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Test Validation & Analysis Program™

(TVAP™)

Biddle Consulting Group, Inc. has funneled over 20 years of test development and EEO litigation experience into the Test Validation & Analysis Program™ (TVAP™) software to provide employers with an effective tool for developing and validating fair written tests. Because written tests are typically effective selection devices, yet also generate adverse impact, they are one of the most used and *litigated* selection devices. The TVAP software helps employers develop and validate tests that are effective and fair, and, after administration, the TVAP software provides an employer with the tools to evaluate test items for bias and establish cutoffs that *minimize adverse impact*.

The test validation and analysis process once required the use of several costly and complex statistical software programs.

Now the process is seamlessly integrated into the easy-to-follow TVAP software.

Standard Feature Comparison Between TVAP and Other Software Programs				
Feature	TVAP Software	SPSS ¹	EEO/AAP Software ²	Testing Software ³
Written Test Validation Review				
Test Validation Survey for SMEs	X			
Evaluation of Test Validity (based on SME ratings)	X			
Angoff Cutoff Creation & Rater Analysis				
Rater Reliability Matrix	X	X		
Overall Reliability by Rater	X			
Overall Rater Panel Reliability	X	X		
Outlier Raters	X			
Overall Critical Score	X			
Test Item Analysis				
Point Biserial	X	X		X
Item Difficulty	X	X		X
Differential Item Functioning	X			X
Overall Test Analysis				
Reliability Using Cronbach's Alpha & KR-21	X	X		X
Test Mean	X	X		X
Test Standard Deviation	X	X		X
Classical Standard Error of Measurement	X			X
Conditional Standard Error of Measurement	X			
Decision Consistency Reliability	X			
Kappa Coefficient	X	X		X
Test Cutoff Determination & Analysis				
Calculating Final Cutoff Options	X			
Cutoff Results by Gender/Ethnicity	X			
Adverse Impact Analyses	X		X	

¹ Version 10.0

² Software designed for completing affirmative action plans and related EEO analyses

³ Typical software programs for completing psychometric analyses

TVAP™: Test Validation & Analysis Program™

Advanced Features. Simple User Interface.

TVAP's step-by-step process includes all of the steps necessary to content validate and analyze a written test . . .

Novice Users: TVAP includes a step-by-step walk through the test validation and analysis process. Complex statistical calculations are reduced to color-coded cells making interpretation simple.

Advanced Users: TVAP seamlessly integrates the entire process into one program and, because the program operates in Microsoft® Excel®, integrating custom features is a simple process.

TVAP™ PROGRAM INCLUDES

- Installation CD with Highly-Integrated TVAP Excel Workbook Programs
- Test Validation Survey (for SMEs to rate test items)
- Instruction Manual for Completing the Test Validation Survey
- Test Item Writing Guidelines
- Instructions for Conducting an Effective Angoff Panel for Setting Cutoff Scores

SYSTEM REQUIREMENTS

- CD-ROM drive for installation
- PC with Pentium III
- 256 MB RAM minimum
512 MB RAM or more recommended
- 150 MB available hard drive space
- Super VGA with:
800x600 resolution minimum
1024x768 or higher recommended
- Windows 98/ME/2000/XP
- Microsoft Office 2000 or higher

Subject-Matter Experts (SMEs) rate test items using the TVAP survey
Survey data is then input into TVAP

TVAP evaluates SME test item ratings using validation criteria
Surviving test items are retained

TVAP evaluates SME ratings for reliability and "outliers" then calculates critical score (Angoff Cutoff Score)

Administer Test and Import Data Into TVAP

TVAP conducts item analysis, item bias evaluation, and calculates three cutoff score options to address the **U.S. v. South Carolina** Supreme Court Ruling

TVAP analyzes reliability, effectiveness, and adverse impact of each of the three cutoff score options and provides charts to review results by various groups

Also includes new statistical procedures recommended by the latest professional testing **Standards (1999):**

Decision Consistency
Reliability

■
Conditional Standard
Error of Measurement

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TVAP™: Test Validation & Analysis Program™

Software that helps organizations address critical employment test validation criteria

Biddle Consulting Group, Inc. has funneled its experience in working as expert consultants or witnesses on over 170 EEO-related court cases since 1974 into a systematic and defensible process for validating and analyzing written tests.

In order to successfully defend a written test that has been challenged, an employer must show that the test is “job related and consistent with business necessity” by conducting a validation study addressing the multitude of relevant guidelines, standards, principles, and court cases.

TVAP assists employers in the validation process by leading them through a step-by-step validation process that has been designed to address the applicable testing standards, guidelines, and legal precedence. Conducting a validation study can be very complex and expensive. Employers can easily lose an EEO challenge because the study failed to address one or more of the required critical components.

TVAP offers a streamlined roadmap through a validation process that integrates steps and analyses that have been previously endorsed by the courts. Many of the analyses and steps in TVAP are taken directly from these testing standards and guidelines, and have been included in the program along with easy-to-follow tips and instructions that make typically complex hurdles simple to overcome.

TVAP is the first of its kind. No other single program offers human resource professionals so much useful information when validating tests and analyzing test results.

TVAP : Testing Standards Matrix

	UNIFORM GUIDELINES (EEOC, 1978)	STANDARDS (APA, 1999)	PRINCIPLES (SIOP, 1987 and 2002 draft)	COURT CASES
Validation Standards*				
Validation Survey Questions #1–5		Chp 1, p. 11	2002 Draft, p. 8	(1), (2)
Validation Survey Question #6	Sect. 5H, 14C7, 15C7	Chp. 14, p. 157	2002 Draft, pp. 73, 81	(1), (2)
Validation Survey Questions #8–10	Sect. 14C4–5, 15C4–4	Standard 14.9–10	2002 Draft pp. 8, 33–35	(1), (2)
Validation Survey Questions #11–14	Sect. 14C1, 5F	Chp. 14, p. 155		(1), (2)
Rater Analyses		Standard 1.7	2002 Draft pp. 16, 79	(1), (2)
Test Analysis Standards				
Critical Score Determination	Sect. 5H, 14C7, 15C7	Standard 14.17	2002 Draft, pp. 73, 81	(1), (2)
Test Item Analyses	Sect. 14C7	Chp. 2	2002 Draft p. 9	
Differential Item Functioning (DIF)	Q&A 70	Chp. 7	2002 Draft, pp. 52–53	
Reliability Analyses	Sect. 14C5, 7; 15C5	Chp. 2	2002 Draft, pp. 27, 40	(3)
Decision Consistency Reliability		Chp. 2, pp. 29–30 and Standard 14.15		
Test Mean & Standard Deviation	Sect. 15C5	Chp. 2, Chp. 4	2002 Draft, p. 74	
Conditional SEM		Standard 2.2, 2.14, and 2.15		
Adverse Impact Analyses	Sect. 3B, 4D; Q&A 10–14	Chp. 7	2002 Draft, p. 10	(4), (5)

- (1) *U.S. v. South Carolina*
- (2) *Contreras v. City of Los Angeles*
- (3) *Guardians Association of the NY Police Department v. Civil Service Commission*
- (4) *Clady v. County of Los Angeles*
- (5) *U.S. v. Commonwealth of Virginia*

* TVAP includes a comprehensive SME survey designed to address many of the relevant guidelines, standards, and principles.. This survey is used throughout the TVAP process.