2001

The influence of job type, information provided, test type, and test performance on applicant reactions to personnel selection tests

Michelle Renae Schulz

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THE INFLUENCE OF JOB TYPE, INFORMATION PROVIDED,
TEST TYPE, AND TEST PERFORMANCE
ON APPLICANT REACTIONS TO PERSONNEL SELECTION TESTS

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
in
Psychology:
Industrial/Organizational

by
Michelle Renae Schulz
June 2001
THE INFLUENCE OF JOB TYPE, INFORMATION PROVIDED, TEST TYPE, AND TEST PERFORMANCE ON APPLICANT REACTIONS TO PERSONNEL SELECTION TESTS

A Thesis
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Approved by:
Dr. Ken Shultz, Psychology
Dr. Jodie Ullman, Psychology
Dr. Matt Riggs

6/7/01 Date
ABSTRACT

The evolution of the Systems Model approach to personnel selection marks the emergence of the relationship between the organization and the applicant. It has made organizations become increasingly aware of the potential influence of applicant reactions to selection procedures. This study examined applicant reactions to different types of selection procedures (a cognitive ability test and a personality test) depending upon type of job they were applying for (Customer Service Representative vs. Accountant) and whether information was provided about the job (Job Description vs. Job Title Only). Participants included undergraduate students (N = 164) at California State University, San Bernardino. Participants were randomly divided into four treatment conditions, 1) Customer Service Representative/Job Description Included, 2) Accountant/Job Description Included 3) Customer Service Representative/Job Title Only, and 4) Accountant/Job Title Only. Paired Samples t-tests and a MANOVA were used to analyze the data. Only one hypotheses was supported which was applicants would show less reaction to a job where there is perceived to be a clear relationship between the job and the personnel selection test, than when the relationship
between the job and the personnel selection test is questionable. Limitations of the study as well as the implications of the findings are discussed.
ACKNOWLEDGMENTS

There are many people I would like to acknowledge for their contribution to the successful completion of my thesis. First and foremost, I would like to thank my family, friends, and boyfriend, Daniel Garrett, for all of their continuing love, support, and encouragement. I would like to especially thank Danny for being there during the challenging moments and "living" through this thesis with me. I would also like to thank my advisor, Dr. Ken Shultz, for his timeliness and patience in handling my procrastination. Finally, I would like to acknowledge Dr. Jodie Ullman, my statistics coach, and Dr. Matt Riggs for being a part of my committee. I could not have accomplished this great achievement without the guidance of all of these individuals.
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Personnel selection is a vital component to organizational functioning. Companies must develop and utilize the most effective personnel selection tools for their organization. Personality testing is one of the many personnel selection techniques used by companies. Personality tests are used as a selection device to predict future job performance of applicants in a variety of jobs. Research on personality testing as a selection device began in the early 1900s with Robert Woodworth's Personal Data Sheet, which was the first standardized personality inventory used for personnel selection purposes (Aiken, 1985). This personality inventory was used for selection into the U.S. military during World War I. The Personal Data Sheet, which was the first of a series of psychopathology measures, led to the development of the Minnesota Multiphasic Personality Inventory (MMPI). While the MMPI is the most widely used objective personality test in the world, it was not designed to predict job performance in normal populations and in fact doesn't do this very well (Hogan, 1991). Thus, a criticism of these early personality tests was that they were intended for clinical practice and
to explain deviant behavior, not the range of normal behavior that is relevant to successful job performance (Guion & Gottier, 1965).

During the period following World War II, several personality tests were published that measured the normal range of personality (Hogan, 1991). These included the 16-PF, the Guilford-Zimmerman Temperament Survey, the Comrey Personality Inventory, and the California Psychological Inventory. Despite the development of these personality measures, the use of personality testing within organizations went into a decline. This was in view of researchers finding low validities (validity coefficients that did not exceed .30) for these personality measures (Hogan, 1991). Guion and Gottier (1965) made an inference that many industrial and organizational psychologists have taken to heart, its principal conclusion that the evidence for the validity of standard personality measures for personnel selection is so poor that their continued use seemed unwarranted. Furthermore, Guion and Gottier (1965) contend that the reason for these low validity coefficients on the personality measures was because of the inadequate research designs such as the use of concurrent designs, poor and inappropriate criterion measures, and the lack of theories and hypotheses tested.
Recent Research in Personality Testing in Personnel Selection

In recent years, personality testing has emerged once again in personnel selection. The results of recent meta-analyses on the predictive validity of personality with regard to job performance (Barrick & Mount, 1991; Tett, Jackson, & Rothstein, 1991) has led to renewed interest in personality measures for selection purposes. Advances in the definition and the measurement of personality traits and supportive evidence for the predictive validity of personality traits are likely to be followed by further increased use of personality tests in organizations.

The emergence of the five-factor framework of personality (Goldberg, 1990), referred to as the Big Five, has also led to a better understanding of the relationship between personality constructs and job performance. The Big Five factors as expressed by Barrick and Mount (1993) are extroversion (e.g., sociable, talkative, and assertive), agreeableness (e.g., good-natured, cooperative, and trusting), conscientiousness (e.g., responsible, dependable, persistent, and achievement oriented), emotional stability (viewed from a negative pole; tense, insecure, and nervous), and openness to experience (e.g., imaginative, artistically sensitive, and intellectual). In a meta-analysis of the Big
Five taxonomy (Barrick & Mount, 1991), conscientiousness was found to be a valid predictor for all occupational groups and across all criteria. In addition, Barrick and Mount (1991) reported that extroversion was a valid predictor for social interaction and managerial jobs. Recent meta-analyses of the Big Five (Anderson & Viswesvaran, 1998) have also found criterion-related validity of the personality scales, which lends further support for the relationship between personality and performance.

Therefore, based on recent evidence, it appears that personality tests can be valid predictors of job performance. The emergence of the Big Five taxonomy of personality has helped codify the relationship between personality with job performance. As a result of this supportive evidence, more organizations are beginning to use personality tests for personnel selection purposes.

**Key Issues in Personality Testing for Personnel Selection**

Despite the recent evidence for the validity of personality tests for use in personnel selection, there are still some issues of personality testing that need to be investigated. Two prominent issues are faking and applicant reactions. Many researchers and practitioners believe that
it is relatively easy for applicants to engage in impression management on these personality tests because of the seemingly candid or transparent nature of some of the items. Applicants may be motivated to make themselves "look better" on these tests in order to obtain a position of interest. Evidence is clear that applicants can make themselves look better on such items if they choose to do so (Barrick & Mount, 1996; Mersman & Shultz, 1998). While Barrick and Mount (1996) indicate that impression management does not influence the predictive validity of personality constructs, it still may result in different hiring decisions than would have occurred if the personality measures were not inflated. Based on these recent findings, faking continues to be a problem in personality testing.

Although faking continues to be an issue with personality measures, an equally important problem in personality testing involves applicant reactions to personality measures. This will be the focus of my study. Organizations are becoming increasingly aware of the potential influence of applicant reactions to selection procedures on the personnel selection process. For many years, organizations followed our Traditional Selection Model (see Appendix A, Figure 1) which involved developing a solid job analysis, identification of relevant job
performance dimensions, identification of knowledge, skills,
and abilities (KSA's) necessary for the job, development of
assessment devices, the validation of the selection devices
in terms of content, construct, and criterion validity, and
finally using these selection devices to choose the most
qualified applicant for the job (Gatewood & Feild, 1994).
Organizations were not concerned with how the applicants
felt about these selection devices; they were only concerned
with selecting the best person for the job.

The evolution of the Systems Model (see Appendix A,
Figure 2) brought about a new perspective in personnel
selection (Schneider & Schmitt, 1986). This Systems Model
now encompassed not only the job characteristics, but also
the organizational practices, environmental issues, and the
individual job applicant when making personnel selection
decisions (Schmitt & Borman, 1993). The Systems Model is
able to identify the reciprocal nature of personnel
selection, how each component of the system influences the
other. While the Systems Model recognizes the certitude of
organizations selecting potential employees, it also
embraces the realm of the applicants selecting the
organization, thus providing a feedback loop from the
applicant to the organization.
The personnel selection process marks the emergence of the relationship between the organization and the applicant. This selection process is not only relevant to the relationship between the organization and applicant before an employment contract is entered into, but it also helps define the culture of the organization. For example, an organization in which the applicants mistrust the selection process will more than likely have an organization culture with much mistrust. Smither, Reilly, Millsap, Pearlman and Stoffey (1993) note that applicant reactions to selection procedures are of practical importance to employers because they may influence organizational attractiveness and the acceptance of job offers. Organizational attractiveness is especially important for applicants due to the changes in the workforce demographics that make it increasingly difficult to attract and recruit qualified job applicants. Murphy (1986) maintains that the applicant’s decision to remain in the relationship is of practical importance to the organization because organizations that fail to attract and hire top candidates will suffer significant declines in the utility of their selection programs.

This new awareness of applicant reactions is also by virtue of the recent dramatic expansion of selection techniques. For many years, we relied on conventional
selection techniques such as interviews, resumes, and
cognitive ability tests in choosing potential employees. Recently, organizations have also found some of the less prevalent selection techniques, such as personality assessments, to be good predictors of overall job performance and training performance (Hurtz and Donovan, 1998). Also, some of these less prevalent selection techniques have added incremental validity above and beyond the 'g' (general intelligence) measure. Some of these new "high growth" selection techniques are drug testing, personality assessment, integrity testing, and background checking (Rynes, 1993).

Recent research on applicant reactions indicate that some of the most liked selection procedures were those where the applicant perceived a strong relationship to job content and that were administered in a non paper-and-pencil format such as work samples or simulations (Rynes, 1993). In a study by Rynes and Connerley (1993), it was found that applicants prefer selection methods with high apparent content validity such as simulations and tests with business-related content. That is, applicants tend to prefer those selection methods that seem face valid. If the selection procedure looks to be job-related, then applicants
are less likely to have a negative reaction to that selection technique.

Rynes (1993) study lends support to applicants' perceptions of drug tests, integrity tests, personality inventories, and unstructured interviews as being some of the more controversial personnel selection procedures. Mixed results have formed when researching applicant reactions to these forms of selection procedures. Rynes and Connerley (1993) found personality inventories, drug testing and honesty testing to be viewed as neutral by future job seekers. While most people may not question the use of these selection procedures, there are some applicants that feel they are invasive and lack obvious relatedness to job content. Smither and Pearlman (1991) had subjects review and rate a variety of selection procedures and found that simulations, interviews, and cognitive tests were judged to be significantly more job-related than personality tests or biodata forms. Finally, Rosse, Ringer and Miller (1996) reported that applicants prefer a selection process that does not include testing and were less satisfied with the selection process if an integrity test, drug test, or vocational interest inventory was used; and least satisfied when the test was a personality-based inventory.
Rynes (1993) contends that some of the least liked selection procedures by applicants were psychological assessments and the handwriting analysis, also known as graphology. In a cross-cultural study by Steiner and Gilliland (1996), it was discovered that graphology received negative applicant reactions in both the United States and France, where it is much more prevalent as a personnel selection device.

For the past decade, many researchers have suggested determinants of applicant reactions. In a study of attitudes toward employment testing, Lounsbury, Bobrow, and Jenson (1989) found that the participants' being told how the test related to job performance and providing feedback were associated with more positive employment attitudes. Thibaut and Walker (1975) emphasized process control or "voice" of an individual in fairness perceptions. They found that procedures are perceived to be fairer when individuals have an opportunity to influence the decision process. Thus, the less control an applicant has over the selection procedure, the more unhappy the applicant will be with the process.

Some of the factors expressed by Rynes (1993) that may affect applicant reactions include the information that they receive about the job and the organization, face validity of
the procedure, perceived employer need to acquire the information revealed by the procedure, perceived likelihood of accurate evaluation, perceived ability of applicants to do well on the procedure, and feedback of the procedure’s results. Schuler (1993) suggested that perceived acceptability of selection situations are influenced by the presence of job-relevant information, participation or representation in the development of the selection process, understanding of the evaluation process, and content and form of feedback. Similarly, Arvey and Sackett (1993) indicated that perceived fairness could be influenced by the content of the selection system, an understanding of the development of the selection process, the administration of the selection process and the organizational context. Some of their examples of the content of the selection system included job relatedness and thoroughness of KSA coverage.

In my review of the literature on applicant reactions, some of the most important factors that affect applicant’s reactions were job-content, job information given, and type of personnel selection test.

Another very important factor that may influence applicant reactions is test performance. Tesser and Leidy (1968) surveyed attitudes toward psychological testing among high school students only to find that most students
endorsed such pro-testing items as "In general, it is the people who do poorly on tests who are against testing" (81%). According to a study by Lounsbury et al. (1989) on attitudes toward employment testing, those persons failing tests and not receiving a job, had more negative attitudes than those who passed and were awarded the job. In more recent studies, the relationship between test performance and applicant reactions has been shown to be much stronger. The results of a study by Bartle (1998) found that only test performance expectations significantly predicted applicant intentions' to apply for a job. In a study by Chan, Schmitt, Jennings, Clause, and Delbridge (1998), self-serving bias emerged as a major determinant of applicant reactions. Perceived performance on a test was found to directly influence both job-relevance and fairness perceptions of applicants. That is, if an applicant believes that he/she has not performed well on a test, he/she will perceive the test as both irrelevant to the job and unfair.

There are many implications for these negative applicant reactions. Rynes (1993) mentioned three areas (ethical, business, and the legal environment) in which negative applicant reactions could be potentially harmful. The ethical implications of applicant reactions that should
be of concern are the psychological well-being of applicants. From a business perspective, reactions to selection procedures may influence the ability of the organization to attract and retain potential employees. Selection procedures that have high applicant reactions may reduce applicant pools or job acceptance rates (Murphy, 1986). Also, the overall utility and validity of the selection system can be reduced if there are high applicant reactions. After experiencing negative selection procedures, newly hired applicants may join the organization with an agenda, be less committed and may be less satisfied overall. For example, Schmitt and Ryan (1992) claim that the utility and validity of the selection tests themselves may be affected in that applicant motivation to perform is influenced. From a legal perspective, the perceived fairness of the selection procedure may influence applicants' decisions to pursue discrimination cases. There may be legal challenges made by applicants to devices regarded as overly invasive or face invalid.

Summary

As shown above, there are many different factors which contributed to formulating this study. First, personality testing has proven in recent years to be predictive of job
performance. This has been mostly a result of the development of the Big Five taxonomy. Thus, more organizations are using personality tests as a selection device, which in turn requires more research in the area, specifically in applicant reactions. Second, there is unfortunately still a focus on the traditional model of selection rather than a systems model, which includes the organization selecting the applicant as well as the applicant selecting the organization. Recent research has indicated the importance of applicant reactions to organizations; applicant reactions are very important to the overall utility and validity of selection procedures. In addition, applicant's performance on the personnel selection test also appears to influence applicant reactions. As a result of these inferences which were made on personnel selection procedures and applicant reactions, I have formulated the hypothesis below.

Hypotheses

There have been many studies that have examined applicant reactions to different types of selection procedures. Most of these studies have contained cognitive ability tests and personality tests. A study by Rosse, Ringer and Miller (1994), for example, reported that
applicants were least satisfied when the selection test was a personality-based inventory. Smither and Pearlman (1991) had subjects review and rate a variety of selection procedures and found that simulations, interviews, and cognitive tests were judged to be significantly more job-related than personality tests or biodata forms.

**Hypothesis 1:** Participants will have higher ratings on the applicant reaction questionnaire to a personality measure than a cognitive ability measure.

Murphy, Thornton, and Reynolds (1990) have been the only researchers to look at the relationship between applicant reactions and job type for a personnel selection procedure. Their study examined attitudes towards drug testing. Results of their study indicate that drug testing is seen, under some circumstances to be necessary; one of these circumstances was the type of job. The relationship between applicant reactions and job type needs to be studied further with different types of selection tests, such as a cognitive ability test and a personality test.

Test Performance is also one of the most influential factors in applicant reactions. In a 1997 study by Chan and Schmitt, evidence was found that test performance influenced test reactions (i.e., face validity) to a cognitive ability test. Recently, Chan, et al. (1998), once again found that
posttest applicant reactions were related to test performance on a cognitive ability test. That is, an applicant who performed poorly on the test would have more negative reactions to the test. In a study by Whitney et al. (1998), it was discovered that individuals who performed well on an overt or personality-based integrity test were more likely to report that the test was a fair and accurate reflection of personal ability. This phenomenon is referred to as a self-serving bias or 'sour grapes'. Given the aforementioned studies which investigated the relationship between applicant reactions and test performance, I would expect that the self-serving bias would also be factor with applicants taking a personality test, especially for the conscientiousness and extraversion scales which are predictive of job performance in most occupations.

Hypothesis 2: After adjusting for the three covariates (i.e., the participants performance on the personnel selection tests as measured by the cognitive ability test scores and the participants scores on the personality dimensions of consciousness and extraversion), applicants will have lower ratings on the applicant reaction questionnaire to a job where there is perceived to be a clear relationship between the job and the personnel
selection test, than when the relationship between the job and the personnel selection test is questionable.

In much of the research, job information was viewed as a determinant of applicant reactions. Rynes (1993) concluded that applicant reactions might be affected by the information that they receive about the job and organization. Schuler (1993) suggested that the presence of job-relevant information that can aid job acceptance decisions will influence the perceived acceptability of selection situations. In addition, Arvey and Sackett (1993) proposed that perceived fairness could be influenced by the administration of the selection process such as information provided prior to the selection tests.

**Hypothesis 3:** After adjusting for the three covariates (i.e., the participants performance on the personnel selection tests as measured by the cognitive ability test scores and the participants scores on the personality dimensions of consciousness and extraversion), if job information is provided to the person, participants will have lower ratings on the applicant reaction questionnaire than if no information is provided.

Since I have already hypothesized that applicants will show more reaction to a personality test than a cognitive ability test and that applicants will have more of a
negative reaction when no job information is provided, it is only logical to conclude that people will show more negative reaction when both of these variables are indicated.

**Hypothesis 4**: Participants will have higher ratings on the applicant reaction questionnaire to a personality test than a cognitive ability test when no information is provided about the job, regardless of the type of job.
CHAPTER TWO

METHOD

Pilot Study

A pilot study was conducted to establish the perceived appropriateness of the job description stimuli. Data was collected from 50 undergraduate students who were first given an Informed Consent and then asked to complete a questionnaire regarding the appropriateness of two types of personnel selection tests (a cognitive ability test and a personality test) for ten different jobs (see Appendix B). The participants were asked to read a description of the cognitive ability test (Wonderlic Personnel Test) and personality test (Mini-Marker) and then rate these tests on a scale of 1 (extremely related/appropriate) to 5 (extremely unrelated/inappropriate) in terms of how related/appropriate the tests were for each job. A Debriefing Statement (see Appendix B) was given to the participants following the survey. Descriptive statistics and frequencies were run on the Pilot Test Survey. Table 1 reports a summary of the Wonderlic Personnel Test means and standard deviations for all of the job descriptions, while Table 2 contains a summary of the Mini-Marker means and standard deviations for all of the job descriptions.
Table 1. Wonderlic Personnel Test (WPT) Descriptives

<table>
<thead>
<tr>
<th>Job Descriptions</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountant</td>
<td>50</td>
<td>1.28</td>
<td>.54</td>
</tr>
<tr>
<td>Architect</td>
<td>50</td>
<td>1.70</td>
<td>.89</td>
</tr>
<tr>
<td>Customer Service Representative</td>
<td>50</td>
<td>2.84</td>
<td>1.87</td>
</tr>
<tr>
<td>Manager of Human Resources</td>
<td>50</td>
<td>2.10</td>
<td>1.04</td>
</tr>
<tr>
<td>Sales Manager</td>
<td>50</td>
<td>2.30</td>
<td>1.33</td>
</tr>
<tr>
<td>Computer Programmer</td>
<td>50</td>
<td>1.40</td>
<td>.90</td>
</tr>
<tr>
<td>Claims Representative</td>
<td>50</td>
<td>2.08</td>
<td>1.10</td>
</tr>
<tr>
<td>Chemical Engineer</td>
<td>50</td>
<td>1.44</td>
<td>.99</td>
</tr>
<tr>
<td>Computer Operations Manager</td>
<td>50</td>
<td>1.76</td>
<td>.94</td>
</tr>
<tr>
<td>Automotive Salesperson</td>
<td>50</td>
<td>2.90</td>
<td>1.18</td>
</tr>
</tbody>
</table>

Table 2. Mini-Marker Descriptives

<table>
<thead>
<tr>
<th>Job Descriptions</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountant</td>
<td>50</td>
<td>3.50</td>
<td>1.11</td>
</tr>
<tr>
<td>Architect</td>
<td>50</td>
<td>2.46</td>
<td>1.18</td>
</tr>
<tr>
<td>Customer Service Representative</td>
<td>50</td>
<td>1.58</td>
<td>1.07</td>
</tr>
<tr>
<td>Manager of Human Resources</td>
<td>50</td>
<td>1.80</td>
<td>1.20</td>
</tr>
<tr>
<td>Sales Manager</td>
<td>50</td>
<td>1.74</td>
<td>1.03</td>
</tr>
<tr>
<td>Computer Programmer</td>
<td>50</td>
<td>3.46</td>
<td>1.05</td>
</tr>
<tr>
<td>Claims Representative</td>
<td>50</td>
<td>2.04</td>
<td>1.07</td>
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<tr>
<td>Chemical Engineer</td>
<td>50</td>
<td>3.70</td>
<td>1.02</td>
</tr>
<tr>
<td>Computer Operations Manager</td>
<td>50</td>
<td>2.24</td>
<td>1.15</td>
</tr>
<tr>
<td>Automotive Salesperson</td>
<td>50</td>
<td>1.48</td>
<td>.86</td>
</tr>
</tbody>
</table>
Descriptive statistics indicated that participants rated the Accountant position as most related to or appropriate (M = 1.28, SD = .54) for the Wonderlic Personnel Test (WPT) and the Automotive Salesperson as most related to or appropriate (M = 1.48, SD = .86) for the Mini-Marker test. The Customer Service Representative was also rated as very related to or appropriate (M = 1.58, SD = 1.07) for the Mini-Marker test. Initially, we were going to use an entry-level managerial job description in the study because previous studies had revealed an established relationship between personality and managerial job performance. Barrick and Mount (1991) reported conscientiousness and extroversion as significantly related to managerial job performance. Therefore, we would have expected applicants to have less of a reaction to a job in which personality was predictive of performance. However, the pilot study revealed that participants felt the Mini-Marker would be more related to or appropriate for a Customer Service Representative position. Based on the results of the pilot study, the Customer Service Representative and Accountant job positions were chosen as the jobs which would be utilized in the Primary Study. Thus, we will try to extend the literature by examining the relationship between a Personality Test and the Customer Service and Accountant position.
Primary Study

Participants

Participants included 164 graduate and undergraduate students at California State University, San Bernardino. Within the sample of 164, the average age was 26.14 (SD = 7.8) with a range from 18 to 58, 70% were females, 43% were white, and 78% were employed. Table 3 displays the demographics of the participants in more detail.

Table 3. Demographics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Valid Percent</th>
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</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>113</td>
<td>70%</td>
</tr>
<tr>
<td>Male</td>
<td>49</td>
<td>30%</td>
</tr>
<tr>
<td>Ethnicity</td>
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<td></td>
</tr>
<tr>
<td>White</td>
<td>71</td>
<td>43%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>44</td>
<td>27%</td>
</tr>
<tr>
<td>African American</td>
<td>18</td>
<td>11%</td>
</tr>
<tr>
<td>Asian</td>
<td>13</td>
<td>8%</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>5%</td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td>76</td>
<td>47%</td>
</tr>
<tr>
<td>Junior</td>
<td>51</td>
<td>32%</td>
</tr>
<tr>
<td>Sophomore</td>
<td>20</td>
<td>12%</td>
</tr>
<tr>
<td>Freshman</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>Graduate</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business-related</td>
<td>84</td>
<td>51%</td>
</tr>
<tr>
<td>Psychology</td>
<td>55</td>
<td>34%</td>
</tr>
<tr>
<td>Other</td>
<td>25</td>
<td>15%</td>
</tr>
<tr>
<td>Employment</td>
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<tr>
<td>Employed</td>
<td>126</td>
<td>78%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>28</td>
<td>17%</td>
</tr>
<tr>
<td>Currently Searching</td>
<td>8</td>
<td>5%</td>
</tr>
</tbody>
</table>
The demographic sheet also asked participants what types of selection procedures they had been previously exposed to. Results indicated that the Structured (71%) and Unstructured (65%) Interview has been the selection procedures most often used with our participants. Table 4 provides a more detailed summary of the types of selection procedures previously used on our participants.

Table 4. Previous Exposure to Selection Procedures

<table>
<thead>
<tr>
<th>Procedure</th>
<th>N</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structured Interview</td>
<td>162</td>
<td>71%</td>
<td>29%</td>
</tr>
<tr>
<td>Unstructured Interview</td>
<td>162</td>
<td>65%</td>
<td>35%</td>
</tr>
<tr>
<td>Drug Test</td>
<td>162</td>
<td>48%</td>
<td>52%</td>
</tr>
<tr>
<td>Job Knowledge Test</td>
<td>162</td>
<td>38%</td>
<td>62%</td>
</tr>
<tr>
<td>Personality Test</td>
<td>162</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>Honesty/Integrity Test</td>
<td>162</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Cognitive Ability Test</td>
<td>162</td>
<td>29%</td>
<td>71%</td>
</tr>
<tr>
<td>Work Sample</td>
<td>162</td>
<td>14%</td>
<td>86%</td>
</tr>
<tr>
<td>Assessment Center</td>
<td>162</td>
<td>13%</td>
<td>87%</td>
</tr>
<tr>
<td>Psychological Inventory</td>
<td>162</td>
<td>12%</td>
<td>88%</td>
</tr>
<tr>
<td>Handwriting Analysis</td>
<td>162</td>
<td>7%</td>
<td>93%</td>
</tr>
</tbody>
</table>
Procedure

Data was collected through scheduled testing sessions and during Psychology and Management class sessions. For the testing sessions, announcements were made in Psychology classes that potential participants would receive extra-credit for participating in the 30-minute experiment. Also, sign-up sheets were available during classes, as well as posted on the Psychology Bulletin Board. With regards to the classroom administrations, Psychology and Business Professors were asked if the administration of the experiment could take place during class sessions.

An Informed Consent (see Appendix C), Demographic Sheet (see Appendix C), and one of the following treatment conditions were placed in an envelope and randomly handed out to participants during administration. The four different treatment conditions utilized in this study were:

1) Customer Service Representative position/Job Description Included, 2) Accountant position/Job Description Included 3) Customer Service Representative position/Job Title Only, and 4) Accountant/Job Title Only. The Customer Service Representative and Accountant job descriptions used in the treatment conditions are shown in Appendix C. The participants were then asked to assume they were applying for the job or treatment condition in the envelope and were
now taking the tests the company required for that particular position.

Next, participants were administered the Personnel Selection Tests and given Applicant Reaction Questionnaires. Participants were first administered the Wonderlic Personnel Test (WPT) followed by an Applicant Reaction Questionnaire. After completing the Applicant Reaction Questionnaire for the WPT (see Appendix C), participants were then asked to complete the Mini-Marker and the Applicant Reaction Questionnaire for the Mini-Marker (see Appendix C). To counterbalance the order of the two tests, the order of the tests were rotated during different data collections. The Applicant Reaction Questionnaires asked the participants to what extent they agreed or disagreed with the application of the WPT and the Mini-Marker for the job they were applying for (i.e., the specific scenario they were assigned). Applicants' reactions towards each personnel selection test was measured with a five-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Upon completion of the experiment, participants were given a Debriefing Statement explaining the purpose of the study.
Measures

Applicant Reaction Questionnaires. The applicant reaction questionnaires consisted of 13 questions (see Appendix C). Both questionnaires contained the same questions, however, they measured applicant reactions for two different personnel selection tests, the Wonderlic Personnel Test and the Mini-Marker. The questions measured three different subscales of applicant reactions: face validity, perceived predictive validity, and fairness perceptions. Face validity (alpha = .86) and perceived predictive validity (alpha = .83) subscales were obtained from Smither et. al (1993). The fairness perceptions (alpha = .78) measure was adapted from Chan et. al (1998). In this particular study, the Cronbach's alpha for the entire applicant reactions measure (all three subscales) was a .90 for both questionnaires. Reliability of the Applicant Reaction Questionnaire subscales for the Wonderlic Personnel Test were a .79 for face validity, .83 for perceived predictive validity, and .77 for fairness. Reliability of the Applicant Reaction questionnaire subscales for the Mini-Marker were a .81 for face validity, .87 for perceived predictive validity, and .82 for fairness. The response scale for the applicant reaction questionnaire was a 5-point
Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scale was scored so that a higher score represented more negative applicant reactions.

**Cognitive Ability Test.** The cognitive ability test used in this study was the Wonderlic Personnel Test (WPT). The WPT is a 12-minute timed test that contains 50 questions measuring general intelligence. These questions include word comparisons, disarranged sentences, sentence parallelism, following directions, number comparisons, number series, analysis of geometric figures and story problems requiring either mathematics or logic solutions. The construct validity of this measure was demonstrated by the high correlation \( r = .92 \) between the WPT and the WAIS-R IQ (Dodrill, 1981, 1983). Content validity was established in a review by Jensen (1977) and Hunter (1989) which determined that the WPT contained the same verbal, quantitative and spatial item types recognized as assessing general cognitive ability. The predictive validity of the cognitive ability tests was summarized in a meta-analysis performed by Hunter and Hunter (1984). The predictive validity is shown in Appendix D. Additional information on the test validities for various jobs is available in the test manual. The reliability coefficients for the WPT test are among the highest reliabilities for any form of tests.
measuring general intelligence (Wonderlic & Associates, 1992). Test-retest reliabilities have ranged from .82 to .94. Alternate form reliabilities range from .73 to .95. Correlation of odd items with even items provides a measure of internal consistency which range from .88 to .94 (McKelvie, 1989).

**Personality Test.** The personality test used in this study was the Mini-Markers (Saucier, 1994). The Mini-Markers is a brief version of Goldberg's 100 unipolar Big-Five Markers. The Mini-Markers contains 40 adjectives assessing the Big Five factors of personality (Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Intellect). The Mini-Markers also has a comparable reliability to Goldberg's unipolar Big-Five Markers. Saucier (1994) reported reliability coefficients for each factor: Extraversion (alpha = .83), Agreeableness (alpha = .81), Conscientiousness (alpha = .83), Emotional Stability (alpha = .78), and Openness/Intellect (alpha = .81). In addition to having good reliability coefficients, some of the other reasons why we choose the Mini Marker as the Personality Test in this study was because it was designed to be more "user-friendly" than the original inventory, its length allows for a much briefer administration time, and because it was in the public domain (i.e., free). The Mini-Marker
is shown in Appendix C. Only Consciousness and Extraversion scales were used in the current study. Furthermore, this study produced very similar reliability coefficients to Saucier (1994) in that Extraversion had an alpha = .83 and Conscientiousness had an alpha = .81.
CHAPTER THREE

RESULTS

Prior to testing the hypotheses, data was scanned for missing values and outliers. The results of the data evaluation indicated there were no missing values or outliers. To test Hypothesis 1, that participants will have higher ratings on the applicant reaction questionnaire to a personality measure than a cognitive ability measure, a paired-samples t-test was conducted between the Applicant Reactions Questionnaire for the WPT and the Applicant Reactions Questionnaire for the Mini-Marker. The mean for the Applicant Reactions Questionnaire for Mini-Marker (M = 3.27, SD = .79) was significantly less (i.e., less applicant reactions) than the mean for the Applicant Reactions Questionnaire for the WPT (M = 3.73, SD = .71), t(163) = 6.90, p < .001. The magnitude of the difference in the means for the two Applicant Reactions Questionnaires was large. The $\eta^2$, a standardized effect size index, was .23, a large value. Although the difference was large, it was in the opposite direction of the hypothesis, thus, Hypothesis 1 was not supported. That is, participants had more negative reactions to the Cognitive Ability Test than the Personality
Test. Table 5 below provides the Applicant Reaction Questionnaire means.

Table 5. Applicant Reaction Questionnaire (ARQ) Means

<table>
<thead>
<tr>
<th>Type of Job</th>
<th>N</th>
<th>ARQ for WPT Mean (SD)</th>
<th>ARQ for Mini-Marker Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountant</td>
<td>82</td>
<td>3.68 (.66)</td>
<td>3.51 (.72)</td>
</tr>
<tr>
<td>Customer Service</td>
<td>82</td>
<td>3.77 (.76)</td>
<td>3.02 (.78)</td>
</tr>
<tr>
<td>Representative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>164</td>
<td>3.73 (.71)</td>
<td>3.27 (.79)</td>
</tr>
</tbody>
</table>

A 2 x 2 between-subjects multivariate analysis of variance (MANOVA) was used to test both Hypothesis 2 and Hypothesis 3. The two dependent variables were Applicant Reactions to the WPT and Applicant Reactions to the Mini-Marker. The two independent variables were type of job (Accountant and Customer Service Representative) and job information (Job Description and Job Title Only). Again, the Accountant and Customer Service Representative positions were chosen based on the pilot test results which revealed that participants considered the Mini-Marker more related to or appropriate for a Customer Service Representative position and the WPT more related to or appropriate for the Accountant position.
Initially, a 2 x 2 between-subjects multivariate analysis of covariance was going to be used to test Hypothesis 2, after adjusting for the three covariates (i.e., the participants performance on the personnel selection tests as measured by the cognitive ability test score and the participants scores on the personality dimensions of consciousness and extraversion) applicants will have lower ratings on the applicant reaction questionnaire to a job where there is perceived to be a clear relationship between the job and the personnel selection test, than when the relationship between the job and the personnel selection test is questionable. The same MANCOVA was also going to be utilized to test Hypothesis 3, after adjusting for the three covariates (i.e., the participants performance on the personnel selection tests as measured by the cognitive ability test score and the participants scores on the personality dimensions of consciousness and extraversion) if job information is provided to the person, participants will have lower ratings on the applicant reaction questionnaire than if no information was provided. However, bivariate correlations revealed non-significant correlations ranging from an r = -.04 to an r = .06 (p > .05) between the dependent variables and covariates. In addition, the dependent
variables were significantly correlated to each other at \( r = .37 \) (\( p < .01 \)). As a result of these discoveries, the covariates were removed from the analysis and the 2 x 2 between-subjects multivariate analysis of variance was performed.

There were no univariate or multivariate within-cell outliers at \( \alpha = .001 \). Results of evaluation of assumptions of normality, homogeneity of variance-covariance matrices, linearity, and multicollinearity were satisfactory.

The interaction between type of job (Accountant vs. Customer Service Representative) and job information (Job Description vs. Job Title Only) was first examined. With the use of the Wilks' criterion, results suggest the combined DVs (the two Applicant Reaction Questionnaires) were not significantly affected by the interaction between type of job and job information, \( F(2,159) = 2.93, p > .05 \).

Univariate analyses of the interaction between type of job and job information revealed no significant effects on the Applicant Reaction Questionnaire for the WPT, univariate \( F(1,160) = 3.60, p > .05 \), or the Applicant Reaction Questionnaire for the Mini-Marker, univariate \( F(1,160) = .35, p > .05 \).

The main effects of type of job and job information were then investigated. The combined DVs were significantly
affected by type of job, approximate $F(2, 159) = 12.37$, $p < .001$, but not job information, $F(2, 159) = .36$, $p > .05$. The results reflected a modest association between job type (Accountant vs. Customer Service Representative) and the combined DVs, partial $\eta^2 = .14$. To further investigate the relationship between job type and the combined DVs, the tests of between-subjects effects was analyzed. The results indicate a significant relationship between job type and Applicant Reactions to the Mini-Marker, univariate $F(1, 160) = 17.01$, $p < .001$, $\eta^2 = .10$. There was no significant relationship between job type and Applicant Reactions to the WPT, univariate $F(1, 160) = .69$, $p > .05$. The Applicant Reaction Questionnaire means for the Accountant and Customer Service Representative position are displayed in Table 5. There was also no significant relationship between job information and the Applicant Reaction Questionnaire for the WPT, univariate $F(1, 160) = .62$, $p > .05$, or the Applicant Reaction Questionnaire for the Mini-Marker, univariate $F(1, 160) = .38$, $p > .05$. The results of the MANOVA found no significant main effect of job information, nor was there a significant interaction between type of job and job information. Thus, Hypothesis 2 was partially supported, while Hypothesis 3 was not supported. The type of job
affected applicant reactions (specifically to the Mini-Marker), however, job information did not.

Hypothesis 4, participants will have higher ratings on the applicant reaction questionnaire to a personality test than a cognitive ability test when no information is provided about the job regardless of the type of job, was also tested using a paired-samples t-test. The results indicated the mean for the Applicant Reactions Questionnaire for Mini-Marker ($M = 3.30, SD = .77$) was significantly lower than the mean for the Applicant Reactions Questionnaire for the WPT ($M = 3.76, SD = .68$), $t(81) = 4.34, p < .001$ when no information was provided. The magnitude of the difference in the means for the two Applicant Reactions Questionnaires when no information was provided was moderate, $\eta^2 = .18$. When information was provided, the mean for the Applicant Reactions Questionnaire for Mini-Marker ($M = 3.23, SD = .81$) was significantly lower than the mean for the Applicant Reactions Questionnaire for the WPT ($M = 3.68, SD = .74$), $t(81) = 5.68, p < .001$. The $\eta^2$ was .28, a large effect size. Although the difference was large, it was in the opposite direction of the hypothesis. Participants had significantly more negative applicant reactions (i.e., lower ratings on the Applicant Reaction Questionnaire) to the
Cognitive Ability Test than the Personality Test regardless of whether information provided or not. Based on these results, Hypothesis 4 was not supported.
CHAPTER FOUR

DISCUSSION

In this study, we examined applicant reactions to certain personnel selection tests depending upon the type of personnel selection test, the type of job, and whether information was provided about the job.

Hypothesis 1, participants will have more applicant reactions to a personality measure than a cognitive ability measure, was not supported in this study. In fact, the results emerged just the opposite of what we predicted in that participants had a significantly greater negative reaction to the Cognitive Ability Test than the Personality Test. These results are contradictory to most studies that have been performed previously on applicant reactions to selection procedures. Most of these studies indicate a favorable reaction to Cognitive Ability Tests with mixed results on the Personality Tests (e.g., Smither & Pearlman, 1991). However, results from this study indicate that overall, participants had negative reactions to both of the tests, given that both means for the Applicant Reactions Questionnaires to the WPT and Mini-Marker fell below a three (i.e., Neutral) on a five-point scale.
Initially, a MANCOVA was to be used to test Hypothesis 2. However, bivariate correlations revealed that the DVs were not significantly correlated to the covariates. As a result, the covariates were removed from the analysis. Hence, a MANOVA was used to test Hypothesis 2, which was partially supported by the findings of the study: job type affected applicant reactions to the personnel selection tests. Further analysis of this hypothesis unveiled that job type specifically affected the applicant reactions to the Mini-Marker Test. Specifically, all three subscales of the Applicant Reaction Questionnaire for the Mini-Marker Test (face validity, perceived predictive validity, and fairness) were significantly related to job type ($p < .01$), while only the fairness scale of the Applicant Reaction Questionnaire was significantly related to the Wonderlic Personnel Test ($p < .01$).

Regardless of the type of job, applicants perceive the use of a personnel selection test, whether it be a cognitive ability test or personality test, to be a good method of screening applicants fairly and cutting down on favoritism that can sometimes be a problem when applicants are selected for jobs. Additionally, when using a personality test, job type can influence an applicants' perceived face validity and perceived predictive validity of the test. This
supports previous research which attests to the face validity of the cognitive ability test for almost any job (Gatewood & Feild, 1994).

However, there have been few studies which have examined the relationship between job type and applicant reactions so this is an area which needs to be further explored. Future research should include a broader range of jobs, especially those jobs which are not as well known as the Accountant and Customer Service Representative. A potential problem of using such global jobs is participants could have preconceived notions about what the job is and not really consider the job information (i.e., job description) provided in the study. In addition, future research needs to include more personnel selection tools, such as interviews (structured and unstructured), job knowledge tests, assessment centers, work samples, drug tests, honesty/integrity tests, and clinical psychological inventories, when investigating the relationship between applicant reactions to personnel selection tests and job type.

Hypothesis 3 also used the MANOVA to explore the relationship between the job information variable and applicant reactions. Hypothesis 3, if job information is provided to the person, there will be less applicant
reaction, was not supported. The results of this study are contradictory to a previous study performed by Arvey and Sackett (1993) which found that providing pre-test information to applicants may reduce feelings of uncertainty surrounding unfamiliar selection procedures and thus lower applicants' concerns that they performed inadequately. Conversely, in this study, the job information may have not been found to be significant because of the type of information given to the participants. Only a job description was provided to the participants, no other additional job information or test information, such as validity of the tests, organizational rationale for testing, and the usefulness/utility of testing, was given. The lack of information may have limited the influence of the job information variable on participants' applicant reactions. Participants may have felt negatively about the tests because they did not understand the reasons why the tests were used.

Current research on the influence of providing information to applicants on applicant reactions has supported the need to supply applicants with more specific information on the testing process. Huffcutt (1990) suggested that offering testing information, such as aspects of test development, linkages between job and the tests, and
other aspects of the selection process, may be beneficial for mitigating negative applicant reactions to personnel selection tests, specifically cognitive ability tests. Hamill and Dickinson (1997) found that giving participants more information about the validity of testing translated into more positive beliefs about testing. In a study by Rynes and Miller (1983), it was found that giving information about testing, the job, or other aspects of the selection process yielded more positive attitudes than not giving information.

Recently, a study was conducted by Ostberg, Truxillo and Bauer (2001) in which they examined the effects of pre-test information on applicants' perceptions of selection procedure fairness. They found that providing "specific" test-related information prior to selection tests can enhance applicants' fairness perceptions, in terms of both process and outcome fairness. More positive attitudes were associated with the participants being told how the tests related to job performance. In all of the aforementioned studies, there is continuing support for the notion that applicants' attitudes toward testing are likely to improve as their understanding of the selection process improves.

Hence, when examining the relationship between information provided and applicant reactions, future
research should not only include a job description, but also
detailed information about the validity of the personnel
selection tool, its usefulness, and additional information
about the selection process. Specifically, it would prove
beneficial for organizations to provide information on job-
relatedness and predictive validity of the selection tests
in an effort to reduce the numerous potentially negative
outcomes associated with procedurally unfair selection
systems (e.g., lower job acceptance rates, lawsuits, etc.).
According to Gilliland (1993), offering such information "may
be one relatively cost-free method for improving the
acceptance of such testing" (p. 707).

Hypothesis 4, which examined the interaction between
job type and job information on applicant reactions, was
also not supported. Again, it appears the job information
variable was not significant in this study and participants
had significantly more of a negative reaction to the WPT
than the Mini-Marker regardless if job information was
provided or not.

Furthermore, inconsistent with our expectations, we
found that actual test scores were not significantly related
to applicants' reactions to either of the selection
procedures. Test scores were originally to be measured by
three covariates (WPT score, Conscientiousness score on the
Mini-Marker, and Extraversion score on the Mini-Marker) in a MANCOVA analysis. However, as previously mentioned, the bivariate correlations revealed that the DVs were not significantly correlated to the covariates, thus indicating that a MANOVA be used to test Hypothesis 2 and 3. The results of the bivariate analysis clearly indicated that test performance was not a factor in influencing applicant reactions. Taken together with the findings by Smither et al. (1993) and Ostberg et al. (2001), evidence suggests that applicant's perceptions of the test may not be related to how they perform.

Limitations

There were several limitations to this study. A major limitation to this study was the use of a student population in a controlled setting. A student sample was used in a simulated selection system in which they were asked to assume they were applying for a certain position. Given the simulated environment, participant motivation in the current study may have been diminished. This was demonstrated in the relatively low medians on the WPT for the different college education levels. WPT's published medians for the different college education levels are freshman = 24, sophomores = 26, juniors = 27, and seniors = 29. In this study, our medians on the WPT according to the different
college education levels were freshman = 20, sophomores = 25, juniors = 21, and seniors = 23. This represents a large difference particularly for juniors and seniors where WPT scores were almost a full standard deviation lower (SD = 7.10). The large difference between the published medians in the WPT Users Manual and our medians produced in this study may demonstrate a lack of essential test-taking motivation in this study. This study would be more conducive to a field setting using job applicants in an actual organization, where there is "real" test-taking motivation in order to obtain a job. Subsequent research needs to focus on examining applicant reactions with real applicants over the course of an actual selection process. Future studies could also use a lab experiment in which a more salient motivation was provided to the participants. For example, additional incentives, such as $20 for the highest score on the WPT, could be used to increase test-taking motivation.

Another limitation to this study was the job information used. As previously discussed, more test-specific information, such as the predictive validity of the test and its job-relatedness, would have created a more "realistic" selection situation for the participants, which
in turn would have been more likely to produce significant results in this study.

The final limitation I want to discuss regarding this study is the limited number of job types used. We only examined applicant reactions for two different jobs, an Accountant and a Customer Service Representative position. However, the results of the pilot test revealed the relationship between applicant reactions and job type should be researched further using other types of jobs. For example, participants felt the Mini-Marker would be the most appropriate/related test to use for a Salesperson position.

Implications

Additional research on Applicant Reactions to selection procedures can help organizations develop practical, low-cost interventions which may help to reduce negative reactions. By reducing negative applicant reactions, organizations can help ensure the utility of their selection systems, mitigate legal issues and lawsuits, increase job acceptance rates, and improve work behaviors of applicants once hired.

Although most of the results in this study were discouraging due to the fact that three out of the four hypotheses were not supported, it still advances our understanding of applicant reactions to personnel selection
tests. Specifically, the study begins to fill the gap in applicant reaction literature regarding job type and its potential influence on applicant reactions.

Given the face validity of the Cognitive Ability Test for almost any job, future research should focus on the association between job type and Personality Tests. Not only would the future study want to include different types of jobs, but also different types of personality tests. Instead of using an adjective checklist type of personality test, a more face valid personality test which contains work-related statements (e.g., PSI's Viewpoint) could be utilized in the study. In addition, research on the relationship between applicant reactions and job type could expand to include other types of controversial personnel selection tests such as drug tests, integrity/honesty tests, and clinical psychological inventories.
APPENDIX A:

SELECTION MODELS
Figure 1

Traditional Selection Model

Job Analysis

Identification of Relevant Job Performance Dimensions

Identification of Knowledge, Skills, Abilities (KSAs') Necessary for Job

Development of Assessment Devices to Measure KSA's

Validation of Assessment Devices
1. Content
2. Construct
3. Criterion

Use of Assessment Devices in the Processing of Applicants

Figure 2
Systems Selection Model

- Individual Job Applicant
- Job Characteristics
- Organizational Practices
- Environmental and Societal Issues

APPENDIX B:

PILOT STUDY MATERIALS
Informed Consent for Pilot Test Study

Thank you for taking your time to participate in this pilot test study. Your time is greatly appreciated. Michelle Schulz, Masters Student of Industrial/Organizational Psychology, California State University San Bernardino, is conducting this pilot test study in part for her Master's thesis on Applicant Reactions, under the supervision of Dr. Ken Shultz. The purpose of this pilot test research is to discover the perception of job applicants regarding the use of certain types of employment tests (cognitive ability test and personality test) for selection into certain types of jobs (10 professional and managerial jobs). To be qualified as a participant, you must be at least 18 years old.

Your participation includes filling out a survey which should take approximately 10 minutes to complete. The survey will ask you to rate how appropriate/inappropriate certain employment tests are for ten (10) different types of jobs. All of your responses will remain anonymous and be used for research purposes only. You are strongly encouraged to respond to all of the items, yet if you feel unable or unwilling to respond to an item, please skip it. Participation in this study is completely voluntary and if you have a need to withdraw, you will not be penalized. There are no known risks to participating in this study.

This pilot test study has been approved by the Department of Psychology Institutional Review Board, California State University, San Bernardino. If you have any questions, please contact Dr. Ken Shultz at (909) 880 - 5484.

Thank you again for your participation.

By placing an "X" in the space below I acknowledge that I have been informed of, and understand, the nature and purpose of this study. I freely consent to participate.

I agree to participate _________________________ Date _________________________
Pilot Test Survey

Please read the descriptions below of two different personnel selection tests.

1. Wonderlic Personnel Test (WPT) - This is a cognitive ability test; a measure of general intelligence. The WPT consists of word comparisons, disarranged sentences, sentence parallelism, following directions, number comparisons, number series, analysis of geometric figures and story problems requiring either mathematics or logic solutions.

2. Mini-Marker Personality Test - This is a personality test; a measure of extroversion (e.g., sociable, talkative, and assertive), agreeableness (e.g., good-natured, cooperative, and trusting), conscientiousness (e.g., responsible, dependable, persistent, and achievement oriented), emotional stability, and openness to experience (e.g., imaginative, artistically sensitive, and intellectual). The Mini-Marker consists of a list of 40 personality adjectives that are rated by applicants on how accurately each adjective describes them on a scale of 1 (Extremely Inaccurate) to 9 (Extremely Accurate).

Using the scale below as a guide (1 = Extremely Related/Appropriate and 5 = Extremely Unrelated/Inappropriate), write a number under each personnel selection test (WPT and Mini-Marker) in the right columns to indicate how related/appropriate you feel it is for each of the jobs listed in the left column.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Related/Appropriate</td>
<td>Moderately Related/Appropriate</td>
<td>Neutral</td>
<td>Moderately Unrelated/Inappropriate</td>
<td>Extremely Unrelated/Inappropriate</td>
</tr>
</tbody>
</table>

Job | WPT | Mini-Marker
---|-----|--------
Accountant - Applies principles of accounting to analyze financial information and prepare financial reports: Compiles and analyzes financial information to prepare entries to accounts, such as general ledger accounts, documenting business transactions. Analyzes financial information detailing assets, liabilities, and capital, and prepares balance sheet, profit and loss statement, and other reports to summarize current and projected company financial position, using calculator or computer. Audits contracts, orders, and vouchers, and prepares reports to substantiate individual transactions prior to settlement. May establish, modify, document, and coordinate implementation of accounting and accounting control procedures.
**Job**

<table>
<thead>
<tr>
<th>Architect -</th>
<th>WPT</th>
<th>Mini-Marker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researches, plans, designs, and administers building projects for clients, applying knowledge of design, construction procedures, zoning and building codes, and building materials. Consults with client to determine functional and spatial requirements of new structure or renovation, and prepares information regarding design, specifications, materials, color, equipment, estimated costs, and construction time. Plans layout of project and integrates engineering elements into unified design for client review and approval. Prepares scale drawings and contract documents for building contractors. Represents client in obtaining bids and awarding construction contracts. Administers construction contracts and conducts periodic on-site observation of work during construction to monitor compliance with plans. May prepare operating and maintenance manuals, studies, and reports. May use computer-assisted design software and equipment to prepare project designs and plans. May direct activities of workers engaged in preparing drawings and specification documents.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Customer Service Representative -**

Interviews applicants and records interview information into computer for water, gas, electric, telephone, or cable television system service: Talks with customers by phone or in person and receives orders for installation, turn-on, discontinuance, or change in service. Fills out contract forms, determines charges for service requested, collects deposits, prepares change of address records, and issues discontinuance orders, using computer. May solicit sale of new or additional services. May adjust complaints concerning billing or service rendered, referring complaints of service failures, such as low voltage or low pressure, to designated departments for investigation. May visit customers at their place of residence to investigate conditions preventing completion of service-connection orders and to obtain contract and deposit when service is being used without contract. May discuss cable television equipment operation with customer over telephone to explain equipment usage and to troubleshoot equipment problems.
### Manager of Human Resources -

Plans and carries out policies relating to all phases of personnel activity: Recruits, interviews, and selects employees to fill vacant positions. Plans and conducts new employee orientation to foster positive attitude toward company goals. Keeps record of insurance coverage, pension plan, and personnel transactions, such as hires, promotions, transfers, and terminations. Investigates accidents and prepares reports for insurance carrier. Conducts wage survey within labor market to determine competitive wage rate. Prepares budget of personnel operations. Meets with shop stewards and supervisors to resolve grievances. Writes separation notices for employees separating with cause and conducts exit interviews to determine reasons behind separations. Prepares reports and recommends procedures to reduce absenteeism and turnover. Represents company at personnel-related hearings and investigations. Contracts with outside suppliers to provide employee services, such as canteen, transportation, or relocation service. Supervises clerical workers. Negotiates collective bargaining agreement with Business Representative and Labor Union.

### Sales Manager -

Manages sales activities of establishment: Directs staffing, training, and performance evaluations to develop and control sales program. Coordinates sales distribution by establishing sales territories, quotas, and goals and advises dealers, distributors, and clients concerning sales and advertising techniques. Assigns sales territory to sales personnel. Analyzes sales statistics to formulate policy and to assist dealers in promoting sales. Reviews market analyses to determine customer needs, volume potential, price schedules, and discount rates, and develops sales campaigns to accommodate goals of company. Directs product simplification and standardization to eliminate unprofitable items from sales line. Represents company at trade association meetings to promote product. Coordinates liaison between sales department and other sales-related units. Analyzes and controls expenditures of division to conform to budgetary requirements. Assists other departments within establishment to prepare manuals and technical publications. Prepares periodic sales report showing sales volume and potential sales.
<table>
<thead>
<tr>
<th>Job</th>
<th>WPT</th>
<th>Mini-Marker</th>
</tr>
</thead>
</table>
| **Computer Programmer** -  
Converting data from project specifications and statements of problems and procedures to create or modify computer programs: Prepares a detailed workflow chart and diagram to illustrate sequence of steps that program must follow and to describe input, output, and logical operations involved. Analyzes workflow chart and diagram, applying knowledge of computer capabilities, subject matter, and symbolic logic. Conferes with supervisor and representatives of departments concerned with program to resolve questions of program intent, data input, output requirements, and inclusion of internal checks and controls. Converts detailed logical flow chart to language processable by computer. Enters program codes into computer system. Inputs test data into computer. Observes computer monitor screen to interpret program operating codes. Corrects program errors, using methods such as modifying program or altering sequence of program steps. Writes instructions to guide operating personnel during production runs. Analyzes, reviews, and rewrites programs to increase operating efficiency or to adapt program to new requirements. Compiles and writes documentation of program development and subsequent revisions. May train workers to use program. May assist Computer Operator (clerical) 213.362-010 to resolve problems in running computer program. May work with Systems Analyst (profess. & kin.) to obtain and analyze project specifications and flow charts. May direct and coordinate work of others to write, test, and modify computer programs. | | |
| **Claims Representative** -  
Investigates claims against insurance or other companies for personal, casualty, or property loss or damages and attempts to effect out-of-court settlement with claimant: Examines claim form and other records to determine insurance coverage. Interviews, telephones, or corresponds with claimant and witnesses; consults police and hospital records; and inspect property damage to determine extent of company's liability, varying method of investigation according to type of insurance. Prepares report of findings and negotiates settlement with claimant. Recommends litigation by legal department when settlement cannot be negotiated. May attend litigation hearings. | | |
**Chemical Engineer**

Designs equipment and develops processes for manufacturing chemicals and related products utilizing principles and technology of chemistry, physics, mathematics, engineering and related physical and natural sciences: Conducts research to develop new and improved chemical manufacturing processes. Designs, plans layout, and oversees workers engaged in constructing, controlling, and improving equipment to carry out chemical processes on commercial scale. Analyzes operating procedures and equipment and machinery functions to reduce processing time and cost. Designs equipment to control movement, storage, and packaging of solids, liquids, and gases. Designs and plans measurement and control systems for chemical plants based on data collected in laboratory experiments and pilot plant operations. Determines most effective arrangement of unit operations such as mixing, grinding, crushing, heat transfer, size reduction, hydrogenation, distillation, purification, oxidation, polymerization, evaporation, and fermentation, exercising judgment to compromise between process requirements, economic evaluation, operator effectiveness, and physical and health hazards. Performs tests and takes measurements throughout stages of production to determine degree of control over variables such as temperature, density, specific gravity, and pressure.

**Computer Operations Manager**

Directs and coordinates activities of workers engaged in computer operations: Plans and develops policies and procedures for carrying out computer operations. Meets with subordinate supervisors to discuss progress of work, resolve problems, and ensure that standards for quality and quantity of work are met. Adjusts hours of work, priorities, and staff assignments to ensure efficient operation, based on workload. Reviews daily logs and reports to detect recurring slowdowns or errors, using computer terminal. Consults with software and hardware vendors and other establishment workers to solve problems impeding computer processing. Meets with users to determine quality of service and identify needs. Meets with data processing managers to determine impact of proposed changes in hardware or software on computer operations and service to users. Evaluates new software and hardware to determine usefulness and compatibility with existing software and hardware. Evaluates proposed data processing projects to assess adequacy of existing hardware, and recommends purchase of equipment. Develops budget and monitors expenditures.

**Automotive Salesperson**

Sells new or used automobiles, trucks, and vans on premises of vehicle sales establishment: Explains features and demonstrates operation of car in showroom or on road. Suggests optional equipment for customer to purchase. Computes and quotes sales price, including tax, trade-in allowance, license fee, and discount, and requirements for financing payment of vehicle on credit.
Debriefing Statement for Pilot Test Study

Thank you again for participating in this research. The purpose of this pilot test study was to assess job applicant’s reactions to using certain types of employment tests for certain types of jobs. Specifically, this study was assessing your reactions to using a cognitive abilities test and personality test for ten (10) different types of professional and managerial jobs.

Results are expected to be available June of 2001. If you would like to obtain general results from this study, please contact Dr. Ken Shultz at (909) 880 - 5484, at California State University, San Bernardino. We ask that you please do not reveal the nature of this study with other potential participants. Thank you.
APPENDIX C:

PRIMARY STUDY MATERIALS
Informed Consent

Thank you for taking your time to participate in this study. Your time is greatly appreciated. Michelle Schulz, Masters Student of Industrial/Organizational Psychology, California State University San Bernardino, is conducting this study in part for her Master's thesis on Applicant Reactions, under the supervision of Dr. Ken Shultz. The purpose of this research is to assess job applicant's reactions to different types of employment tests. To be qualified as a participant, you must be at least 18 years old.

Your participation includes taking two tests, a personality test (Mini-Markers) and a cognitive ability test (WPT), and completing an Applicant Reaction Questionnaire for each test. The personality test should take approximately 10 minutes to complete and the cognitive ability test is a 12 minute timed test. After you have completed the test, you will be asked to fill out an Applicant Reaction Questionnaire for each test which should take approximately 10 minutes to complete. All of your responses will remain anonymous and be used for research purposes only. You are strongly encouraged to complete both tests and respond to all of the items, yet if you feel unable or unwilling to respond to an item, please skip it. Participation in this study is completely voluntary and if you have a need to withdraw, you will not be penalized. There are no known risks to participating in this study. However, a potential benefit could include gaining exposure to employment tests, which may help you in your future job-seeking.

This study has been approved by the Department of Psychology Institutional Review Board, California State University, San Bernardino. If you have any questions, please contact Dr. Ken Shultz at (909) 880 - 5484.

Thank you again for your participation.

By placing an "X" in the space below I acknowledge that I have been informed of, and understand, the nature and purpose of this study. I freely consent to participate.

I agree to participate ___________________________ Date ___________________________
Demographic Sheet

Please provide the following information.

Age____________________

Gender____________________

Ethnicity____________________

Level of Education____________________

Major____________________

What is your current employment status?

____ unemployed  ____ employed  ____ currently searching for employment

As a job applicant, which of the following selection procedures have you been exposed to? Please place a check mark (✓) beside each selection procedure that you have previously been tested with.

____ Unstructured Interview  ____ Work Sample

____ Structured Interview  ____ Drug Test

____ Cognitive Ability Test  ____ Honesty Test/Integrity Test

____ Job Knowledge Test  ____ Psychological Inventory

____ Personality Test  ____ Handwriting Analysis

____ Assessment Center
Job Descriptions

Accountant

Applies principles of accounting to analyze financial information and prepare financial reports: Compiles and analyzes financial information to prepare entries to accounts, such as general ledger accounts, documenting business transactions. Analyzes financial information detailing assets, liabilities, and capital, and prepares balance sheet, profit and loss statement, and other reports to summarize current and projected company financial position, using calculator or computer. Audits contracts, orders, and vouchers, and prepares reports to substantiate individual transactions prior to settlement. May establish, modify, document, and coordinate implementation of accounting and accounting control procedures.

Customer Service Representative

Interviews applicants and records interview information into computer for water, gas, electric, telephone, or cable television system service: Talks with customers by phone or in person and receives orders for installation, turn-on, discontinuance, or change in service. Fills out contract forms, determines charges for service requested, collects deposits, prepares change of address records, and issues discontinuance orders, using computer. May solicit sale of new or additional services. May adjust complaints concerning billing or service rendered, referring complaints of service failures, such as low voltage or low pressure, to designated departments for investigation. May visit customers at their place of residence to investigate conditions preventing completion of service-connection orders and to obtain contract and deposit when service is being used without contract. May discuss cable television equipment operation with customer over telephone to explain equipment usage and to troubleshoot equipment problems.
### Applicant Reactions Questionnaire for the WPT Test

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1. I did not understand what the selection test had to do with the job.  
2. I could not see any relationship between the selection test and what is required on the job.  
3. It would be obvious to anyone that the selection test is related to the job.  
4. The actual content of the selection test was clearly related to the job.  
5. There was no real connection between the selection test that I went through and the job.  
6. Failing to pass this selection test clearly indicates that you can't do the job.  
7. I am confident that this selection test can predict how well an applicant will perform on the job.  
8. My performance on this selection test was a good indicator of my ability to do the job.  
9. Applicants who perform well on this type of selection test are more likely to perform well on the job than applicants who perform poorly.  
10. The employer can tell a lot about the applicants' ability to do the job from the results of the selection test.  
11. I feel that using this test to select applicants for the job is fair.  
12. The use of this selection test would allow screening every applicant fairly and giving them the same opportunity to compete for the job.  
13. Using this type of test would cut down on favoritism that can sometimes be a problem when applicants are selected for jobs.
Applicant Reactions Questionnaire for the Mini-Marker Test

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. I did not understand what the selection test had to do with the job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. I could not see any relationship between the selection test and what is required on the job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. It would be obvious to anyone that the selection test is related to the job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. The actual content of the selection test was clearly related to the job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. There was no real connection between the selection test that I went through and the job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Failing to pass this selection test clearly indicates that you can't do the job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. I am confident that this selection test can predict how well an applicant will perform on the job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. My performance on this selection test was a good indicator of my ability to do the job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Applicants who perform well on this type of selection test are more likely to perform well on the job than applicants who perform poorly.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. The employer can tell a lot about the applicants ability to do the job from the results of the selection test.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. I feel that using this test to select applicants for the job is fair.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12. The use of this selection test would allow screening every applicant fairly and giving them the same opportunity to compete for the job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13. Using this type of test would cut down on favoritism that can sometimes be a problem when applicants are selected for jobs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How Accurately Can You Describe Yourself?

Please use this list of common human traits to describe yourself as accurately as possible. Describe yourself as you see yourself at the present time, not as you wish to be in the future. Describe yourself as you are generally or typically, as compared with other persons you know of the same sex and of roughly your same age.

Before each trait, please write a number indicating how accurately that trait describes you, using the following rating scale:

<table>
<thead>
<tr>
<th>Inaccurate</th>
<th>?</th>
<th>Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely</td>
<td>Very</td>
<td>Moderately</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Bashful
- Bold
- Careless
- Cold
- Complex
- Relaxed
- Creative
- Deep
- Disorganized
- Sympathetic
- Energetic
- Envious
- Extraverted
- Fretful
- Harsh
- Imaginative
- Inefficient
- Intellectual
- Jealous
- Kind
- Moody
- Organized
- Philosophical
- Practical
- Quiet
- Unenvious
- Rude
- Shy
- Sloppy
- Withdrawn
- Systematic
- Talkative
- Temperamental
- Touchy
- Uncreative
- Unenvious
- Unintellectual
- Unsympathetic
- Warm
- Withdrawn
APPENDIX D:

PREDICTIVE VALIDITY OF WONDERLIC PERSONNEL TEST (WPT)
Table 3
Predictive Validity of the Wonderlic Personnel Test (WPT)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability</td>
<td>.63</td>
</tr>
<tr>
<td>College Grades</td>
<td>.33</td>
</tr>
<tr>
<td>Biodata</td>
<td>.33</td>
</tr>
<tr>
<td>Education</td>
<td>.27</td>
</tr>
<tr>
<td>Reference Checks</td>
<td>.26</td>
</tr>
<tr>
<td>Interest</td>
<td>.20</td>
</tr>
<tr>
<td>Interview</td>
<td>.11</td>
</tr>
<tr>
<td>Age</td>
<td>-.02</td>
</tr>
</tbody>
</table>

REFERENCES


