



FOR THE ACADEMIC YEAR 2009–2010

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	6
Texas Education Code	6
Texas Administrative Code	7
Curriculum Guidelines for Assessment	9
Chapter 2 Building a High-Quality Assessment System	11
Annual Test Development Activities	11
Groups Involved.....	13
Student Assessment Division	13
Pearson	13
ETS	13
Questar Assessment, Inc.	13
Tri-Lin.....	13
Texas Educators	14
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
History of Test Security-Related Activities.....	22
Light Marks Analysis.....	24





Task Force on Test Integrity	25
Changes in Security Procedures Made Prior to the 2008–2009 School Year	26
Enhanced Security Efforts in 2009–2010	30
Quality-Control Procedures.....	31
Reporting of Test Results.....	31
Ongoing Quality Control.....	36
Performance Assessments Used on TAKS, TAKS (Accommodated), and TAKS–M.....	37
TAKS, TAKS (Accommodated), and TAKS–M	37
TAAS Exit Level.....	38
Scoring Facilities.....	38
Scoring Staff.....	38
Prompt Development, Field Testing, and the Rangefinding Process	39
Reader Training Process.....	39
The ePEN System.....	40
Training Procedures	41
Validity System.....	42
Nonscorable Responses.....	42
Resolution Procedures	43
Data Entry Procedures and Resulting Reports	44
Score Reliability and Validity Information: TAKS, TAKS (Accommodated), and TAKS–M.....	44
Field-Test Response Scoring: TAKS, TAKS (Accommodated), and TAKS–M	44
Appeals: All Projects	45
Chapter 3 Standard Technical Processes	47
Overview	47
Standards	48
Scaling	50
Equating	51
Reliability.....	52
Validity.....	52
Measures of Student Progress	53
Sampling	54
Technical Details and Procedures.....	54
Standards	54
Modified Item-Mapping Method	54
Other Methods Used in Texas.....	56



Performance Level Descriptions.....	56
Scaling	57
Equating	59
Rationale	60
Pre-equating	61
Post-equating	62
Field-Test Equating	63
Matched Sample Comparability Analysis.....	65
Reliability.....	65
Internal Consistency Estimates	65
Interrater Reliability.....	67
Measurement Error.....	67
Validity.....	70
Evidence Based on Test Content.....	70
Evidence Based on Response Processes.....	71
Evidence Based on Internal Structure	72
Evidence Based on Relationships to other Variables.....	72
Evidence Based on Consequences of Testing	73
Measures of Student Progress	73
Multilevel Models.....	74
The Transition Table Approach.....	75
Sampling	76
Key Concepts of Sampling.....	76
Reasons for Sampling	76
Sampling Designs	77
Chapter 4 Texas Assessment of Knowledge and Skills (TAKS), TAKS (Accommodated), and Linguistically Accommodated Testing (LAT).....	79
Overview	79
TAKS	79
Spanish TAKS.....	80
TAKS (Accommodated)	80
Linguistically Accommodated Testing (LAT)	80
Testing Requirements for Graduation	81
Test Development.....	82
Item Development Approach for Spanish TAKS	82
Spanish-English TAKS Alignment	82
Training	83
District and Campus Coordinator Manual	84



Test Administrations.....	84
Overview	84
Make-up Testing	85
Out-of-District Testing.....	85
Out-of-School Testing.....	86
Testing Accommodations	86
Overview	86
Accommodations Categories	87
Linguistic Accommodations	87
Dyslexia Accommodations—TAKS Reading.....	89
Oral Administration.....	89
Students with Visual Impairments.....	89
Accommodations Manual.....	90
Educational Materials Required for Testing—TAKS, TAKS (Accommodated), and TAKS-M.....	90
Online Testing.....	91
TAKS Exit Level	92
Student Success Initiative	93
The Grade Placement Committee.....	93
ELLs	95
Scores and Reports	95
Description of Scores.....	95
Report Formats	95
Standard Reports	96
Optional Reports	99
Parent Brochures	102
Standard Setting.....	102
Scaling	105
Scale Score.....	105
Vertical Scale Score.....	105
Horizontal Scale Score.....	107
TAKS Results for Individual Students	109
Groups of Students.....	110
Equating	110
Overview	110
Pre-Equating	111
Post-Equating	111
Field-Test Equating	111
Comparability Analyses	112



Reliability	112
Internal Consistency	112
Classical Standard Error of Measurement	113
Conditional Standard Error of Measurement	113
Classification Accuracy.....	114
Validity.....	114
Evidence Based on Test Content.....	114
Evidence Based on Response Processes.....	115
Evidence Based on Internal Structure	116
Evidence Based on Relationships to Other Variables	117
Evidence Based on Consequences of Testing	118
Performance Assessments Used On TAKS and TAKS (Accommodated)	118
Measures of Student Progress	120
Sampling	123
TAKS Field-Test Sampling Process.....	123
Chapter 5 TAKS–Modified (TAKS–M)	127
Overview	127
TAKS–M Participation Requirements	128
Test Development.....	129
Training	130
Test Administrations.....	130
Testing Accommodations	131
Student Success Initiative	132
Scores and Reports	132
Description of Scores.....	132
Report Formats	133
Standard and Optional Reports for TAKS–M	133
Parent Brochure	134
Standard Setting.....	134
Scaling	134
Scale Score.....	135
Equating	135
Field-Test Equating	136
Pre-Equating	136
Reliability.....	137
Internal Consistency.....	137
Classical Standard Error of Measurement	137
Conditional Standard Error of Measurement.....	137



Classification Accuracy.....	138
Validity.....	138
Evidence Based on Test Content	138
Evidence Based on Response Processes.....	139
Evidence Based on Internal Structure	140
Evidence Based on Relationships to Other Variables.....	140
Evidence Based on Consequences of Testing	141
Measures of Student Progress	142
Sampling	143
Chapter 6 TAKS–Alternate (TAKS–Alt)	145
Overview	145
TAKS–Alt Participation Requirements.....	146
ARD Manual	147
Test Development.....	147
Complexity Level of Assessment Tasks.....	148
Educator Review Committee Meetings	149
Evaluating Bias in the Assessment.....	150
Training	150
TAKS–Alt Online Training and Qualification	150
Module 1: Overview of the TAKS–Alt Assessment.....	151
Module 2: Implementing the TAKS–Alt Assessment.....	151
Module 3: The TAKS–Alt Online Instrument.....	151
Module 4: Beyond the Basics	151
Test Administrations.....	151
Testing Accommodations	152
Student Success Initiative	152
Scores and Reports	152
Scoring TAKS–Alt Assessments	152
Scoring Steps for TAKS–Alt	153
Report Formats	155
Standard and Optional Reports	155
Parent Brochure.....	156
Standard Setting.....	156
Scaling	156
Equating	160
Reliability.....	160
The Interrater Reliability Study.....	160
Validity	163
Evidence Based on Test Content.....	163



Evidence Based on Response Processes.....	165
Evidence Based on Internal Structure	167
Evidence Based on Relationships to Other Variables.....	167
Evidence Based on Consequences of Testing	168
Measures of Student Progress	169
Sampling	172
Interrater Reliability Sampling.....	172
Validity Audit Sampling	173
Chapter 7 Texas English Language Proficiency Assessment System (TELPAS)	175
Overview	175
Test Development and Administration.....	176
Historical Overview	176
TELPAS Reading Tests for Grades 2–12.....	177
TELPAS Holistically Rated Assessments.....	178
Holistic Rating Training	179
Administration Procedures	180
Scores and Reports	180
Language Domain Scores	183
TELPAS Comprehension and Composite Scores.....	183
Use of Results.....	186
Standard and Optional Reports.....	186
Parent Brochures	186
Interpreting TELPAS Reports	186
Audits.....	187
Standard Setting.....	187
Scaling	188
Vertical Scale Score.....	188
Scale for Holistically Rated Assessments	189
Scale for Composite Scores	189
Equating	190
Reliability.....	191
Internal Consistency	191
Classical Standard Error of Measurement	191
Conditional Standard Error of Measurement.....	191
Classification Accuracy.....	192
Interrater Reliability.....	192
Validity.....	193
Evidence Based on Test Content.....	193



TEL PAS Multiple-Choice Components	193
TEL PAS Holistically Rated Components	195
Evidence Based on Response Processes	196
Evidence Based on Internal Structure	197
Evidence Based on Relationships to Other Variables	197
Evidence Based on Consequences of Testing	201
Sampling	201
Chapter 8 End-of-Course Assessments.....	203
Overview	203
EOC Participation Requirements	205
Test Development.....	205
Test Administrations.....	206
Testing Accommodations	207
Scores and Reports	207
Description of Scores.....	207
Report Formats	208
Standard Reports	208
Additional Reports in 2009–2010.....	208
Standard Setting.....	209
Scaling	210
Scale Score.....	210
Raw Score.....	210
Equating	211
Pre-Equating	211
Field-Test Equating	211
Comparability Analyses	212
Reliability.....	212
Internal Consistency	212
Classical Standard Error of Measurement	213
Conditional Standard Error of Measurement.....	213
Classification Accuracy.....	213
Validity.....	213
Evidence Based on Test Content.....	213
Evidence Based on the Response Process.....	215
Evidence Based on Internal Structure	215
Evidence Based on Relationship to Other Variables.....	216
Evidence Based on the Consequences of Testing	216
Student Growth and Projection Measures.....	216
Sampling	217

EOC Sampling Process.....	217
Chapter 9 Resources	221
Overview	221
Texas Student Assessment Division Website.....	221
Information Booklets	222
TAKS Information Booklets	222
Educator Guide to TELPAS.....	224
Study Guides	224
Procedural Manuals.....	225
Accommodations Manual.....	225
ARD Manual	225
GPC Manual.....	225
LPAC Manual	226
District and Campus Coordinator Manual	226
District and Campus Coordinator Manual Supplement	226
Released Tests.....	227
Interpreting Assessment Reports.....	227
Bibliography	229





List of Tables

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



- Table 30. Overall TAKS–Alt Correlation between Subject Scores
- Table 31. Overall TAKS–Alt Correlation between Total Score and Gender
- Table 32. Overall TAKS–Alt Correlation between Total Score and Ethnicity
- Table 33. TAKS–Alt On Track Classification Results for 2009–2010, All Students
- Table 34. Grades and Subject Areas Included in the Audit
- Table 35. Summary of 2007–2008 TELPAS Reading Test Revisions
- Table 36. Grade Clusters for 2–12 Reading
- Table 37. Weights of the Language Domains in TELPAS Composite Ratings
- Table 38. Sample Calculation of Composite Results
- Table 39. Approved Raw and Scale Score Cut Points from 2008 TELPAS Reading Proficiency Level Setting (Online Versions)
- Table 40. Vertical Scale Score Linking Constants for TELPAS Reading Tests
- Table 41. Staged Linguistic Accommodation Test Design
- Table 42. 2010 TAKS Reading Performance by TELPAS Reading Proficiency Rating for Students Who Participated in Both Assessments in Grades 3–8
- Table 43. 2010 TAKS Reading/ELA Performance by TELPAS Reading Proficiency Rating for Students Who Participated in Both Assessments in Grades 9–11
- Table 44. EOC Assessments—Implementation Plan
- Table 45. EOC Assessments Administered Online and On Paper in 2009–2010
- Table 46. Scaling Constant for EOC Assessments
- Table 47. Sampling Summary for 2010 EOC Assessments
- Table 48. Quick Guide to Online References



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 2009–2010 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](#).