

Table V

Test Construction

The majority of states with assessment programs have employed formal procedures to avoid bias in test items for both race and sex. More than half of the states surveyed reported using pretested and statistically analyzed items. Fourteen states reported tests that use item calibration related to item response theory (IRT). This is a significant development of the past several years that indicates growing acceptance of the values of IRT in testing construction. Some of these states used IRT calibration on only part of the tests used.

The movement toward IRT and the introduction of matrix sampling in a few states seemed to be the chief changes in test construction technology occurring in state programs.

Very little change was reported in norming practices, except for some movement toward criterion referenced testing (CRT) measurement in the 1970s and a return to norm-referenced testing (NRT) or a combination of both CRT and NRT in the 1980s. Pennsylvania reported a move from district to school norming information.

Few changes in reporting practices were noted except for references to "more sophisticated" forms of reporting. This probably refers to the increased use of variables as discussed under Table IV for both students and schools in the reporting and interpretation of test results, and the continuing trend away from reporting grade level equivalents.

state Assessment

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State	Formal Procedure. to Avoid Bias		Test Construction Items pretested, items analyzed	Construction Items calibrated using IRT	Significant Changes Since Program Began in:		
					Construction	Norming	
Alabama	Y	Y	N	Y	Switched CAT to SAT in 1984	N	Did away with grade equivalence in 84, 85
Alaska	Y	Y	Y	N	N	Expected in 85/86	1985 - Start updating my district for comparative purposes
Arizona	Y	Y	Y	N	Y	Y	Changing from CAT to present tests.
Arkansas	Y	Y	Item selection part of the test selection	Y : With MAT	Y	Y	Y: Expanded With new test and norms
California	Y	Y	Y	Y	1972 matrix sample and state developed tests	N	Percent correct to scale scores 3,6,9
Colorado state program							
Connecticut	Y	Y	Y	n sample	Matrix sampling added in 1981	N	Used business program to set performance standards on Business Exam only - 1984
Delaware	Y	Y	Y	Y	Y	Y	Y
	Note CTBS manual for specification				Started with CAT and last year switched to CTBS: CTBS uses IRT and CAT did not.		
District of Columbia	N	N	or CAT	N	N	N	N
					(me\ t to change the N.R.T.)		
Florida (Combined with M.C. under SSAT 1 2 note M.C. comments.)	N	N	N	N	N	N	N
Georgia	Y	Y	Y	Y: Rasch	Y: Switched to IRT calibration	N	Y: Added scale scores to scoring system.
	Bias review panel and measurement statistics						

SOURCE: Data Compiled for the Office of Technology Assessment by Northwest Regional Educational Laboratory, 1985.

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State	Formal Procedures to Avoid Bias		Test Construction		Significant Change Since		
	Racial	Sex	Items analyzed	Items using IRT	Construction	Nothing	Reporting
Hawaii	Y	Y	Commercial tests		N	N	N
Idaho	Y	Y	Y	Y	Y	Y	N
	Done through published standardization process.				Test publisher updating from 82-85	norm	
Illinois	Y	Y	Y	Y: Logist		Y	Y
	Items are always reviewed by committees even if they are technically appropriate. Logist analysis is formal procedure.						
Indiana	Y	Y	Y	Y	1: 1984 change to competency testing program has a 1-year cycle.	N	N
Iowa	No state program						
Kansas	N	N	Y	N	N	N	N
Kentucky	Y	Y	Y	N	1985 test	NR and CRT in 1985	
					[Approach to whole assessment changed in 1985]		
Louisiana	Y	Y	Y	N	N	N	N
Maine	Y	Y	Y	N	N	N	N
Maryland	Y	Y	Y	N	N	N	N
Massachusetts	No state program						
Michigan	Y	Y	Y	N	N	In 1972 switched to CRT	N
Minnesota	Y	Y	Y	N	Test analysis has become more psychometric over the years.	Y	More sophisticated

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State	Formal Procedures to Avoid Bias		Test Construction Items pretested, items analyzed	Terms calibrated using IRT	Significant Changes Since Program Began in:			
	Racial	Sex			Construction	Norming	Reporting	
Mississippi	Y	Y	N	N	N	N		N
Missouri	N	N	Y	N	N	Random sampling in 1984/85		N
1905 test anticipated to look at item difficulty, score reporting, etc.								
Montana - No state program								
Nebraska - No state program								
Nevada - No state program								
New Hampshire - No state program								
New Jersey - No state program								
New Mexico	NA	NA	NA	NA	NA	NA		Y
New York	Y	Y	Y	Reading items are calibrated using an IRT model.	N	N		N
Exam committee								
North Carolina	Y	I	Y	Y	Current CAT used IRT	Depends on change in test edition, L.C. test publisher may change test with each new edition: in writing and science new tests constructed - no norming,		N
By test publisher; for science no; for writing a general committee that developed prompts looked at and did not find bias								
North Dakota - No state program								
Ohio - No state program								
Oklahoma - No state program								
Oregon	N	Y		Y	N	First time have normed test.		N
Pennsylvania	Y	Y	Y: Field tested	N	techniques looking at bias, item selection technique and item writing techniques.	Y: Moved from district basis to school basis.	(: More comprehensive, better layout.	
look at items and how ethnic groups respond; items read by different groups.								

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State	Formal Procedure to Avoid Bias?		Test Construction		Significant Changes Since Program Began in:		
			Items pretested and analyzed	Items calibrated using IRT	Construction	Norming	Reporting
Rhode Is 1 and			Y	N	N	Y: 1975 [new program will use standardized test)	Will improve.
South Carolina	Y	Y	Not appropriate -- using standardized test		Changed test	N	More sophisticate
South Dakota	NA	NA	NA	NA	State test is in its first year. This year it is not mandatory. (1985-86 it will be). Test is thus being given to non-random non-stratified sample of the 21,000 eligible pupils.	NA	State test is in a first year. This year it is not mandatory. (1985-86 will be). Test is thus being given to a non-random non-stratified sample of the 21,000 eligible pupils.
Tennessee - No interview							
Texas - No state program							
Until	Y	Y	Y	N	N		N
No state program							
Virginia	NA	NA	NA	NA	NA	NA	NA
Washington	Y	Y	Y	N	N	N	N
West Virginia	NA	NA	NA	NA	NA	NA	NA
Wisconsin - Not available for interview							
Wyoming	Y	Y	Y	Y	N		N