

ERI[®] EMPLOYEE
RELIABILITY INVENTORY

User's Manual

 **Psychometrics**

TABLE OF CONTENTS

INTRODUCTION	2
PRE-EMPLOYMENT SELECTION PROGRAMS.....	2
UNRELIABLE AND UNPRODUCTIVE BEHAVIOR	2
TYPES OF UNRELIABLE AND UNPRODUCTIVE BEHAVIOR	2
COMMON CAUSES OF UNRELIABLE AND UNPRODUCTIVE BEHAVIOR	3
THE MULTIFACTORIAL NATURE OF UNRELIABLE AND UNPRODUCTIVE BEHAVIOR.....	3
THE EMPLOYEE RELIABILITY INVENTORY (ERI®)	4
PROCEDURES AND INSTRUCTIONS FOR THE USE, ADMINISTRATION AND SCORING OF THE ERI	4
GENERAL INFORMATION REGARDING THE USE OF THE ERI.....	4
ADMINISTRATION OF THE ERI	5
PREPARING THE APPLICANT TO TAKE THE ERI.....	5
APPLICANT’S COMPLETION OF THE ERI	5
REPORTING AND INTERPRETING ERI RESULTS	6
REPORTING OF ERI RESULTS	6
REVIEWING RESULTS FOR POSSIBLE PROBLEMS.....	6
AN IMPORTANT NOTE REGARDING SMALL DIFFERENCES IN RESULTS	6
USING THE ERI AS A PRE-INTERVIEW QUESTIONNAIRE	7
SOME GENERAL GUIDELINES FOR ASKING FOLLOW-UP QUESTIONS	7
RESPONSE DISTORTION	8
TECHNICAL SUPPORT	8
APPENDIX A – SAMPLE REPORT	9

INTRODUCTION

PRE-EMPLOYMENT SELECTION PROGRAMS

The basic reason that there is a need for preemployment selection programs is that people are different from one another. The ways in which people differ from one another can be critically important to an employer.

- An employee's job performance may be disrupted by factors outside of work, while others do not face this challenge.
- Some employees are courteous and customer service oriented, while others are not.
- Some employees are emotionally mature, while others are not.
- Some employees are productive and conscientious workers, while others are not.
- Some employees are reliable and easily trusted, while others are not.
- Some employees drift from job to job, while others become valued long-term employees.
- Some employees perform their work in a safe manner, while others do not.

Employees who behave on the job in an unreliable or unproductive manner can have a negative effect on an organization's efforts to carry out its objectives. For that reason, organizations have a need to assess the likelihood that job applicants will perform on the job in a reliable and productive manner, if hired.

Most employers routinely use pre-employment selection procedures to determine which applicants who are well suited for a particular position and those who are not. Commonly used pre-employment selection procedures include the use of:

- Employment applications.
- Verification of information on the employment application (e.g. checking references).
- Pre-employment interviews.
- Psychologically-based assessments.

UNRELIABLE AND UNPRODUCTIVE BEHAVIOR

TYPES OF UNRELIABLE AND UNPRODUCTIVE BEHAVIOR

A study sponsored by the National Institute of Justice¹ revealed that many organizations in the US are being negatively affected by the presence of employees whose overall performance on-the-job is characterized by unreliable and unproductive behavior. This study also found that such unreliable and unproductive behavior can be found in just about all job categories within an organization, ranging from unskilled laborers to upper level managers.

When referring to the subject of unreliable and unproductive behavior in the work place, a distinction can be made between three types of behavior: "Production Deviance", "Property Deviance" and "Unplanned and Uncontrolled Turnover".

- **PRODUCTION DEVIANCE** refers to behavior which conflicts with an organization's expectations of productivity. Common examples of production deviance include failure to follow standard procedures, frequent unauthorized absences, coming to work intoxicated, on-the-job use of alcohol or illegal drugs, and a higher than average number of injuries and accidents.
- **PROPERTY DEVIANCE** refers to behavior which is directed against an organization's property. Common examples of property deviance include theft and vandalism.
- **UNPLANNED AND UNCONTROLLED TURN-OVER** refers to employees who, for a variety of reasons, only remain on the job for a short period of time (e.g. being fired for violations of company policy or drifting from job to job). This type of behavior can seriously disrupt an organization's ongoing effectiveness. Such turnover also results in significantly increased administrative and training costs associated with the recruiting, hiring, and training of new employees.

¹ John P. Clark and Richard C. Hollinger, *Theft by Employees*. (Lexington, MA: Lexington Books, 1983).

COMMON CAUSES OF UNRELIABLE AND UNPRODUCTIVE BEHAVIOR

In order to minimize the occurrence of these unreliable and unproductive behaviours in the workplace, a comprehensive selection program typically assesses job applicants for each of these common causes of unreliable behavior, including:

- Insufficient training or experience to adequately carry out the requirements of the job.
- Presence of maladaptive personality traits.
- Presence of adaptive personality traits which are nonetheless in conflict with the specific requirements of the job.
- Untrustworthiness.

THE MULTIFACTORIAL NATURE OF UNRELIABLE AND UNPRODUCTIVE BEHAVIOR

A question of significance for the field of employee selection is whether there are interrelationships among these various causes of unreliable and unproductive behavior.

Consider the following example: Pre-employment selection procedures may indicate that an applicant appears acceptable in terms of their training and experience, and that their job performance appears unlikely to be disrupted by repeated absences. On this basis, would it be reasonable for an employer to assume that the applicant is also likely to work cooperatively with others and to exercise good judgment on the job? Would it also be reasonable for an employer to assume that the applicant will make a long-term commitment to the job?

Whether the various causes of unreliable and unproductive behavior are intercorrelated has implications for the design of pre-employment selection programs. If there are significant interrelationships between the various causes, then an employer might be able to assess job applicants for just one cause, on the assumption that he or she was concurrently assessing applicants for the other causes as well. On the other hand, if these five causes are relatively uncorrelated, it would seem advisable to include procedures which assess applicants for each job relevant cause.

Conventional wisdom seems to subscribe to what can be called the “bad apple” view of behavior. According to this point of view, all unreliable and unproductive people are more or less similar to each other, in that they are all likely to manifest multiple causes of unreliable behavior. For example, the “bad apple” perspective would predict that if a job applicant is likely to be difficult to work with, he or she is also likely to be unreliable and untrustworthy. For purposes of pre-employment assessment, the implication of the “bad apple” perspective is that assessing applicants for any single cause of unreliable or unproductive behavior should be sufficient to accurately identify the “bad apples” in an applicant pool.

An alternative perspective can be called the multifactorial view of behavior. According to this point of view, different individuals perform unproductively or unreliably for different reasons. For example, one job applicant may have some personality traits which are well suited to the requirements of the job, but they may be vulnerable to performing in an unsafe manner. Another job applicant may be trustworthy but may be consistently inattentive, conflicting with the requirements of the job.

The multifactorial perspective accepts that there may be some degree of intercorrelation among the various causes of unreliable and unproductive behavior. However, unlike the “bad apple” viewpoint, the conclusion to be drawn from the multifactorial perspective is that a comprehensive pre-employment selection program should assess job applicants for all of the job-relevant causes of unreliable behavior. According to the multifactorial view, it is quite unlikely that assessing job applicants for just one cause of unreliable behavior will adequately call attention to applicants who may be likely to perform unreliably on the job due to other causes.

Preliminary studies, including the correlation matrix found in Appendix E of the ERI Technical Manual, seem to favor the validity of the multi-factorial perspective over the “bad apple” point of view.²

² Evans, M.A., McGee, M.P., and Borofsky, G.L. Psychological evaluation and illicit drug use in an industrial population. Proceedings. American Academy of Forensic Science. 1986.; Borofsky, G.L., Friedman, J., and Pignato, J. C., Interrelationships Among Various Causes Of Unreliable Behavior In The Workplace, Research Bulletin, Number 400-9. Groton, MA: Human Reliability Institute, 1987

THE EMPLOYEE RELIABILITY INVENTORY (ERI®)

The ERI was designed and developed to be used as one part of a company's pre-employment selection program. The purpose of the ERI is to assist employers in their efforts to hire reliable and productive employees. It was designed to be used where production deviance, property deviance, and unplanned and uncontrolled turnover are important job concerns. Accordingly, the ERI should be used where such behaviors are related to job performance in the position for which the applicant is being considered.

The ERI is a criterion-keyed, self-administered, "True/False" type of behavior inventory. It contains 80 statements, which are worded at a sixth-grade reading level. Results for each scale are presented in an easy to understand format designed to add flexibility to your selection process. Results provide an estimate of the likelihood that a job applicant will perform, on the job, in a reliable and productive manner.

The ERI consists of seven separate scales. Each scale assesses job applicants with respect to a different dimension of reliable and productive behavior. In other words, the scales estimate the likelihood that an applicant, if hired, would perform on the job in a reliable and productive manner. The seven ERI scales are described below.

ERI Scales	
Scale Name	Work Behaviour Skills Assessed
Self-Discipline	Assesses the likelihood that an applicant's work performance will not be disrupted by behaviors such as inattentiveness, unauthorized absence/lateness, failing to follow through on assignments, or other inappropriate work behaviors.
Courtesy	Assesses the likelihood that an applicant's interactions with customers/guests will be characterized by a high level of courtesy and commitment to service.
Emotional Maturity	Assesses the likelihood that an applicant's work performance will be characterized by mature behavior, indicated by acting in a responsible and cooperative manner, tolerating frustrations, and showing impulse control.
Conscientiousness	Assesses the likelihood that a candidate will have a strong desire to perform well and take their obligations seriously.
Trustworthiness	Assesses the likelihood that a candidate will perform in a trustworthy manner and will not engage in various forms of property deviant behavior.
Job Commitment	Assesses the likelihood that a candidate will make a long-term commitment to the job and will not quit.
Safety	Assesses the likelihood that a candidate will be proactive in identifying safety risks and will do their best to avoid on-the-job accidents.

PROCEDURES AND INSTRUCTIONS FOR THE USE, ADMINISTRATION AND SCORING OF THE ERI

GENERAL INFORMATION REGARDING THE USE OF THE ERI

- 1) The ERI was developed and validated as a pre-employment assessment tool. For that reason, it is to be used only for the assessment of new job applicants. Under no circumstances should the ERI be administered to current employees or individuals other than actual job applicants, nor should it be used for any purpose other than as an aid in the pre-employment selection process.

- 2) It is recommended that the ERI be administered to job applicants after they have completed the employment application and before they are interviewed (or references are verified). When used in this manner, the ERI can serve as an objective method for assessing issues related to job performance, which can then be explored further during interviews and reference verification.
- 3) The ERI is not designed to reveal, nor should it be used for the purpose of revealing, the existence, nature or severity of a disability (physical or mental)
- 4) The decision to hire or not hire a specific applicant should not be based solely on the applicant's ERI scores. Hiring decisions should be based on a review of ALL information collected during the conduct of the total selection process.
- 5) Only ERI scale scores should be used. Answers to the individual statements contained in the ERI should never be used as part of the selection process.
- 6) At no time should ERI results be discussed with applicants, regardless of the selection outcome. For reasons of security and confidentiality, ERI results should never be discussed with unauthorized employees or representatives. Only authorized individuals should have access to ERI results.
- 7) The seven ERI scales estimate the likelihood that an applicant, if hired, would perform on the job in a reliable and productive manner. However, you should be aware that subsequent changes in a person's life and work environment (both positive and negative) can affect his/her performance on the job. Once an applicant is hired, supervisory knowledge of employees and supervisory observation of on the job behavior are commonly used techniques for monitoring and helping to enhance job performance.

ADMINISTRATION OF THE ERI

The ERI can be completed through the Psychometrics Testing Platform. If you do not have access to this platform, please contact Psychometrics Canada at 1-800-661-5158 to set one up.

PREPARING THE APPLICANT TO TAKE THE ERI

In ALL cases, the applicant should be advised as to the purpose of the ERI before it is administered to him/her. (E.g. "This questionnaire is being administered to you as one part of your application for employment with [Your Company's Name]. I would like you to carefully read and follow all of the directions.")

Research has shown that use of the ERI does not result in discrimination on the basis of race, gender, or age (refer to the "Fairness of the ERI and Adverse Impact" section of the ERI Technical Manual). Additionally, the process of scoring of the questionnaire does not adjust the scores, use different cut-off scores for, or otherwise alter the results on the basis of race, color, religion, sex, or national origin. Nonetheless, please be sure to assess each individual applicant to determine if language factors are likely to interfere with his/her ability to understand the ERI instructions and statements. Needless to say, a failure to accurately understand the instructions and statements can significantly affect the accuracy and usefulness of the ERI. In this regard, please note that the ERI is available in multiple languages.

APPLICANT'S COMPLETION OF THE ERI

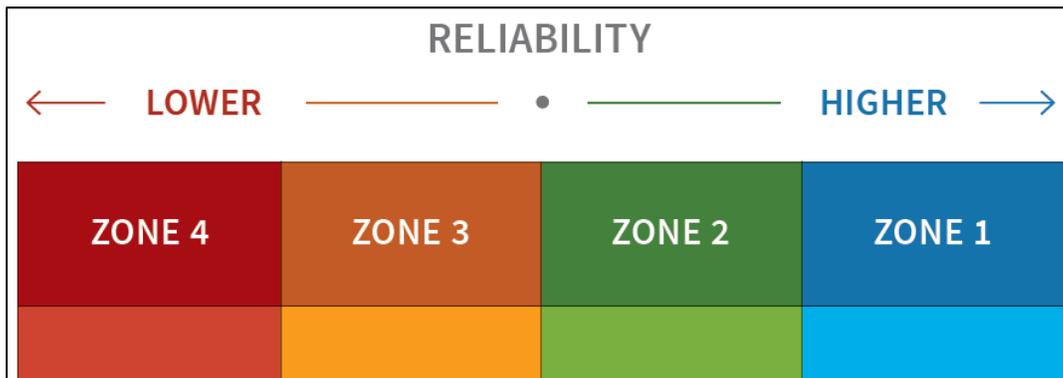
- If applicants have questions about answering a particular statement, instruct them to use the guidelines contained in the test instructions, as the basis for coming up with their answer.
- If an applicant states that he/she is unable to answer a particular statement because it does not apply to him/her, the applicant should be told to answer the statement as being "False".
- You may not tell the applicant how to answer a statement. However, if the applicant does not understand the meaning of certain words or expressions, you may explain what the word or expression means.
- Instruct applicants that all 80 statements must be answered and that they can give only one answer for each statement.

REPORTING AND INTERPRETING ERI RESULTS

REPORTING OF ERI RESULTS

As you read the following guides for interpreting applicant's' ERI results, please refer to the sample report (Appendix A) at the back of the Manual.

For purposes of communicating ERI results, scores are reported in terms of a system of four arithmetically equal-sized zones (designated 1 through 4). Results for each of the ERI scales are reported as falling into one of the four zones, as shown in the diagram below.



The applicant's score on each scale is shown as a horizontal line extending from left to right: Shorter lines indicate a likelihood of less reliable behavior, while longer lines indicate a likelihood of more reliable behavior. As a result, scores in Zone 4 indicate that the applicant will be less reliable, while scores in Zone 1 indicate that the applicant will behave in a reliable manner.

REVIEWING RESULTS FOR POSSIBLE PROBLEMS

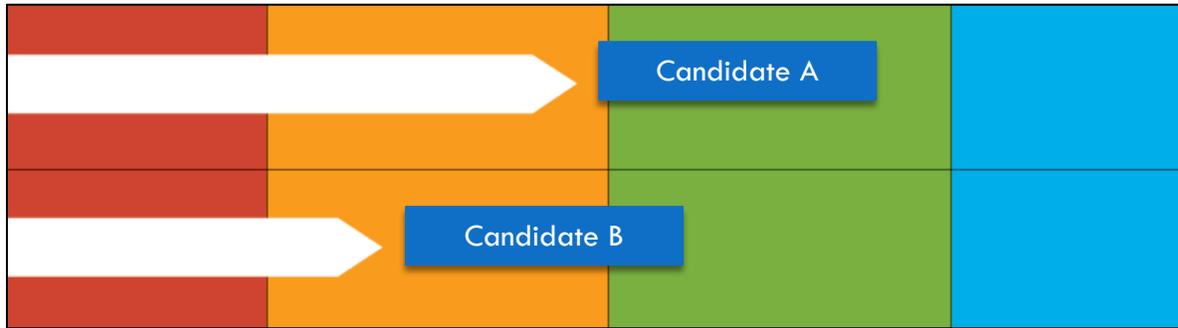
The failure of an applicant to carefully read and understand each of the 80 statements can significantly affect the accuracy and usefulness of the ERI. Invalid results may be produced under two different sets of circumstances.

- 1) Although statements are worded at a sixth-grade reading level, language or educational factors could theoretically contribute to reading comprehension difficulties for some applicants. In spite of having assessed each individual applicant to determine his/her ability to understand the ERI instructions and statements, it is possible that an applicant may have encountered reading comprehension difficulties, without the administrator being aware of this fact. Under such circumstances the applicant has had to guess when answering those statements which he/she did not understand.
- 2) An applicant who is able to read and understand the ERI statements may nonetheless, choose to not read the statements carefully, or to not read the statements at all, before answering. Under these circumstances, as well, the applicant has functionally guessed when answering the statements.

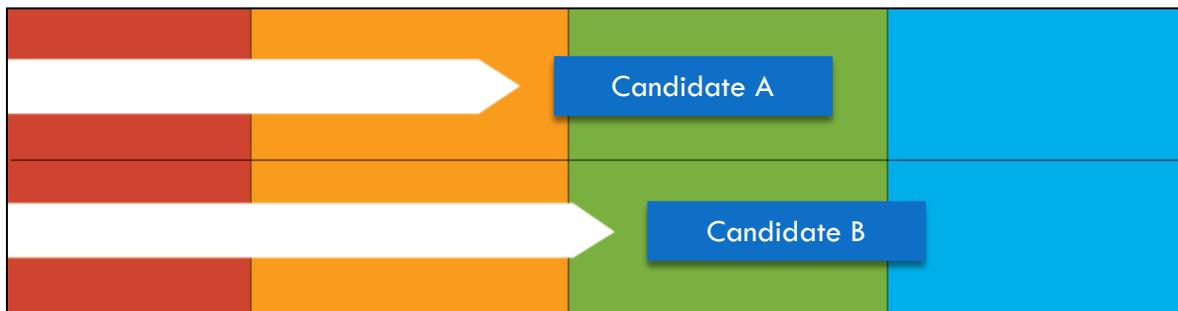
AN IMPORTANT NOTE REGARDING SMALL DIFFERENCES IN RESULTS

Because of the variability inherent in any type of scores, small differences in ERI results should never be used as the basis for making decisions about applicants or for comparing applicants. Examples of small differences can be found below:

- Scores within the same zone should not be considered different from each other.



- Scores which are in different zones, but are still very close together, should not be deemed meaningfully different.



USING THE ERI AS A PRE-INTERVIEW QUESTIONNAIRE

As noted earlier, use of the ERI is an objective method for identifying issues related to job performance which may require further exploration during interviews and reference verification. Use of the ERI can help you to make the most effective use of your time during interviews and reference verification by focusing your questions on those specific areas of reliable and productive behavior that are important in the particular job setting. Coordinated use of the ERI, with focused inquiries during interviews and reference verification, should greatly increase the likelihood of your identifying reliable and productive individuals prior to making a hiring decision.

If an applicant's score on one or more of the ERI scales suggests a possible problem area, the applicant can be questioned in greater detail than usual about their past record of on-the-job performance, in the specific area(s) of behavior where a question has been raised by the ERI results. In similar fashion, questions asked of past employers can focus in greater detail than usual on the applicant's job performance in the specific area(s) of behavior where a question has been raised by the results.

SOME GENERAL GUIDELINES FOR ASKING FOLLOW-UP QUESTIONS

Sample questions are provided with each ERI report, to help you further understand a candidate's score in each scale. It should be understood that the sample questions being referred to are only intended as examples of the types of questions that could be asked. You should ensure that the particular wording you choose for your questions does not violate any applicable statutory or regulatory restrictions.

In asking follow-up questions you also should keep the following guidelines in mind:

- Questions should not be accusatory.
- Questions should be limited to content areas which are relevant and necessary for the performance of the specific job for which the applicant is applying.

- There should be a direct relationship between the information being sought and the specific requirements of the job for which the applicant is applying. For example, you should not ask questions dealing with religious beliefs, or affiliations, racial matters, sexual behavior, political beliefs and affiliations, or beliefs or opinions regarding unions or labor organizations.
- Questions should be non-discriminatory and should not be used to disclose a disability, its nature, or its extent.

RESPONSE DISTORTION

Socially desirable responding (“faking good”) is an important issue to consider when considering the use of assessments in selection. Many assessments use a separate scale to indicate the possibility of dishonest responses. However, the ERI does not contain this measure. Instead, the below measures were taken to ensure that socially desirable responding would have a limited impact on the assessment.

- In other assessments, candidates may be able to guess what is being assessed by each question. The ERI uses covert questions (e.g. questions that are seemingly not related to any sort of workplace behaviour). As a result, responding in a socially desirable way is a much more difficult task for the candidate.
- The ERI was normed using real job applicants who were applying for actual jobs. As a result, scores accommodate for those who are trying to present themselves in a positive light. (This is also why the assessment should not be used outside of a selection context.)

To ensure that these preventative measures were effective, this issue was examined empirically. Research comparing the ERI scale scores to 3 different measures of response distortion concluded that the ERI scales are free from the effects of response distortion. (This research is discussed further in the “Response Distortion and ERI Results” section of the ERI Technical Manual.)

TECHNICAL SUPPORT

If you have questions about any aspect of ERI administration, scoring, interpretation, use, or if you would like to discuss the interpretation of a specific applicant’s ERI results with a member of our staff, please call Psychometrics Canada at 1-800-661-5158.

