

Calibration Study of POWER Performance Levels to the CASAS Scale

The Adult Education and Family Literacy Act, as part of the Workforce Investment Act of 1998, requires programs to use standardized assessments to report learning gains for students in adult education programs. In addition, local and state agencies need an accountability tool for students who are difficult to assess adequately with a paper-and-pencil format.

In this study CASAS sought to determine the feasibility of calibrating basic skills on the POWER performance assessment and to establish corresponding difficulty estimates on the CASAS scale. The goal of the calibration was to achieve consistency of the POWER scoring system with guidelines of the National Reporting System (NRS) for adult education.

Results indicate that performance levels (0-4) for each of the basic skills in a POWER assessment can be scaled and located on the CASAS scale score continuum. Therefore, agencies can use the POWER performance assessment to measure learning gains for students with developmental disabilities and for NRS reporting purposes.

► Rationale

The U.S. Department of Education provides guidelines for program accountability in education. The National Reporting System (NRS), as part of the Workforce Investment Act (WIA) Title II Section 225 of the Adult Education and Family Literacy Act (PL 105-220), requires meaningful assessments and standardized performance measures in adult education. The Individuals with Disabilities Education Improvement Act (IDEA) of 2004 (P.L. 108-446) requires that all students with disabilities participate in state and district-wide assessments with accommodations or alternative assessments, if necessary. Alternative assessments must align with state academic content standards and meet challenging student academic achievement standards.

As a result of this legislation programs for students with developmental disabilities seek valid and reliable standardized assessment to report achievement gains.

Performance-based assessment procedures report gains for some students with developmental disabilities in a more relevant and functional context than paper-and-pencil multiple-choice formats. In response local adult education practitioners and the CASAS National Consortium, Special Education Committee, helped CASAS develop the POWER performance-based assessment system.

► Purpose

POWER — Providing Options for the Workplace, Education, and Rehabilitation — is a performance-based assessment system for secondary and adult students with developmental disabilities. Performance levels indicate how much support students require to demonstrate basic skills successfully. The study examined the feasibility of calibrating the CASAS POWER performance levels and, subsequently, to establish corresponding scores on the CASAS scale. The study focused on two primary research questions: 1. How do POWER performance levels (0-4) on the 27 basic employability skills correspond with established skill levels on the CASAS scale? 2. Can programs use POWER performance levels to report learning gains enabling the use of one uniform scale for all students across a wide range of ability levels?

► Background

POWER was validated over a six-year period (1995-2001) with more than 2,500 adults with a wide range of developmental disabilities. These adults were enrolled in WIA Title II funded agencies in California, Iowa, Ohio, and North Carolina. The adults represented community-based supported employment, adult education, community college, secondary transition and developmental center programs.

The POWER assessment used in the initial calibration study has 27 priority employability-related basic skills coded to CASAS Competencies. The skills include career development, workplace basics and community integration, and use of natural supports. The assessment instrument is completed through observations, and each component provides users

the capability to report performance on a scale score continuum for students with developmental disabilities.

► Population

The target population and calibration sample for the initial study were adults with developmental disabilities who were specifically categorized as having intellectual disabilities. The data for the calibration study was gathered from 460 adults with intellectual disabilities who were classified as having mild (n=173), moderate (n=171), severe (n=93), or profound (n=23) intellectual disabilities.

► Methods and Procedures

Instructors, assessors, and master trainers received careful training in scoring guidelines for two assessment series used, study procedures, and timelines from September 2000 through May 2001. Programs administered both the POWER performance assessment and the CASAS Life Skills tests (4A, 3A, and 2A, A or B) within a two-week period. Each of the POWER assessment items has five levels (0-4) of performance, ranging from needing intensive support (more difficult for students) to being independent (less difficult) while the Life Skills 4A to 2A tests are multiple-choice paper-and-pencil tests.

CASAS Life Skills Reading test scores are reported as scale scores on a one-parameter (Rasch Model) Item Response Theory (IRT) based scale. Unlike Classical Measurement Theory where a score has meaning only with respect to a reference or norm group, both student ability and item difficulty are on a common scale in IRT. Therefore, a test score can be interpreted with respect to the difficulty level of a test item — thereby giving meaning to the score in and of itself.

The 27 items in the POWER employability assessment were calibrated using a partial credit model. CASAS items on the Life Skills 2-4 A tests are multiple-choice and had been calibrated and placed on the CASAS Scale in the early 1990s.

► Results

Study results indicate that POWER performance levels (0-4) for each of the 27 employability basic skills can be located on the CASAS scale. This scaling of the 27 skills provides evidence that agencies can use the POWER performance assessment to report learning gains for students with developmental disabilities. Agencies can report performance gains using one uniform reporting system for all students. The POWER assessment system provides local and state agencies

an accountability tool for students who are difficult to assess adequately with a paper-and-pencil format.

In 2003 CASAS conducted a second calibration study for 23 basic skills related to community access, with 162 adults classified with intellectual disabilities. Skills include the areas of personal safety and public interaction, using streets and public buildings, and personal and community hazards. CASAS followed the same statistical procedures as with the employability assessment items, and the 23 items in community access were graded on a partial credit model. In 2005 CASAS conducted a third calibration study for 24 basic independent living skills with 466 examinees classified with intellectual disabilities following the same procedures. The skills include grooming, hygiene and health, basic community access, basic communication, and public interaction. The calibration process and data for all three sets of POWER assessment items are detailed in the CASAS Technical Manual.

► Funding Sources

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Contact CASAS at 1-800-255-1036 and www.casas.org for further information on the POWER assessment.

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