

Participation and Performance of Students Using Accommodations on the New York State Testing Program

December 2010



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Participation and Performance of Students Using Accommodations on the New York State Testing Program

Summary

- Participation data indicated high accommodation participation rates for students with disabilities (SWD) and English Language Learners (ELL) who participated in the regular Grades 3–8 assessments and the New York State Alternate Assessment (NYSAA) in 2010.
- Participation data indicated high participation rate for students with disabilities using test accommodations on the regular Grades 3–8 tests in 2010. High accommodation participation rate was also found in the June 2008 Regents Examination in Integrated Algebra, the June 2009 Regents Examination in Geometry and the June 2010 Regents Examination in Algebra 2/Trigonometry.
- Participation data indicated high participation rate for English Language Learners using test accommodations on the regular Grades 3–8 tests in 2010 as well as for the June 2008 Regents Examination in Integrated Algebra. Moderate accommodation participation rate was found in the June 2009 Regents Examination in Geometry and low accommodation participation rate was found in the June 2010 Regents Examination in Algebra 2/Trigonometry.
- Student performance using test accommodations on the regular Grades 3–8 tests, the 2008 June Regents Examination in Integrated Algebra, the 2009 June Regents Examination in Geometry and the June 2010 Regents Examination in Algebra 2/Trigonometry were comparable to the results obtained from SWD and ELL subgroups.
- High internal consistency provided sound evidence of reliability for student using accommodations on the 2008 June Regents Examination in Integrated Algebra, the 2009 June Regents Examination in Geometry and the 2010 Regents Examination in Algebra 2/Trigonometry.
- Factor analysis results provide evidence of essential unidimensionality of the construct measured by the 2008 June Regents Examination in Integrated Algebra, the 2009 June Regents Examination in Geometry and the 2010 June Regents Examination in Algebra 2/Trigonometry for students using test accommodations.
- Grades 3–8 Math Test has Braille and large-type versions. It has also been translated into various foreign languages. The number of students using alternative forms is recorded.

NYS Procedures for Determining Appropriate Accommodations for Students with Disabilities (SWD) and English Language Learners (ELL)

New York State has guidelines for Committees on Special Education to determine appropriate accommodations for students with disabilities. See: <http://www.vesid.nysed.gov/specialed/publications/policy/testaccess/policyguide.htm>.

Student Participation on the New York State Assessments

Students with Disabilities

Table 1 shows the data for students with disabilities who participated in the 2010 Grades 3–8 English language arts (ELA) and Mathematics Tests and in the 2010 NYSAA. In 2010, 97.7% participated in the Grades 3–8 ELA Tests and 97.9% participated in the Grades 3–8 Mathematics Tests.

Table 2 shows the data on the numbers and percents of students with disabilities who used accommodations when taking the 2010 Grades 3–8 ELA and Mathematics Tests. In 2010, 90.3% of students used accommodations when taking the Grades 3–8 ELA Tests and 86.7% of students used accommodations when taking the Grades 3–8 Mathematics Tests.

Table 1: Participation of Students with Disabilities in 2010 Grades 3–8 ELA and Mathematics Tests and the NYSAA

	Grades 3–8 ELA Tests	Grades 3–8 Mathematics Tests
Number of students with disabilities continuously enrolled	229,497	229,448
Number of students with disabilities who participated in the State Tests/NYSAA	224,241	224,616
Percent of students with disabilities who participated in the State Tests/NYSAA	97.7%	97.9%

Source: School Year 2009–10 Consolidated State Performance Report submitted to US Department of Education.

Table 2: Participation of Students with Disabilities in 2010 Grades 3–8 ELA and Mathematics Tests and the Use of Accommodations

	Grades 3–8 ELA Tests	Grades 3–8 Mathematics Tests
Number of students with disabilities taking the State Tests	179,092	180,261
Number of students with disabilities taking the State Tests, using accommodations	161,666	161,595
Percent of students with disabilities taking the State Tests, using accommodations	90.3%	89.6%

Source: 2010 Technical Report – English Language Arts Grades 3–8 and Mathematics Grades 3–8.

Tables 3, 4 and 5 show the use of accommodations by students with disabilities when taking the June 2008 Regents Examination in Integrated Algebra, the June 2009 Regents Examination in Geometry, and the June 2010 Regents Examination in Algebra 2/Trigonometry. Demographic data was only collected during the initial administration years of each test. For these administrations, 94.0% of the students with disabilities used accommodations for June 2008 Regents Examination in Integrated Algebra, 92.8% of the students with disabilities used accommodations for June 2009 Regents Examination in Geometry, and 92.6% of the students with disabilities used accommodations for Regents Examination in Algebra 2/Trigonometry.

Table 3: Participation of Students with Disabilities in June 2008 Regents Examination in Geometry and the Use of Accommodations

	June 2008 Regents Examination in Integrated Algebra
Number of students with disabilities taking the State Examination	14,107
Number of students with disabilities taking the State Examination, using accommodations	13,257
Percent of students with disabilities taking the State Examination, using accommodations	94.0%

Source: 2008 Technical Report – Regents Examination in Integrated Algebra.

Table 4: Participation of Students with Disabilities in June 2009 Regents Examination in Geometry and the Use of Accommodations

	June 2009 Regents Examination in Geometry
Number of students with disabilities taking the State Examination	5,973
Number of students with disabilities taking the State Examination, using accommodations	5,543
Percent of students with disabilities taking the State Examination, using accommodations	92.8%

Source: 2009 Technical Report – Regents Examination in Geometry.

Table 5: Participation of Students with Disabilities in June 2010 Regents Examination in Algebra 2/Trigonometry and the Use of Accommodations

	June 2010 Regents Examination in Algebra 2/Trigonometry
Number of students with disabilities taking the State Examination	2,564
Number of students with disabilities taking the State Examination, using accommodations	2,375
Percent of students with disabilities taking the State Examination, using accommodations	92.6%

Source: 2010 Technical Report – Regents Examination in Algebra 2/Trigonometry.

English language learners (ELLs)

Table 6 shows the data for ELLs who participated in the 2010 Grades 3–8 ELA and Mathematics Tests and in the 2010 NYSAA. In 2010, 98.7% of students participated in the Grades 3–8 ELA Tests and 99.2% of students participated in the Grades 3–8 Mathematics Tests.

Table 7 shows the data on the numbers and percents of ELLs who used accommodations when taking the 2010 Grades 3–8 ELA and Mathematics Tests. In 2010, 86.0% used accommodations when taking the Grades 3–8 ELA Tests and 82.7% when taking the Grades 3–8 Mathematics Tests.

Table 6: Participation of English Language Learners in 2010 Grades 3–8 ELA and Mathematics Tests and the NYSAA and the Use of Accommodations

	Grades 3–8 ELA Tests	Grades 3–8 Mathematics Tests
Number of ELLs continuously enrolled	103,765	103,955
Number of ELLs who participated in the State Tests/NYSAA	102,426	103,170
Percent of ELLs who participated in the State Tests/NYSAA	98.7%	99.2%

Source: School Year 2009–10 Consolidated State Performance Report submitted to US Department of Education.

Table 7: Participation of English Language Learners in 2010 State Assessments and Use of Accommodations

	Grades 3–8 ELA Tests	Grades 3–8 Mathematics Tests
Number of ELLs taking the State Tests	79,217	96,218
Number of ELLs taking the State Tests, using accommodations	68,163	79,534
Percent of ELLs taking the State Tests, using accommodations	86.0%	82.7%

Source: 2010 Technical Report – English Language Arts Grades 3–8 and Mathematics Grades 3–8.

Tables 8, 9 and 10 show data on ELLs' use of accommodations when taking the June 2008 Regents Examination in Integrated Algebra, the June 2009 Regents Examination in Geometry and the June 2010 Regents Examination in Algebra 2/Trigonometry. For these administrations, 75.2% of ELLs used accommodations for June 2008 Regents Examination in Integrated Algebra, 69.4% of ELLs used accommodations for June 2009 Regents Examination in Geometry and 26.1% of ELLs used accommodations for Regents Examination in Algebra 2/Trigonometry.

Table 8: Participation of English Language Learners in the June 2008 Regents Examination in Integrated Algebra and the Use of Accommodations

	June 2008 Regents Examination in Integrated Algebra
Number of ELLs taking the Regents Examination in Geometry	6,129
Number of ELLs taking the Regents Examination in Geometry, using accommodations	4,606
Percent of ELLs taking the Regents Examination in Geometry, using accommodations	75.2%

Source: 2008 Technical Report – Regents Examination in Integrated Algebra.

Table 9: Participation of English Language Learners in the June 2009 Regents Examination in Geometry and the Use of Accommodations

	June 2009 Regents Examination in Geometry
Number of ELLs taking the Regents Examination in Geometry	3,185
Number of ELLs taking the Regents Examination in Geometry, using accommodations	2,209
Percent of ELLs taking the Regents Examination in Geometry, using accommodations	69.4%

Source: 2009 Technical Report – Regents Examination in Geometry.

Table 10: Participation of English Language Learners in the June 2010 Regents Examination in Algebra 2/Trigonometry and the Use of Accommodations

	June 2010 Regents Examination in Algebra 2/Trigonometry
Number of ELLs taking the Regents Examination in Algebra 2/Trigonometry	4,652
Number of ELLs taking the Regents Examination in Algebra 2/Trigonometry, using accommodations	1,212
Percent of ELLs taking the Regents Examination in Algebra 2/Trigonometry, using accommodations	26.1%

Source: 2010 Technical Report – Regents Examination in Algebra 2/Trigonometry.

Student Performance on the New York State Assessments

Tables 11, 12, 13, 14 and 15 provide the Performance Level Distribution Summaries for the statewide student population, the students with disabilities and ELL populations as wholes, and for students with disabilities and ELLs who both used and did not use accommodations when taking the Grades 3–8 ELA and Mathematics Tests, the June 2008 Regents Examination in Integrated Algebra, the June 2009 Regents Examination in Geometry and the June 2010 Regents Examination in Algebra 2/Trigonometry.

The results for the students with disabilities and ELLS who used accommodations were comparable to the results of the students with disabilities and ELL subgroups as wholes.

Table 11: Performance Level Distribution Summary, 2010 Grades 3–8 ELA Tests

Demographic Category (Subgroup)	N-Count	Percent Of Total N	Level I %	Level II %	Level III %	Level IV %
Statewide student population	1,194,747	100	10.7	36.1	43.1	10.2
Students with disabilities	179,092	15.0	38.3	46.7	13.8	1.1
Students with disabilities using accommodations	161,666	13.5	39.7	46.8	12.6	0.9
Students with disabilities not using accommodations	17,426	1.7	25.9	45.5	25.1	3.4
English language learners (ELLs)	79,217	6.6	39.4	46.3	13.2	1.2
ELLs using accommodations	68,163	5.7	37.5	47.3	14.0	1.2
ELLs not using accommodations	11,054	0.9	51.3	39.6	8.3	0.7

Source: 2010 Technical Report – English Language Arts Grades 3–8 and Mathematics Grades 3–8.

Table 12: Performance Level Distribution Summary, 2010 Grades 3–8 Mathematics Tests

Demographic Category (Subgroup)	N-Count	Percent Of Total N	Level I %	Level II %	Level III %	Level IV %
Statewide student population	1,208,341	100	7.6	31.3	36.4	24.7
Students with disabilities	180,261	14.9	27.6	47.9	19.8	4.7
Students with disabilities using accommodations	161,595	13.4	28.5	48.5	19.0	4.0
Students with disabilities not using accommodations	18,666	1.5	19.9	42.4	27.0	10.7
English language learners (ELLs)	96,218	8.0	21.5	44.8	22.4	7.1
ELLs using accommodations	79,534	6.6	21.0	46.7	24.4	7.9
ELLs not using accommodations	16,684	1.4	23.9	35.5	12.7	3.6

Source: 2010 Technical Report – English Language Arts Grades 3–8 and Mathematics Grades 3–8.

Table 13: Performance Level Distribution Summary, June 2009 Regents Examination in Integrated Algebra

Demographic Category (Subgroup)	N-Count	Percent Of Total N	(0 - 64) %	(65 – 84) %	(85 – 100) %
Statewide student population	176,801	100	24.9	55.9	19.2
Students with disabilities	14,107	11.4	51.8	44.2	4.0
Students with disabilities using accommodations	13,257	94.0	52.1	44.0	3.9
Students with disabilities not using accommodations	850	6.0	47.0	47.5	5.5
English language learners (ELLs)	6,129	5.4	58.2	36.1	5.7
ELLs using accommodations	4,606	75.2	61.4	34.2	4.4
ELLs not using accommodations	15,23	24.9	48.7	41.9	9.4

Source: 2008 Technical Report – Regents Examination in Integrated Algebra.

Table 14: Performance Level Distribution Summary, June 2009 Regents Examination in Geometry

Demographic Category (Subgroup)	N-Count	Percent Of Total N	(0 - 64) %	(65 – 84) %	(85 – 100) %
Statewide student population	133,101	100	28.3	47.2	24.4
Students with disabilities	5,973	4.5	51.5	40.8	7.8
Students with disabilities using accommodations	5,543	4.2	51.3	41.1	7.6
Students with disabilities not using accommodations	430	0.3	53.5	36.9	9.6
English language learners (ELLs)	3,185	2.4	53.9	34.4	11.7
ELLs using accommodations	2,209	1.7	57.6	31.7	10.6
ELLs not using accommodations	976	0.7	45.5	40.3	14.2

Source: 2009 Technical Report – Regents Examination in Geometry.

Table 15: Performance Level Distribution Summary, June 2010 Regents Examination in Algebra 2/Trigonometry

Demographic Category (Subgroup)	N-Count	Percent Of Total N	(0 – 64) %	(65 – 84) %	(85 – 100) %
Statewide student population	100,188	100	39.1	35.2	25.7
Students with disabilities	2,564	2.6	53.6	33.5	12.9
Students with disabilities using accommodations	2,375	2.4	53.4	33.9	12.7
Students with disabilities not using accommodations	189	0.2	55.5	28.6	15.9
English language learners (ELLs)	4,652	4.6	45.3	33.2	21.6
ELLs using accommodations	1,212	1.2	50.7	28.0	21.4
ELLs not using accommodations	3,440	3.4	43.4	35.0	21.7

Source: 2010 Technical Report – Regents Examination in Algebra 2/Trigonometry.

Reliability and Validity Results for Students Using Test Accommodations

Internal Consistency

Test reliability is directly related to score stability and standard error. As such, it is an essential element of test fairness and validity. Tables 15, 16 and 17 present the reliability coefficients of the tests for students with disabilities and ELLs and students using test accommodations. It is inferred from the finding of high coefficients that the test questions measured the same domain of skill, and are reliable and consistent. All the coefficients for total test reliability are in the range of 0.88–0.92, which indicates high internal consistency and provides sound evidence of test reliability.

Table 15: Test Reliability by Subgroup, June 2008 Regents Examination in Integrated Algebra

Demographic Category (Subgroup)	N-Count	Cronbach's Alpha
Statewide student population	176,801	0.92
Students with disabilities	14,107	0.88
Students with disabilities using accommodations	13,257	0.88
Students with disabilities not using accommodations	850	0.89
English language learners (ELLs)	6,129	0.90
ELLs using accommodations	4,606	0.89
ELLs not using accommodations	1,523	0.91

Source: 2008 Technical Report – Regents Examination in Integrated Algebra.

Table 16: Test Reliability by Subgroup, June 2009 Regents Examination in Geometry

Demographic Category (Subgroup)	N-Count	Cronbach's Alpha
Statewide student population	133,101	0.92
Students with disabilities	5,973	0.91
Students with disabilities using accommodations	5,543	0.91
Students with disabilities not using accommodations	430	0.92
English language learners (ELLs)	3,185	0.92
ELLs using accommodations	2,209	0.92
ELLs not using accommodations	976	0.92

Source: 2009 Technical Report – Regents Examination in Geometry.

Table 17: Test Reliability by Subgroup, June 2010 Regents Examination in Algebra 2/Trigonometry

Demographic Category (Subgroup)	N-Count	Cronbach's Alpha
Statewide student population	100,188	0.90
Students with disabilities	2,564	0.88
Students with disabilities using accommodations	2,375	0.88
Students with disabilities not using accommodations	189	0.89
English language learners (ELLs)	4,652	0.91
ELLs using accommodations	1,212	0.92
ELLs not using accommodations	3,440	0.90

Source: 2010 Technical Report – Regents Examination in Algebra 2/Trigonometry.

Factor analysis

Construct validity, what scores mean and what kinds of inferences they support, is often considered the most important type of test validity. Empirical studies of the factor structure (dimensionality) of the test provide one type of evidence of construct validity. A principal component factor analysis was conducted to assess the dimensionality of construct for students with disabilities and ELLs using test accommodations. As can be seen in Tables 18, 19 and 20, a large first principal component demonstrates the common factor – student ability – underlying student responses to test items. The evaluation of Eigenvalue magnitude and the proportions of variance among factors with loadings exceeding 1, as explained by the main and secondary factors, provide evidence of the essential unidimensionality of the construct measured by the tests for students using test accommodations. The data for these students were comparable to that of the total student population.

Table 18: Factor Analysis by Subgroup, June 2008 Regents Examination in Integrated Algebra

Subgroup	Initial Eigenvalues		
	Component	Total	Proportion
State	1	10.310	0.80
	2	1.429	0.11
	3	1.223	0.09
Students with disabilities using accommodations	1	8.488	0.69
	2	1.514	0.12
	3	1.264	0.10
	4	1.112	0.09
ELLs using accommodations	1	7.888	0.68
	2	1.422	0.12
	3	1.282	0.11
	4	1.049	0.09

Source: 2008 Technical Report – Regents Examination in Integrated Algebra.

Table 19: Factor Analysis by Subgroup, June 2009 Regents Examination in Geometry

Subgroup	Initial Eigenvalues		
	Component	Total	Proportion
State	1	10.23	0.80
	2	1.37	0.11
	3	1.21	0.09
Students with disabilities using accommodations	1	9.21	0.72
	2	1.39	0.11
	3	1.25	0.10
	4	1.01	0.08
ELLs using accommodations	1	10.02	0.68
	2	1.38	0.09
	3	1.23	0.08
	4	1.09	0.07
	5	1.01	0.07

Source: 2009 Technical Report – Regents Examination in Geometry.

Table 20: Factor Analysis by Subgroup, June 2010 Regents Examination in Algebra 2/Trigonometry

Subgroup	Initial Eigenvalues		
	Component	Total	Proportion
State	1	9.00	0.67
	2	1.23	0.09
	3	1.14	0.08
	4	1.04	0.08
	5	1.00	0.07
Students with disabilities using accommodations	1	8.18	0.55
	2	1.28	0.09
	3	1.18	0.08
	4	1.10	0.07
	5	1.06	0.07
	6	1.05	0.07
	7	1.03	0.07
ELLs using accommodations	1	10.45	0.60
	2	1.48	0.08
	3	1.26	0.07
	4	1.15	0.07
	5	1.08	0.06
	6	1.06	0.06
	7	1.01	0.06

Source: 2010 Technical Report – Regents Examination in Algebra 2/Trigonometry.

Other Accommodation Studies

Distribution of Alternative Grades 3–8 Math Test Editions

The Grades 3–8 Mathematics Tests have Braille and large-type editions, and have also been translated into various alternative languages. The number of students using these alternate forms is shown in Table 21.

Table 21: Students Using Alternative Grades 3–8 Mathematics Tests Edition in 2010

Type	Number of Students
Grades 3–8 Mathematics Tests, Braille edition	88
Grades 3–8 Mathematics Tests, large-type edition	984
Spanish Translation	19,453
Chinese Translation	4,450
Haitian Creole Translation	846
Korean Translation	408
Russian Translation	483

Source: 2010 Technical Report – English Language Arts Grades 3–8 and Mathematics Grades 3–8.