



THE HIGHLANDS ABILITY BATTERY (THAB)

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A Counselor's Guide to Career Assessment Instruments

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THE HIGHLANDS ABILITY BATTERY (THAB)

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Paper & Pencil Version and CD Version

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CD Version and Online Version

THE HIGHLANDS ABILITY BATTERY (tHAB)

CD version and Online version

Target Population: All ages 15 and above with universal application to male and female.

Statement of the Purpose of the Instrument: To compare the user's scores on each of 19 work samples with the scores of all users who have completed the Battery in the same format (CD or online). Also, to conduct feedback with clients either individually or in groups (e.g., corporate groups, student groups.) Each work sample measures a different innate ability by requiring the client to respond on his or her keyboard to visual and aural stimuli. In this way, we measure whether the client is a specialist or a generalist, and whether he or she is an introvert or an extrovert. We also measure the client's orientation to time management, as well as to the abilities we describe as classification, concept organization, idea productivity, spatial relations (abstract and structural), verbal memory, tonal memory, image memory, kinesthetic memory, number memory, pitch discrimination, observation, visual speed, visual accuracy, and vocabulary. We adjust results to compensate for ranges in typing speed. Instructions are given both on screen and orally.

Titles of Subtests, Scales, Scores Provided: The Battery consists of 19 work samples or subtests. They are: Generalist/Specialist scale, Extrovert/Introvert scale, Time Frame Orientation, Classification (Inductive Reasoning), Concept Organization (Analytical Reasoning), Time Frame (Foresight), Idea Productivity (Ideaphoria), Spatial Relations Visualization (Structural), Spatial Relations Theory (Abstract), Design Memory, Verbal Memory (Associative Memory), Observation, Tonal Memory (Auditory Memory), Pitch Discrimination, Rhythm Memory, Number Memory, Visual Speed, Visual Accuracy, Vocabulary Level.

A COUNSELOR'S GUIDE TO CAREER ASSESSMENT INSTRUMENTS

All the subtests are scored in the range of 5 – 99. The individual receives a separate score for each subtest, measured on the following scale: Low 5-34; Mid-range 35-64; High 65-99.

Forms and Levels Available, with Dates of Publication/Revision of Each: Screen shots of each screen of each work sample are supplied. The CI) version was first published in the year 2000 and has not been revised. It is available on a CD-ROM disc. The online version was published in April 2004 and was revised in August 2006.

Date of Most Recent Edition of Test Manual, User's Guide, etc.: The most recent edition of the Test Manual was published in 2006. Instructions for registration and technical support are supplied to each user. Directions for completing the subtests are contained within the CD itself and within the online version.

Languages in Which Available: English only.

Time:

Actual Test Time: Approximately three hours in all.

Total Administration Time: The Battery is scored during the assessment process. A report is available to the client immediately upon completion of the assessment. The report contains 32 pages of text and graphics.

The Company employs a full-time technician who is available at all hours to answer any questions relating to the CD version and the online version.

Norm Group(s) on Which Scores Are Based: Norms were based originally on all clients who completed the original paper and pencil version of the Battery. The norms were tested and confirmed by Dr. C. L. Holland in 1994. In 2002, the Chauncey Group, an ETS subsidiary, examined 4,307 CD reports. The Chauncey Group computed sample sizes, means, standard deviations, and complete norms tables for each of the 23 CD-based scores for four groups of examinees, ages 15-21, 22-30, 31-39, 40 and older. Each norms table provided the percentile rank and the raw score for that age group at that percentile rank. Tables were provided that included the comparison of the data with each other and, where available, to the norms assigned by Highlands in the CD-based Highlands Ability Battery. In its report, the Chauncey Group concluded:

THE HIGHLANDS ABILITY BATTERY

Overall, the data from the CD-based Highlands Ability Battery show that each test score in the battery correlates sufficiently so as to provide indirect evidence that the tests in the Highlands Ability Battery are sufficiently reliable for their use in the test battery for feedback purposes, since the feedback report provides a combination of the scores for personal growth purposes.

Also, examination of the frequency distributions among the four age groups shows consistent similarities for scores at the different percentiles regardless of age group. Those differences in scores by age group that did exist were consistent across the different age groups.

Since completion of the Chauncey Group report, the company has been drawing data in an online databank based upon the test results of each client. We now have a separate set of data for (1) a 500-client sampling of paper and pencil results; (2) all CD results to date; (3) all online results to date; and (4) all results of a group in the construction industry which we refer to as the X Group. Norms based on the CD results (a total of 2,036 at this date) are computed by age and sex and are compared with the paper and pencil results to assure

reasonable conformity. Since the introduction of the online version, a separate set of data has been maintained for it (a total of 6,800 entries to date). These are also distributed by sex and age. The age range is 15-21, 22-30, 31-39, 40-55 and 56+. Data are also maintained by sex. Each subdivision of age and sex is separately normed.

Manner in Which Results Are Reported for Individuals:

Types of Scores: A score expressed in percentile ranking is issued for each work sample.

Report Format/Content:

BASIC SERVICE: A 32-page report is issued to each client. The report contains a bar chart showing the client's score on each work sample. The results and their significance are explained in narrative form, as well as graphically. A sample report is attached.

After the report is issued and analyzed by a user and an Affiliate of the Company, we conduct an individual feedback conference lasting two hours. During the conference, the results are explained to the client. In some situations, as with corporate teams or a class of students, feedback can be accomplished effectively in group feedback sessions lasting 4 to 8 hours.

A COUNSELOR'S GUIDE TO CAREER ASSESSMENT INSTRUMENTS

OPTIONS: The Battery is used in many corporate and student settings for training in individual development, team building, and leadership.

Report Format/Content for Group Summaries:

BASIC SERVICE: For each type of group, we have designed both a facilitator's manual and a participant manual. Manuals are available in Personal Development, Team Building, and Leadership.

Before each program, we prepare and issue a Group Profile showing the distribution of scores among the participants. This enables the affiliate/ facilitator to focus on the strengths and challenges of the group as a whole, as well as of the individual participants.

OPTIONS: We have conducted programs utilizing the Battery in mentoring and in in-house training of HR and other corporate personnel. The training enables these employees to administer and interpret the Battery for other employees of the company.

Scoring:

Machine Scoring Service: All scores are computed and stored electronically in a common data base housed on the Company's own server. Scores are collected and scored immediately.

Scoring is done online as a work sample is completed.

COST OF BASIC SERVICE PER COUNSELEE: The Battery and the two-hour individual feedback are treated as one integrated service. The cost for both in direct sales by the Company to the individual user is \$450. The Company pays one or another of its Affiliates for conducting the individual feedback. When they deal with their own clients, Affiliates of the Company are permitted to establish their own prices for the Battery and feedback.

The Company sells access to the Battery to its Affiliates, who then fix the charge for the Battery and feedback themselves. The cost to each Affiliate for a key permitting registration online is \$90; the cost for a single CD disc is also \$90. The CD price, but not the online price, is subject to volume discounts.

THE HIGHLANDS ABILITY BATTERY

COST OF OPTIONS: When group programs are substituted for individual feedback, the cost varies depending on the size of the group, the nature of the program, and the length of the program.

Hand Scoring: Not available.

Local Machine Scoring: Not available.

Computer Software Options Available: Computerized adaptive administration: because each work sample is scored by applying its own unique formula, software was designed, implemented, and copyright by the company.

Ways in Which Computer/Online Version Differs:

The CD and online versions make unnecessary:

- Travel by the client to an office or classroom
- Hand-scoring and the resulting possibility of error
- Interpretation of results by a fallible human being
- Translation of results onto paper—a source of potential error.

The CD and online versions permit:

- Immediate registration and completion
- Instantaneous receipt of scores and report
- Sophisticated instructions, both on-screen and in audio
- Graphics in color and with movement

- Common treatment for all, instead of varying treatment by individual instructors
- Translation of individual results into data by sex and age

Cost of Materials: Due to possible price changes since publication date be sure to check with publisher web site.

Specimen Set of materials: No additional cost for individual clients. Clients in a group feedback are charged \$50 each for the Participant's Manual.

Counselee Materials: Various manuals and instruction sheets.

Additional Comments of Interest to Users: We are contemplating an online version in Spanish . We regularly design and produce new group feedback programs. We are now in the process of completing a program in Leadership. All programs relate human abilities to the functions and roles of the school or the workplace.

Published Reviews of the Instrument in the Last 15 Years: None cited.

The Highlands Ability Battery

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Description

The Highlands Ability Battery (tHAB) is based on the initial work of Johnson O'Connor, a research scientist devoted to studying innate abilities. O'Connor (1928) theorized that people are born with certain natural abilities that develop from infancy and can be measured upon maturation, usually at the age of 14. tHAB was developed primarily for use in career counseling with high school and college students and for working adults in career transition, initially offered as a paper and pencil test in 1992 by its publisher, The Highlands Company, a CD version was developed in 2000, and an online format followed in 2004 (Tavantzis, 2007). The paper and pencil version can be administered in individual or group formats. Both tHAB CD and online versions may be taken in one sitting or in intervals.

tHAB consists of a series of 19 worksamples. Each worksample measures particular ability and is categorized under one of the following sections:

(1) Personal Style Assessment (Generalist-Specialist, Introvert-Extrovert Scale, and

Time Frame Orientation); **(2) Driving Abilities** (Classification, Concept Organization, Idea Productivity, Spatial Relations Theory, and Spatial Relations Visualization); **(3) Specialized Abilities** (Design Memory, Observation, Verbal Memory, Tonal Memory, Rhythm Memory, Pitch Discrimination, Number Memory, and Visual Speed and Accuracy) and **(4) Vocabulary** (Vocabulary).

Each worksample is timed to determine the ease with which an individual is able to complete a particular task. The paper and pencil and CD versions take approximately 3 hours to complete, while the online version can be completed in 2 hours and 30 minutes. Both tHAB CD and online versions include written and voice-recorded instructions. All three versions of the Battery provide examples of how to complete each worksample and offer test takers practice worksamples.

Results of both tHAB CD and online versions are available immediately in electronic format upon completing the Battery. The report includes a detailed 30-page summary of each worksample compiled in a personal profile and bar chart to illustrate ability patterns and how certain abilities cluster. A copy of the results also is automatically transmitted via the Internet to a trained and certified Highlands affiliate. Certified Highlands affiliates are individuals who have participated in *The Highlands Company Affiliate Training Program*. This training qualifies people to interpret tHAB results and offer consultation for test takers. Trained and certified affiliates are available live or via phone for two-hour individual or group interpretation of results. Live interpretations can also be recorded on a CD-ROM and mailed to test takers. Certified Highlands affiliates are either employed through the Highlands Company or one of the 175+ trained and certified consultants from around the world (e.g., United States, United Kingdom, Singapore, and Canada).

Individual reports vary depending on whether the test taker is a student or an adult. A new report issued in 2007 relates natural abilities to the functions of leadership. Certified affiliates who consult with students are likely to explore college choices, college curriculum, college majors, and college selection. Affiliates working with adults may address career changes, career transitions, career exploration, career services, and leadership.

Use in Counseling

tHAB is intended to be used to help individuals better understand their natural abilities and how these relate to career development and planning for high school-aged students, college and university students, and adults. Counselors may also find the Battery useful in helping students understand their learning styles as one section of the instrument measures learning styles (Tavantzis, 2007). The Battery is also used to assist individuals who are in career transition, to help businesses restructure their workforce according to employee abilities, in employee team building and development, in employee training needs, and in leadership.

Interpretation of results by a trained affiliate is required by The Highlands Company. Trained affiliates are able to explain results, provide meaning to the Battery, and discuss future steps in

individual and group formats. To be a trained Highlands affiliate, individuals are required to apply for admission. The training consists of completing tHAB, receiving live feedback on the results, and participating in eight two-hour telephone-based training sessions or two day-long sessions. Face-to-face training is also available. Trainees are also trained to offer individual and group feedback and required to provide two practice feedback reports and two practice feedback conferences.

Written resources are also available on tHAB. Tavantzis (2007) found the *tHAB Technical Manual* to be a useful resource on the technical elements of the Battery. Two books describing tHAB have also been published by the Highlands Company: *Don't Waste Your Talent* (McDonald and Hutcheson, 2005) and *Highlands: The Right Choice* (Martin and Danelo, 2006). These resources are additional tools that provide counselors a framework for understanding tHAB.

Technical Considerations

The Highlands Company has conducted several studies of tHAB since 1993. For example, in 1994 a reliability study was conducted on the Battery (Holland, 1994). This study revealed that the 19 worksamples have reliability scores ranging from .83 to .95 (Tavantzis, 2007). The study was based on a random sample of 298 test takers ranging in age between 15 and 66 and included 146 males and 152 females. Adults over 25 were mainly college graduates and those under 25 were either in college or former college students (Holland, 1994). The Highlands Company asserts that the minimum reliability scores required for all 19 worksamples of the Battery is $r = .80$, which is higher than the acceptable reliability range of .6 to .7 for tests of like nature (Tavantzis, 2007). This suggests the 19 worksamples are highly reliable and useful for comparison purposes.

In 2002, The Highlands Company contracted with the Chauncey Group, a subsidiary of the Educational Testing Service (ETS), to conduct a statistical audit of the CD version of the Battery (Breyer, Katz, & Duran, 2002). This study computed sample sizes, means, and standard deviations and provided norms tables for test takers in the following age categories: 15-21, 22-30, 31-39, and 40 and older. The researchers concluded that the CD version yielded 23 separate scores on the 19 work samples and that each score on the Battery correlated sufficiently, thus deeming them reliable for interpretation purposes.

Validity studies have also been conducted. Holland (1994) concluded that there was adequate evidence of both convergent and divergent validity when assessing individual worksamples. That is, abilities that were expected to be related (e.g., typing speed and visual speed) were in fact related. Similarly, those abilities that should not be related (e.g., time frame and writing speed) showed little relationship. This seems to suggest strong evidence of validity on tHAB.

Computer-Based and/or Online Version

tHAB is available in both CD and online formats. The CD is only compatible with PCs. Offering CD and Online versions of the Battery allows test takers freedom to take the instrument at their own convenience as long as they have access to a computer and reliable Internet access. Test takers using the CD version need to complete the Battery on the same computer because scores

are stored on the computer's hard drive.

Minimum software requirements include: 133 MHz processor and at least 32 MB RAM, VGA monitor, sound card with speakers (headphones recommended when in public settings), mouse, a reliable Internet connection (56k modem or faster), one of the following Internet browsers—Internet Explorer (version 6 or higher), Mozilla (version 1 or higher), Netscape (version 7 or higher), and/or Safari (version 1.2 or higher), plus Macromedia Flash Player (version 6 or higher). Users should also make sure they have Javascript and cookies enabled if they are using tHAB online.

Overall Critique

Unlike other assessment instruments such as the Strong Interest Inventory (SII) and the Myers-Briggs Type Indicator (MBTI), which require self-report and measure interests and personality respectively, tHAB assesses natural abilities through completion of timed objective tasks. This can be helpful in assisting students with career decisions, adults who are in the midst of a life transition, and those interested in understanding how their abilities are related to leadership qualities. Another strength of tHAB has to do with technology. Both CD and online formats use voice-recorded instruction, which can be an added benefit for those who are auditory-learners. Instructions, both on the screen and in the voice recording, are simple, clear, and comprehensive. Receiving results immediately upon completion of the Battery is also an added feature. In addition, Highlands affiliates are very professional and helpful in their interpretation of results.

Test takers who are not computer proficient or do not have access to a computer and/or the Internet are able to use the paper and pencil test.

The time (2.5 – 3 hours) required to complete the tHAB is time-consuming when compared to other inventories. However, the benefits seem to outweigh the costs. The information provided is in-depth and can be useful for those in the midst of career exploration and decision making. Another limitation is that tHAB CD is not compatible with Macintosh computers. However, Apple users have the option of using the Internet version of the Battery—which is the more popular of the two versions. Lastly, tHAB is only available in English. The Highlands Company has discussed the idea of having it available in other languages. This would seem to be important as its use becomes more global.

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