CICT Results for Students with Weak Cognitive Skills

A Closer Look at Indiana Digital Intervention Grant Results

Clinton Central Community School Corporation and North Miami Community Schools each received funding through the Indiana Department of Education's Digital Intervention Grant to implement Comprehensive Integrated Cognitive Training (CICT®) during the 2025–26 school year.

Topline analysis of pre- and post-testing showed meaningful cognitive growth among students at both districts. At Clinton Central, where implementation was consistent with the recommended CICT protocol, students in grades 3–7 demonstrated substantial average gains across cognitive skills (17 to 25 percentile points on average across all ten cognitive skills assessed, depending on grade). At North Miami, where overall usage was lower, students who completed at least 20 sessions also demonstrated meaningful overall cognitive growth (10 percentile points on average across all ten cognitive skills assessed). All students at North Miami were 7th graders when they participated in the CICT program.

Those overall results raised another important question: **What happened to the students who began with the weakest cognitive skills?**

This question is especially relevant because schools typically turn to interventions to help students who are struggling. While average results across an entire student population are important, they can obscure what happens to the students who began with weak scores in individual cognitive skills.

To examine this question, we conducted a second analysis of the MindPrint pre- and post-test data. For each of ten cognitive skills, we identified students whose pre-test score was at or below the 30th percentile. The 30th percentile was selected because MindPrint identifies scores in this range as the "Support Range," indicating that a student is likely to need support in that skill beyond what is typically provided in the classroom.

For each of the ten cognitive skills measured, we identified students whose pre-test score fell within the Support Range (30th percentile or below). Only students with both pre- and post-test scores for that skill were included. We then compared their average percentile rankings before and after CICT. Figure 1 shows the results for Clinton Central. Figure 2 shows the analysis for North Miami Schools.

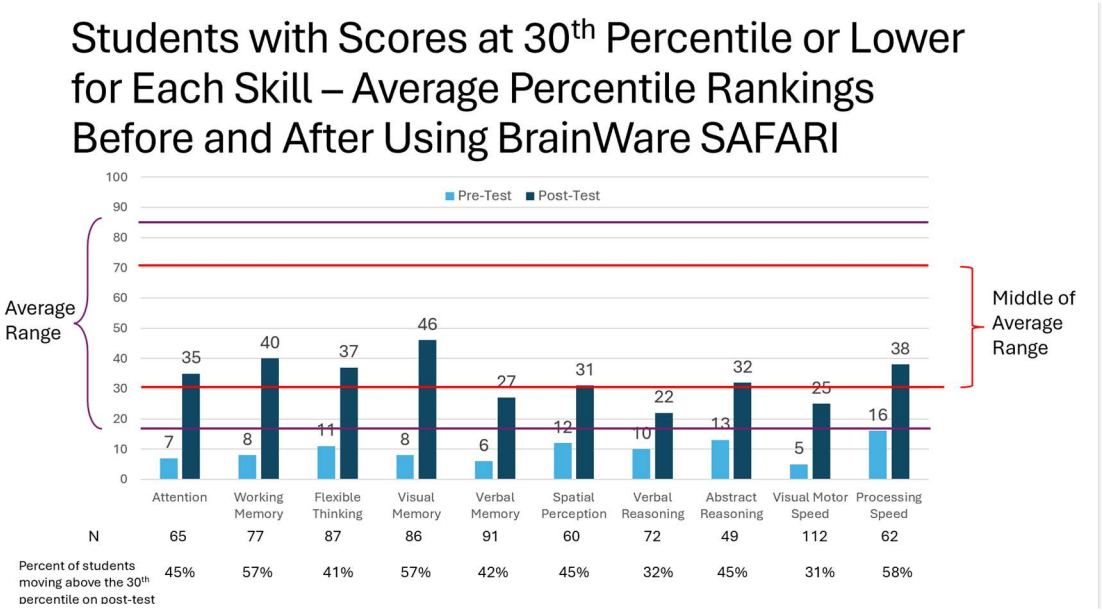

Figure 1. Pre- and post-test average percentile ranking scores for students scoring at the 30th percentile or lower for each skill. Clinton Central Schools.

At Clinton Central, students who began at or below the 30th percentile showed substantial average gains across all ten cognitive skills measured. Average gains ranged from 12 percentile points in verbal reasoning to 38 percentile points in visual memory. Sample sizes ranged from 49 to 112 students per skill.

Depending on the skill, 31% to 58% of students who began at or below the 30th percentile moved above the 30th percentile on the post-test.

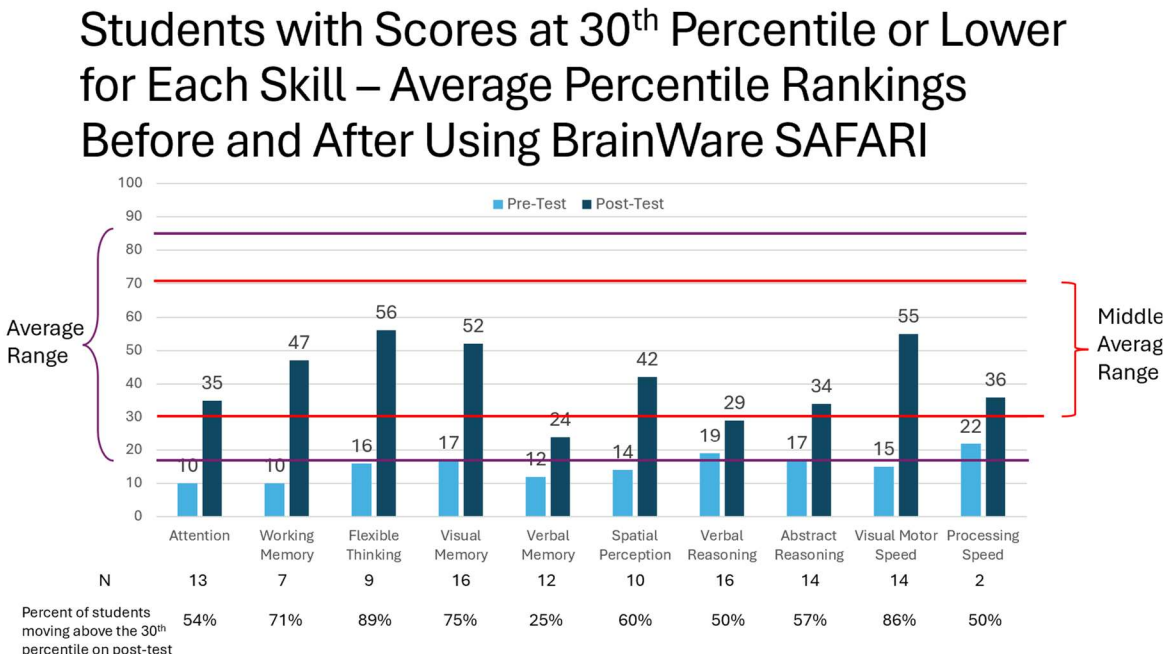

Figure 2. Pre- and post-test average percentile ranking scores for students scoring at the 30th percentile or lower for each skill. North Miami Schools.

North Miami's smaller student population resulted in smaller samples for individual cognitive skills, but the overall pattern was similar. Average gains among initially low-scoring students were observed across all ten skills, with particularly large gains in flexible thinking, visual memory and visual motor speed. Please note that the sample sizes for Working Memory (N=7), Flexible Thinking (N=9), and Processing Speed (N=2) should be interpreted cautiously.

Implications for Schools

Schools have traditionally responded to struggling students with more instruction, additional practice, tutoring, accommodations and other academic interventions. Those supports may be important, but they do not necessarily address weaknesses in the cognitive skills students rely on to learn.

These results suggest another possibility. Students who begin with weaknesses in attention, memory, flexible thinking, reasoning, processing speed and other cognitive skills can make meaningful gains when those capacities are systematically developed.

For schools, the implication is significant. Cognitive weaknesses need not simply be accommodated; the underlying capacities can be developed.

This expands the way we can think about helping students who struggle. The question is no longer only, “What additional support does this student need to succeed?” We can also ask, “What capacities can we strengthen so this student becomes a more capable learner?”

Comprehensive Integrated Cognitive Training adds a new dimension to intervention: rather than only changing what we provide to the learner, we can strengthen the capacity the learner brings to learning.