Overview of Computer-Aided Instruction


Computer-aided instruction includes the use of computers to teach academic skills and to promote communication and language development and skills. It includes computer modeling and computer tutors.

**Evidence**

This intervention category meets evidence-based practice criteria within the preschool, elementary, and middle/high school age groups for promoting academic/cognitive and communication skills with a total of six studies (four single-subject; two group).

**With what ages is computer-aided instruction effective?**

The evidence-base for CAI includes studies conducted with learners ranging from 3 years to 18 years of age. Within the domain of communication skills and in the area of academics and cognition, the research has shown success with early childhood through secondary age learners. In short, depending on the targeted skill and the needs/preferences of the learner, CAI may be used with nearly any age.

**What skills or intervention goals can be addressed by computer-aided instruction?**

Computer-aided instruction can be used effectively to address academic and communication/language skills. In the academic domain, evidence-based research focused on vocabulary and grammar. Within the communication domain, evidence-based studies targeted communicative functions and initiations. One study taught the recognition and prediction of emotions in others.

**In what settings can computer-aided instruction be effectively used?**

Studies that comprise the evidence-base were conducted in clinical or school settings and across preschool, elementary, middle, and high school age groups. Although no research studies identified the home as a context for intervention, application of computer-aided instruction in this setting seems logical.

**Evidence Base**

The studies cited in this section document that this practice meets the NPDC on ASD’s criteria for an evidence-based practice. This list is not exhaustive; other quality studies may exist that were not included.
Module: Computer- Aided Instruction (CAI)

Preschool


Elementary School


Middle/High School


Selected Additional References

Module: Computer-Aided Instruction (CAI)


