**Title:** A Meta-Analysis of Reading Comprehension Interventions and Outcomes for Students with Intellectual Disabilities

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**Introduction:** The ultimate goal of reading is comprehension, including for students with intellectual disabilities (ID). Reading comprehension involves both recognizing printed text and understanding its meaning (Gough & Tunmer, 1986). Although individual interventions targeting reading comprehension have been tested with participants with ID, there has not been a systematic analysis of these interventions, leaving gaps in our knowledge of the most effective strategies and their relative impact. Thus, this study aimed to systematically analyze 1) the types of reading comprehension interventions that have been tested with students with ID, 2) how reading comprehension outcomes were measured, and 3) the effects of those interventions.

**Method:** The search procedures followed PRISMA standards (Liberati et al., 2009). It included four electronic databases (i.e., ERIC, PsycInfo, Dissertations & Theses (ProQuest), and Academic Search Premier) used search terms related to ID and reading (e.g., *mild/moderate/severe intellectual disability, reading intervention/ability).* To be included, studies needed to include 1) an intervention aimed at improving reading comprehension, 2) a dependent variable measuring reading comprehension, 3) participants with ID enrolled in academic programs Kindergarten through grade 12, and 4) the use of an experimental design with sufficient data to calculate effect sizes. Both group and single-case designs (SCD) were acceptable. After title and abstract screening and full article reviews, 17 studies met all inclusion criteria and were included in the meta-analysis. The first and second authors coded these studies for participant, design, intervention, and reading comprehension outcome variables independently. Interventions, specifically, were coded as: 1) cognitive-based strategy instruction, 2) meta-cognitive approaches, 3) background knowledge, 4) instructional enhancements, 5) foundational skills, and/or 6) other non-literacy strategies (e.g., Gersten et al., 2001).

**Results:** The meta-analysis included 543 students with a mean age of 12.8 years (range = 5.0-21.8) and a mean IQ of 58 (range = 30-88). Group design studies (*n* = 11) had sample sizes of 16 to 180 participants with ID, and SCDs (*n* = 6) had sample sizes of 3 to 11. Aim 1: Training in background knowledge was included in 11 studies, cognitive strategies in eight, instructional enhancements in six, foundational skill practice in five, and evidence-based non-literacy strategies, like direct instruction, were present in seven. Only one study included training in meta-cognitive strategies. Eleven studies incorporated two or more reading comprehension strategies. Aim 2: Reading comprehension was primarily assessed via questions about factual information in expository texts. Across all studies, 58% of measures were receptive, meaning participants could demonstrate reading comprehension without a verbal response. Group studies primarily measured reading comprehension with receptive, multiple-choice questions from standardized, norm-referenced assessments, and SCD studies mainly used expressive, open-ended questions. Aim 3: The 17 studies reported 25 effect sizes (group = 16, SCD = 9).The average weighted effect for group designs was 1.00 (SE = 0.31, *p* = .006) with significant heterogeneity, and the average standardized effect for SCD studies was 1.03 (SE = 0.19, *p* = .001), with minimal heterogeneity. Both designs remained significant after adjusting for clustering. We will also present individual study effect sizes and study characteristics that moderated outcomes.

**Discussion:** Both group and SCD intervention studies led to significant improvements in the reading comprehension skills of students with ID. This highlights the importance of providing high quality interventions for this population. However, our findings are somewhat limited by the relatively small body of literature on reading comprehension interventions for students with ID, at least compared to other disabilities. Future research should continue to test the efficacy of reading comprehension interventions to identify which interventions are most effective for whom.

**References**

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