THE HIGHLANDS ABILITY BATTERY
Robert McDonald (Paper-and-Pencil Version and CD Version)
and Lazar Emanuel (CD Version and Online Version)

The Highlands Company
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http://www.highlandsco.com
http://www.highlandslifeandcareercenter.com
CD version: http://www.highlandsccd.com
Online version: http://www.abilitybattery.com

Target Population: Adolescents, young adults, and adults; ages 15 and older.

Statement of the Purpose of the Instrument: The purpose of the The Highlands Ability Battery (tHAB) is to compare the client’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). Further, the purpose is 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, the tHAB measures whether the client is a specialist or a generalist, and whether he or she is an introvert or an extrovert. It also measures the client’s orientation to time management, as well as to the following abilities: 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. Results are adjusted to compensate for ranges in typing speed. Instructions are given both on screen and aurally.

Titles of Subtests, Scales, Scores Provided: The Battery consists of 19 work samples or subtests:

- Generalist/Specialist
- Extrovert/Introvert
- 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

All the subtests have scores in the range of 5 to 99. The client receives a separate score for each subtest, measured on the following scale: Low 5-34; Mid-Range 35-64; High 65-99. tHAB 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.


Date of Most Recent Edition of Test Manual, User’s Guide, Etc.: Test Manual, 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.
The Highlands Ability Battery

Time:

Actual Test Time: Approximately three hours.

Total Administration Time: Approximately three hours.

Norm Group(s) on Which Scores Are Based: Norms were based originally on all clients who completed the 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 Educational Testing Service (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, and 40 and older. Also, examination of the frequency distributions among the four age groups show 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 Highlands Company has been collecting additional data in an online data bank based upon the test results of each client. Norms based on the CD results 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. 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: A score expressed in percentile ranking is issued for each work sample. 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. Sample reports may be found at the publisher's website. After the report is issued and analyzed by a user and an affiliate of the company, an individual feedback conference lasting two hours is conducted. 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. 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: For each type of group, there is a facilitator's manual and a participant manual. Manuals are available in Personal Development, Team Building, and Leadership. Before each program, a Group Profile showing the distribution of scores among the participants is prepared and issued. This enables the affiliate to focus on the strengths and challenges of the group as a whole, as well as of the individual participants.

Cost of Materials: Due to possible price changes since publication date, be sure to check the publisher's website.

Specimen Set: The Battery and the two-hour individual feedback are treated as one integrated service, approximately $450.00. The Highlands 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. 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. Clients in a group feedback are charged approximately $50.00 each for the Participant's Manual.

Counselor Materials: Various manuals and instruction sheets.

Machine Scoring: All scores are computed and stored electronically in a common database housed on the company's own server. Scores are collected and scored immediately. Scoring is done online as a work sample is completed.

Hand Scoring: Not available.

Local Machine Scoring: Not available.

Computer Software Options Available: Computerized adaptive administration. The software was designed, implemented, and is copyrighted by The Highlands Company.

Additional Comments of Interest to Users: The Highlands Company employs a full-time technician who is available to answer any questions relating to the CD version and the online version.
Published Reviews of the Instrument in the Last 15 Years:

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 individuals are born with certain natural abilities developed from infancy and can be measured upon maturation, usually by age 14. tHAB was developed primarily for use in career counseling with high school students, college students, and for working adults in career transition. The publisher, The Highlands Company, offers the tHAB in paper-and-pencil (1992), CD (2000), and online (2004) formats (Tavantzis, 2007). The paper-and-pencil version can be administered in individual or group formats. tHAB CD and online versions may be taken in one sitting or in intervals.

tHAB consists of a series of 19 timed work samples. Each work sample (scale) measures a particular ability and is categorized under one of the following sections (subscales in parentheses): (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). Sample reports, which include examples of work samples, are available on The Highlands Company website. Each report includes descriptions of each work sample as well as an explanation of an individual’s score on that work sample. Individual scores for each work sample are expressed as percentiles of all persons who have completed that work sample. Individual scores are categorized as low, medium, or high percentile scores.

Each work sample 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 work sample and offer test takers practice work samples.

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 work sample compiled in a personal profile and bar chart to illustrate ability patterns and how certain abilities cluster. A copy of the results is also automatically transmitted via the Internet to a trained and certified Highlands affiliate. Affiliates are available live or via phone for 2 hour (individual or group) interpretation of results. Live interpretations can also be recorded on a CD-ROM and mailed to test takers.
Individual reports vary depending on whether the test taker is a student or an adult. A 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.

Interpretation of results by a trained affiliate is required for all versions by The Highlands Company. Certified Highlands affiliates are individuals who have participated in The Highlands Company Affiliate Training Program, who are either employed through The Highlands Company or one of the more than 250 trained and certified consultants from around the world (e.g., United States, United Kingdom, Singapore, and Canada). Affiliates are able to explain results, provide meaning to the Battery, and discuss future steps in individual and group formats. An application is required for consideration to be a trained Highlands affiliate. The training consists of completing tHAB, receiving live feedback on the results, and participating in eight 2-hour telephone-based training sessions. Face-to-face training is also available. Affiliate training is offered via tele-classes up to 10 times per year and in person a minimum of two times per year. Customized corporate training is also an option. Affiliates are also trained to offer individual and group feedback and required to provide two practice feedback reports and two practice feedback conferences.

The Highlands Company made a significant contribution to their knowledge of law and the skills and talents lawyers possess. The Highlands Ability Battery and the Lawyers’ Report (Emanuel, 2011) was released in August 2011. This report was designed to guide all law practitioners and law students in various stages of their careers. Additionally, the release of a new Career Supplement to provide abilities-based career exploration for students is planned for 2013 (D. Stiles, personal communication, November 13, 2012).

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, employee team building and development, employee training needs and leadership. Counselors refer clients to a Highlands affiliate to take the instrument, and it is common for clients to share the results of their scores with their counselor. When appropriate, and with client’s signed permission, counselors will communicate directly with a Highlands affiliate.

Technical Considerations

A summary of psychometric properties (e.g., reliability and validity measures) of tHAB is available on The Highlands Company website. A convenience sample from previous test takers is used to determine psychometric properties. Age and gender differences are considered in this sample. Racial differences are not considered. The Highlands Company asserts that the minimum reliability scores required for all 19 work samples of the Battery is \( r = .80 \). Holland (1994) revealed that the 19 work samples have reliability scores ranging from .83 to .95. Reliability scores were obtained from a convenience sample of 298 Highlands test takers ranging in age between 15 to 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). These scores suggest the 19 work samples are highly reliable and useful for comparison purposes. Updated reliability and re-norming data for the tHAB, conducted by independent psychometrician Andrew Neiner, Ph.D., will be available in 2013. Included in the analysis will be a sample of more than 11,000 test takers who have completed an online version of the tHAB since 2007 (D. Stiles, personal communication, November 13, 2012).

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, standard deviations, and provided norms tables for test takers in the following age categories: (1) 15-21, (2) 22-30, (3) 31-39, and (4) 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 work samples. That is, abilities that were expected to be related (e.g., typing speed and visual speed) were related. Similarly, those abilities that should not be related (e.g., time frame and writing speed) showed little relationship. This seems to suggest strong initial evidence of validity on tHAB. No studies beyond Holland have been conducted to date. However, The Highlands website does provide access to a Technical Manual (McDonald, 1995), which highlights Holland’s research and provides psychometric properties.

**General Utility and Evaluation**

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 relate to leadership qualities. A key strength of tHAB relates to the multiple formats available. Offering CD and online versions of the Battery allows test takers freedom to take the instrument at their convenience as long as they have access to a computer and reliable Internet access. 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. 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. Receiving results immediately upon completion of the Battery is also an added feature. It is important to note that the CD version of the tHAB will soon be phased out to enable better access to ongoing research and test updates.

Although technology has increased to provide additional formats, test takers who are not computer proficient or do not have access to a computer and/or the Internet are still able to use the paper-and-pencil test. Further, Highlands affiliates are professional and helpful in their interpretation of results for any format.

The time (2.5 hours to 3 hours) required to complete the tHAB is consuming when compared to other inventories. A mitigating factor of the lengthy time required is that tHAB may be taken in one sitting or in intervals. 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 Apple computers. However, Apple computer users have the option of using the Internet version of the Battery – which is the most popular among the two versions (D. Stiles, personal communication, November 13, 2012).

This instrument is only available in English. The lack of multiple language versions is unfortunate because it leaves out important cultural groups that may benefit from taking this instrument. The Highlands Company states that it presently administers the instrument in other countries where English is either the primary or secondary language: Kazakhstan, Australia, Canada, France, India, Singapore, Switzerland, Thailand, United Kingdom, and Germany (D. Stiles, personal communication, November 13, 2012). This instrument is appropriate for a variety of age groups (e.g., adolescents to late adulthood) and is applicable for use with males and females.

There are several resources available for applying findings for tHAB (see References and Additional Resources). Further, the Highlands Company has a Facebook page.

**References and Additional Resources**


The Highlands Company Facebook page: https://www.facebook.com/TheHighlandsCompany.

The Highlands Company website: http://www.highlandsco.com
“Assessment represents a signature form of career intervention. Counselors, educators, and researchers alike use and depend on a wide variety of tests, inventories, scales, and measures to help people of all ages shape their careers and to advance knowledge about career development. Continuing a venerable tradition, the contributors to NCDAs 6th edition of A Counselor's Guide to Career Assessment Instruments offer a tremendously rich resource for all who engage in career assessment. This edition continues the Guide's reputation as the go-to source for state-of-the-art information about career assessment principles, practices, and instruments. Keep a copy close at hand.”

Paul J. Hartung, Ph.D.
Professor, Department of Family and Community Medicine
Northeast Ohio Medical University
Editor, The Career Development Quarterly

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Executive Director
American School Counselor Association
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Janet G. Lenz, Ph.D., MCC, NCC
Assistant-In Professor, Ed. Psychology & Learning Systems
Program Director for Instruction, Research, & Evaluation
Florida State University Career Center

“NCDAs 6th edition of A Counselor's Guide to Career Assessment Instruments is a welcome update to a valuable resource for counselors unfamiliar with the wide range of assessments that are available, to aid them in their work. It should be in every counselor's library.”


A COUNSELOR'S GUIDE TO CAREER ASSESSMENT INSTRUMENTS

SIXTH EDITION

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