ASSESSMENT TECHNOLOGIES

Non-Bias and Culture-Fair Development of ATI Assessments

- ◆ Over 100 psychologists from all 50 States of the U.S. involved in test development

- ◆ Items developed with no literacy component to minimize group differences

- ◆ Graphics depicted in items are comprised of 3-d Computer-generated shapes or photographs depicting animals and environments to avoid bias

- ◆ 5 pilot studies conducted in New York and Oklahoma with all ethnicities represented

- ◆ National standardization conducted with thousands of people tested in all 50 states

- ◆ Psychologists flown in small planes to remote villages in Alaska to assess Eskimos

- ◆ Psychologists sent throughout Oklahoma to assess various Native American Indian tribes on remote Indian reservations.

- ◆ Sample was representative of the U.S. Census and was stratified according to Race, Gender, Age, Geographic Location, and Socio-Economic Status

FACTOR ANALYSIS
A thorough Factor Analysis was conducted on the normative data to confirm that the test correctly implements the Gf-Gc Model of Intelligence upon which it is based. _Test demonstrates very robust factor loadings, which are better than almost all other professional assessment tools currently available._

CHRONBACH ALPHA ANALYSIS
A Chronbach Alpha Analysis was performed on all test items to confirm internal consistency; this analysis, by examining complex intercorrelations among item responses, determines if each test item exclusively measures the skill for which it was intended. _Results confirmed that all test items accurately and consistently measure only the specific skills they are intended to measure._

FREQUENCY ANALYSIS
A Frequency Analysis was conducted on all item responses to ensure that none of the questions had any ambiguous answers. _The results clearly demonstrated that every test item has a single correct response that was consistently selected by the overwhelming majority of high performers on the test._

DISCRIMINABILITY INDEX

A Discriminability Index was calculated for each item to determine the discriminating power of each question. This analysis divides the total sample into groups according to their overall performance on the test; for example, these groups might be labeled as "Very Bright," "Bright," "Average," and "Below Average." This index then determines how well each test item discriminates among such groups. *The results indicated that every test item demonstrated a high discriminating power, and appropriately discerns the correct skill level of the examinee.*

ITEM - TOTAL CORRELATIONS

An Item – Total Correlations analysis was conducted to determine how well each test item's number of correct responses correlates to the total score on the entire test. *The results demonstrated very high item – total score correlations.*

ITEM DIFFICULTY ANALYSIS

An Item Difficulty Analysis was performed on all test items; this analysis ascertains, on an item-by-item basis, what percentage of the total sample of examinees answered each item correctly, thereby enabling the proper sequence of items according to difficulty level. *The final sequence of test items is based exclusively on the results of this empirical analysis.*

CLASSICAL ITEM ANALYSIS

All forms of Classical Item Analysis were performed. *The results confirmed that all test items are functioning appropriately and accurately.*

CONCURRENT VALIDITY STUDIES

Concurrent Validity Studies were performed to confirm that the overall test results correlate with the results of other well-accepted tests that measure the same skill. *The results demonstrated a very high correlation with other valid assessment tools currently in use.*

TEST-RETEST RELIABILITY

Test – Retest Reliability studies were conducted to determine if the test consistently produced comparable results across multiple administrations. To that end, care was taken to ensure that a minimum of 3 weeks and no more than 3 months elapsed between test – retest administrations; this minimum time span prevents a "practice effect" from artificially inflating the scores, as might occur when an examinee is retested immediately following the initial test administration, while the maximum time span precludes the possibility that the subjects might acquire greater crystallized skills in areas such as vocabulary or general knowledge. *The results demonstrated high test – retest reliability correlations.*

MAENTEL – HAENSEL BIAS ANALYSIS

A Maentel – Haensel Bias Analysis was conducted to determine the degree of adverse impact and group differences among the overall test scores. This pivotal analysis is a fundamental method of determining ethnic bias and was developed from differential item function analysis. In this analysis comparisons are conducted between groups of equal ability, but from different ethnic groups, to determine if any item responses were consistent to a specific minority group. *The results indicated that there were NO statistically significant differences shown by ANY ethnic group.*

A 100 page Clinical Manual detailing the full Reliability/Validity studies conducted on this product is available upon request.