

Areas of Strengths and Weaknesses of
Limited English Proficient Students on the
Regents Comprehensive Examination in English Field Test

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Overview

An analysis was conducted on the field test of the Regents Comprehensive Examination in English to determine if Limited English Proficient (LEP) students performed differentially on Sections 3 and 4 or any parts of Sections 3 and 4. The performance on Sections 3 and 4 was predicted from performance on Sections 1 and 2. In this way, differential strengths and weaknesses were identified holding the first two sections constant between LEP students and the general population.

Because the field test was administered in parts to different groups of students, predictions of performance on Sections 3 and 4 were made based on the performance of all students who took intact forms A and B on Sections 1 and 2.

Methods

In fact, to analyze performance strengths and weaknesses, six prediction equations were developed based on the open-ended (o.e.) and multiple-choice (m.c.) parts of Section 1 and Section 2 of Forms A and B. They were for the

- 1) multiple-choice questions of Section 3;
- 2) open-ended questions of Section 3
- 3) multiple-choice and open-ended questions of Section 3;
- 4) open-ended questions (there was no multiple-choice) of Section 4;
- 5) open-ended questions of both Sections 3 and 4; and
- 6) multiple-choice and open-ended questions of both Sections 3 and 4.

The analysis was as follows:

- 1) Means were computed for each section taken by LEP students on the field test (Table 1);
- 2) Means and standard deviations were computed for each section of Forms A and B for all students who took the intact field tests of those forms (Table 2);
- 3) Standardized differences between the LEP and general population totals were computed to show relative strengths and weaknesses (Table 3);

- 4) The six regressions were performed for each of the two test forms based on the intact form field test population (Table 4);
- 5) Mean residuals were computed for the LEP students by inserting the mean values based on their field test results into the regression equations and subtracting it from the observed mean value for the part and section predicted (Table 5);
- 6) The residuals were divided by the observed standard deviations computed in 2) above to standardize these differences to enable comparisons across sections and forms (also in Table 5).

Results

The results are given in Tables 1-5.

Conclusion

Table 3 shows that the largest relative standardized differences were on the open-ended part of Section 3 on Form B. As a whole, the open-ended questions were more difficult for LEP students. The order of relative achievement on the third and fourth sections of the test for LEP students on Sections 3 and 4 of the Comprehensive Examination in English were as follows:

		<u>Form A</u>	<u>Form B</u>
Strongest	1	Section 4 o.e. (+)	Section 3 m.c. (+)
	2	Both o.e.	Section 3
	3	Sections 3 and 4	Sections 3 and 4
	4	Section 3 m.c.	Section 4 o.e.
	5	Section 3	Both o.e.
Weakest	6	Section 3 o.e.	Section 3 o.e.

The most consistent finding is the difficulty of Section 3 o.e. for LEP students.

Table 1

Means and Standard Deviations for Limited English Populations
 on the Comprehensive Examination in English Field Test
 (mc=multiple-choice, oe=open-ended)

Variable		N	Mean	Stand Dev.	Possible Points
Form A	MC1	48	2.833	1.243	6
	MC2	23	4.739	1.484	10
	MC3	20	5.300	2.473	10
	OE1	48	1.771	1.016	6
	OE2	23	2.087	1.345	6
	OE3	20	1.450	1.191	6
	OE4	19	1.526	1.172	6
Form B	MC1	24	3.917	1.139	6
	MC2	33	4.788	2.043	10
	MC3	24	4.875	2.050	10
	OE1	24	2.333	1.167	6
	OE2	33	1.909	1.182	6
	OE3	24	1.083	1.248	6
	OE4	17	0.529	0.800	6

Table 2

Means and Standard Deviations for All Students who Took Intact
Forms A or B on the Comprehensive Examination in English Field Test
(mc=multiple-choice, oe=open-ended)

Variable		N	Mean	Stand Dev.	Possible Points
Form A	MC1	198	4.126	1.410	6
	MC2	198	7.066	2.603	10
	MC3	198	6.899	2.221	10
	OE1	198	2.955	1.239	6
	OE2	198	2.227	1.236	6
	OE3	198	2.172	1.175	6
	OE4	198	1.833	1.428	6
Form B	MC1	198	4.535	1.424	6
	MC2	198	7.045	2.408	10
	MC3	198	6.444	2.383	10
	OE1	198	3.343	1.252	6
	OE2	198	2.086	1.221	6
	OE3	198	2.561	1.155	6
	OE4	198	2.131	0.419	6

Table 3

Standardized Mean Differences on Field Test of
Regents Comprehensive Examination in English Between
Limited English Proficient and Total Populations

Form A		Overall Mean	LEP Mean	Standard. Dev.	Standard. Diff.
Section 1	m.c.	4.126	2.833	1.410	-0.917
	o.e.	2.955	1.771	1.239	-0.955
Section 1	Total	7.081	4.604	2.276	-1.088
Section 2	m.c.	7.066	4.739	2.604	-0.893
	o.e.	2.227	2.087	1.236	-0.114
Section 2	Total	9.293	6.826	3.388	-0.728
Section 3	m.c.	6.899	5.300	2.221	-0.720
	o.e.	2.172	1.450	1.175	-0.614
Section 3	Total	9.071	6.750	2.993	-0.775
Section 4	o.e.	1.833	1.526	1.428	-0.215

Form B		Overall Mean	LEP Mean	Standard. Dev.	Standard. Diff.
Section 1	m.c.	4.535	3.917	1.424	-0.434
	o.e.	3.343	2.333	1.252	-0.807
Section 1	Total	7.879	6.250	2.303	-0.707
Section 2	m.c.	7.045	4.788	2.408	-0.938
	o.e.	2.086	1.909	1.221	-0.145
Section 2	Total	9.131	6.697	3.185	-0.765
Section 3	m.c.	6.444	4.875	2.383	-0.659
	o.e.	2.561	1.083	1.155	-1.279
Section 3	Total	9.005	5.958	3.110	-0.980
Section 4	o.e.	2.131	0.529	1.419	-1.129

Table 4

Multilinear Regression Coefficients Predicting Performance on
Sections 3 (multiple-choice (m.c.) and open-ended (o.e.))
and 4 (o.e. only) of the Comprehensive Examination in English Field Test

Form A

		Section 1		Section 2		Intercept	R-Square
		m.c.	o.e.	m.c.	o.e.		
Section 3	m.c.	0.094	0.322	0.338	0.223	2.677	0.384
	o.e.	0.090	0.156	0.092	0.337	-0.058	0.424
	both	0.184	0.418	0.429	0.561	2.619	0.499
Section 4	o.e.	0.060	0.312	0.012	0.460	-0.446	0.384
both	o.e.	0.150	0.468	0.104	0.797	-0.505	0.526
Sections 3 and 4		0.244	0.790	0.441	1.021	2.173	0.554

Form B

		Section 1		Section 2		Intercept	R-Square
		m.c.	o.e.	m.c.	o.e.		
Section 3	m.c.	0.516	0.507	0.203	0.217	0.526	0.467
	o.e.	-0.027	0.207	0.111	0.325	0.531	0.394
	both	0.489	0.715	0.314	0.542	1.057	0.537
Section 4	o.e.	0.116	0.311	0.022	0.456	-0.542	0.423
both	o.e.	0.089	0.518	0.133	0.781	-0.012	0.524
Sections 3 and 4		0.605	1.025	0.336	0.998	0.514	0.601

Table 5

Observed and Predicted Performance on Sections 3 and 4 of the
Comprehensive Examination in English Field Test for Limited English Proficient Students

Form A

Predicted Variables		Observed	Predicted	Residual	Standardized Residual
Section 3	m.c.	5.300	5.358	-0.058	-0.042
	o.e.	1.450	1.620	0.170	-0.222
	both	6.750	6.976	-0.226	-0.107
Section 4	o.e.	1.526	1.397	0.129	0.146
both	o.e.	2.976	3.016	-0.039	-0.024
Sections 3 and 4		8.276	8.373	-0.097	-0.033

Form B

Predicted Variables		Observed	Predicted	Residual	Standardized Residual
Section 3	m.c.	4.875	4.187	-0.688	-0.422
	o.e.	1.083	2.014	0.931	-1.284
	both	5.958	6.203	0.245	-0.107
Section 4	o.e.	0.529	1.488	0.958	-1.038
both	o.e.	1.613	3.501	-1.888	-1.158
Sections 3 and 4		6.488	7.688	-1.200	-0.379