TiaPlus Fact Sheet

TiaPlus, the Swiss Army Knife for Test and Item Analysis

This document lists some of the characteristics, features and capabilities of the TiaPlus program.

Feature	TiaPlus
General:	
Graphical User Interface	√
Runs on Windows 98/NT4/2000/XP/Vista/Windows 7 or 8	√
Users manual, plus example test materials	√
F1 Help, What's this Help	√
Point & Click	√
Run time switchable language selection (English, Spanish, Dutch)	√
Input data file formats: ASCII fixed format (e.g., .TXT), .CSV, .XLS and .XLSX (Excel spreadsheets)	√
Uses an item- and test information database	√
Database is selectable	√
Can take information from a 'remote' TiaPlus database	√
No limits on number of persons or number of items (other that PC memory, free disk space, and time)	√
Up to 20 user definable subgroups	√
Up to 21 user definable subtests	√
Item types: Multiple item types (MC(1 answer correct), MC(more answers correct, dichotomous item score), MC(more answers correct, item score is number correct), Open ended question, Scale item)	√
User selectable way of 'missing' handling	√
Can work with 'multiple item keys'	√
Can work with 'calamity' items	√
Can 'disable' items (ignore in analysis)	√
All item characteristics user definable at item level (like key, item answer recoding options, weight, etc.)	√
Can use positive and negative item weights	√
Item labels can be imported from disk file (no retyping)	√
MC item keys can be imported from disk file (no retyping)	√
Item information table is user configurable (column order, column widths, columns sortable)	√
Graphical display of Empirical Item Response Curves	√
Creates a dichotomous score file (overall).	√
Create a dichotomous score file per subgroup-subtest combination.	√
Factor analysis (both numerical and graphical)	√
Per (sub)test creates a polychoric item intercorrelation matrix	√
DIF (item bias) analysis, both numerical (Mantel-Haenszel) and graphical	√
Creates a Variance-Covariance matrix per (sub)test	√
Item statistics:	
% Omitted and number of Missing values	√
Max and Mean item score	√
Item standard deviation	√
RSK (standardised item standard deviation)	√
P-value	√
90% Confidence limits on P-values	√
Rit, item test correlation (if required with Henrysson correction)	√

Feature	TiaPlus
95% Confidence limits on Rit values	√
Rir, item rest correlation, Rar correlations	√
Flags items with Rar >= Rir, Rir<= 0 or Rar >= 10	√
Alpha-rest coefficient	√
Effective weight	√
Difference between effective- and nominal weight	√
Relative score frequencies (unweighted, in %)	√
Can calculate the correlation of item scores and criterion scores	√
Test statistics:	
Number of persons in test	√
Number of items (selected) in test	√
Minimum test score	√
Maximum test score	√
Average test score	√
Standard deviation of the test scores	√
Average P-value	√
Std. Error of Measurement (in test scores), using the best reliability index	√
Average Rit	√
Estimated Std. Error of Measurement at specific score levels	√
Coefficient Alpha (test reliability estimate)	√
Standard error on Coefficient Alpha	√
90% Confidence limits on Coefficient Alpha	√
Estimated Coefficient Alpha for similar test with norm length 40 items (Spearman-Brown)	√
Guttman's Lambda 2 coefficient	√
GLB coefficient (Greatest Lower Bound - test reliability estimate), raw value	√
Asymptotic GLB coefficient (Unbiased value)	√
Cut-off score and % persons failing the test	√
% and number of misclassifications (using Alpha and / or GLB, and from a test - parallel test perspective and from a observed score - true score perspective	√
Other:	
Can create a Score Frequency Distribution table (Abs. Freq, Abs %, Cum. Freq., Cum. %, plus norms scale and/or grade information, if requested)	√
Score Frequency table also contains Z-scores, percentile ranks, percentile scores, the four moments, skewness and kurtosis values	√
Can create a (graphical) Score Frequency distribution Histogram	√
Can create a Scores table (for the test and all subtests, incl. norms scales values and grades equivalents, if requested)	√
Analyses user definable subtests	√
Calculates subtest intercorrelations	√
Analyses user definable subgroups	√
T-tests on test mean scores between subgroups (w/wo pooling)	√
Empirical Item Response function table	√
Scores to Grades transformations and Norms scales	
Can transform total test scores to US Letter Grades (user selectable score regions for F - A)	√
Can transform total test scores to Dutch numerical grades (1.0 - 10.0), two integer arithmetic algorithms (strictly linear, and 'doglegged'). Cut-off score point user selectable	√
Can convert test scores to T-scores	√
Can convert test scores to C-scores	√
Can convert test scores to Stanines	√
Can convert test scores to IQ-scores	√
User definable norms scale conversion (its mean and standard deviation being user selectable). Capability to normalize this scale	√