Meta-Analysis of the Pattern of Change in IQ Scores over a Three-Year Period for Exceptional Children with LD, EBD, and MR

Hsin-Yi Chen  Jian-Jun Zhu  Frances Frey
Department of Special Education, National Taiwan Normal University  Department of Psychometrics, Psychological Corporation, U. S. A.

Abstract

The techniques of meta-analysis were used to arrive at a quantitative synthesis of the results of 39 samples, based on the retesting of exceptional children using the WISC-R or WISC-III over an average time interval of three years. The primary findings indicated that IQ scores do change over time, and that the patterns of change for FSIQ, VIQ, and PIQ vary as a function of disability group. On average, children with LD and MR scored 2 points lower on retested VIQ, while retested PIQ increases significantly for LD and EBD children. Moreover, several factors including age, ability level, retest interval, and test version were found to be meaningful moderating factors which affect the variability of effect sizes for learning-disabled children. Further implications were also discussed.

Keywords: exceptional children, meta-analysis, retesting, WISC-III, WISC-R

Introduction

For diagnostic reasons, clinical individuals are frequently administered the same evaluations multiple times. Longitudinal and repeated diagnosis is also frequently conducted in the educational field, especially for educating exceptional children where individualization is the main concern. Thus, issues concerning retesting are of great practical importance (Horton, 1992; Kaufman & Lichtenberger, 2002).

Among various measures, Intelligence Quotient (IQ) has been one of the most frequently repeated measures in educational settings. Current research, which reports significant test-retest correlations, generally indicates stability of IQ over a period of three years in exceptional children (Canivez & Watkins, 1998; Sattler, 2001). However, these high correlations merely reveal similar rank orders between two sets of scores, they provide little information about ability level change. This is unfortunate, because change in ability levels is of great interest and practical importance to educational diagnosticians.

Findings on directions and magnitudes of IQ score changes across studies remain controversial. Canivez and Watkins (1998)