



FOR THE ACADEMIC YEAR 2010–2011

A Collaborative Effort of
the Texas Education Agency
and Pearson



Table of Contents

List of Tables.....	xii
List of Figures	xiv
List of Appendices	xv
About the Technical Digest	xvi
Chapter 1 Historical Overview of Assessment in Texas.....	1
Assessment Provisions in State Law and Administrative Rule	7
Texas Education Code	7
Texas Administrative Code	7
Curriculum Guidelines for Assessment	8
Chapter 2 Building a High-Quality Assessment System	10
Test Development Activities.....	11
Groups Involved.....	13
Student Assessment Division	13
Pearson	13
ETS	13
Questar Assessment, Inc.....	13
Tri-Lin.....	13
Texas Educators	13
Item Development and Review	14
Item Guidelines.....	14
Item Writers.....	14
Training	15
Contractor Review	15
TEA Review.....	15
Educator Committee Review	15
Item-Review Committees.....	16
Pilot Testing	17
Field Testing and Data Review.....	18
Sampling Procedures.....	18
Data-Review Committees	19
Statistical Analyses	19
Item Bank.....	20
Test Construction	20
Security	21
Test Security Supplement	21
14-Point Plan.....	21





Manuals	21
Incident Tracking	22
Security Violations	22
Light Marks Analysis.....	22
Quality-Control Procedures.....	24
Reporting of Test Results.....	24
Ongoing Quality Control.....	28
Performance Assessments.....	29
Scoring Facilities	30
Scoring Staff	30
Prompt Development, Field Testing, and the Rangefinding Process	31
Reader Training Process.....	31
The ePEN System.....	32
Training Procedures	33
Validity System.....	34
Nonscorable Responses.....	34
Resolution Procedures	34
Data Entry Procedures and Resulting Reports	35
Score Reliability and Validity Information:TAKS, TAKS (Accommodated), and TAKS–M.....	35
Field-Test Response Scoring	36
Appeals	36
Chapter 3 Standard Technical Processes	37
Overview	37
Standards	38
Scaling	40
Equating	41
Reliability.....	42
Validity.....	42
Measures of Student Progress	43
Sampling	44
Technical Details and Procedures.....	44
Standards	44
Modified Item-Mapping Method	44
Other Methods Used in Texas.....	43
Performance Level Descriptions.....	46
Scaling	47
Equating	49



Rationale	50
Pre-equating	51
Post-equating	52
Field-Test Equating	53
Matched Sample Comparability Analysis.....	55
Reliability.....	55
Internal Consistency Estimates	55
Interrater Reliability.....	57
Measurement Error.....	57
Validity.....	60
Evidence Based on Test Content.....	60
Evidence Based on Response Processes.....	61
Evidence Based on Internal Structure	62
Evidence Based on Relationships to other Variables.....	62
Evidence Based on Consequences of Testing	63
Measures of Student Progress	63
Multilevel Models.....	64
The Transition Table Approach.....	65
Sampling	66
Key Concepts of Sampling.....	66
Reasons for Sampling.....	66
Sampling Designs	67
Chapter 4 Texas Assessment of Knowledge and Skills (TAKS), TAKS (Accommodated), and Linguistically Accommodated Testing (LAT).....	69
Overview	69
TAKS	69
Spanish TAKS.....	70
TAKS (Accommodated)	70
Linguistically Accommodated Testing (LAT)	70
Testing Requirements for Graduation	71
Test Development.....	72
Item Development Approach for Spanish TAKS	72
Spanish-English TAKS Alignment	72
Test Administrations.....	73
Overview	73
Training	74
District and Campus Coordinator Manual	75
Make-up Testing	75



Out-of-District Testing	75
Out-of-School Testing.....	76
Testing Accommodations	76
Overview	76
Accommodations Categories	77
Linguistic Accommodations	77
Dyslexia Accommodations—TAKS Reading.....	78
Oral Administration.....	79
Students with Visual Impairments.....	79
Accommodations Manual.....	80
Educational Materials Required for Testing—TAKS, TAKS (Accommodated)	80
Online Testing.....	81
TAKS Exit Level	82
Student Success Initiative	83
The Grade Placement Committee.....	83
ELLs	85
Scores and Reports	85
Description of Scores.....	85
Report Formats	86
Standard Reports	86
Optional Reports	89
Parent Brochures	91
Standard Setting.....	92
Scaling	94
Scale Score.....	94
Vertical Scale Score.....	94
Horizontal Scale Score.....	96
TAKS Results for Individual Students	98
Groups of Students.....	99
Equating	100
Overview	100
Pre-Equating	100
Post-Equating	100
Field-Test Equating	101
Reliability	101
Internal Consistency	101
Classical Standard Error of Measurement	102
Conditional Standard Error of Measurement	102



Classification Accuracy.....	103
Validity.....	103
Evidence Based on Test Content.....	103
Evidence Based on Response Processes.....	104
Evidence Based on Internal Structure	105
Evidence Based on Relationships to Other Variables	106
Evidence Based on Consequences of Testing	106
Reliability and Validity of Performance Assessments Used On TAKS and TAKS (Accommodated).....	107
Measures of Student Progress	108
Sampling	113
TAKS Field-Test Sampling Process.....	113
Chapter 5 TAKS–Modified (TAKS–M)	117
Overview	117
TAKS–M Participation Requirements	118
Test Development.....	119
Training	120
Test Administrations.....	120
Testing Accommodations	121
Student Success Initiative	121
Scores and Reports	122
Description of Scores.....	122
Report Formats	123
Standard and Optional Reports for TAKS–M	123
Parent Brochure.....	123
Standard Setting.....	124
Scaling	124
Scale Score.....	124
Equating	125
Reliability.....	126
Internal Consistency.....	126
Classical Standard Error of Measurement	126
Conditional Standard Error of Measurement.....	126
Classification Accuracy.....	127
Validity.....	127
Evidence Based on Test Content	127
Evidence Based on Response Processes.....	128
Evidence Based on Internal Structure	129
Evidence Based on Relationships to Other Variables.....	129



Evidence Based on Consequences of Testing	130
Measures of Student Progress	130
Sampling	132
Chapter 6 TAKS–Alternate (TAKS–Alt)	133
Overview	133
TAKS–Alt Participation Requirements.....	134
ARD Manual	135
Test Development.....	135
Complexity Level of Assessment Tasks.....	136
Training	137
TAKS–Alt Online Training and Qualification	138
Module 1: Overview of the TAKS–Alt Assessment.....	138
Module 2: Implementing the TAKS–Alt Assessment.....	138
Module 3: The TAKS–Alt Online Instrument.....	138
Module 4: Beyond the Basics	139
Test Administrations.....	139
Testing Accommodations	139
Student Success Initiative	140
Scores and Reports	140
Scoring TAKS–Alt Assessments	140
Scoring Steps for TAKS–Alt	140
Report Formats	142
Standard and Optional Reports	142
Parent Brochure.....	143
Standard Setting.....	143
Scaling	143
Equating	148
Reliability.....	148
The Interrater Reliability Study.....	148
Validity	151
Evidence Based on Test Content.....	151
Evidence Based on Response Processes.....	153
Evidence Based on Internal Structure	155
Evidence Based on Relationships to Other Variables.....	155
Evidence Based on Consequences of Testing	156
Measures of Student Progress	157
Chapter 7 Texas English Language Proficiency Assessment System (TELPAS)	161
Overview	161



Test Development and Administration	162
Historical Overview	162
TELPAS Reading Tests for Grades 2–12.....	163
TELPAS Holistically Rated Assessments.....	164
Holistic Rating Training	165
Administration Procedures	165
Scores and Reports	166
Language Domain Scores.....	168
TELPAS Comprehension and Composite Scores.....	169
Use of Results.....	171
Standard and Optional Reports	171
Parent Brochures	171
Interpreting TELPAS Reports.....	171
Audits.....	172
Standard Setting.....	172
Scaling	173
Vertical Scale Score.....	173
Scale for Holistically Rated Assessments	174
Scale for Composite Scores	174
Equating	175
Reliability.....	175
Internal Consistency	175
Classical Standard Error of Measurement	176
Conditional Standard Error of Measurement.....	176
Classification Accuracy.....	176
Interrater Reliability.....	176
Validity.....	177
Evidence Based on Test Content.....	178
TELPAS Multiple-Choice Components	178
TELPAS Holistically Rated Components	180
Evidence Based on Response Processes	181
Evidence Based on Internal Structure	181
Evidence Based on Relationships to Other Variables	182
Evidence Based on Consequences of Testing.....	186
Sampling	186
Chapter 8 End-of-Course Assessments.....	189
Overview	189
EOC Participation Requirements	191
Test Development.....	191



Test Administrations.....	192
Testing Accommodations	193
Scores and Reports	193
Description of Scores.....	193
Report Formats	194
Standard Reports	194
Additional Reports in 2010–2011.....	194
Standard Setting.....	195
Scaling.....	196
Scale Score.....	196
Raw Score.....	196
Equating	197
Field-Test Equating	197
Comparability Analyses	197
Reliability.....	198
Internal Consistency	198
Classical Standard Error of Measurement	198
Validity.....	199
Evidence Based on Test Content.....	199
Evidence Based on the Response Process.....	201
Evidence Based on Internal Structure	201
Evidence Based on Relationship to Other Variables.....	202
Evidence Based on the Consequences of Testing	202
Measure of Student Progress	202
Sampling	203
EOC Sampling Process.....	203
Chapter 9 Transition to the State of Texas Assessments of Academic Readiness (STAAR) Assessments	207
Overview	207
Timeline for STAAR Development and Implementation.....	208
Grades and Subject Assessed	208
STAAR Spanish and STAAR L.....	209
STAAR Modified.....	210
STAAR Alternate.....	210
Testing Requirements for Graduation	210
Phase-in of STAAR Graduation Requirement.....	210
Plan for Measurement of Student Progress.....	211
Test Design	212
Item Development and Review	213

Field Testing.....	214
Testing Accommodations	214
Performance Standards.....	215
Chapter 10 Resources	217
Overview	217
Texas Student Assessment Division Website.....	217
Student Portal Available Through Texas Assessment Management System	218
Information Booklets	219
TAKS Information Booklets	219
Educator Guide to TELPAS.....	221
Study Guides	221
Procedural Manuals.....	222
Accommodations Manual.....	222
ARD Manual	222
GPC Manual.....	222
LPAC Manual	223
District and Campus Coordinator Manual	223
District and Campus Coordinator Manual Supplement	223
Released Tests.....	224
Interpreting Assessment Reports.....	224
Bibliography	225





List of Tables

- Table 1. Item Review Guidelines
- Table 2. Classification Accuracy for Met Standard and Did Not Meet Standard
- Table 3. 2010–2011 TAKS Assessments
- Table 4. 2010–2011 TAKS Online Test Administrations
- Table 5. Current Performance Standards for 2011 for TAKS English Reading and Mathematics
- Table 6. Current Performance for 2011 for TAKS Spanish Reading and Mathematics
- Table 7. Vertical Scale Score Transformation Constants for the 2011 TAKS English Tests
- Table 8. Vertical Scale Score Transformation Constants for the 2011 TAKS Spanish Tests
- Table 9. Horizontal Scale Score Transformation Constants for the 2011 TAKS English Tests
- Table 10. Horizontal Scale Score Transformation Constants for the 2011 TAKS Spanish Tests
- Table 11. Summary of Scorer Agreement (Reliability) for 2011 TAKS and TAKS (Accommodated)
- Table 12. Summary of Validity Packet Results for 2011 TAKS and TAKS (Accommodated)
- Table 13. Subjects, Grades, and Language Versions Created and Reported for 2011 TPM
- Table 14. English TAKS Classification Accuracy for the TPM from 2010 to 2011
- Table 15. Spanish TAKS Classification Accuracy for the TPM from 2010–2011
- Table 16. Cross-language TAKS Classification Accuracy for the TPM from 2010 to 2011
- Table 17. English Classification Accuracy for the TPM from 2009 to 2011
- Table 18. Spanish TAKS Classification Accuracy for the TPM from 2009 to 2010
- Table 19. Sampling Summary for 2011 TAKS Stand-Alone Field tests
- Table 20. 2010–2011 TAKS–M Assessments
- Table 21. Scale Score Transformation Constants for TAKS–M
- Table 22. TAKS–M Classification Accuracy for the 2010 TPM
- Table 23. 2010–2011 TAKS–Alt Assessments
- Table 24. Descriptive Statistics for Operational Data—Overall
- Table 25. Number of Assessment Tasks by Complexity Level
- Table 26. Frequency Distribution for the Complexity Level 3 Essence Scores
- Table 27. Frequency Distribution for the Complexity Level 2 Essence Scores
- Table 28. Frequency Distribution for the Complexity Level 1 Essence Scores
- Table 29. Frequency Distribution of Overall Complexity Level Combination



- Table 30. Overall Correlations among Complexity Level, Demonstration of Skill, Level of Support, and Generalization of Skill
- Table 31. Correlations between First and Second Ratings
- Table 32. Percentages of Perfect Agreement between First and Second Ratings
- Table 33. Frequency of Responses to Audit Judgment Form Items
- Table 34. Overall TAKS–Alt Correlation between Subject Scores
- Table 35. Overall TAKS–Alt Correlation between Total Score and Gender
- Table 36. Overall TAKS–Alt Correlation between Total Score and Ethnicity
- Table 37. TAKS–Alt On-Track Classification Results for 2010–2011, All Students Met Standard
- Table 38. Summary of 2007–2008 TELPAS Reading Test Revisions
- Table 39. Grade Clusters for 2–12 Reading
- Table 40. Weights of the Language Domains in TELPAS Composite Ratings
- Table 41. Sample Calculation of Composite Results
- Table 42. Approved Raw and Scale Score Cut Scores from 2008 TELPAS Reading Proficiency Level Setting (Online Versions)
- Table 43. Vertical Scale Score Linking Constants for TELPAS Reading Tests
- Table 44. Staged Linguistic Accommodation Test Design
- Table 45. 2010 TAKS* Reading Performance by TELPAS Reading Proficiency Rating for Students Who Participated in Both Assessments in Grades 3–8
- Table 46. 2011 TAKS Reading/ELA* Performance by TELPAS Reading Proficiency Rating for Students Who Participated in Both Assessments in Grades 9–11
- Table 47. EOC Assessments—Implementation Plan
- Table 48. EOC Assessments Administered Online and On Paper in 2010–2011
- Table 49. Sampling Summary for 2011 EOC Assessments
- Table 50. STAAR Assessments for the 2011–2012 School Year
- Table 51. Phase-out of TAKS and Phase-in of STAAR EOC
- Table 52. Timeline for Implementing and Reporting Progress for STAAR Assessments.
- Table 53. Quick Guide to Online Resources



List of Figures

- Figure 1. Test Development Process
- Figure 2. The Standard-Setting Process
- Figure 3. Relationship between Raw Scores and Scale Scores at the Performance Standards
- Figure 4. Equating Process
- Figure 5. TAKS Information Booklets

List of Appendices

Appendix A

TAKS Sample Light Marks Analysis Report

Appendix B

TAKS Statistical Tables

Appendix C

TAKS–M Statistical Tables

Appendix D

TAKS–Alt Statistical Tables

Appendix E

TELPAS Statistical Tables

Appendix F

EOC Statistical Tables





About the Technical Digest

The *Technical Digest* is designed to provide information to Texas testing coordinators, educators, researchers, and interested citizens about the development procedures and technical attributes of the state-mandated assessment program. This digest does not include all the information available about the assessment program in Texas. Additional information is available on the [Texas Education Agency \(TEA\) Student Assessment Division website](#). For materials not found on the website or for questions concerning information in this digest, contact the TEA Student Assessment Division at 512-463-9536 or by e-mail at Student.Assessment@tea.state.tx.us.

The *Technical Digest* for 2010–2011 is designed primarily as a web-based document. The entire text of the *Technical Digest* along with the documents referenced and the technical reports in support of information in the *Technical Digest* are available on [TEA's Student Assessment Division website](#).