



Q-interactive[®] and KTEA[™]-3

Whitepaper

Mark H. Daniel, PhD
Senior Scientist for Research Innovation

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Introduction

The Q-interactive research team determined that the Q-interactive and paper versions of KTEA–III subtests do not require studies of equivalence. The KTEA-III task analysis and Q-interactive study results of other tests suggest that the examinee interfaces do not cause a difference in performance results. (Technical reports describing the earlier studies may be found at www.helloq.com.)

With respect to examinee interfaces, most of the KTEA-III subtests use oral stimuli or visual stimuli (simple text and/or pictures). The images in Phonological Processing, Math Concepts & Applications, Reading Comprehension, Object Naming Facility, and Oral Expression have little detail and appear on the tablet as very similar to the stimulus book. On subtests that show text, the type size is the same or nearly the same as the stimulus book or stimulus card. The Wechsler Individual Achievement Test–third edition (WIAT–III; Wechsler, 2009) includes subtests with stimulus materials very similar to the KTEA-III Silent Reading Fluency, Letter-Word Recognition, Nonsense Word Decoding, Word Recognition Fluency, and Decoding Fluency subtests. Readability of WIAT–III Oral Reading Fluency, Word Reading, and Pseudoword Decoding subtests was equivalent across formats. Oral Reading Fluency also was evaluated for equivalence, which was demonstrated. These results are particularly significant because the text size of the WIAT–III materials was slightly reduced in the Q-interactive implementation.

Similarly, examiner interfaces for response capture and scoring resemble those that have already been evaluated and found equivalent on Q-interactive. On most subtests, the examinee gives a simple verbal or touch response. Several KTEA–III subtests have more complex response-capture demands. In Associational Fluency, the examinee says words as quickly as possible that belong to a semantic category. This task closely resembles the Delis-Kaplan Executive Function System (D-KEFS; Delis & Kaplan, 2001) Verbal Fluency subtest. Object Naming Facility and Letter Naming Facility also have an examiner interface design similar to the Wechsler Intelligence Scales for Children–fifth edition, (WISC–V; Wechsler 2014) Rapid Naming Literacy and Rapid Naming Quantity subtests, the D-KEFS Color-Word Interference subtest, and the NEPSY–II Inhibition subtest (Korkman, Kirk, & Kemp, 2007). All of these relatively complex examiner interfaces have been studied and found to produce equivalent results as the paper materials.

Finally, several KTEA–III subtests use the same paper response booklets as the paper version to ensure equivalence. These are Math Computation, Writing Fluency, Silent Reading Fluency, Math Fluency, Written Expression, and Spelling.