

## **Rapid Training-Driven Improvement In Language Ability In Autistic And Other PDD Children**

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Below is a report of major success in applying adaptive training procedures disguised as computer games to 5- to 12-year-old specifically language impaired children. Seven hierarchical exercises were designed to improve aural phonetic reception in these children, and to generalize their improved aural reception skills to all aspects of language. With training, speech reception was markedly clarified and language comprehension thereby improved.

In extension, training was applied to a population of 28 pervasively developmentally disabled (PDD) children (10 autistic; 18 NOS). Children worked at the same seven computer-guided adaptive training exercises for 100 min/day for 20-60 days. Most PDD children made major gains in acoustic and phonological reception and in language comprehension, as measured by highly significant progressions in training exercise performance.

Mean Z-score improvements in standard pre- vs post-training of these abilities (eg, Token Test, GFW) were about 1.75. In parallel, CELF and TOLD language battery quotients improved by 1 SD in about 80% of trained PDD children. Interestingly, large improvements in both receptive and expressive battery quotients were recorded; Z score changes averaged 1.3 for receptive LQs and 1.1 for expressive LQs, respectively.

These studies show that major gains in language abilities can be very rapidly achieved in at least most of these severely impaired children by computer-guided training targeting fundamental acoustic and speech reception abilities.

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