



ACE – Adjustable Competence Evaluation

Fact sheet

About ACE

The Adjustable Competence Analysis (ACE) is a cognitive ability test that measures competence in logical, analytical reasoning, or the so-called g-factor (Spearman), which refers to general mental ability

The test design

The test is a power test based on Computer Adaptive Testing (CAT) technology. This means that the test measures a person's maximum cognitive potential by automatically adjusting the level of difficulty of its questions to the test takers ability level.

Three cognitive domains, numeric, spatial and verbal, are available in the test. The person administering the test may freely choose to include a minimum of two of these domains, or to employ all three, in the test. A non-verbal version of the test for dyslexics is also available.

The test feedback report presents and explains the result in a clear manner showing both the total result and the selected cognitive domain scores in isolation. The report also shows the test taker's working speed.

It is possible to automatically forward the report to the test taker upon test completion.

Psychometric properties

Reliability and testing time

The test administrator can freely select which level of precision is desired:

High precision:

Reliability ≥ 0.90

(Avg. testing time: Appx. 50 min.

Max. testing time 75 min.)

Standard precision:

Reliability ≥ 0.80

(Avg. testing time: Appx. 15 min.

Max. testing time: 30 min.)

Validity

The test fits a so-called 2-parameter logistical (2-PL) model. This is strong evidence that the objective of the test, to measure the test takers general cognitive ability as a power test, is met.

ACE is a continuation of its precursor the MCA (Master Competence Analysis). Questions in the ACE test build on the same principles as the MCA. MCA questions were shown to function in the same way independently of the test subject's gender and organizational/educational level. In other words there was no Differential Item Functioning (DIF).

The MCA was also shown to correlate highly (reliability = 0.7) with the well established g-factor test Ravens Advanced Progressive Matrices (APM).

Norms

The latest norms are from 2010 (n = 4,768). The norm group has an equal gender split and represents subjects in various job categories and with varied educational backgrounds.

Languages

ACE is presently available in Danish, English, Finnish, German, Norwegian and Swedish.

Additional Features

Confirmation test

A short confirmation test can be issued to candidates in a supervised setting to confirm the accuracy of the result obtained in an online ACE test. The confirmation test has an average test length of approximately 7 minutes, and very high accuracy: Over 99% accuracy in identifying honest respondents, and 87% accuracy in identifying cheaters.

