AccuVision WRS
Validation Report
For

October, 2011

Validation Study Summary/Objectives

This document constitutes a report of the validation study conducted to determine the effectiveness and predictiveness of the Workforce Readiness System for ██. The WRS Simulator is a web-based selection test that was developed to measure key skills and abilities critical for success in entry-level jobs across a variety of industries. More specifically, this validation study examined the relationship between performance on the WRS Customer Care Module and current on-the-job performance (quality ratings, etc.) of incumbents as measured by their supervisor. A criterion oriented validation strategy utilizing a predictive design was used. In addition, turnover was examined as a second criterion.

Results showed that better on-the-job performers scored higher on the Simulator assessment than lower performers. The results for the ██ sample were comparable to results of similar studies found in the research. The current validation study conducted at ██ will provide additional support for implementation of the system within ██.

This validation report begins with describing the sample characteristics followed by an analysis of overall test characteristics and ends with a summary of findings.

Methodology

Data Collection and Analysis

A cross-validation study was conducted and involved the following steps: 1. Training of individual sites to administer the assessment to all job applicants. 2. Administration of the AccuVision WRS Customer Care Module to all applicants after a brief resume screen. 3. Collection of on-the-job performance data (performance criterion) of all new hires as rated by their direct supervisors. 4. Collection of turnover data over a six month period. 5. Data transmission and analysis.

Subjects

██████ provided data on a total of 8000 applicants for the job of Visa Officer. Of the 8000 individuals assessed 420 were subsequently hired and their performance and tenure were tracked over a six month period. The 420 individuals hired were from 11 different countries. Of the 420 individuals hired, complete performance data and assessment data were available on 411 of them. Tenure data was available for all 420 subjects. All data were made available for analysis by February, 2011. Tables 1 through 3 provide demographics of the sample.

Table 1

Countries		
	Frequency	**Percent**
US	290	69.0%
China	3	0.7%
India	14	3.3%
Nigeria	12	2.9%
South Africa	21	5.0%
Canada	46	11.0%
Nepal	9	2.1%
UK	20	4.8%
Ghana	3	0.7%
Australia	2	0.5%
Total	420	100%

Table 2

Gender		
	Frequency	**Percent**
Male	252	60.0%
Female	96	22.9%
Missing Data	72	17.1%
Total	420	100%

Table 3

Age		
	Frequency	**Percent**
0-39	167	39.8%
40-49	67	16.0%
50-59	19	4.5%
60+	4	1.0%
Missing Data	163	38.8%
Total	420	100%

Predictor

The Workforce Readiness Customer Care Simulator is a video-based assessment that assesses applicants' ability to deal with people in various situations that are likely to occur in a first-time, entry-level jobs (i.e., customer wants information or a customer who is angry and has a request). Participants choose the most effective and least effective solutions from a list of four. 14 different situations are presented that take place across a wide variety of industries such as health care, retail, hospitality, fast-food, and others.

Job Performance Criterion Measure

The purpose of the criterion is to provide an accurate measure of on-the-job performance so that a participant's test results can be correlated with that person's overall job performance. It is important to choose a measure that accurately describes overall job performance since there may be more than one aspect to the job. Thus, a mathematical composite was derived.

Specifically, the composite was the average of all ratings (15 activity statements) on the criterion survey. This was the same criterion measure used in the original validation study, and in this case there were no significant differences between the reliability of the measure used in this study. In the original validation study a factor analysis identified a single factor (with an eigen value > 1.0) when examining all 15 statements. In the current study again a single factor with an an eigen value > 1.0 was found.

On a scale from 1 (weak) to 7 (outstanding), the mean of all composite ratings was 4.92, with a standard deviation of .96. This shows that even though there were multiple factors, there was an adequate range in the criterion measure.

In addition to the managers' perceptions ratings a Quality rating was compiled based on the overall rating system used within ▓▓ normal course of business. To calculate the average quality rating the following formula was used. Quality = ((# of excellent ratings *100) + (# of good ratings * 75) + (# of average ratings * 50) + (# of unsatisfactory ratings * 25) + (# of poor ratings)) / # of total ratings. For the 411 people given quality ratings the mean was 72.65 with a standard deviation of 11.93. This shows that there was some slight restriction of range in the criteria measure, which will slightly adversely affect the correlations obtained in this study, however, does not at all affect the usefulness or true validity of the assessment. The % of above satisfactory ratings measure was simply calculated by finding the percentage of ratings that were rated satisfactory or above. The mean was 85.88% with a standard deviation of 11.91%. Table 4 shows the descriptive statistics for both criteria.

Table 4

	N	Min	Max	Mean	SD
Average Quality Rating	411	47.50	100.00	72.66	11.93
Mgr Rating of Customer Service	362	1.00	7.00	4.92	0.96

Turnover Criterion Measure

As part of this study the early attrition of the new hire group was examined. Early attrition was simply defined as terminating employment within the first 6 months of employment.

Results

Relationship of Test to Criterion Measures

The correlation between test performance and the job performance mathematical composite was calculated for the entire sample of 411 subjects. The correlation for this sample was .34 (p < .01). This correlation is similar to those found in the original validation study as well as numerous other studies of video-based assessments.

Next the correlation between test performance and the quality ratings were examined. As was the case with the more subjective managers' ratings there was a significant positive correlation between test performance and the objectively calculated quality rating (r=.30, p < .01). This provided additional evidence of the overall relationship between assessment performance and on-the-job performance.

While not part of the empirical validation study, anecdotal comments were collected from the managers on the performance measure all of which were positive. Comments included:

> "We have upgraded our workforce considerably."
> "My staff is at a much higher level versus a year ago."
> "We have much better workers now that we have implemented the customer care assessment."

Lastly the impact on turnover was examined. For the previous 24 months turnover rates (early attrition) were tracked by the organization. In offices where the Customer Care Module was implemented there was a 24% decrease in turnover compared to the previous 24 months. In addition, there was a 28% difference in turnover rates between those offices using the customer care assessment versus those that did not. This provides additional evidence as to the utility of the assessment within the organization.

Correction for Unreliability in the Criterion

The test correlates significantly with the criterion; however, the magnitude of the correlation is affected by the reliability of the criterion. In the current study, second performance ratings were not collected, therefore, it is not possible to get an exact reliability coefficient. However, it is possible to conservatively estimate the reliability of the criterion based on other similar studies that have been conducted in the past. The criterion reliability estimate used here is derived from the correlation between the first ratings and the second ratings from other validation studies using the exact same or similar criteria measures. Based on data collected from over 12000 individuals using the same or similar criteria we're able to generalize and conservatively estimate that the reliability coefficient to be .81 (p < .05). This is simply being used to correct the obtained correlations in this study to get a more accurate estimate of what the true correlation is. All correlations presented previously were uncorrected. The corrected correlation between the criterion measure test performance was .36 (p<.01).

In conclusion, this data shows that the Customer Care Simulator is a valid predictor of performance within ▮▮▮ and will assist with making accurate and fair hiring decisions.