Comprehensive Test of Nonverbal Intelligence
(CTONI)

Publisher/Date:
- PRO-ED, Inc., 8700 Shoal Creek Blvd., Austin, TX 78756-6897. Published, 1996.

Purpose:
- Individually-administered test of nonverbal intelligence and cognitive skills for children ages 6-00 to 18-11.

Provides:
- Three composite nonverbal ability scores (Nonverbal Intelligence Quotient, Pictorial Nonverbal Intelligence Quotient, and Geometric Intelligence Quotient), based on six individual subtest scores.

Standardization Issues:
- 2,129 examinees from 23 states. Subgroup sizes ranged from 101 to 286 students per age group, with the lowest numbers occurring at ages 6 and 18, and highest occurring at ages 8, 9, and 10. The manual reports that the 1995 sampling is representative of the general population with regards to geographic region, gender, race, residence, ethnicity, SES and parent education. Children with certain disabilities who were “mainstreamed” were included in the overall norm sample (learning disability, cognitive disability, speech & language, and other handicap).

Reliability and Validity Issues:
- Test-Retest reliabilities reported the lowest reliability estimates but were still acceptable (.79-.94). The average of three different reliability estimates were good (.92-.96), and all measures of reliability had acceptably high coefficients. Reliability estimates did not vary by ethnicity, gender, or the indicated disability status. Validity evidence suggests the best interpretive score being the overall Nonverbal Intelligence Quotient (NVIQ). Content validity studies suggested the test as good in terms of little-to-no bias seen between six different groups (gender, African American/non-African American, ESL/non-ESL, American Indian/non-American Indian, and LD/non-LD). Specific evidence of concurrent validity, overall, was not impressive.

Additional Points:
- Performance of youngest children (age 6) represents the weakest normative set as well as some criticism of item presentation for young children.
• Validity studies with the WISC-III yielded good correlation (.81) though mean scores were not reported and it may be difficult to draw comparison conclusions.

• Instructions are given in the manual for both oral presentation and for use of pantomime.

• Beyond interpretation of the global score, further guidance into analysis of test profiles and discrepancies may be lacking, and the manual appropriately cautions that further research in this area is needed.

• Interpreting the CTONI in conjunction with other instruments is suggested.

• Using nonverbal estimates in isolation have been criticized to overestimate an individual’s functional ability in language-oriented environments, and examiners may wish to consider results from both language-loaded and language-reduced tests in estimating intellectual abilities, functional capabilities, and future performance.