Sample Answers to Interview Questions

It is advisable to develop the sample answers to the interview questions as the questions themselves are developed. For each question, a 5-point answer rating scale is constructed with specific samples developed for a "good" answer (a 5 rating), a "marginal" answer (a 3 rating), and a "poor" answer (a 1 rating). One way to develop the answers is through group brainstorming.

The answers to the questions must be scaled to the requirements of the job. For example, the very best possible answer may be far above what is required for the job and would distort the evaluation of the applicants. It should also be noted that occasionally questions will only have one correct answer (for example, a mathematics question). This is most likely to occur for written questions.

The sample answers should not be scaled so that additional job requirements which have not previously been included become a part of the answer. This is distorting the question in order for a "nice to have" requirement to be included. For example, business school (or equivalent training or experience) may be a necessary requirement for an executive-secretary position. Listing a college education as a #5 answer and listing a business school education as a #3 answer to an education question would be incorrect. This would clearly be altering the job requirements.

The development of the sample answers is an evaluative measurement of the question. If there is difficulty in determining what any of the answers should be for a particular question, then the question should be reviewed for possible refining, restructuring or eliminating.

Interview Committee and Implementation

An interview committee should consist of 3 to 6 members. The committee members are preferably the same employees who participated in the job analysis and the construction of the interview questions and answers. Members of the committee may be from levels of supervision above the job to be filled, or include the job incumbent, peers and personnel representatives familiar with the job. The same interview members should be used throughout the interviewing for a single job.

The interview committee is assembled well in advance of the first interview. During this time, it is trained in how to conduct the interview. The committee has no need to review application forms; in fact, reviewing these forms prior to interviewing could bias the members.

Firstly, the job duties, the requirements, the questions, and the interview answers are distributed to

the committee members and reviewed. Secondly, the group discusses the various types of rating errors that can bias ratings, and how to avoid them by concentrating on accuracy and adhering to the rating-scale anchor points. Finally, the interview committee members are divided according to the parts of the interview. The three parts of the interview are administered as follows:

- **Oral**—is administered by a panel of three or more of the committee members in a quiet, comfortable room. The interview setting should be casual and nonstressful. One selected member of the panel introduces the applicant to the panel members. The introductions should serve to relax the applicant. The same (selected) panel member asks the questions with all the applicants and conducts every interview to insure consistency. There must be no cues, questioning or confirmation after the applicant has responded. The question may, however, be reread at the applicant's request. All panel members record and rate the applicant's answers on the rating scale sheet. This recording must be exactly as the applicant responded, but clear abbreviations are acceptable. This recording becomes a critical part of the documentation, and it must be possible to reconstruct any applicant's response to any question. Between interviews, the panel members must not discuss the questions, the answers or the applicants.
- **Written**—is administered by one of the committee members in a quiet room away from distractions. Any necessary supplies must be secured in advance. Time limits are usually not applied to the written questions. "Extra help" is not allowed for applicants who do not understand the questions. Complete standardization must be maintained. The scoring of the written questions may be done by one of two methods: either the committee member administering this part may score each answer based on a pre-determined answer key, or the questions may be given an independent rating by each committee member based on the pre-determined answers which were developed prior to the interview.
- **Physical**—is administered by two or more of the committee members on the work site or in a nearly identical (job-simulation) setting. Each member records observations, applicant statements and performance levels, and rates all items independently using the pre-determined answers.

After all the oral, written and physical questions are administered, a total score is determined by averaging across all the raters to get one score for each item, and then averaging across all items to get a total score. This procedure gives equal weight to each item in the structured interview. Note that if it is determined that a particular job requirement is more critical than others, it is better to write more than one item on that job requirement than differentially to weight items in the total score.

At the conclusion of the final phase of the structured interview, each applicant should be directed to

someone who explains follow-up procedures and answers any questions that the applicant may have.

There are three additional topics that are related to the structured interviewing process. The first deals with cut scores. Cut scores are usually essential to mak-

Don't forget 3 important elements: cut scores, performance appraisal and documentation.

ing testing decisions, and there are a number of procedures and considerations relevant to them. Secondly, performance appraisal is an essential second step in the personnel selection process. It not only provides a follow-up and evaluation of the selection system, but it is also critical to employee motivation and counseling. A third topic in the selection system development process is documentation. If the selection system is ever challenged legally, a lack of documentation of the validity of the selection procedure will be interpreted as indicating that the selection procedure has no validity at all. Further, documentation of the development process provides a check on the adequacy of the validation efforts.

Cut Scores

There are two possible ways of making selection decisions on the basis of structured interview (or any test) scores. One can either rank the candidates and choose those with the highest scores, or one can determine a cut score above which all candidates are qualified. There are at least four reasons why the latter is the preferred method. Firstly, ranking candidates usually leads to the greatest degree of adverse impact.¹⁵ Conversely, using a cut score above which all candidates are qualified allows a place for affirmative action goals to enter the selection decision. Secondly, the Uniform Guidelines on Employee Selection Procedures¹⁶ and the courts¹⁷ have suggested that ranking candidates is an inappropriate selection strategy for reasons of content validation. Thirdly, for union line-of-progression promotions many union contracts stipulate that the "most senior qualified" be accepted. The determination of "qualified" on a selection instrument ultimately translates into a cut score. Finally, a cut score requires management to stipulate in advance their definition of minimum qualifications for the job in question. This makes the selection process fairer and less susceptible to bias.

Unfortunately, there is no single best way of setting a cut score. In a recent review of the cut score literature, Buck discussed 10 different methods for setting cut scores for criterion-referenced tests and described them as a mere "sampling of a variety of models and procedures."¹⁸ Setting a cut score always involves a value judgment. The critical features behind setting a cut score are that it be objective, based on a solid rationale and preferably set in advance of testing.

Two techniques (among many) have been effectively used with structured interviews. The first tech-

nique involves judging the minimum acceptable performance level on each interview item, and the average across the items is used as the cut score. Related to this method, a cut score is often built into the items when they are written by developing the rating scale anchor points in such a manner that a particular level (for example, a 3 or "marginal" rating) represents the minimum acceptable level. Another method of determining a cut score is to test a few of the job incumbents on the interview. A suggested strategy here is to base the cut score on the score received by the least satisfactory employee. After determining a cut score, its appropriateness may be verified by testing the ap-

Cut scores must take into account potential adverse impact.

plicants, arranging their scores from highest to lowest and examining the distribution. It is important to keep the applicants' names separate from their scores at this point in the process to prevent any bias.

Two final points should be made concerning cut scores. Firstly, they should be established in light of both a reasonable, expected level of resulting job performance and the potential adverse impact that may result for females and minorities. Secondly, it is usually advisable to set cut scores at a minimum acceptable level to allow for the influence of other important selection factors such as seniority, other qualifications or affirmative action goals.

Performance Appraisal

Performance appraisal is a natural follow-up to any selection decision. It provides an evaluation of the accuracy of the selection procedures; it develops information that is useful for employee counseling; and it generates documentation for corrective action when selection mistakes are made. Furthermore, accurate performance data may allow for an estimate of the predictive validity of the selection procedure by statistically relating job performance scores to structured interview scores.

A detailed discussion of performance appraisal techniques is too large a topic to be addressed here. However, it should be noted that the job analysis information collected to develop the structured interview is an ideal resource base for developing a performance appraisal instrument. Further, if ratings are to be used to collect performance information, some form of rater training is advisable. It has been demonstrated that training can significantly reduce rating errors.¹⁹

Documentation

Documentation is another essential component in the development and implementation of any selection system. This includes the maintenance of written records of the steps involved in the job analysis and the development of the structured interview and perform-

ance appraisal, as well as records of interview scores and job performance and any unusual occurrences or exceptions. Documentation is especially important for the demonstration of validity. When content validation is employed, documentation must exist for the content relationships between the structured interview and job tasks and requirements. With criterion-related validation, documentation must be kept to demonstrate the accuracy of the performance appraisal and the relationship between performance appraisal scores and structured interview scores.

In terms of a guide to the format and extent of the documentation required, the Uniform Guidelines on Employee Selection Procedures²⁰ are very explicit concerning the documentation necessary to demonstrate validity. In conclusion, documentation is essential and the potential test user is well advised to maintain documentation of validity during the developmental process, rather than trying to reconstruct it at a later point in time. ■

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