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Technical report

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National Assessment Program – Literacy and Numeracy (NAPLAN) 2017: technical report

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CHAPTER 1 INTRODUCTION AND OVERVIEW

ACER was appointed by the Australian Curriculum, Assessment and Reporting Authority (ACARA) to undertake the central analyses of test data for the National Assessment Program – Literacy and Numeracy (NAPLAN) 2017 administration. In May 2017, the NAPLAN 2017 tests were administered nationally to all students in Years 3, 5, 7 and 9. As in previous cycles of NAPLAN, students at each of these year level were assessed in five domains: Reading, Writing, Language Conventions (Spelling, Grammar and Punctuation) and Numeracy. Students at the same year level were administered the same paper-based test for each domain.

NAPLAN results are reported using five national achievement scales, one for each of the assessed aspects of literacy – Reading, Writing, Spelling, and Grammar and Punctuation – and one for Numeracy. Each NAPLAN achievement scale spans Years 3, 5, 7 and 9 with scores that range from 0 to approximately 1000. There are also ten proficiency bands that span Years 3, 5, 7 and 9. Each year level is reported against six of these bands.

As in the previous two years, the central analyses were carried out in two stages. The first stage involved item and test analyses, test calibrations and equating of the 2017 tests onto the historic NAPLAN reporting scales for each domain. This was to ensure that NAPLAN results were comparable across cycles. The equating was achieved using data collected by administering the secure equating tests (which had already been scaled onto the NAPLAN historic scale) and the 2017 NAPLAN tests to a sample of Australian students. The equated reporting scale information with score-equivalence tables for the tests and cut points for proficiency bands provided necessary information for the jurisdictions to report to parents and schools.

The second stage involved analyses of the full cohort data that informed national reporting. The analyses provided performance results to ACARA for the preparation of the NAPLAN 2017 summary (preliminary) information released in August, the NAPLAN 2017 National Report released in December, and for other reporting.

Over one million students in Years 3, 5, 7 and 9 in all states and territories of Australia participated in NAPLAN 2017. Test data based on student responses were delivered to ACER from the jurisdictional Test Administration Authorities. There were eight sources of data from the national testing corresponding to the eight states and territories of Australia.

The main aim of this technical report is to describe and document the methodology used in the central data analyses of NAPLAN 2017 in producing reports on the performance of students on NAPLAN 2017. This includes description of methods for test calibration, test equating, scaling and in the estimation of performance results. Chapter 2 of this report describes the NAPLAN 2017 test design. Chapter 3 gives a summary of the methodology used in sampling for equating and calibration, and presents the participation rates. Chapter 4 describes the analysis procedure and the methodology of scaling and equating. Chapter 5 describes the data preparation process, test calibration outcomes and differential item functioning (DIF) analysis outcomes. Chapter 6 describes the test equating processes to place the NAPLAN 2017 tests on the NAPLAN historic scales. Chapter 7 describes the generation of proficiency estimates, scale transformation procedures and the methodology used for reporting of NAPLAN 2017 performance.

The student performance results are reported in the 2017 NAPLAN National Report which can be found at http://www.nap.edu.au/results-and-reports/national-reports

CHAPTER 2 NAPLAN TEST DESIGN

Four tests were administered at each of Years 3, 5, 7 and 9. The four tests were reading, writing, language conventions (spelling, grammar and punctuation) and numeracy. The test results were reported in five domains: reading, writing, spelling, grammar and punctuation and numeracy.

In reading, language conventions and numeracy, there was a mix of multiple-choice items and constructed-response items. The multiple-choice (MC) items were presented in a standard format with a number of possible answers (usually four) from which students were required to select the best answer. The constructed-response (CR) items generally required a numeric answer, a word or a short phrase. All MC and CR items were dichotomously scored (correct or incorrect).

Year 3 and Year 5 numeracy tests consisted of 36 and 42 items, respectively. The use of calculators was not permitted in the numeracy tests in Years 3 and 5. Each of the Year 7 and Year 9 numeracy tests consisted of 48 items where in both year levels, the use of calculators was permitted in 40 of the items but not in 8 of the items.

Table 2.1 to Table 2.4 provide information on the structure of each of the numeracy, reading, spelling and grammar and punctuation test domains in Years 3, 5, 7 and 9.

Table 2.1. Structure of Year 3 Test Domains, NAPLAN 2017

Domain	Strand	Number of MC Items	Number of CR Items	Total for Strand	Total in Test
Reading	Literacy	30	0	30	37
	Literature	2	0	2	
	Language	5	0	5	
Spelling	Spelling	0	25	25	25
Grammar and Punctuation	Grammar	18	0	18	25
	Punctuation	7	0	7	
Numeracy	Measurement and Geometry	7	3	10	36
	Number and Algebra	10	11	21	
	Statistics and Probability	5	0	5	

Table 2.2. Structure of Year 5 Test Domains, NAPLAN 2017

Domain	Strand	Number of MC Items	Number of CR Items	Total for Strand	Total in Test
Reading	Literacy	28	0	28	37
	Literature	1	0	1	
	Language	8	0	8	
Spelling	Spelling	0	25	25	25
Grammar and Punctuation	Grammar	16	0	16	25
	Punctuation	9	0	9	
Numeracy	Measurement and Geometry	9	3	12	42
	Number and Algebra	17	7	24	
	Statistics and Probability	6	0	6	

Table 2.3. Structure of Year 7 Test Domains, NAPLAN 2017

Domain	Strand	Number of MC Items	Number of CR Items	Total for Strand	Total in Test
Reading	Literacy	24	3	27	48
	Literature	7	0	7	
	Language	14	0	14	
Spelling	Spelling	0	25	25	25
Grammar & Punctuation	Grammar	14	2	16	25
	Punctuation	9	0	9	
Numeracy (No Calculator)	Number and Algebra	5	3	8	48
Numeracy (Calculator Allowed)	Measurement and Geometry	11	3	14	
	Number and Algebra	11	8	19	
	Statistics and Probability	6	1	7	

Table 2.4. Structure of Year 9 Test Domains, NAPLAN 2017

Domain	Strand	Number of MC Items	Number of CR Items	Total for Strand	Total in Test
Reading	Literacy	19	0	19	49
	Literature	12	0	12	
	Language	18	0	18	
Spelling	Spelling	0	25	25	25
Grammar & Punctuation	Grammar	17	0	17	25
	Punctuation	8	0	25	
Numeracy (No Calculator)	Number and Algebra	4	4	8	48
Numeracy (Calculator Allowed)	Measurement and Geometry	10	4	14	
	Number and Algebra	10	8	18	
	Statistics and Probability	6	2	8	

For writing, all students were required to write a persuasive text in 2017. Students from Years 3 and 5 responding to one writing prompt, while students in Years 7 and 9 responded to a different prompt. The scripts were rated based on the same ten criteria (Criteria 1 to 10) across all four year levels. Each of these ten criteria was rated polytomously. The ratings on the ten criteria were treated as data on ten different items. The ten criteria with the associated number of score categories are listed in Table 2.5.

Table 2.5. Criteria and Score Categories for Writing, Years 3 to 9, NAPLAN 2017

Item	Criterion	Score Categories
1	Audience	0-6
2	Text Structure	0-4
3	Ideas	0-5
4	Persuasive Devices	0-4
5	Vocabulary	0-5
6	Cohesion	0-4
7	Paragraphing	0-3
8	Sentence Structure	0-6
9	Punctuation	0-5
10	Spelling	0-6
	Raw Score Range	0-48

CHAPTER 3 SAMPLING DESIGN FOR STAGE-1 ANALYSES

3.1 Overview

As with earlier NAPLAN administrations, data based on a scientific sample drawn from all states and territories were used for the purpose of test calibrations and scaling, for equating and for generating preliminary estimates of key national outcomes to be used on parent reports. This approach enabled results to be delivered to jurisdictions in time for reporting to schools and parents. It also provided jurisdictions with preliminary estimates of the final national outcomes some time before the full census data were made available.

There were three sampling activities associated with the NAPLAN 2017:

- The National Scientific Sample (also referred to as National Calibration Sample) – This was a sample of students who participated in the NAPLAN assessments that was used for generating estimates of the key national outcomes to be used on parent reports and for the estimation of preliminary NAPLAN 2017 results on the existing NAPLAN scale.
- The Item Calibration Sample – This was a sub-sample of the National Calibration Sample that was used for test calibrations and scaling.
- The Equating Sample – This sample was required for equating the 2017 tests onto the historic NAPLAN reporting scales. As in earlier administrations, a common-person equating method was used. Secure equating forms, which had been previously equated onto the NAPLAN reporting scales, were administered to students in this equating sample in addition to the NAPLAN 2017 tests.

As a contractor for the Australian Curriculum, Assessment and Reporting Authority (ACARA), Educational Measurement Solutions (EMS) worked with documentation from the previous technical vendor (Australian Council for Educational Research (ACER)) and information from ACARA to create the sampling procedures used for the NAPLAN 2017 administration.

Documentation for calculating the sampling weights can be found in an ACER report included in Appendix G of the 2012 NAPLAN Technical Report. This appendix provides:

- A description of the source data files that are used to create the sampling weights.
- The steps used for preparing the data.
- The calculation procedure for the sampling weights including adjustments for post- stratification and student-non-response.
- The procedure for checking and assigning weights to the National Calibration Sample file.
- The procedure for calculating the response rates.

Appendix A provides the NAPLAN 2017 EMS Sampling Report and describes:

- The development of the sample frames for the National Scientific and Equating

Samples including the steps used in data preparation and the creation of primary and secondary samples based on grade levels.

- The details of the explicit and implicit stratification used and the selection of schools.
- The procedures employed for using replacement schools when the schools originally selected for the sample did not participate.

The appendix also provides details on the sample frame and sampling parameters used in the NAPLAN 2017 administration.

The remainder of this chapter presents tables describing main aspects of the 2017 National Scientific Sample and the Equating Sample. These tables include the numbers of schools and students sampled, the assessment participation rates and the distributions of gender, language background (LBOTE), Indigenous status and geolocation by year level.

3.2 The National Calibration Sample

Table 3.1 lists the numbers of schools and students included in the National Scientific Sample from each of the eight jurisdictions. The table shows both the numbers of students (N) who were selected in the sample, as well as the numbers of students (Wtd. N) represented by the samples after sampling weights had been applied to approximate the full population of students who had taken the NAPLAN 2017 tests.

Table 3.1. Numbers of Schools and Students included in the National Scientific Sample by State/Territory and Year Level (2017)

Year Level	Source	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total
Year 3	Schools	47	48	46	45	44	30	20	24	304
	Students (N)	1982	2007	2315	1759	1650	911	1127	630	12381
	Students (Weighted N)	101810	80582	73374	35677	22644	6997	5741	4167	330992
Year 5	Schools	48	46	47	44	44	30	20	24	303
	Students (N)	2003	1952	2235	1868	1481	876	1147	639	12201
	Students (Weighted N)	96170	75974	70340	33735	21233	6618	5551	4294	313915
Year 7	Schools	48	47	48	45	41	30	17	17	293
	Students (N)	5634	5636	5435	5185	1288	2408	2520	483	28589
	Students (Weighted N)	90541	72625	67702	31770	20562	6355	5481	3803	298839
Year 9	Schools	48	44	48	45	46	30	17	16	294
	Students (N)	5372	5319	4988	4765	3920	2450	2488	480	29782
	Students (Weighted N)	90562	75040	68082	31677	21330	6847	5545	3892	302975
Total	Schools	191	185	189	179	175	120	74	81	1194
	Students (N)	14991	14914	14973	13577	8339	6645	7282	2232	82953
	Students (Weighted N)	379082	304221	279498	132860	85769	26817	22318	16156	1246721

The remainder of this section presents summary tables showing school and student participation in the sample and the distribution of the National Scientific Sample across key population subgroups.

Table 3.2 shows the percentages of schools from the original sampling list (i.e., without replacement schools) that were included in the National Scientific Sample for each jurisdiction by year level, and the inclusion rates when replacement schools were taken into account.

For each jurisdiction and year level, the school response rates before the use of replacement schools are calculated as

$$RR_s = P_s/(P_s + NP)$$

where *RRs* is the response rate using sampled schools only, *Ps* is the number of sampled schools that participated and *NP* is the number of sampled schools that did not participate.

The school response rate after the use of replacement school is given by

$$RR_{sr} = P_{sr}/(P_{sr} + NP)$$

where *RRsr* is the response rate using sampled schools and replacement schools, *Psr* is the number of sampled or replacement schools that participated, and *NP* is the number of sampled schools that did not participate.

Table 3.2. Percentage of Sampled Schools included in the National Scientific Sample (2017)

Year Level	School Type	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Year 3	Sampled Schools	96	88	94	100	100	100	95	88
	Sampled and Replaced Schools	96	89	94	100	100	100	95	89
Year 5	Sampled Schools	98	83	98	98	98	100	100	88
	Sampled and Replaced Schools	98	85	98	98	98	100	100	88
Year 7	Sampled Schools	100	75	100	98	97	97	100	88
	Sampled and Replaced Schools	100	80	100	98	98	97	100	89
Year 9	Sampled Schools	100	71	100	98	95	97	100	82
	Sampled and Replaced Schools	100	76	100	98	96	97	100	83

Table 3.3 to Table 3.6 present the overall student participation rates obtained by aggregating students across all of the schools within the National Scientific Sample. These participation rates are reported by state/territory and by domain for each year level. Besides students who were *present* for testing, several other categories are shown and defined as follows:

- *Absent* students are students who did not take the test because they were not present when the test was administered, and are identified as absent by the school for the purpose of the test session (ACARA, 2017a, p. 10);
- Students may be labelled *exempt* from one or more of the tests on the basis of English language proficiency or significant disabilities as attested by parents/carers (ACARA, 2017a, p. 9);
- Students may be *withdrawn* from the testing program by their parent/carer for such reasons as religious beliefs or philosophical objections to testing (ACARA, 2017a, p. 11);
- The *other* category includes sanctioned abandonment of the test due to injury and illness (ACARA, 2017a, p. 11) and verified by the Test Administration Authority (TAA).

Table 3.3. Year 3 Sample: Overall Participation Category Rates (%) by State/Territory by Domain (2017)

Domain	Participation Code	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Reading	Absent	2.0	2.5	1.9	2.5	2.2	1.9	2.5	11.0	2.7
	Exempt	1.2	1.6	0.6	0.6	1.6	1.5	1.8	1.1	1.2
	Withdrawn	0.9	1.6	5.6	1.1	4.6	1.8	3.3	1.1	2.7
	Other	0.1	-	0.0	-	-	-	-	-	0.0
	Present	95.9	94.3	91.8	95.8	91.6	94.8	92.5	86.8	93.4
Writing	Absent	1.7	3.1	2.4	1.9	3.4	2.5	2.4	10.2	2.9
	Exempt	1.3	1.6	0.7	0.6	1.5	1.5	1.8	1.1	1.2
	Withdrawn	0.9	1.5	5.7	1.1	4.6	1.9	3.4	1.3	2.7
	Other	0.1	-	-	-	-	-	-	-	0.0
	Present	96.0	93.8	91.1	96.4	90.5	94.1	92.5	87.5	93.2
Spelling	Absent	1.6	3.0	2.1	2.0	2.8	2.1	2.0	9.5	2.6
	Exempt	1.3	1.6	0.7	0.6	1.5	1.5	1.8	1.1	1.2
	Withdrawn	0.9	1.4	5.4	1.1	4.5	1.9	3.4	1.1	2.6
	Other	0.1	-	0.0	-	-	-	0.1	-	0.0
	Present	96.2	94.0	91.7	96.2	91.2	94.5	92.7	88.3	93.5
Grammar & Punctuation	Absent	1.6	3.0	2.1	2.0	2.8	2.1	2.0	9.5	2.6
	Exempt	1.3	1.6	0.7	0.6	1.5	1.5	1.8	1.1	1.2
	Withdrawn	0.9	1.4	5.4	1.1	4.5	1.9	3.4	1.1	2.6
	Other	0.1	-	0.0	-	-	-	0.1	-	0.0
	Present	96.2	94.0	91.7	96.2	91.2	94.5	92.7	88.3	93.5
Numeracy	Absent	2.2	2.7	2.5	2.6	2.8	3.1	2.9	14.3	3.2
	Exempt	1.2	1.5	0.6	0.6	1.5	1.5	1.6	1.1	1.2
	Withdrawn	0.9	1.4	5.5	0.9	4.3	1.6	3.1	1.1	2.6
	Other	-	-	-	-	-	-	-	-	-
	Present	95.7	94.3	91.4	95.9	91.3	93.7	92.4	83.5	93.0

Note: The percentages of students represented in the table above have been rounded and may not sum to 100.

Table 3.4. Year 5 Sample: Overall Participation Category Rates (%) by State/Territory by Domain (2017)

Domain	Participation Code	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Reading	Absent	1.8	2.9	1.3	2.7	3.2	2.7	2.8	12.4	2.9
	Exempt	1.6	1.4	0.9	0.5	1.3	0.8	1.4	1.7	1.2
	Withdrawn	0.6	1.4	5.0	1.3	3.4	0.7	3.1	2.8	2.4
	Other	-	-	-	-	-	-	-	-	-
	Present	96.0	94.4	92.8	95.4	92.0	95.8	92.7	83.1	93.6
Writing	Absent	1.6	3.0	1.7	2.8	3.6	3.0	2.2	11.1	2.9
	Exempt	1.6	1.4	1.2	0.5	1.3	0.8	1.5	1.7	1.2
	Withdrawn	0.6	1.4	4.8	1.3	3.2	0.8	3.3	3.0	2.3
	Other	-	-	-	-	-	-	0.1	-	0.0
	Present	96.2	94.2	92.3	95.4	91.9	95.4	92.9	84.2	93.5
Spelling	Absent	1.4	3.4	1.6	2.4	2.7	2.5	2.3	11.1	2.7
	Exempt	1.5	1.4	1.0	0.5	1.3	0.8	1.4	1.7	1.2
	Withdrawn	0.6	1.4	4.7	1.3	3.2	0.7	3.3	2.8	2.3
	Other	0.0	-	-	-	-	-	0.1	-	0.0
	Present	96.3	93.8	92.7	95.8	92.8	96.0	92.9	84.4	93.8
Grammar & Punctuation	Absent	1.4	3.4	1.6	2.4	2.7	2.5	2.3	11.1	2.7
	Exempt	1.5	1.4	1.0	0.5	1.3	0.8	1.4	1.7	1.2
	Withdrawn	0.6	1.4	4.7	1.3	3.2	0.7	3.3	2.8	2.3
	Other	0.0	-	-	-	-	-	0.1	-	0.0
	Present	96.3	93.8	92.7	95.8	92.8	96.0	92.9	84.4	93.8
Numeracy	Absent	1.7	3.4	1.5	3.1	3.2	3.9	3.3	14.7	3.3
	Exempt	1.6	1.4	0.8	0.5	1.2	0.8	1.4	1.7	1.1
	Withdrawn	0.6	1.3	4.7	1.2	3.1	0.6	3.3	2.8	2.2
	Other	-	-	-	-	-	-	-	-	-
	Present	96.1	93.9	93.0	95.2	92.4	94.7	92.0	80.8	93.3

Notes: The percentages of students represented in the table above have been rounded and may not sum to 100.

Table 3.5. Year 7 Sample: Overall Participation Category Rates (%) by State/Territory by Domain (2017)

Domain	Participation Code	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Reading	Absent	2.0	3.4	4.1	3.2	3.5	3.5	2.5	10.8	3.3
	Exempt	0.7	0.7	0.8	0.7	1.0	1.0	0.6	1.0	0.8
	Withdrawn	0.9	1.7	6.3	0.3	2.6	1.5	2.5	-	2.2
	Other	-	-	0.0	-	-	-	-	-	0.0
	Present	96.4	94.2	88.8	95.7	92.9	94.0	94.4	88.2	93.7
Writing	Absent	1.8	3.5	3.8	3.3	3.8	3.4	2.0	9.9	3.2
	Exempt	0.8	0.7	0.8	0.7	1.0	1.0	0.7	1.0	0.8
	Withdrawn	0.9	1.6	6.3	0.3	2.6	1.6	2.6	-	2.2
	Other	0.0	-	0.0	-	-	-	0.0	-	0.0
	Present	96.5	94.1	88.9	95.7	92.6	94.0	94.7	89.0	93.8
Spelling	Absent	1.8	3.3	3.6	2.9	3.0	3.2	1.9	9.7	3.0
	Exempt	0.7	0.7	0.8	0.7	1.0	1.0	0.7	1.0	0.8
	Withdrawn	0.9	1.6	6.2	0.3	2.6	1.5	2.5	-	2.2
	Other	-	-	-	-	-	0.0	-	-	0.0
	Present	96.6	94.3	89.3	96.1	93.4	94.3	94.9	89.2	94.1
Grammar & Punctuation	Absent	1.8	3.3	3.6	2.9	3.0	3.2	1.9	9.7	3.0
	Exempt	0.7	0.7	0.8	0.7	1.0	1.0	0.7	1.0	0.8
	Withdrawn	0.9	1.6	6.2	0.3	2.6	1.5	2.5	-	2.2
	Other	-	-	-	-	-	0.0	-	-	0.0
	Present	96.6	94.3	89.3	96.1	93.4	94.3	94.9	89.2	94.1
Numeracy	Absent	2.3	3.7	4.3	3.8	4.5	4.4	3.5	12.0	3.8
	Exempt	0.7	0.7	0.8	0.7	1.0	0.9	0.7	1.0	0.8
	Withdrawn	0.9	1.6	6.3	0.3	2.6	1.5	2.5	-	2.2
	Other	0.0	-	-	-	-	-	-	-	0.0
	Present	96.1	93.9	88.6	95.2	91.9	93.2	93.3	87.0	93.3

Notes: The percentages of students represented in the table above have been rounded and may not sum to 100.

Table 3.6. Year 9 sample: Overall Participation Category Rates (%) by State/Territory by Domain (2017)

Domain	Participation Code	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Reading	Absent	3.3	6.8	6.8	4.8	6.6	8.2	5.3	21.3	6.0
	Exempt	0.9	1.0	0.6	0.5	1.0	1.0	1.1	2.1	0.9
	Withdrawn	0.8	2.6	6.7	0.3	2.6	0.9	4.9	0.6	2.6
	Other	-	-	-	-	-	-	0.0	-	0.0
	Present	95.1	89.6	85.9	94.4	89.7	89.9	88.6	76.0	90.5
Writing	Absent	3.4	6.7	7.1	4.7	6.5	8.3	4.5	19.4	6.0
	Exempt	0.9	1.0	0.6	0.5	1.0	1.0	1.2	2.1	0.9
	Withdrawn	0.8	2.7	6.8	0.3	2.6	0.9	4.9	0.6	2.6
	Other	0.1	-	-	-	0.0	-	-	-	0.0
	Present	94.9	89.7	85.5	94.4	89.9	89.8	89.4	77.9	90.5
Spelling	Absent	3.2	6.3	6.9	4.7	6.0	7.5	4.4	19.4	5.7
	Exempt	0.8	1.0	0.6	0.5	1.0	1.0	1.2	2.1	0.9
	Withdrawn	0.8	2.6	6.7	0.3	2.5	0.9	4.9	0.6	2.6
	Other	0.0	-	-	-	-	-	-	-	0.0
	Present	95.1	90.1	85.9	94.5	90.4	90.7	89.5	77.9	90.9
Grammar & Punctuation	Absent	3.2	6.3	6.9	4.7	6.0	7.5	4.4	19.4	5.7
	Exempt	0.8	1.0	0.6	0.5	1.0	1.0	1.2	2.1	0.9
	Withdrawn	0.8	2.6	6.7	0.3	2.5	0.9	4.9	0.6	2.6
	Other	0.0	-	-	-	-	-	-	-	0.0
	Present	95.1	90.1	85.9	94.5	90.4	90.7	89.5	77.9	90.9
Numeracy	Absent	3.6	7.5	7.9	5.4	7.7	9.0	6.3	21.0	6.8
	Exempt	0.8	1.0	0.5	0.5	1.0	0.9	1.1	2.1	0.8
	Withdrawn	0.8	2.5	6.5	0.3	2.7	0.9	4.9	0.6	2.6
	Other	0.0	-	0.0	-	-	-	0.0	-	0.0
	Present	94.8	89.0	85.0	93.7	88.6	89.1	87.7	76.3	89.8

Notes: The percentages of students represented in the table above have been rounded and may not sum to 100.

Table 3.7 to Table 3.10 shows the overall distributions of the National Scientific Sample by several student-level and school-level demographic variables by year level and jurisdiction. The definitions of these variables are taken from the *National Assessment Program – Literacy and Numeracy Achievement in Reading, Writing, Language Conventions and Numeracy: National Report for 2017* (ACARA, 2017b):

- *Sex* is the distinction 'male' and 'female' as reported on a student's enrolment record (p. viii).
- A student is classified as *language background other than English* (LBOTE) if either the student or parents/ guardians speak a language other than English at home (p. vii).
- A student is considered to be *Indigenous* if he or she identifies as being of Aboriginal and/or Torres Strait Islander origin. The term 'origin' is considered to relate to a person's Australian Aboriginal or Torres Strait Islander descent and for some, but not all, their cultural identity (p. vii).
- The *geolocation* of a school uses the ABS Australian Statistical Geography Standard (ASGS) Remoteness Structure which is based on the locality of individual schools and is used to disaggregate data according to Major Cities of Australia, Inner Regional Australia, Outer Regional Australia, Remote Australia and Very Remote Australia (p. vii).

Table 3.7. Calibration Sample: Distribution (%) by Sex by Year Level (2017)

Year Level	Gender	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Year 3	Male	51.3	52.5	50.3	53.6	51.3	52.5	47.9	52.9	51.5
	Female	48.7	47.5	49.7	46.4	48.7	47.5	52.1	47.1	48.5
Year 5	Male	50.8	53.5	49.2	53.1	49.9	52.6	49.6	49.1	51.1
	Female	49.2	46.5	50.8	46.9	50.1	47.4	50.4	50.9	48.9
Year 7	Male	51.5	51.7	51.7	54.2	50.9	49.7	49.2	51.6	51.7
	Female	48.5	48.3	48.3	45.8	49.1	50.3	50.8	48.4	48.3
Year 9	Male	51.9	52.5	51.0	54.3	54.8	50.7	46.8	47.5	52.0
	Female	48.1	47.5	49.0	45.7	45.2	49.3	53.2	52.5	48.0

Notes: The percentages represented in the table above have been rounded and may not sum to 100.

Table 3.8. Calibration Sample: Distribution (%) by Language Background by Year Level (2017)

Year Level	Background	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Year 3	Non-LBOTE	56.1	70.9	83.8	38.6	85.9	90.5	76.0	48.6	69.1
	LBOTE	43.5	29.1	16.2	20.4	12.5	7.7	23.9	35.2	23.8
	Not Stated	0.4	0.0	0.0	41.0	1.6	1.9	0.1	16.2	7.1
Year 5	Non-LBOTE	55.9	74.1	84.7	36.3	86.3	90.4	78.1	45.4	68.8
	LBOTE	43.7	25.9	15.3	18.1	12.2	6.5	21.9	36.8	22.8
	Not Stated	0.4	0.0	0.1	45.6	1.6	3.1	0.0	17.8	8.4
Year 7	Non-LBOTE	66.0	72.8	81.9	55.1	84.2	84.1	80.9	46.8	71.7
	LBOTE	32.8	27.2	18.0	24.3	13.9	14.5	19.1	42.0	23.9
	Not Stated	1.2	0.0	0.1	20.6	1.9	1.4	0.0	11.2	4.4
Year 9	Non-LBOTE	65.9	74.0	82.5	58.3	80.9	73.8	83.7	34.2	72.5
	LBOTE	32.9	26.0	17.5	24.8	17.9	24.8	16.3	43.3	23.9
	Not Stated	1.2	0.0	0.1	16.9	1.2	1.4	0.0	22.5	3.6

Notes: The percentages represented in the table above have been rounded and may not sum to 100.

Table 3.9. Calibration Sample: Distribution (%) by Indigenous Status by Year Level (2017)

Year Level	Indigenous Status	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Year 3	Aboriginal and/or Torre Strait Isl.	4.8	0.9	6.0	5.2	3.6	12.2	2.0	43.3	6.6
	Non-Aboriginal and/or Torre Strait Isl.	93.4	98.8	91.1	92.0	88.7	79.8	97.3	56.5	90.5
	Not Stated	1.8	0.2	2.9	2.8	7.6	8.0	0.6	0.2	2.9
Year 5	Aboriginal and/or Torre Strait Isl.	5.1	1.3	5.9	5.0	2.9	10.5	2.3	44.4	6.5
	Non-Aboriginal and/or Torre Strait Isl.	93.6	98.4	90.9	91.6	92.2	84.9	97.1	55.1	91.1
	Not Stated	1.3	0.3	3.2	3.3	4.9	4.6	0.6	0.5	2.4
Year 7	Aboriginal and/or Torre Strait Isl.	5.5	1.7	7.1	5.4	3.5	9.6	2.9	39.8	5.7
	Non-Aboriginal and/or Torre Strait Isl.	90.5	97.9	89.2	92.6	91.1	70.8	95.8	60.2	90.4
	Not Stated	4.0	0.3	3.6	2.1	5.4	19.6	1.2	0.0	3.9
Year 9	Aboriginal and/or Torre Strait Isl.	5.2	1.6	7.0	5.1	3.3	9.0	3.3	50.4	5.5
	Non-Aboriginal and/or Torre Strait Isl.	90.7	98.1	89.1	92.5	94.9	67.7	96.3	49.2	90.5
	Not Stated	4.1	0.3	3.8	2.4	1.8	23.3	0.4	0.4	4.0

Notes: The percentages represented in the table above have been rounded and may not sum to 100.

Table 3.10. Calibration Sample: Distribution (%) by Geolocation by Year Level (2017)

Year Level	Geolocation	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Year 3	Major Cities	76.3	76.1	60.3	80.2	-	-	100	-	56.3
	Inner Regional	16.9	20.2	22.9	10.2	73.9	64.3	-	-	26.3
	Outer Regional	6.2	3.4	11.3	7.0	25.8	31.4	-	59.4	13.4
	Remote	0.6	0.2	3.5	2.5	0.2	2.2	-	15.1	2.1
	Very Remote	-	-	2.0	-	0.2	2.1	-	25.6	1.9
Year 5	Major Cities	76.6	74.7	60.9	80.7	-	-	100	-	57.4
	Inner Regional	17.0	21.6	21.8	10.3	74.7	69.2	-	-	25.9
	Outer Regional	5.3	3.5	11.4	6.4	24.9	27.1	-	55.4	12.4
	Remote	1.0	0.3	3.7	2.6	0.3	1.9	-	15.6	2.3
	Very Remote	-	-	2.2	-	0.1	1.8	-	29.0	2.1
Year 7	Major Cities	74.6	74.8	65.7	76.5	-	-	100	-	64.6
	Inner Regional	21.8	17.7	18.9	10.9	73.9	75.6	-	-	23.1
	Outer Regional	3.6	7.5	13.6	10.6	26.0	23.9	-	52.6	10.8
	Remote	-	-	0.7	2.0	-	0.5	-	27.3	1.0
	Very Remote	-	-	1.1	-	0.1	-	-	20.1	0.6
Year 9	Major Cities	75.1	74.2	64.6	78.9	-	-	100	-	58.6
	Inner Regional	21.8	18.0	20.2	10.6	79.8	73.4	-	-	28.8
	Outer Regional	3.0	7.9	13.2	9.1	18.2	26.0	-	56.7	11.1
	Remote	-	-	0.5	1.5	1.1	0.6	-	12.1	0.7
	Very Remote	-	-	1.4	-	0.8	-	-	31.3	0.8

Notes: The percentages represented in the table above have been rounded and may not sum to 100.

3.3 The Equating Sample

Table 3.11 shows the achieved number of schools and students in the Equating Sample by content domain, year level, and state/territory.

Table 3.11. Numbers of Schools and Students for the Equating Forms (2017)

Domain	Year Level		NSW	VIC	QLD	WA	SA	TAS	NT	AUS
Reading	Year 3	School	11	8	6	4	3	2	2	36
		Student	285	185	141	85	69	36	45	846
	Year 5	School	11	8	6	4	3	2	2	36
		Student	286	203	150	111	64	44	47	905
	Year 7	School	14	11	10	5	3	2	0	45
		Student	296	253	250	93	65	51	0	1008
	Year 9	School	14	11	10	5	3	2	0	45
		Student	278	239	204	114	70	46	0	951
Language Conventions (Spelling, Grammar and Punctuation)	Year 3	School	11	9	7	4	2	2	2	37
		Student	250	207	163	78	42	47	38	825
	Year 5	School	11	9	7	4	2	2	2	37
		Student	271	209	164	95	43	43	42	867
	Year 7	School	13	11	9	5	2	2	1	43
		Student	295	234	218	112	40	43	25	967
	Year 9	School	14	11	9	5	4	2	1	46
		Student	289	225	203	109	86	33	25	970
Numeracy	Year 3	School	11	9	6	3	3	2	2	36
		Student	267	210	129	54	66	55	41	822
	Year 5	School	11	9	6	3	3	2	2	36
		Student	267	219	133	64	64	38	37	822
	Year 7	School	13	11	9	5	3	2	1	44
		Student	283	243	193	95	57	46	23	940
	Year 9	School	13	11	9	5	3	2	1	44
		Student	287	227	199	92	66	38	26	935

CHAPTER 4 ANALYSIS PROCEDURES AND METHODOLOGY

This chapter describes the processes and methodologies used in the NAPLAN 2017 central analysis. The psychometrics and scaling methods used are methods that have been widely utilised in many large scale assessment programs, including the *Programme for International Student Assessment* (PISA).

The NAPLAN 2017 test calibrations were based on the Item Calibration Sample. The equating to the NAPLAN scale was based on the Equating Sample. The National Scientific Sample was used for the estimation of preliminary NAPLAN 2017 results in July. These estimates were used on parent reports. The analyses for national reporting were based on full cohort data.

The NAPLAN program uses multidimensional item response model with latent regression (MDLR) to produce the plausible values (PVs) required for the analysis and reporting of NAPLAN results at the national and jurisdictional level. The PVs are generated using the *ACER ConQuest* software. PVs were generated based on the National Scientific Sample for the estimation of preliminary results in July, on stage-1 census data for the estimation of summary results released in August and on stage-2 census data for the full national report released in December.

4.1 Data Collection and Data Delivery

Data collection was undertaken by the Test Administration Authorities (TAAs) in the jurisdictions. There were three rounds of data delivery for the central data analysis and a final round for the preparation of national report. The first round involved delivery of data from the equating samples and the second round involved the delivery of the national scientific samples, both described in Chapter 3. The third round involved delivery of nearly complete stage-1 full cohort NAPLAN test data of Years 3, 5, 7 and 9 students in mid July 2017. These data were used for the generation of the NAPLAN 2017 national summary information. The complete set of full cohort data used in the production of the national report was delivered in September 2017. With each round of data delivery, the datasets were cleaned and recoded in preparation for analysis. A systematic process involving data checking was used to ensure that each dataset was consistent with national code frames and data dictionaries.

4.2 Scaling Model

Test calibration and scaling was performed based on the Rasch model, as was the case in previous administrations.

For multiple-choice items and constructed-response items with a category score 1 for correct responses and 0 for incorrect responses, the Rasch model predicts the probability of a correct response given the latent trait (θ_n) and the item difficulty or location (δ_i). This is modelled as

$$P_i(1|\theta) = \frac{\exp(\theta_n - \delta_i)}{1 + \exp(\theta_n - \delta_i)}$$

where $P_i(1|\theta)$ is the probability of person n to score 1 on item i. θ_n is the estimated latent trait of person n, and δ_i the estimated location of item i on this dimension. For each item, responses are modelled as a function of the latent trait θ_n.

In the case of items with more than two categories, this model can be generalised to the Partial Credit Model (Masters, 1982) as

$$P(x \mid \theta) = \frac{\exp \sum_{j=0}^{x} (\theta_n - \delta_i + \tau_{ij})}{\sum_{h=0}^{m_i} \exp \sum_{j=0}^{h} (\theta_n - \delta_i + \tau_{ij})} \qquad x = 0,1,\mathrm{K}\ ,m_i$$

where $P(x|\theta)$ is the probability of person n to score x on item i. θ_n denotes the person's latent trait, the item parameter δ_i gives the location of the item on the latent continuum, and τ_{ij} is a step parameter.

It should be noted that both item (difficulty) and person (ability) parameters are measured on the same scale: in the case of dichotomous items with just two categories (correct and incorrect), for students who have ability (θ_n) the same as the estimated difficulty parameter of an item (δ_i), the probability of giving a correct response is 0.5.

Software used for analyses

For data checking, data management and calculations of sample statistics, statistical software packages SPSS and SAS were used. For the Rasch scaling analysis, the software *ACER ConQuest* (Wu, Adams, Wilson, and Haldane, 2007) was used. *ACER ConQuest* provides tools for the estimation of a variety of item response models and regression models. It was used for test calibrations, for generating weighted likelihood estimates (WLE) for the score-equivalence tables and for drawing plausible values (PVs) based on a multidimensional item response model with latent regression. In addition, score-equivalence tables obtained from *ACER ConQuest* were cross-checked with those obtained from ACER Quest (Adams and Khoo, 1996).

4.3 Stage One Analyses Based on Item Calibration Sample and Equating Samples

Sequence of analyses

Analyses were undertaken in the following order:

- Item and test analyses based on item calibration sample data (treating 'not reached' items as 'not administered' to obtain appropriate estimates of item difficulty). No weights were used.
- A check of item characteristics using classical statistics such as item facilities (*p*-values) and distractor analysis. A review of the outcomes of Rasch analyses including checks of item fit, item spread, test targeting, and differential item functioning (DIF) analysis.
- Horizontal equating using the equating data.
- Vertical equating based on common items in tests of adjacent year levels (Year 3 and Year 5, Year 5 and Year 7, Year 7 and Year 9).
- The combination of results from the horizontal and vertical equating for putting each 2017 domain scale onto the NAPLAN domain scale.

- The generation of student weighted likelihood estimates (WLE) to obtain score equivalence tables.
- The transformation of logit scores into NAPLAN reporting scale scores.
- The generation of plausible values for the national scientific sample.
- The analyses to obtain preliminary results on the NAPLAN scale based on the national scientific sample data. Student weights were used in the calculations of preliminary statistics.
- The calculation of standard errors for student summary statistics that took into account sampling, measurement, and equating errors.

Item coding

The recoding of test data was done prior to data analysis.

In 2017, data for multiple-choice items were indicated by the letter of the chosen response option for each item, i.e., A, B, C, D, or E. Responses for students not participating on a particular test were recoded to Rs and treated as missing. Multiple responses (7s) were treated as incorrect. Embedded missing responses were coded as 9 by the TAAs and treated as incorrect. Trailing missing responses were also coded as 9 for the first unanswered item and treated as incorrect, while the remaining trailing missing items were recoded as Ms and treated as "not reached". These not-reached items were treated as missing values for item calibration to obtain an appropriate estimate of the item difficulty (for students who had a chance to respond).

However, these omits were treated as incorrect for the final estimation of student abilities.

Data for partial-credit items were indicated by ordered categories starting with 0 up to the maximum possible value. Short-answer items were given scores of 0 or 1. The rules for data recoding are provided in Table 5.1 in the next chapter.

Item calibration

The outcomes of the Rasch analyses, including item and test characteristics, are provided in Chapter 5 and Appendices C and D. The goodness of fit for individual items was based on the Mean Square Statistics. The statistical information regarding item characteristics provided includes:

- Item facility, expressed as percentage correct for each relevant year level.
- Item location on individual year level scales.
- Test targeting and item spread.
- Information about the fit of the item to the Rasch model specified.
- Plots for assessing potential differential item functioning (DIF).
- Information on the consistency of the functioning of link items between adjacent year levels.

Review of test and item characteristics

ACER ConQuest provides statistics for each individual item in tabular form with statistics for response categories. The information provided includes the number of students taking the test item, item discrimination (which is equivalent to the correlation between the correct item category and the corrected total score), the item difficulty parameter and the weighted mean square (Infit) fit statistic. Other information provided in the tables includes scoring for each category (responses and other codes, such as missing or not reached), the number and percentage of students in each category, the point biserials for each category (correlation with the corrected total score) and their *t*-values, as well as the average ability estimates of students in each category and their standard deviation. These statistics were used for item review in conjunction with the item characteristic curves (ICC), which show the modelled and empirical curves and distractor behaviours for multiple-choice items. Distractor curves were studied for problem items. This process is described in greater detail in Chapter 5.

In the calibration for each test, the item difficulties and the distribution of student abilities were presented on the same scale. These can be examined visually in the item variable maps provided by *ACER ConQuest*. The reliabilities of the NAPLAN 2017 tests are reported in Chapter 5.

Differential Item Functioning Analysis

Differential item functioning (DIF) occurs when an item is substantially harder for one group than for another group after their relative performance in the domain tested has been taken into account.

A general problem of DIF analysis is to determine the point below which differences are not significant. With large sample sizes, most of the differences will appear to be statistically significant but may not be of practical importance or substantial in size. Under such circumstance, rules of thumb were used to determine whether there was substantial DIF present for a particular subgroup.

DIF in the test items was examined for gender, LBOTE and Indigenous groupings. With five domains and four year levels for each of the three subgroup pairs (for writing, four year levels were analysed together), a decision was made to first examine DIF in the subgroups using scatter plots of adjusted item parameters. Separate Rasch calibrations were performed over the same set of items for the subgroups. The mean item difficulty in each of the two independent sets of item parameters was centred at zero. One set of item parameters was then plotted against the other set of item parameters. Each item is represented by one point on the plot. A diagonal line was plotted as the reference line. If the relative item difficulty for an item is the same in the two groups after taking their relative performance on the test into account, the point representing the item will be on the diagonal. The further the distance that point is from the diagonal, the larger will be the size of the DIF.

DIF was also examined using *ACER ConQuest* by analysing the data based on a multi-facet model by adding an item-by-subgroup term.

In addition to the DIF analysis of student subgroups, item differential functioning across jurisdictions was also examined. The results are shown in section 5.6.

Vertical reporting scales

NAPLAN reporting in each of the five domains is based on a vertical reporting scale spanning Years 3, 5, 7 and 9 for that domain. Each year the scales have been used by jurisdictions to report to parents and schools and for national reporting of student performance on the NAPLAN tests. The NAPLAN 2017 tests were equated onto each NAPLAN domain scale through a combination of vertical equating across the year levels and horizontal equating to the historic scale.

Reading, Spelling, Grammar and Punctuation, and Numeracy

Each of the reading, spelling, grammar and punctuation, and numeracy vertical preliminary scales across Years 3, 5, 7 and 9 was constructed and equated to the NAPLAN vertical scale established in 2008. The equating was performed through: horizontal test equating based on the equating sample data; and vertical equating using linking items embedded in the 2017 tests of adjacent year levels (Year 3 and Year 5, Year 5 and Year 7, Year 7 and Year 9), based on the 2017 calibration sample data. Specifically, the transformation needed for each domain score was calculated based on the equating constants determined from the horizontal and vertical equating in combination. The methodology and results of the equating are described in Chapter 6, and scale transformations are described in Chapter 7.

Writing

In 2017, while students in Years 3 and 5 responded to one prompt for the writing assessment, students in Years 7 and 9 responded to another. The resulting scripts were rated using ten criteria. The data from all four year levels were analysed concurrently to construct the vertical writing scale. The writing analysis was based on the Partial Credit model, a polytomous extension of the Rasch model. The equating of the 2017 writing scale to the 2015 writing scale was conducted using the pairwise-comparison method. The results were checked against those from the common-item equating method. The results of the equating are discussed in Chapter 6. Appendix B provides details of the pairwise-comparisons.

Scoring

The raw scores for each student on the five domains were calculated. Omitted responses were scored as being incorrect. Score-equivalence tables based on WLEs in logits were generated for each test in each domain based on delta-centred item parameters. Transformations were applied to the logit scores for conversion to NAPLAN reporting scale scores on the historic NAPLAN scales.

The jurisdictions were provided with the transformed score-equivalence tables for rapid generation of student and school reports. The score-equivalence tables provided the means for Test Administration Authorities to locate individual students on year level specific reports using the raw scores for each test.

For the estimation of population statistics, rather than using the WLE estimates, five sets of PVs of student latent proficiency estimates were drawn using *ACER ConQuest* based on imputation techniques and a multidimensional item response model with latent regression for students in each of the year levels for each of reading, spelling, grammar and punctuation and numeracy. The conditioning variables used were gender, LBOTE status, Indigenous status, school sector, geolocation, parents' education and occupation and school WLE reading mean.

In generating PVs based on the National Scientific Sample for preliminary estimation of national results in July, jurisdiction was also included as a conditioning variable. The plausible values for writing were drawn for Years 3, 5, 7 and 9 concurrently, conditioning on year level, and the school WLE writing mean was used in the conditioning instead of the reading mean. For each student, the school mean was calculated excluding that particular student. The conditioning on background variables increases the precision of population estimates and allows the analysis of relationships between proficiency estimates and background variables. Plausible values were drawn for all students (including absent students and withdrawn students) except for students who were exempt from NAPLAN testing.

National NAPLAN Reporting Scales and Proficiency Bands

A linear transformation was applied to the logit scores in each domain. The transformation for each domain score was based on standardisation procedures established in 2008 and the equating constants and scale factors estimated from the horizontal and vertical equating, with the result that all five domain scales were put on the NAPLAN historical scales. These scales share the same set of cut-points separating the bands. The cut-points in scale scores established for NAPLAN 2008 were used in 2009 through 2017 to ensure comparability of results across time.

Preliminary performance information based on the National Scientific Sample

For reporting to parents, the national means, standard deviations, the 20th percentiles and the 80th percentiles for each domain and each year level were calculated using the 2017 National Scientific Sample, with weights applied. Preliminary percentages in bands were also estimated for each domain and each year level. All the statistics obtained were expressed on the NAPLAN Reporting Scales.

4.4 Stage Two Analyses Based on Census Data

Using item parameters and scaling information as described in the stage one analyses, five sets of plausible values were drawn separately for each jurisdiction, based on a multidimensional item response model with conditioning on background variables for students in each of the year levels in each of the domains. The conditioning variables used were as described in section 4.3. Census data were analysed to produce national and jurisdiction results, on the full cohort for national reporting in August and in December. The National Report released in December also include results on subgroups.

4.5 The Estimation of Standard Errors

NAPLAN results from census data were reported with standard errors that included both measurement errors and sampling errors. The inclusion of sampling error might be considered surprising in that all students in the target year levels were included in the assessment.

However, the aim of NAPLAN is to make inference about the educational systems each year and not about the specific student cohorts in 2017. In addition, even in census assessments there is a certain amount of non-response that must be taken into account.

The measurement errors are estimated using the multiple sets of plausible values. In general, secondary analyses with plausible values can be described as follows. If θ is the population parameter and θ_i is the statistic of interest computed on one set of plausible values, then:

$\theta = \frac{1}{M}\sum_{i=1}^{M}\theta_i$, with M being the number of sets of plausible values.

The plausible values also allow the computation of the uncertainty in the estimate of θ due to the lack of precision of the test. If a perfect test could be developed, then the measurement error would be equal to zero and the five statistics from the plausible values would be exactly identical. Since no test is perfect, the five sets of statistics would not be identical. The measurement variance is estimated as:

$$B_M = \frac{1}{M-1}\sum_{i=1}^{M}(\theta_i - \theta)^2$$

It corresponds to the variance of the five plausible value statistics of interest. The final stage is to combine the sampling variance and the imputation variance as follows:

$V = U + \left(1 + \frac{1}{M}\right) B_M$, with U being the sampling variance.

Sampling error was considered at both the student and the school level. At the student level there is a random element from one year to another in respect of having different age cohorts at each year level. At the school level it needs to be considered that schools may be closed from one year to another or new schools may be opened.

The Taylor Series Linearization method (Wolter, 1995; Levy and Lemeshow, 1999) was used to construct an approximation to the functional form of the estimated population characteristic that is a linear function of the original observations and hence is amenable to construction of a variance estimator.

The process of *linearization* or *Taylor series variance estimation* involves several steps. To look at a simple case, consider a population characteristic θ and assume that there exists an estimator $\hat{\theta} = f(x, y)$ such that the variables x and y are linear functions of the sample observations but that $f(x, y)$ is *not* a linear function of the sample observations. The next step is to use a first-order Taylor series to approximate $f(x, y)$. This results in an approximation that is linear in the variables x and y, and hence, linear in the sample observations. The final step is to take this linear approximation, identify the sample design, and apply the design-based formula to estimate the variance (Levy & Lemeshow, 1999).

Taylor series variance estimation can be done using commercially available statistical software. For NAPLAN 2017, the complex sample module implemented in the SPSS software package and the procedure *Proc Surveymeans* in the SAS software package were used in parallel processing for checking. Macros were written in both SPSS and SAS to combine the estimates of sampling error with the estimates of measurement error to obtain final standard errors for the performance statistics reported for the census data. The standard errors were used to determine statistical significance in mean differences in NAPLAN 2017 performance in the reports.

Two additional sets of standard errors were calculated, one set for the comparisons of means across 2008 (the baseline year) and 2017 for reading, spelling, grammar and punctuation and numeracy tests and across 2011 (the baseline year) and 2017 for writing, and one set for the comparisons of means across 2016 and 2017. These took into consideration, in addition to sampling and measurement errors, the errors due to the equating of measurement scales across years. See section 6.6 for a discussion of the estimation procedure used to calculate the standard errors of equating.

The calculation of effect size for census data

All significance testing is accompanied by an effect size measure, which indicates the magnitude of any change. The effect size for differences in means is given by *Hedge's g*, whose formula is:

$$g = \frac{m_2 - m_1}{s_p}$$

where m_1 is the sample mean of the first group, m_2 is the sample mean of the second group, and s_p is the pooled standard deviation, i.e. the square root of the pooled within-groups variance, weighted by number of cases in each group

$$s_p = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

where n_1 and n_2 are the number of cases in group 1 and 2, respectively, and s_1^2 and s_2^2 are their variances. This formula is known to yield a biased estimate for the population value and is corrected using the following formula:

$$g_{unbisased} = g_{biased}\left[1 - \frac{3}{4(n_1 + n_2 - 2)}\right]$$

CHAPTER 5 TEST CALIBRATIONS

This chapter describes the data preparation process, test calibration outcomes and differential item functioning (DIF) analysis outcomes.

5.1 Data Preparation

As in previous years, each TAA prepared its jurisdiction data according to a common codebook provided. Each TAA prepared four data files in ASCII format, one for each year level. The data files were uploaded to ACARA's secure File Transfer Protocol (FTP) site. The data were identified at the school level and delivered with school information necessary for the calculation of weights. This made it possible for the data analysis contractor to calculate the weights for each school and for each jurisdiction.

Data Checking

All data files were checked for invalid codes and inconsistencies. Data were cleaned and recoded as part of the central data analysis process. Any concerns about data were communicated to the TAA and rectified as necessary. Recoded data files were generated and verified in preparation for data analysis.

Rules for Data Recoding

Table 5.1 lists the test participation codes used in the data files and the rules for recoding the response string for each test.

Table 5.1. Rules for Data Recoding

Participation Code	Data Recoding Rule
P – Present	Data string (i.e. item responses) expected. Any embedded missing responses are indicated with 9s by the TAA, invalid responses with 7s. The first trailing missing response is to be kept as a 9; subsequent trailing-missing responses are unreached missing responses, and are to be recoded as Ms. Any embedded missing responses within the data string are kept as 9s. Students who are present but do not attempt any question will have a string of Ms.
A – Absent	A data string of all 9s for that test was expected from the TAA. Item data are recoded as a string of Rs.
S – Sanctioned Abandonment	This is specifically used to indicate students who unexpectedly abandon the test due to illness or injury. See National protocols for Test Administration section 5.5. There may be data, but these students will be treated as absent. All item data are recoded as a string of Rs.
W – Withdrawn	A data string of all 9s for that test was expected from the TAA. See National protocols for Test Administration section 5.4. These students are treated as absent. Item data are recoded as a string of Rs.
E – Exempt	A data string of all 9s for that test was expected from the TAA. See National protocols for Test Administration section 5.2. These students are not included in the calibration or in the calculation of means. Item data are recoded as a string of Rs.

Language conventions was one test but reported as two domains. There were students who attempted only the spelling part or only the grammar and punctuation part. For the purpose of calibration, the unreached-missing coding was done separately for spelling and grammar and punctuation. A code of 9 was only used for the first of the unreached missing response, and the remaining missing values were recoded to M. The code of 9 was also used for embedded missing responses.

Missing data were not expected for writing. Students who were present but did not write anything (blank booklet) had their ratings coded as a string of 9s by the TAAs. These were then all recoded to M.

5.2 Test Calibrations

Senate weights were not used for item calibration. To ensure each state/territory was equally represented, a simple random sample was drawn from each state/territory's scientific sample to match the sample size of the scientific sample of the smallest state/territory (Northern Territory). The reading, spelling, grammar and punctuation and numeracy tests were calibrated separately by domain and year level, resulting in 16 separate calibrations. In the estimation of parameters, all responses from a non-participating student (absent, withdrawn and exempt) were treated as missing, and the embedded missing response (9), the first trailing missing response (9) and the invalid response (7) were treated as wrong. Trailing missing responses (M) beyond the first were treated as missing. Senate weights were not used for item calibration. To ensure each state/territory was equally represented, a simple random sample was drawn from each state/territory's scientific sample to match the sample size of the smallest state/territory (Northern Territory).

In 2017, while students in Years 3 and 5 responded to one prompt for the writing assessment, students in Years 7 and 9 responded to another. The writing scripts were rated using the same marking rubric based on the ten criteria. The writing test data from Years 3, 5, 7 and 9 were analysed concurrently, based on the partial credit model. The latent distribution was conditioned on year level.

All calibrations were conducted using *ACER ConQuest*. In addition, calibrations were conducted independently using *ACER Quest* as a method of checking the calibration outcomes.

The *ACER ConQuest* item analysis results are in Appendix B. This is an item-by-item tabular display of classical item statistics: item facility, discrimination and point-biserial statistics, counts and percentages of each response option (for multiple-choice items), score-points (for scored items), Rasch item parameters and Infit mean square. The item parameters shown on these tables are delta-centred (i.e., the mean of item difficulties is set to zero) within each domain and year level, except for writing, where Years 3, 5, 7 and 9 are combined.

Traditional test reliability, Coefficient Alpha, is presented at the end of the item analysis results for each test.

The Rasch item parameter estimates and statistics are summarised in Appendix C for each of the 17 tests. The item parameters shown in these tables are delta-centred for each test. The 95% confidence interval for the expected value of the Infit mean square is also provided for each item.

Item Characteristic Curves (ICCs) for all items are shown in Appendix D. The ICC plot shows a comparison of the empirical ICC based on observations from ten equal-size ability groupings (broken line joining ten dots) and the expected model-based ICC (smooth line). The two curves should display small or no disparities for an item that has good fit to the model. Since the ICC for a multiple-choice item also shows the proportion of students in each of the ten groups who responded to each distractor in the distractor response curves, the performance of distractors can be examined using the item analysis results and the behaviours of the response curves in the ICC plots.

5.3 Test Reliability and Average Item Discrimination

Test Reliability

Table 5.2 shows the coefficient alpha of each test. It should be noted that the language conventions test is reported as two domains for each year level: (1) spelling and (2) grammar and punctuation with 25 items each. While spelling items are in a constructed response format, grammar and punctuation items are in a multiple-choice format for Years 3, 5 and 9 while Year 7 test include 2 constructed response items.

The coefficient alphas are between 0.84 and 0.89 for the reading tests, between 0.89 and 0.92 for the spelling tests, between 0.73 and 0.78 for the grammar and punctuation tests and between 0.87 and 0.93 for the numeracy tests. The reliability for the writing test is 0.96. The reliabilities are generally high with the exception of the reliabilities for the grammar and punctuation tests. The shorter multiple-choice tests may explain the slightly lower reliability for the grammar and punctuation tests.

Table 5.2. Coefficient Alpha for NAPLAN 2017 Tests

Year Level	Reading	Spelling	Grammar and Punctuation	Numeracy	Writing*
Year 3	0.84	0.92	0.73	0.87	0.96*
Year 5	0.86	0.92	0.74	0.90	
Year 7	0.89	0.90	0.78	0.91	
Year 9	0.88	0.89	0.73	0.93	

*For Years 3, 5, 7 and 9 together

Average Item Discrimination

Table 5.3 shows the average item discriminations for the reading, spelling, grammar and punctuation and numeracy tests. The average item discriminations for the reading tests range from 0.34 to 0.37. The spelling tests have the highest average item discriminations, ranging from 0.48 to 0.57. The averages for the grammar and punctuation tests are between 0.27 and 0.32, and those for the numeracy tests are between 0.37 and 0.45.

The unusually high average item discrimination (i.e., 0.82) for the writing test is likely due to the small number of highly correlated, polytomously scored criteria used in scoring across the span of grade levels.

Table 5.3. Average Item Discrimination for NAPLAN 2017 Tests

Year Level	Reading	Spelling	Grammar and Punctuation	Numeracy	Writing*
Year 3	0.34	0.57	0.29	0.37	0.82*
Year 5	0.37	0.54	0.29	0.41	
Year 7	0.36	0.48	0.32	0.40	
Year 9	0.35	0.48	0.27	0.45	

*For Years 3, 5, 7 and 9 together

5.4 Test Targeting and Item Spread

The purpose of the variable map (or Wright map) is to compare the distribution of student locations (on the left side of the map) and the item thresholds (on the right side of the map). Item, step and person parameters are plotted on a common scale on a variable map. Appendix E provides the variable maps for the domains at each year level.

For dichotomously scored tests, the maps are constructed so that a student has a 50% chance of answering an item correctly when the item is at a difficulty level that is at the same level as the student's ability. On each variable map, the mean of the item estimates was centred at zero. Students at the top end of the distribution have higher proficiency estimates, while items at the top end are the more difficult items.

Figure 5.1 displays the variable map for Year 3 numeracy. That variable map indicates that this sample's numeracy achievement level has been well targeted by the current test. The distribution of persons (each X represents approximately 8 persons) matches up well with the distribution of item thresholds, which indicates that the ability levels of the population were well represented at all levels of the test.

For the polytomously scored tests (e.g., writing), on the other hand, the criterion difficulty of each of the ten rating criteria is plotted in the middle panel with the latent ability distribution on the left-hand side. Each criterion is polytomously scored. The right-hand panel of Figure E.5 shows locations of the Thurstonian thresholds of each item. The notation *a.b* indicates threshold *b* of criterion *a*. The location of the threshold indicates the ability level required for a student to have 50% chance of achieving category *b* or better on criterion *a*. The variable maps show that the thresholds are well spread out and well separated.

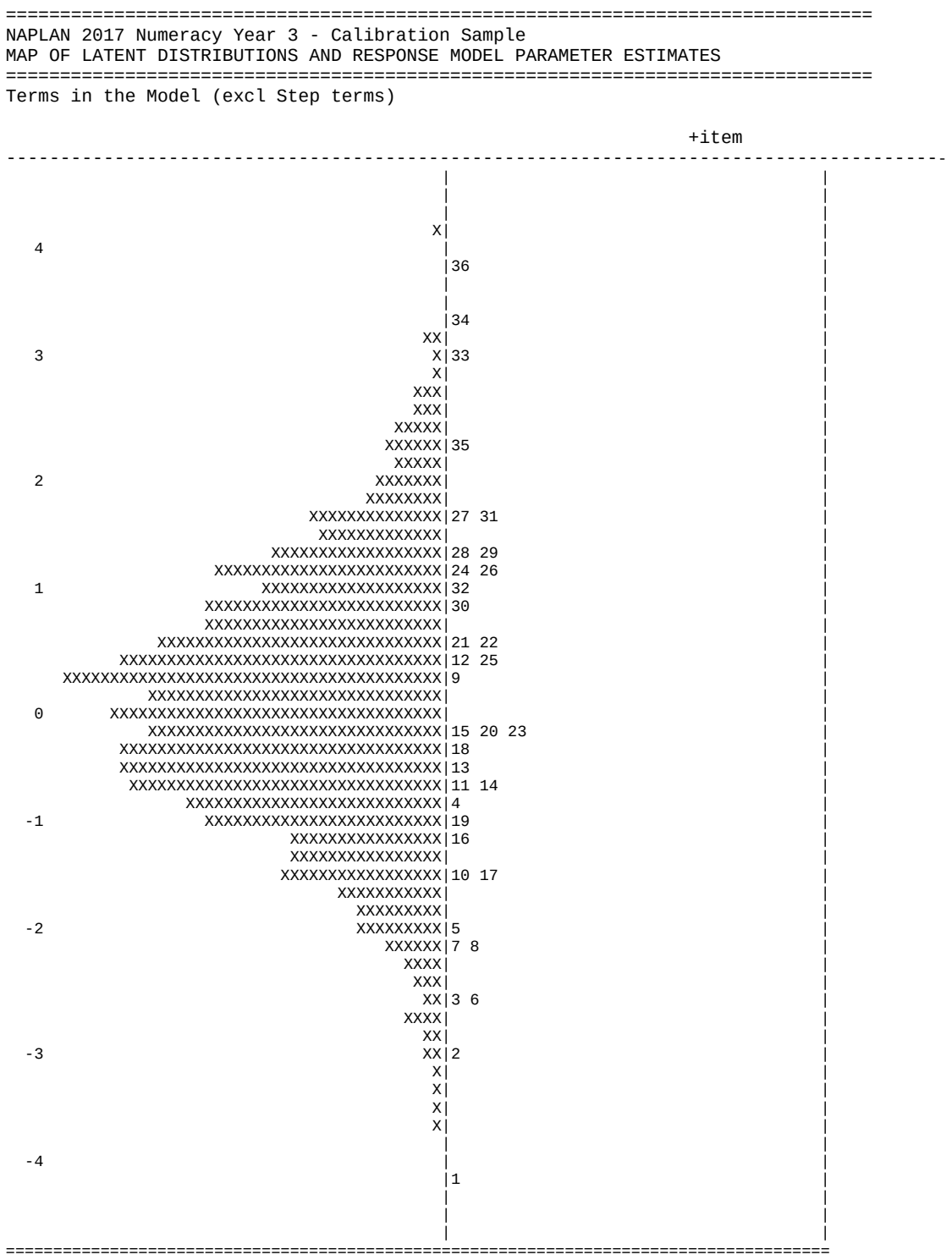

Figure 5.1. Example of a Wright map for Year 3 Numeracy

5.5 Item Fit

The evaluation of goodness of fit to the Rasch model for individual items was based on the weighted mean square (Infit mean square) statistics. Infit compares the actual residuals to how much of the variation is expected if the data fit the model. A value greater than the expected value of 1.0 indicates that the item responses contain a greater amount of variability than expected by the model, and a value below 1.0 indicates that the consistency between observed data and model-based predictions is better than expected. We used an Infit value of 1.20 as the criterion value for evaluating the goodness of fit of each item, i.e., Infit values greater than 1.20 indicate item under-fit. We also calculated classical item statistics (i.e., discrimination and facility) for the purpose of item fit evaluation, specifying criterion values for discrimination (based on item-rest score correlation) less than 0.25 and facility outside the range of 0.10 to 0.90. Values of the Infit mean square and classical item statistics of each item can be found in Appendices B and C.

As mentioned in section 5.2., the ICC of each item shows a comparison of the empirical ICC based on observations from ten equal-size ability groupings (broken line joining 10 dots) and the expected model-based ICC (smooth line), and the two curves should display small or no disparities for an item that has good fit to the model. The ICCs for all items can be found in Appendix D.

Reading, Spelling, Grammar and Punctuation, and Numeracy

Item fit to the Rasch model was closely examined for reading, spelling, grammar and punctuation and numeracy at each of the four year levels. As all items were trialled and examined previously, few items should show misfit. Because of the large size of the calibration sample, the confidence intervals for the Infit mean squares were rather narrow.

Table 5.4 presents the number of items falling into two Infit mean square ranges: less than or equal to 1.20, and greater than 1.20. It also presents the number of items with discrimination less than 0.25 and the number of items with facility outside the range of 0.10 to 0.90. As seen from the table, there were 14 items across 16 tests having Infit greater than 1.20. Regarding classical test statistics, there was a total of 57 items across the 16 tests with discrimination less than 0.25. There was a total of 39 items with facility higher than 0.90 and 15 items with facility less than 0.10. Figure 5.2 shows the ICC of one reading item (i.e., Item R3Q20) with an Infit statistic close to 1.01. In contrast, Figure 5.3 shows the ICC of one reading item (i.e., Item R5Q28) with an Infit statistic (i.e., 1.27) higher than the criterion value (i.e., 1.20) for evaluating the goodness of fit of each item.

Writing

The evaluation of goodness of fit to the Rasch model for individual writing items was also based on the weighted mean square statistics. None of the criteria exhibited misfit to the Rasch partial credit model except for punctuation and spelling (i.e., 1.45 and 1.23, respectively). Regarding the ICCs, there were not large differences between the empirical and the expected curves for each of the ten criteria. The ICCs of the ten writing criteria are also included in Appendix D.

Table 5.4. Summay of Item Statistics in NAPLAN 2017 Tests

Domain	Year Level	Total Number of Items	Number of Items with Discrimination <0.25	Number of Items with Infit ≤1.2	Number of Items with Infit > 1.2	Number of Items with Facility > 0.90	Number of Items with Facility < 0.10
Reading	3	37	3	37	0	2	0
	5	37	4	35	2	6	0
	7	48	3	47	1	5	1
	9	49	7	49	0	8	0
Spelling	3	25	0	25	0	0	0
	5	25	0	24	1	1	0
	7	25	0	24	1	2	2
	9	25	0	24	1	1	1
Grammar and Punctuation	3	25	9	25	0	1	1
	5	25	7	25	0	1	0
	7	25	7	25	0	2	1
	9	25	8	25	0	1	1
Numeracy	3	36	4	36	0	2	3
	5	42	1	42	0	5	2
	7	48	3	45	3	2	3
	9	48	1	43	5	0	0

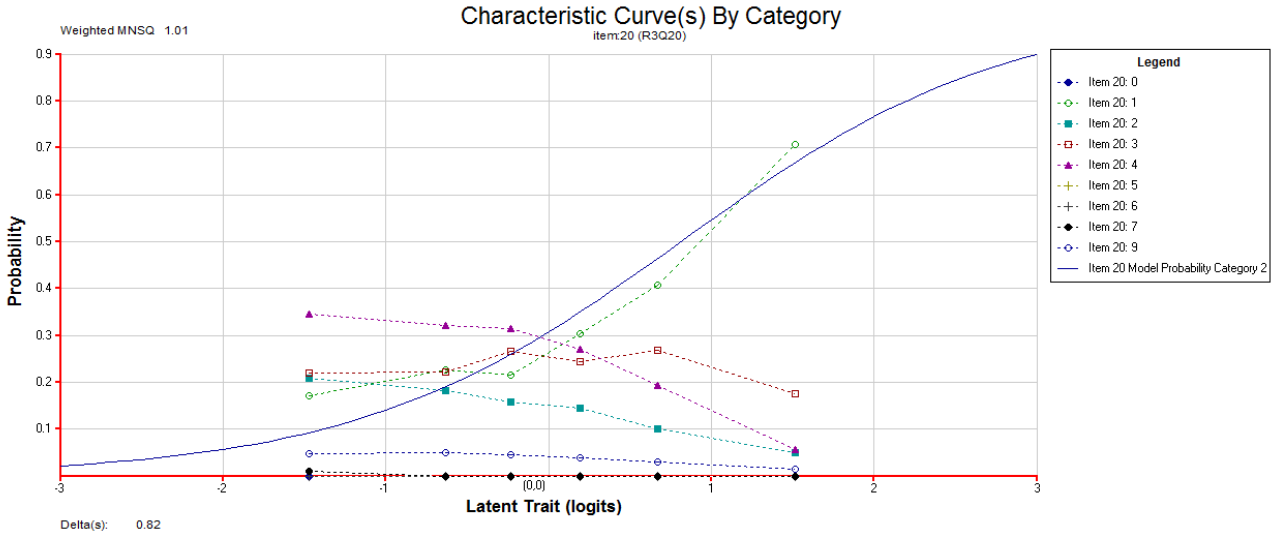

Figure 5.2. Item characteristic curves for an item with Infit =1.01

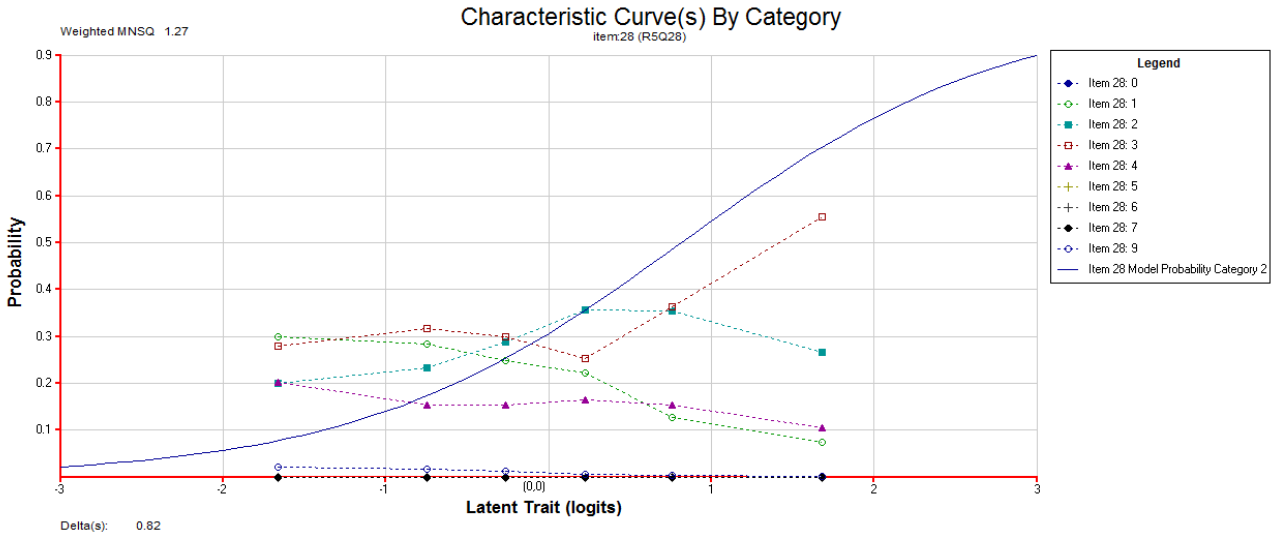

Figure 5.3. Item characteristic curves for an item with Infit > 1.27

5.6 Differential Item Functioning (DIF) Analyses

According to Camilli and Shepard (1994), item response theory can be used to assess DIF. Specifically,

> [i]tem characteristic curves provide a means for comparing the responses of two different groups . . . to the same item. A difference between the ICCs of two groups indicates that . . . examinees [for the two groups] at the same ability level do not have the same probability of success on the item. More technically, DIF is said to occur whenever the conditional probability, $P(\theta)$, of a correct response differs for two groups. (Camilli & Shepard, 1994)

In the analysis for NAPLAN, subgroups were arbitrarily categorized as either reference or focal groups. While males, non-LBOTE students, and non-Indigenous students were assigned to the reference group, females, LBOTE students, and Indigenous students were assigned to the focal group for DIF analyses. As mentioned in Chapter 4, independent Rasch analyses were then performed over the same set of items for each subgroup in order to examine any DIF that exists between two subgroups (e.g., males vs. females). The mean item difficulty for each subgroup was centred at zero to adjust for group differences in ability. The difference in the relative item difficulties after adjustment is referred to as the adjusted difference.

For visual depiction of DIF, item locations of the reference group were plotted against those of the focal group as seen from Appendices F, G and H (i.e., gender, LBOTE, and Indigenous status, respectively). Each item is represented by one point on the plot. A diagonal line is plotted as the reference line. If the relative item difficulty for an item is not different in the two groups after taking their relative performance on the test into account, the point representing the item will be on the reference line. The distance of a point from the diagonal reflects the magnitude of DIF. Due to the large sample sizes, confidence bands were very narrow and were not plotted on the charts.

Finally, Tables 5.5, 5.6, and 5.7 summarize the total number of items indicating potential DIF with an absolute adjusted difference of 0.50 or greater for gender and language background (LBOTE), and 0.60 or greater for Indigenous DIF. Figures 5.4, 5.5, and 5.6 are examples of the potential DIF items.

Gender DIF

Appendix F presents the scatter plots for examining gender DIF in the five domains. The plots for reading, spelling, grammar and punctuation, and numeracy are presented by year levels. The writing gender DIF was performed by combining all four grades together. On the whole, the plots indicate that there are few items that exhibit gender differences in the adjusted item estimates and that any differences are not large and thus were not of great concern.

Table 5.5 identifies the number of items that show potential gender DIF with an absolute adjusted difference of 0.50 or greater for reading, spelling, grammar and punctuation, and numeracy. Figure 5.4 shows as an example, one numeracy item (Item N7CAQ09) with an absolute adjusted difference of 0.50 or greater. This item with a positive adjusted difference indicates that the item was relatively easier (adjusted difference = 0.64) for female students. Appendix F includes DIF plots that show for each of the items the observed curves by gender group compared to the expected ICC.

Table 5.5. Number of Items Showing Gender DIF by Domain by Year Level

Year Level	Reading		Spelling		Grammar and Punctuation		Numeracy	
	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items
3	37	1	25	0	25	0	36	3
5	37	2	25	1	25	0	42	3
7	48	1	25	0	25	0	48	5
9	49	1	25	2	25	1	48	2

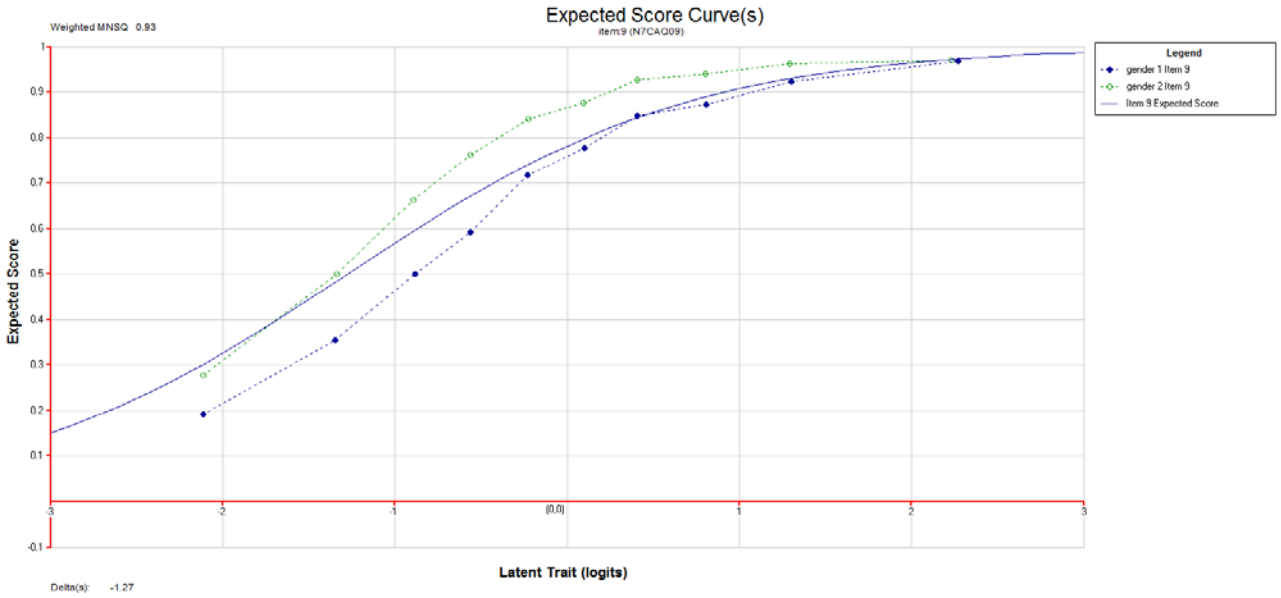

Figure 5.4. Example of item characteristic curves displaying gender DIF†

† 'gender 1' indicates 'Male' and 'gender 2' indicates 'Female'.

LBOTE DIF

Appendix G shows scatter plots for examining DIF due to language background in the five domains by the four year levels. Writing LBOTE DIF was performed by combining all four grades. These plots indicated that there were not many items that showed notable differences in the relative item difficulties.

Table 5.6 indicates the number of items that show potential DIF with an absolute adjusted difference of 0.50 or greater for reading, spelling, grammar and punctuation, and numeracy. Figure 5.5 depicts one numeracy item (Item N5Q16) with an absolute adjusted difference of 0.50 or greater. This item was relatively easier (adjusted difference = 0.96) for non-LBOTE students.

Appendix G includes DIF plots that show for each of the items, the observed curves by language group compared to the expected ICC.

Table 5.6. Numer of Items Showing LBOTE DIF by Domain by Year Level

Year Level	Reading		Spelling		Grammar and Punctuation		Numeracy	
	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items
3	37	0	25	2	25	0	36	2
5	37	0	25	2	25	2	42	2
7	48	0	25	1	25	1	48	3
9	49	1	25	2	25	1	48	1

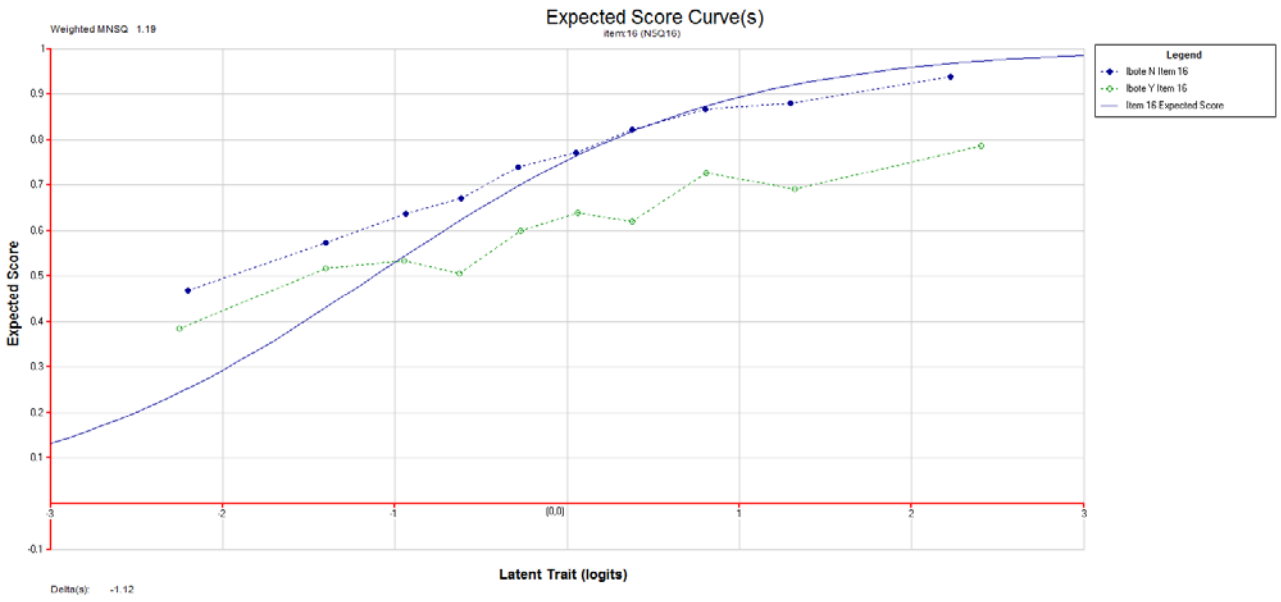

Figure 5.5. Example of item characteristic curves displaying LBOTE DIF†

† 'lbote Y' indicates 'LBOTE group' and 'lbote N' indicates 'Non-LBOTE group'.

Indigenous Status DIF

Appendix H includes scatter plots for examining Indigenous DIF in the five domains. Writing Indigenous DIF was performed by combining all four grades. These plots showed that there were not many items that showed notable differences in the relative item difficulties.

Table 5.7 lists the number of items that show potential Indigenous DIF with an absolute adjusted difference of 0.60 or greater for reading, spelling, grammar and punctuation, and numeracy. The larger threshold (i.e., 0.60 instead of 0.50) was used in order to identify only the items that showed larger DIF. Figure 5.5 depicts one grammar and punctuation item (Item G3Q29) with an absolute adjusted difference of 0.60 or greater. This item was relatively easier (adjusted difference = 0.93) for non-Indigenous students.

Appendix H provides the item DIF plots for items listed in Table 5.7. The plots show for each of the items, the observed curves by Indigenous group compared to the expected ICC. In interpreting the plots, it should be noted that there may not be many Indigenous students along parts of the ability range. As a result, one would expect larger variability of empirical probabilities (i.e., the dots connected by dashed lines) about the model-based curve (the solid curves).

Table 5.7. Numer of Items Showing Indigenous DIF by Domain by Year Level

Year Level	Reading		Spelling		Grammar and Punctuation		Numeracy	
	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items
3	37	8	25	0	25	8	36	6
5	37	7	25	1	25	3	42	6
7	48	2	25	0	25	4	48	5
9	49	6	25	1	25	2	48	7

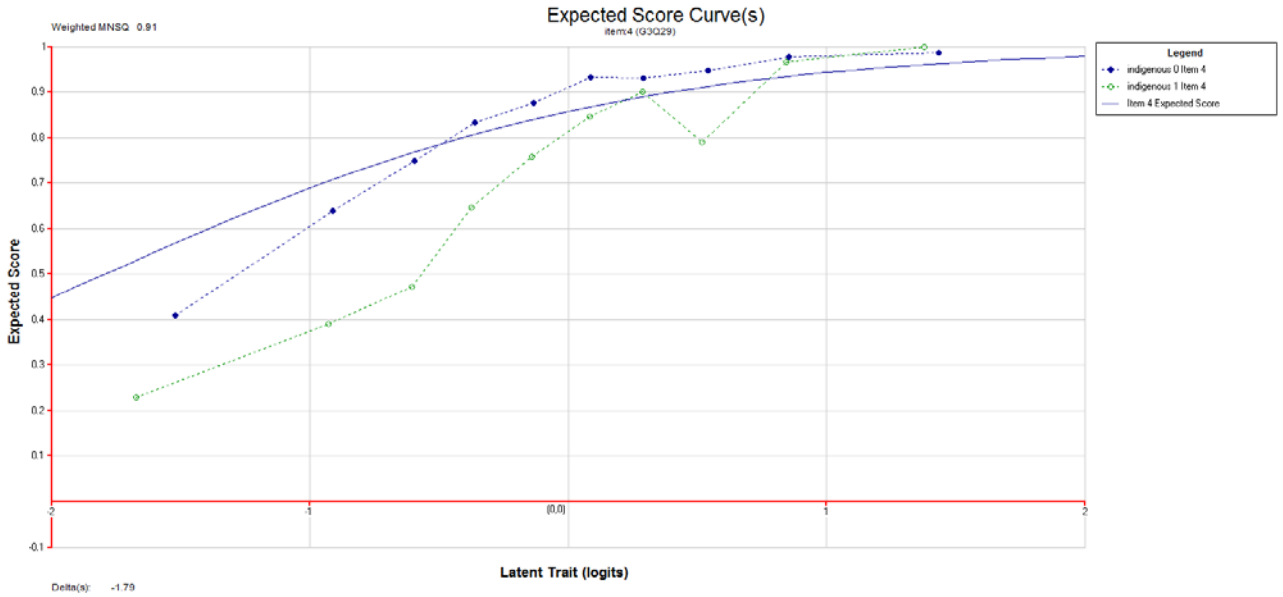

Figure 5.6. Example of item characteristic curves displaying Indigenous DIF†

† 'indigenous 1' indicates 'Indigenous group' and 'indigenous 0' indicates 'Non-Indigenous group'.

DIF values of individual items for gender, LBOTE, and Indigenous status are presented in Appendix I.

State/Territory DIF

The number of items showing statistically significant state/territory related DIF in reading, spelling, grammar and punctuation and numeracy are shown in Table 5.8. In the headings of Table 5.8, 'E' indicates that the item is relatively easier for the jurisdiction, and 'H' indicates that the item is relatively harder for the jurisdiction. There were 13 potential DIF in reading, 3 in spelling, 17 in grammar and punctuation and 32 in numeracy across all four year levels across the jurisdictions. Table 5.8 can be read in conjunction with Appendix I, from which the items showing state/territory related DIF can be identified. For example, from Table 5.8, there were three items in Year 3 reading showing DIF in NT when compared to the national level, with all three items (R3Q01, R3Q02, and R3Q04) being harder for NT, as seen from Appendix I.

Table 5.8. Number of Items Showing State/Territory DIF by Domain by Year Level

Domain	Year Level	ACT		NSW		NT		QLD		SA		TAS		VIC		WA	
		E	H	E	H	E	H	E	H	E	H	E	H	E	H	E	H
Reading	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1
Spelling	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	9	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
GP	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
	7	0	1	0	0	0	0	0	0	0	0	1	0	1	1	0	0
	9	0	1	1	1	0	0	1	2	0	0	0	1	0	1	0	2
Numeracy	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0
	7	0	0	3	2	0	0	2	1	0	1	0	1	0	0	2	0
	9	0	0	5	2	0	0	1	0	0	0	0	2	3	0	1	1

Note. 'E' indicates that the item is relatively easier for the jurisdiction, and 'H' indicates that the item is relatively harder for the jurisdiction.

To examine the state/territory DIF for the writing test, the expected score curves of ten rating criteria were plotted for the eight states/territories in Appendix J. None of the criteria showed notable differences across states/territories.

CHAPTER 6 EQUATING PROCESS

NAPLAN results are reported using five national achievement scales, one for each of the assessed domains of literacy – reading, writing, spelling and grammar and punctuation, and one for numeracy. The vertical and horizontal equating design is represented schematically in terms of data matrix in Figure 6.1. Each year in NAPLAN, the scales are vertically equated so that each NAPLAN achievement scale spans Years 3, 5, 7 and 9; i.e., there is a single scale for each assessment domain. All assessments other than writing are vertically equated by including common items in tests administered to adjacent year levels; i.e., Year 3/5, Year 5/7 and Year 7/9. The responses to the common items are represented as the shaded columns in Figure 6.1 that overlap between adjacent year levels. For the purpose of monitoring student achievement over time, the 2017 NAPLAN scale for each domain needs to be horizontally equated to the historic NAPLAN reporting scale.

Because NAPLAN test materials are considered in the public domain after the tests are administered, it is not possible to use common items to horizontally equate the tests over time. Instead, common-person equating is used. The secure equating test forms used for horizontal equating in 2009 through 2016 were used for common-person equating again in 2017, noting that some of the secure forms have been modified or updated. Students from Years 3, 5, 7 and 9 in the equating sample were administered the secure equating forms at their year level in addition to the 2017 main NAPLAN test forms. The equating data were used to equate the 2017 tests onto the existing NAPLAN reporting scales.

The horizontal equating provides one basis for placing the 2017 NAPLAN Year 3, Year 5, Year 7 and Year 9 tests on the vertical NAPLAN scale for each domain because item locations for the secure forms are on the NAPLAN scale. The common items in the tests administered to adjacent year levels also provide a basis for vertically equating the scales. As in previous years, the results of common person equating were checked against the results of 2017 common-item vertical equating and both sets of results were taken into consideration in finalising the scaling of the reading, spelling, grammar and punctuation and numeracy tests.

The writing prompt of NAPLAN can be either persuasive or narrative. From 2008 to 2010 the prompt was narrative; from 2011 to 2015 a persuasive prompt was used. In 2011, a persuasive writing scale, separate from the narrative scale, was introduced. NAPLAN 2016 employed a narrative test. New analytical methods were used in 2016 to put the results of the narrative test onto the existing persuasive writing scale, creating a NAPLAN writing scale comparable for both genres for writing performance from 2011. In 2017 a persuasive writing task was administered in NAPLAN and the resulting scale was equated to the NAPLAN writing scale. In 2017, as in 2015 and 2016, one task was administered to Year 3 and 5 students and a different task was administered to Year 7 and 9 students. The process of equating for writing is described in section 6.6.

6.1 Horizontal Equating for Reading, Spelling, Grammar and Punctuation and Numeracy

The horizontal equating design for all tests other than writing involved a two-step procedure that combines common-person and common-item test equating methods. The common-person equating was achieved through the equating sample. The equating was carried out using secure equating forms that were administered with the NAPLAN 2017 tests for reading, spelling, grammar and punctuation and numeracy. Each student in the equating sample completed an equating form in addition to the NAPLAN 2017 tests that the full cohort to

which they belong completed. Figure 6.1 shows the horizontal equating design for each of reading, spelling, grammar and punctuation and numeracy at each year level.

The equating form for each domain at each year level had already been scaled onto the historic NAPLAN scale in 2009. The first step was to place the NAPLAN 2017 test and the equating form on the same scale, for each domain at each year level, using the common-person equating data. The second step was to equate each of the 2017 NAPLAN tests onto the historic NAPLAN domain scale using the relevant equating form through the process of common-item equating.

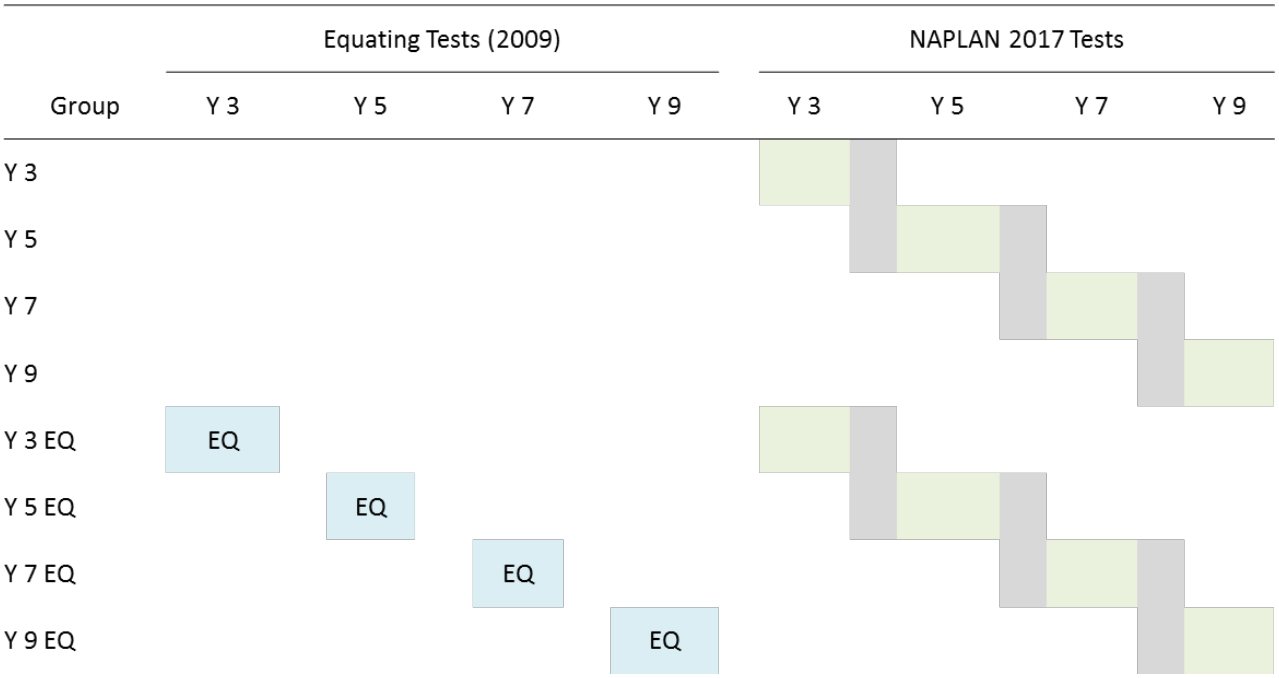

Figure 6.1. Equating design for each assessment domain

The vertical scales were originally established in 2008. In each new calendar year, link items are included in the tests for adjacent year levels and new vertical equating is conducted. This provides the basis for obtaining new estimates of vertical shift constants to equate the 2017 Years 3, 5, 7 and 9 tests vertically onto the same scale. The tests are also equated horizontal to the historic scale using the secure forms. Consequently, the horizontal equating through equating forms also places the four year-level tests onto the NAPLAN vertical scale. The horizontal equating provides indirect vertical linking that ideally will agree with the direct vertical linking. In most cases, there was a reasonable level of agreement between the horizontal and vertical links.

6.2 Calibrations of the Equating Forms and Item Reviews

Test calibrations were carried out separately for each of the 16 equating test forms (four domains at four year levels). The equating form and the corresponding 2017 test were jointly calibrated for each domain and each year level using the combined common-person equating data and anchoring on the delta-centred item parameters of the 2017 test on the 2017 preliminary scale.

The analyses of the equating data described above provided a set of item parameters on the preliminary NAPLAN 2017 scale for each of the equating forms. The set of 2017 equating

form item estimates was then compared with the item estimates of the 2009 equating forms which were on the historic NAPLAN scale. Items were considered for deletion as links if they functioned poorly (based on Mean Square indices and ICCs) and/or if their relative locations differed by an absolute value of greater than 0.3 compared with their locations on the original 2009 scale for the relevant secure form.

Figures 6.2 to 6.17 show the comparisons of the 2009 item parameters and 2017 item parameters for items on each of the 16 equating tests. Each figure shows a pair of parameter plots of the linked items, before and after review, in each domain and for each year level. Ideally, the bivariate points would follow the identity line, which is shown in each figure for reference as a solid line.

Equating items that were modified over time had been omitted from the horizontal linking.

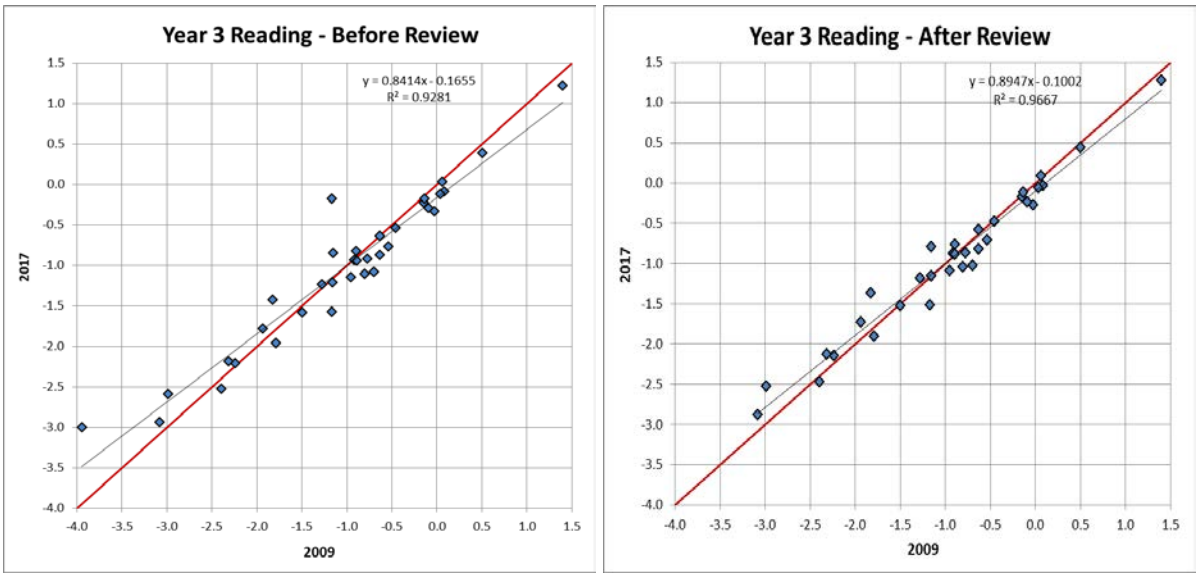

Figure 6.2. Links review for Reading equating form Year 3 (2017 vs. 2009)

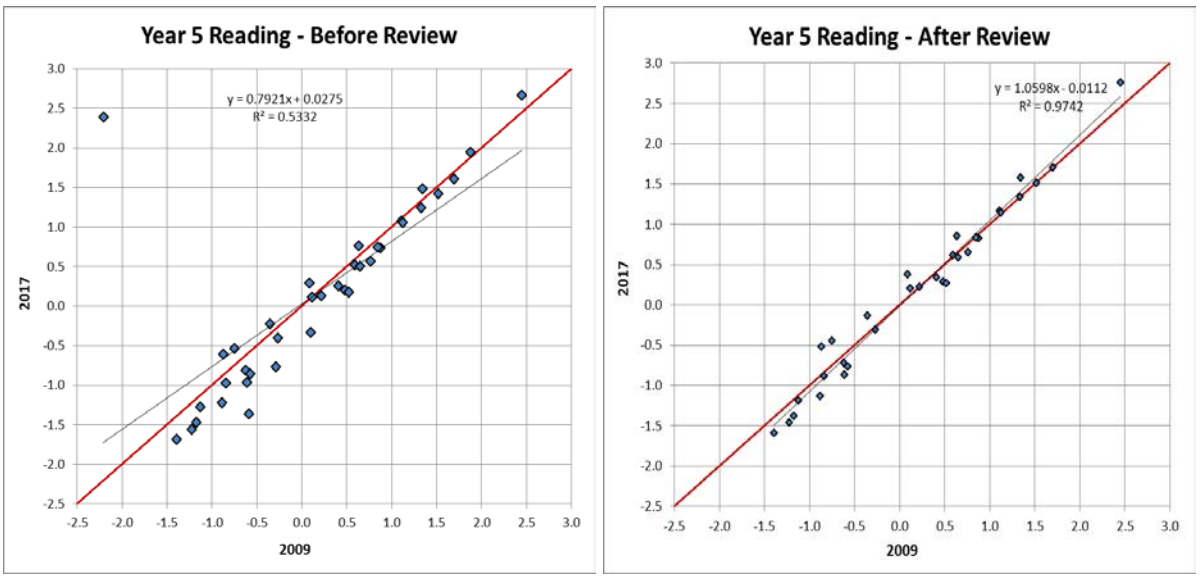

Figure 6.3. Links Review for Reading equating form Year 5 (2017 vs. 2009)

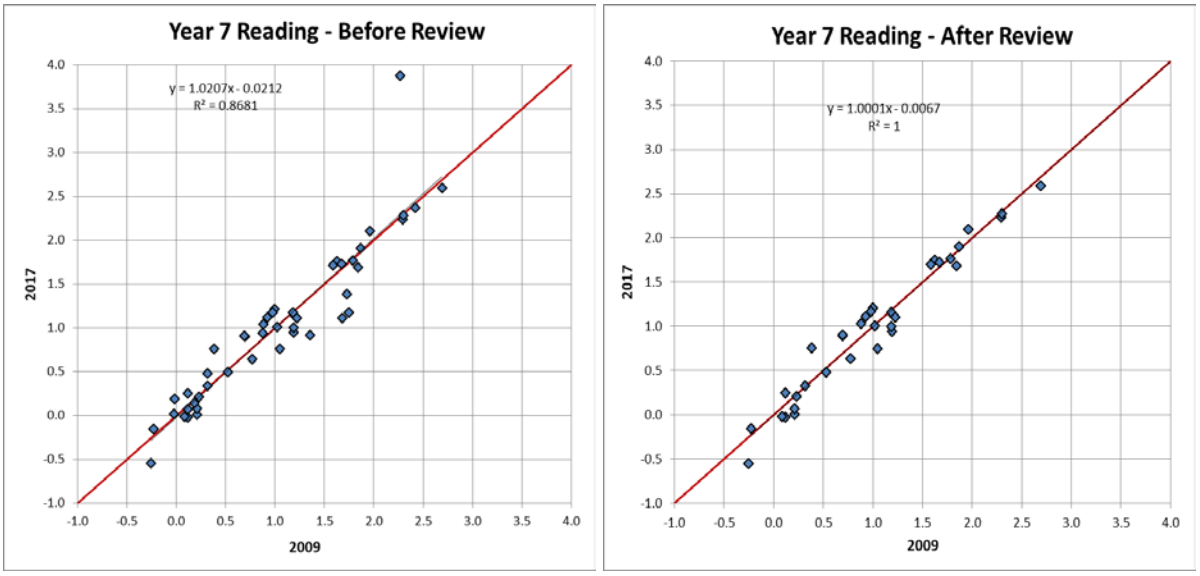

Figure 6.4. Links Review for Reading equating form Year 7 (2017 vs. 2009)

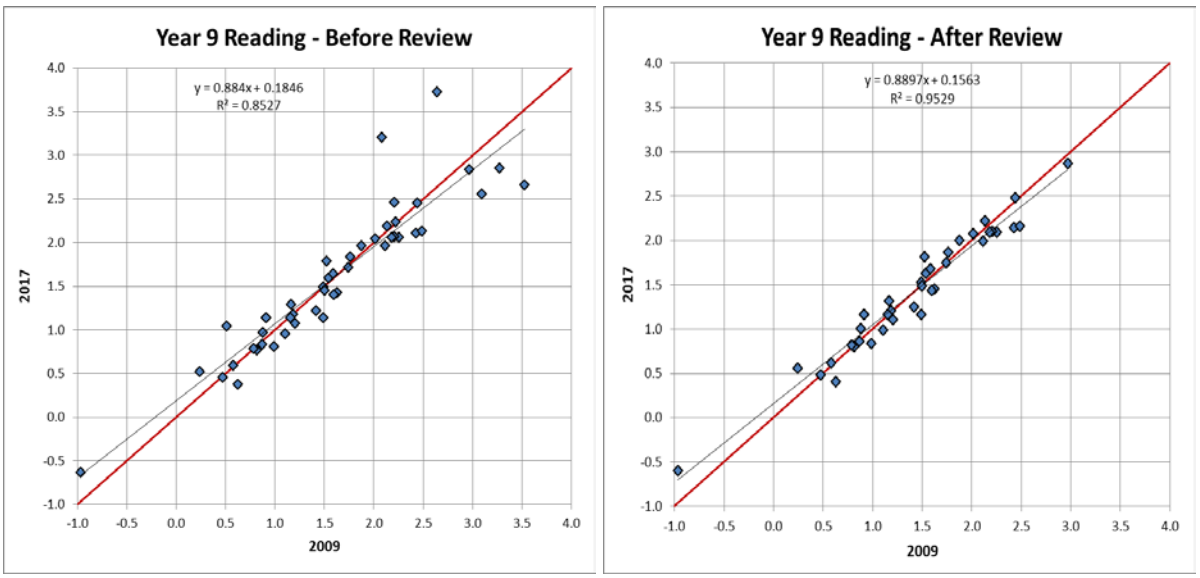

Figure 6.5. Links review for Reading equating form Year 9 (2017 vs. 2009)

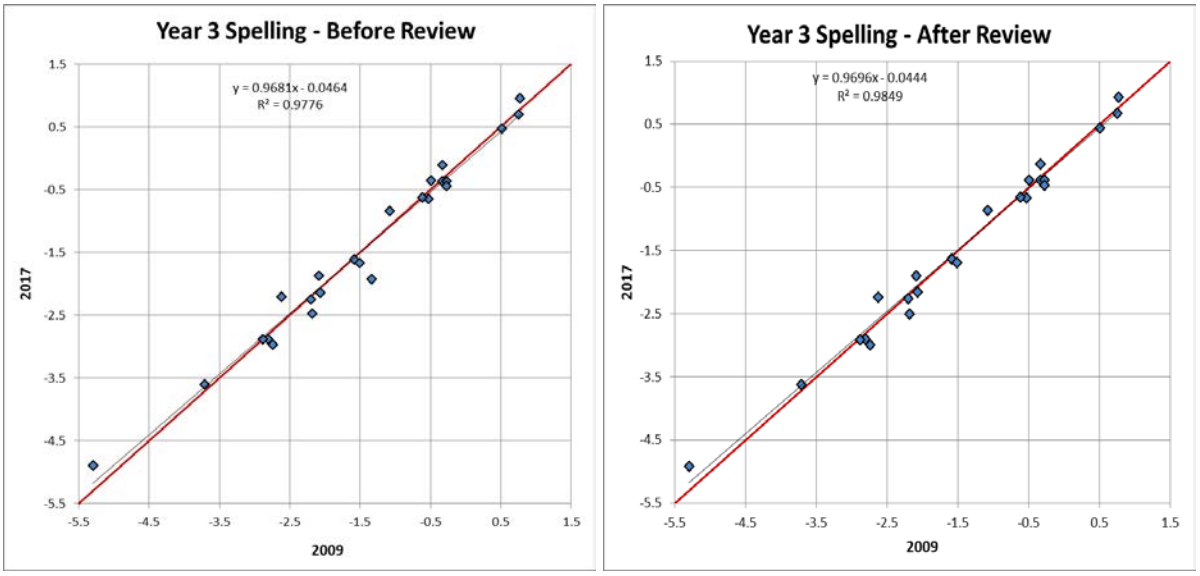

Figure 6.6. Links review for Spelling equating form Year 3 (2017 vs. 2009)

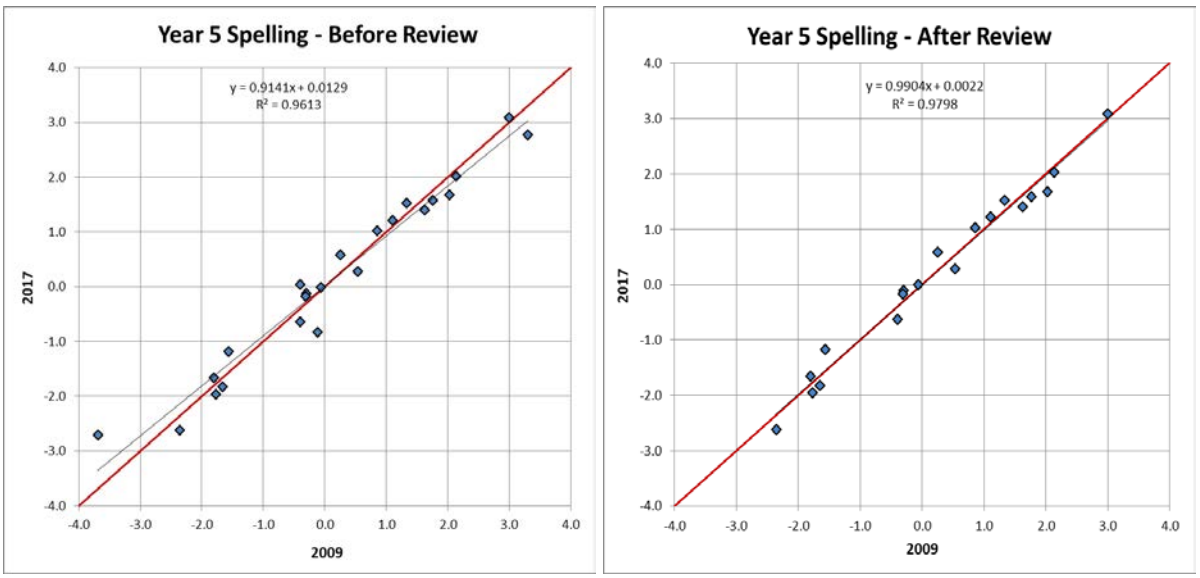

Figure 6.7. Links review for Spelling equating form Year 5 (2017 vs. 2009)

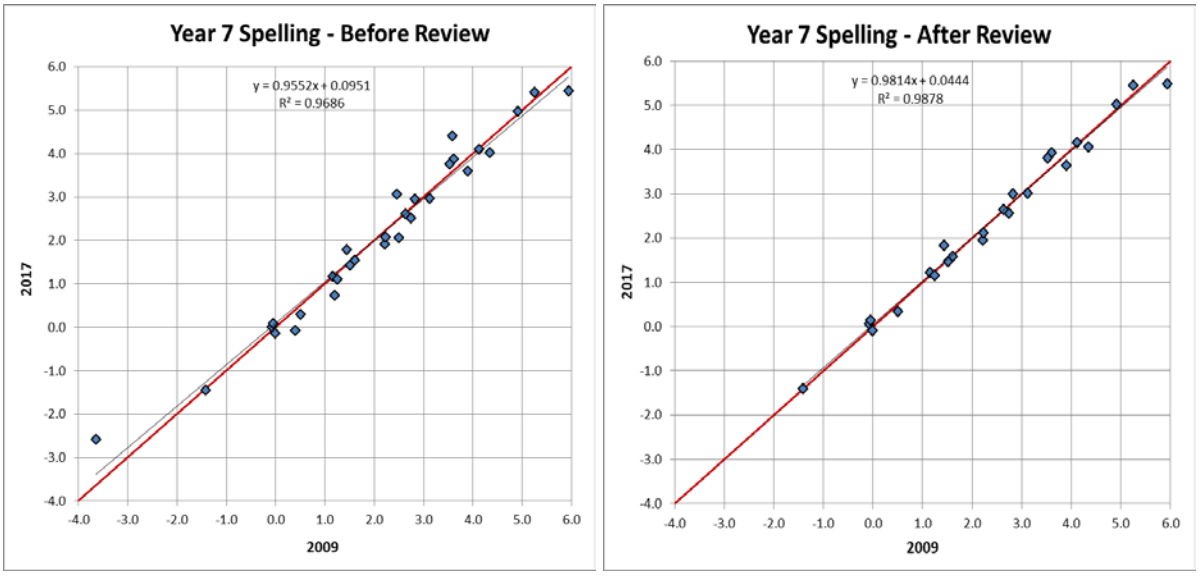

Figure 6.8. Links Review for Spelling equating form Year 7 (2017 vs. 2009)

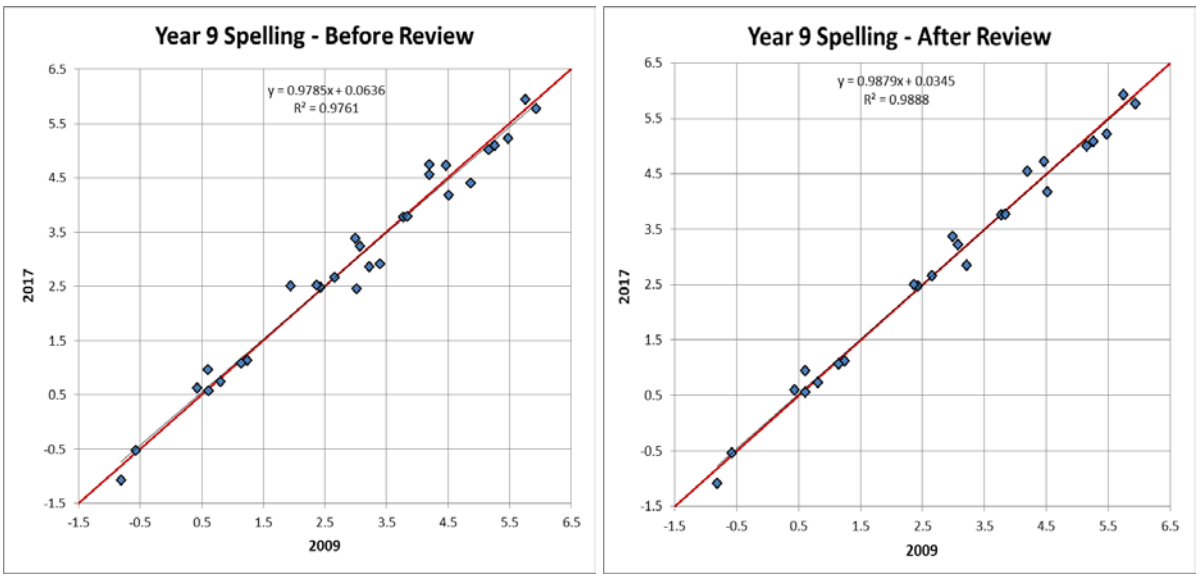

Figure 6.9. Links Review for Spelling equating form Year 9 (2017 vs. 2009)

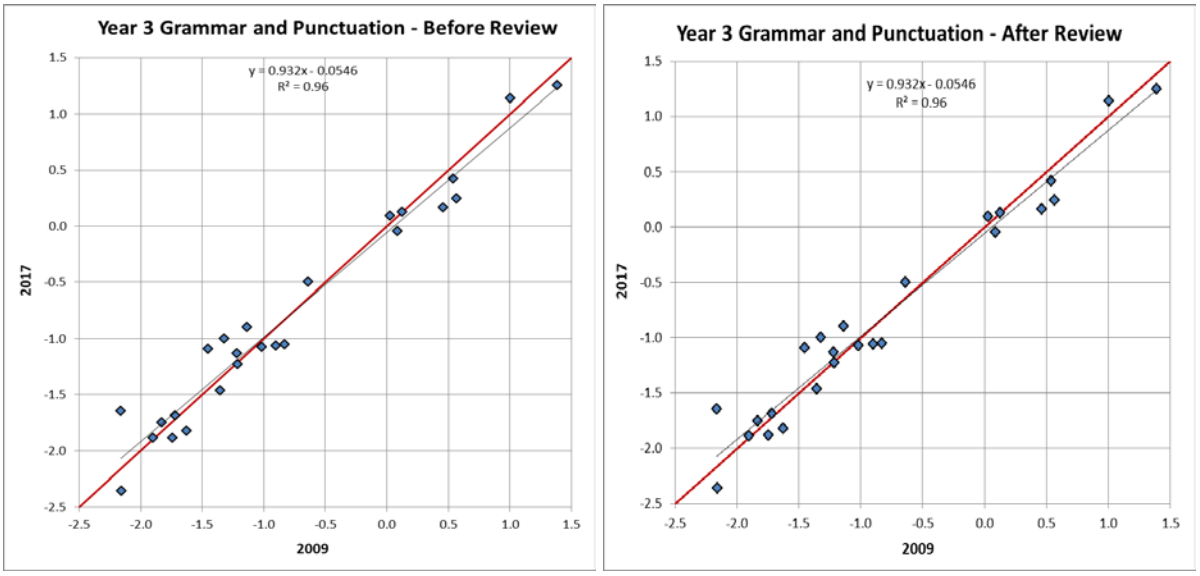

Figure 6.10. Links review for Grammar and Punctuation equating form Year 3 (2017 vs. 2009)

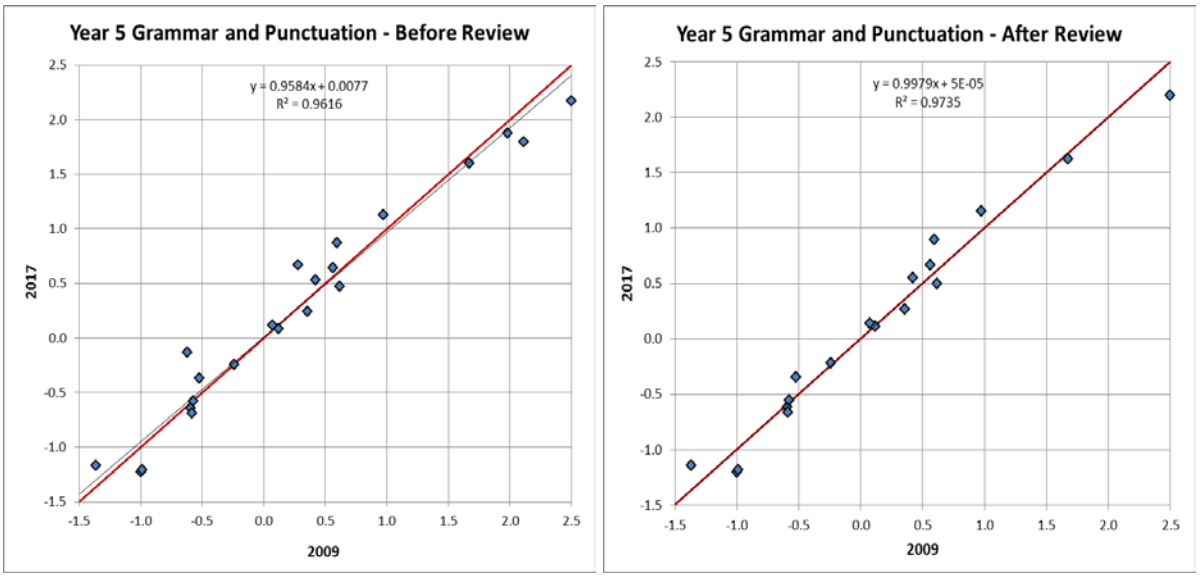

Figure 6.11. Links Review for Grammar and Punctuation equating form Year 5 (2017 vs. 2009)

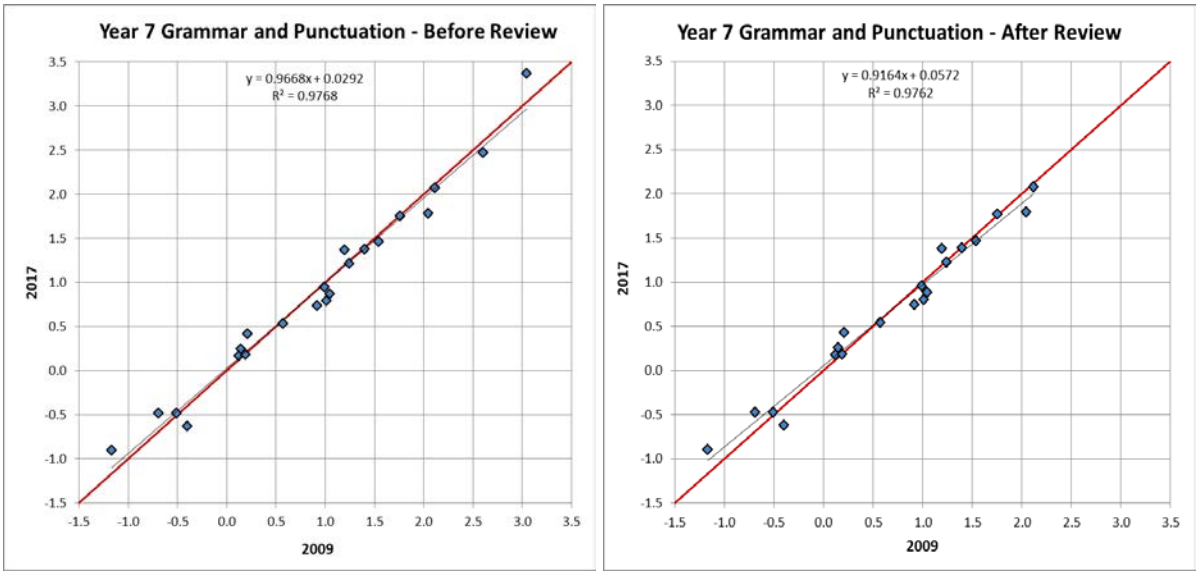

Figure 6.12. Links Review for Grammar and Punctuation equating form Year 7 (2017 vs. 2009)

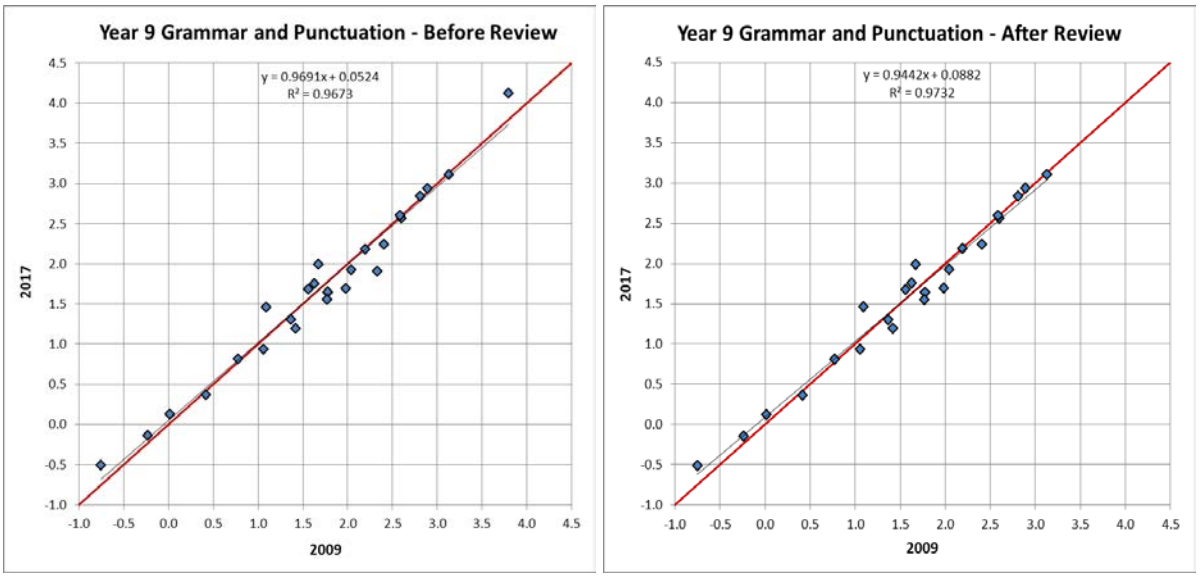

Figure 6.13. Links review for Grammar and Punctuation equating form Year 9 (2017 vs. 2009)

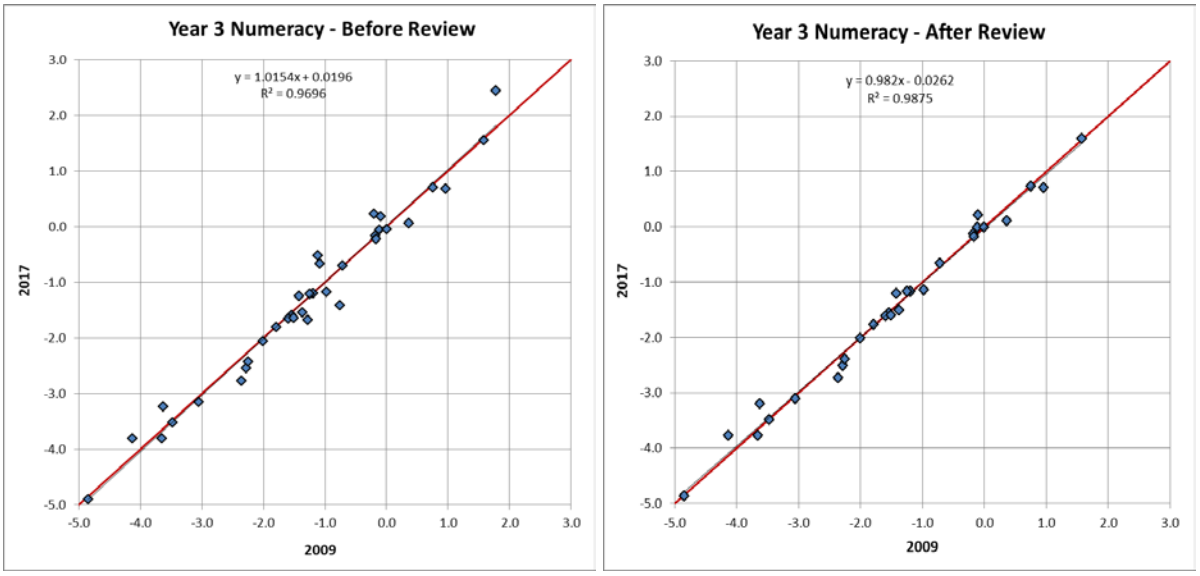

Figure 6.14. Links review for Numeracy equating form Year 3 (2017 vs. 2009)

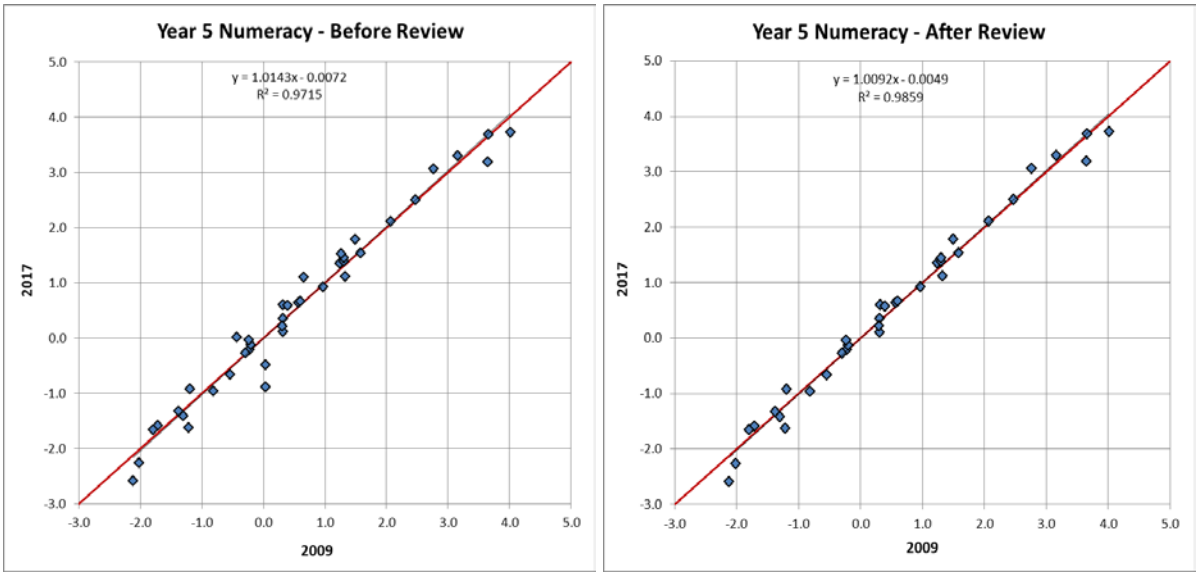

Figure 6.15. Links review for Numeracy equating form Year 5 (2017 vs. 2009)

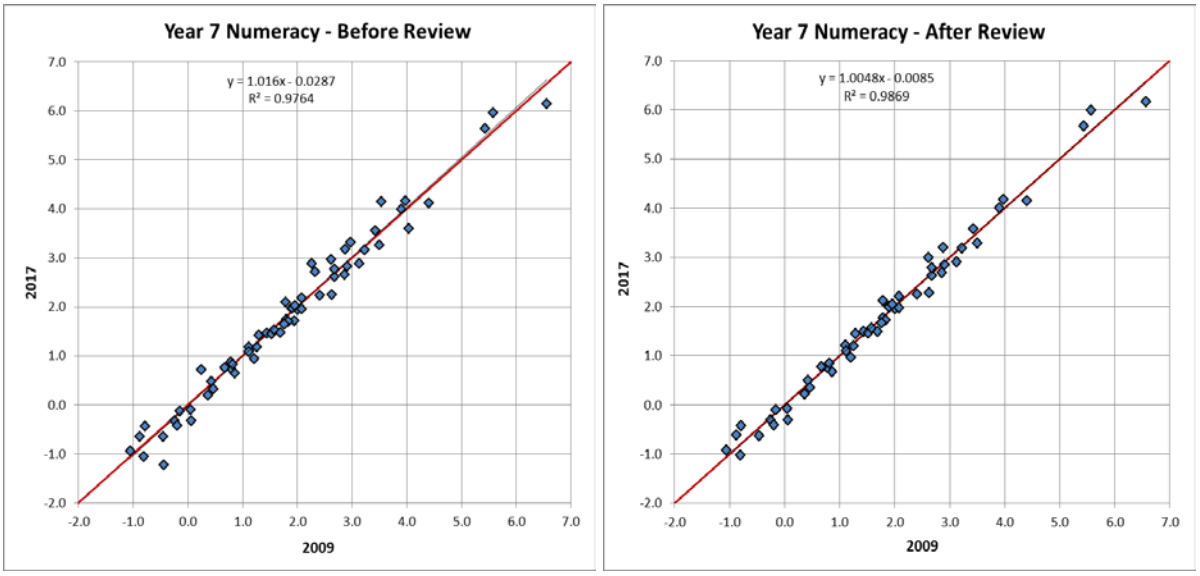

Figure 6.16. Links review for Numeracy equating form Year 7 (2017 vs. 2009)

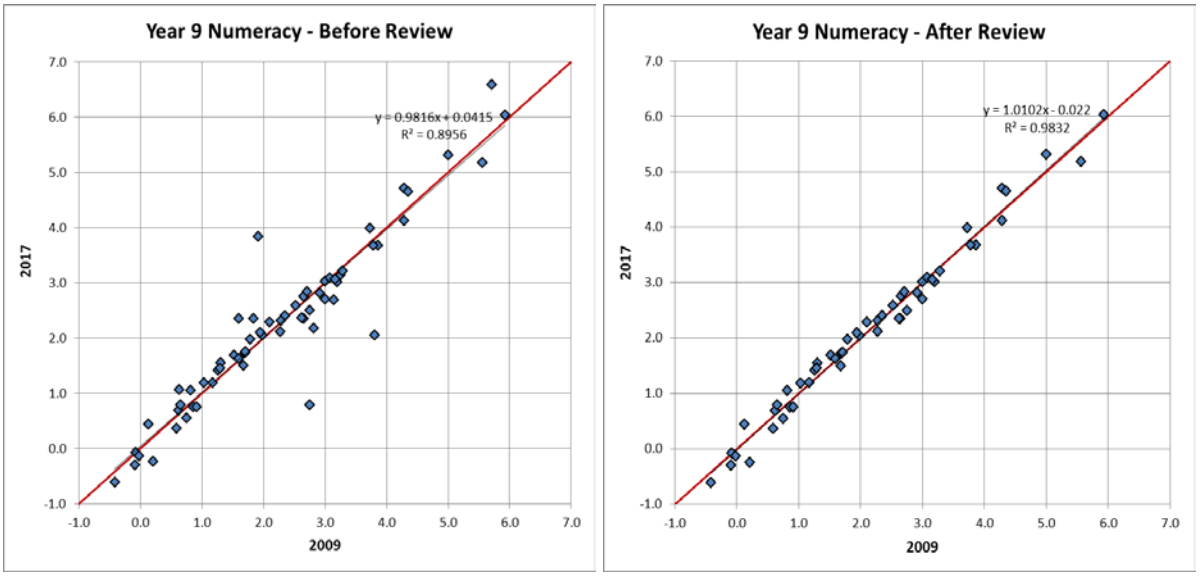

Figure 6.17. Links review for Numeracy equating form Year 9 (2017 vs. 2009)

After the review and evaluation of the equating items, a final set of link items was identified for each domain and each year level. The final sets of link items were used to calculate the shift to be applied to equate the 2017 equating forms onto the historical NAPLAN reporting scale, thus aligning the 2017 tests with the historic NAPLAN reporting scale.

Table 6.1 shows the horizontal shift-constants for each domain at each year level. The shifts are those required to equate the final set of link items for each domain and year level, based on the 2017 calibration, with the 2009 item locations of the same set of link items.

Table 6.1. Horizontal Shifts for Equating the 2017 Item Locations with 2009 Item Locations

Year Level	Reading	Spelling	Grammar and Punctuation	Numeracy
Year 3	-0.085	-0.909	0.183	-0.879
Year 5	0.255	0.733	1.038	0.045
Year 7	1.052	2.215	1.535	1.513
Year 9	1.471	3.616	1.986	2.506

The horizontal equating of each of the 2017 NAPLAN domain scales in reading, spelling, grammar and punctuation and numeracy to the corresponding historical NAPLAN scales had provisionally put each of the tests on the vertical NAPLAN scales. The locations of the year-level tests on the scale based on the horizontal equating results were compared with their relative locations based on the vertical equating results. Both sets of results were taken into consideration in determining the final shifts. The vertical equating of the 2017 tests is described in the next section.

6.3 Common-Item Vertical Equating of NAPLAN 2017 Tests

As in previous years of testing, the 2017 NAPLAN reading, spelling, grammar and punctuation and numeracy tests were vertically equated across Years 3, 5, 7 and 9 using link items embedded in tests in adjacent year levels. The quality of these link items was systematically reviewed for each domain. Only items that were considered to be good link items were used in the vertical equating.

Starting with the separate calibration of each test and using delta-centred item parameters, a vertical scale was constructed by determining the shift-constants (translation) between adjacent tests to equate the common items such that the tests are on a common scale.

A common item was considered for omission (i.e. not to be used as for vertical linking purposes) based on the fit of the item and evidence for Differential Item Functioning (DIF). An overarching principle, agreed in previous years, was to maximise the number of links retained where possible. In practical terms, the adoption of this principle means erring on the side of using a link where there is doubt regarding the justification and basis for its omission.

A four-stage process was used, as detailed to follow.

Vertical Equating Stages

The vertical equating process was undertaken in four stages as follows:

Stage 1. Initial cross-year scatterplots with all items are examined to ascertain the overall correlation and to note any patterns and outliers.

Stage 2. Each item is checked for misfit at each year level based on: inspection of the ICC and graphical fit; the magnitude of the Outfit index; and the discrimination/slope estimate. Items that have no pronounced misfit in either year level form the reference set provided there are sufficient items.

Stage 3. Items that have high or low discrimination are identified and omitted from the review set if their inclusion affects the shift constant in the predicted direction. The effect is judged based upon changes in the shift constant for all items other than those omitted relative

to the shift obtained for the reference set alone.

Stage 4. Items are omitted that show cross year-level DIF that affects the vertical shift.

Decisions to omit items due to misfit are not based on any one indicator in isolation; rather, decisions are based on all available evidence concerning the functioning of each item. Items that fail some criteria are normally excluded from the reference set but may have been retained if the total number of functioning links was relatively small.

At the last stage, items were considered for deletion based on DIF if the absolute adjusted difference was greater than 0.3 and if the absolute standardised difference was greater than the criterion set.

After each stage, the cross-year level scatterplot was evaluated with a focus on the agreement of bivariate data with the identity line. The ratio of the standard deviations of the item locations was checked for each adjacent year level (e.g., Year 3 SD/Year 5 SD). Ideally the ratio should fall between 0.9 and 1.1. If there were insufficient items to evaluate the correspondence of the data with the identity line, it was necessary to relax the criteria applied in earlier stages of the method.

Three sets of link items (Year 3 and Year 5, Year 5 and Year 7, Year 7 and Year 9) were reviewed for each of the four domains. In each domain, the items administered to each year level were calibrated separately. For each pair of adjacent tests with common items, mean item parameters of the common items were calculated for the tests administered to each of the two-year levels. The vertical shift is the difference between the two means. The first vertical shift was applied to equate common Year 3 and Year 5 items by adjusting the Year 3 locations. The second vertical shift was applied to equate common Year 7 items to the common Year 5 items. The third vertical shift was applied to equate common Year 9 items to the common Year 7 items. The vertical shifts were computed based on the delta-centred item locations, i.e., based on usual constraint that the mean item location is 0. Thus, the preliminary vertical scale is centred about the Year 5 item locations.

In each case, the vertical shift is a constant that needs to be applied so that the mean adjusted difference is zero. This is so that the means of item locations for common items in adjacent year levels are equal. This allows the comparison of relative difficulties of the common items in the two tests. The standardised differences for each common item were also calculated.

For each pair of adjacent tests, one set of item parameters was then plotted against the other set of item parameters. Two plots are presented below for each review: one plot for the set of common items to be reviewed and one plot for the retained link items after review. On the plots, each dot represents a common item. The 24 plots are shown in Figure 6.18 to Figure 6.29.

Vertical Equating of 2017 Reading Tests

Reading – Year 3/Year 5

Figure 6.18 shows the Year3/Year 5 reading links before and after review. One item that was misfitting with low discrimination and showing evidence of guessing was omitted before the evaluation and not shown on the plot. Three items were deleted as links during the review. These items showed cross-year level DIF beyond the criterion level.

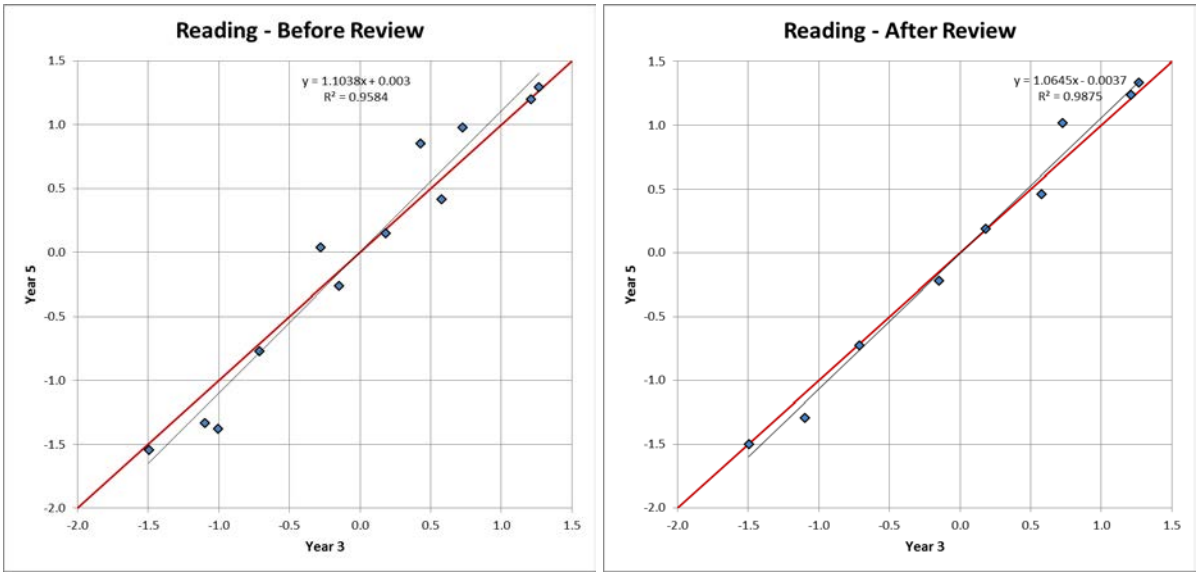

Figure 6.18. Links review for Reading Year 3 and Year 5

Reading – Year 5/Year 7

Figure 6.19 shows the Year 5/Year 7 reading links before and after review. Two items that had low discrimination for Year 5 were omitted before the evaluation and not shown on the plot. No item was deleted as links during the review.

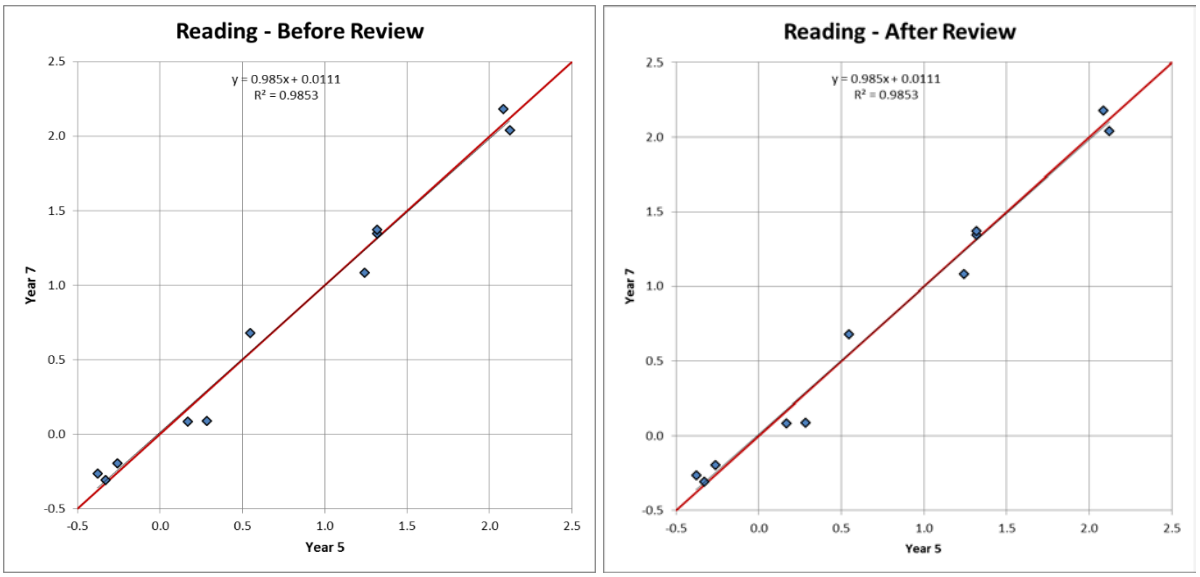

Figure 6.19. Links review for Reading Year 5 and Year 7

Reading – Year 7/Year 9

Figure 6.20 shows the Year 7/ Year 9 reading links before and after review. One item that showed low discrimination at both Years 7 and 9 was omitted before the evaluation and not shown on the plot. Four items were deleted as links during the review. Three items showed

cross-year level DIF beyond the criterion level and one item showed misfit. With the deletion of these link items, the slope of the best fit line was improved from 0.75 to 0.83.

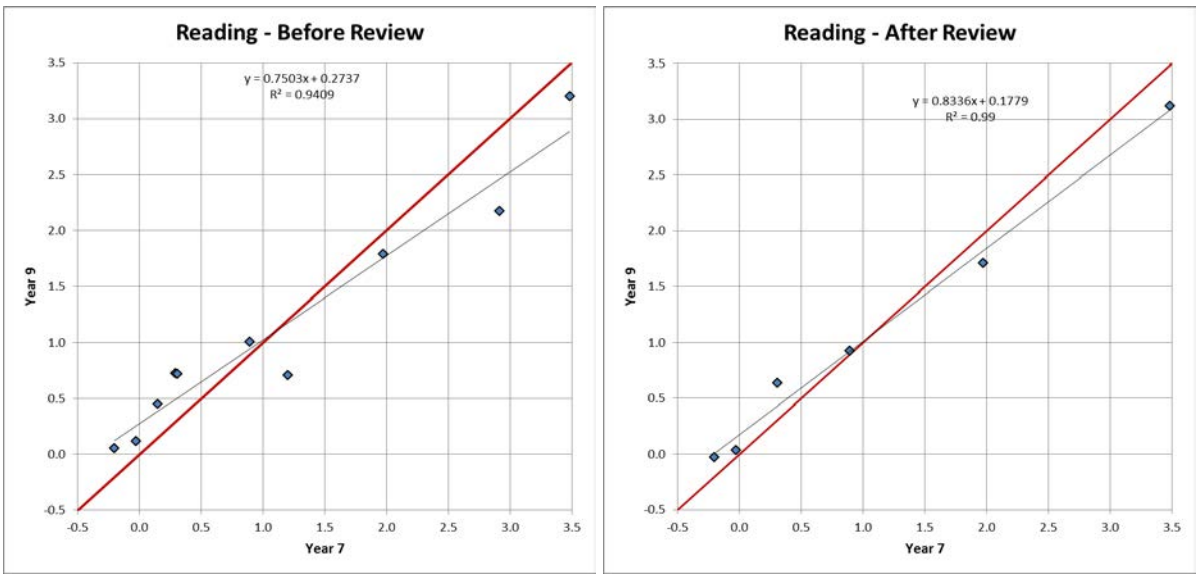

Figure 6.20. Links review for Reading Year 7 and Year 9

Vertical Equating of 2017 Spelling Tests

Spelling – Year 3/Year 5

The Year 3/Year 5 vertical equating is summarised in Figure 6.21. Two items showing DIF beyond the criterion level were omitted as links.

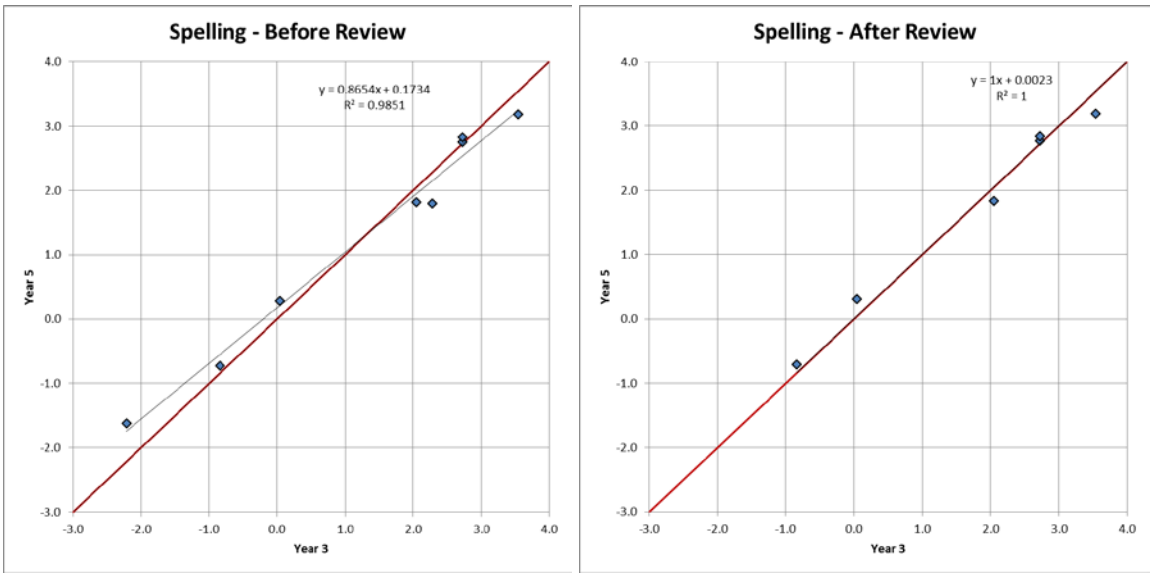

Figure 6.21. Links review for Spelling Year 3 and Year 5

Spelling – Year 5/Year 7

The Year 5/ Year 7 links are shown in Figure 6.22. One item that is misfitting with low

discrimination was omitted before the evaluation and not shown on the plot. No other item was deleted.

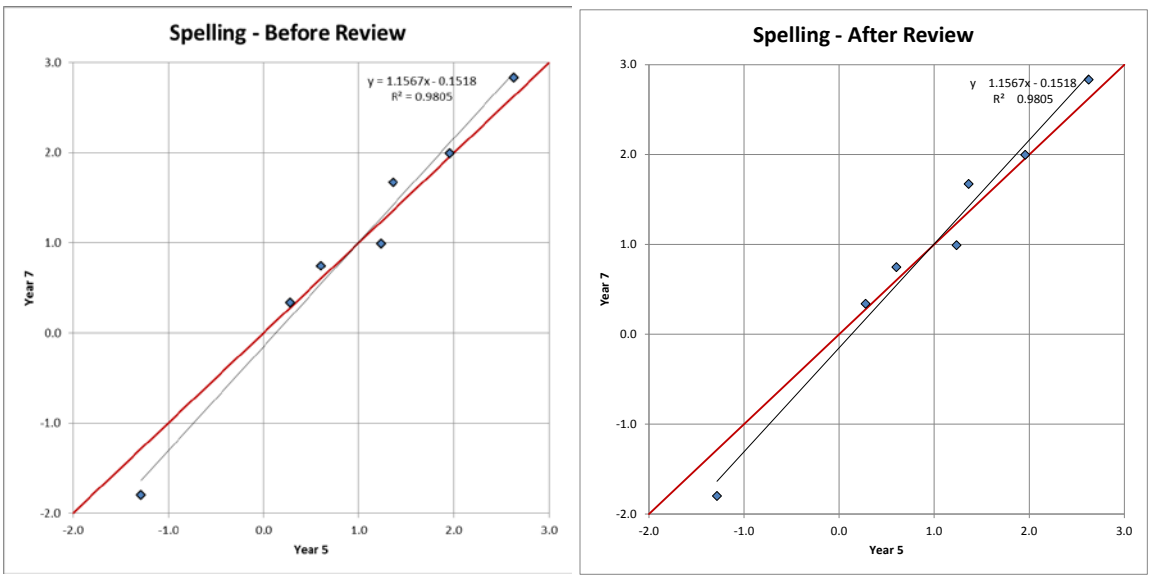

Figure 6.22. Links review for Spelling Year 5 and Year 7

Spelling – Year 7/Year 9

The Year 7/ Year 9 links are summarised in Figure 6.23. Two items were deleted as links due to cross-level DIF.

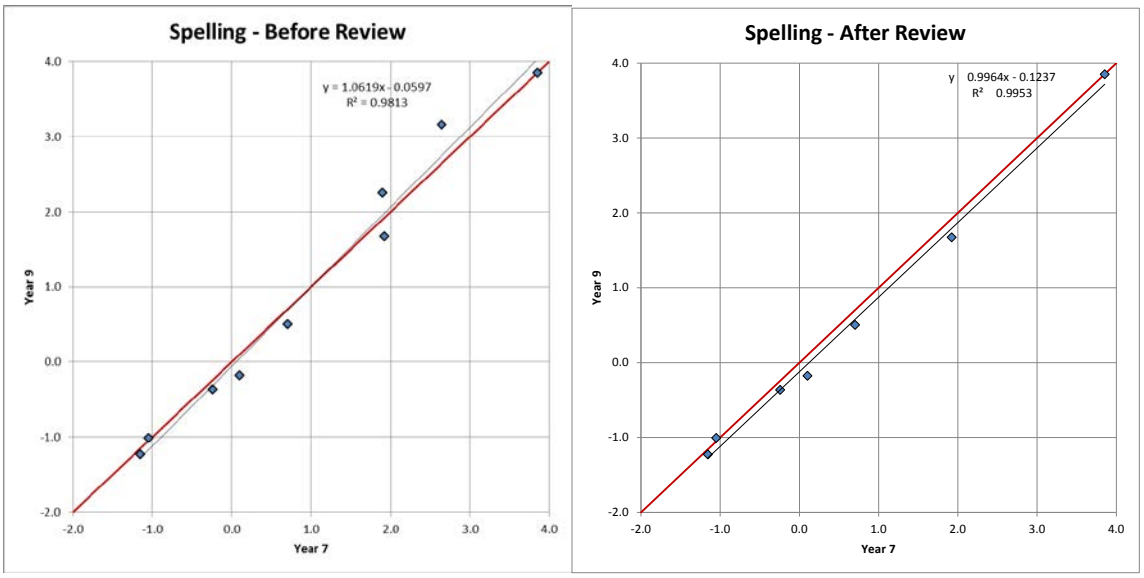

Figure 6.23. Links review for Spelling Year 7 and Year 9

Vertical Equating of 2017 Grammar and Punctuation Tests

Grammar and Punctuation – Year 3/Year 5

Figure 6.24 shows the Year 3/Year 5 grammar and punctuation scatterplots before and after review. Two items were deleted due to cross-year level DIF.

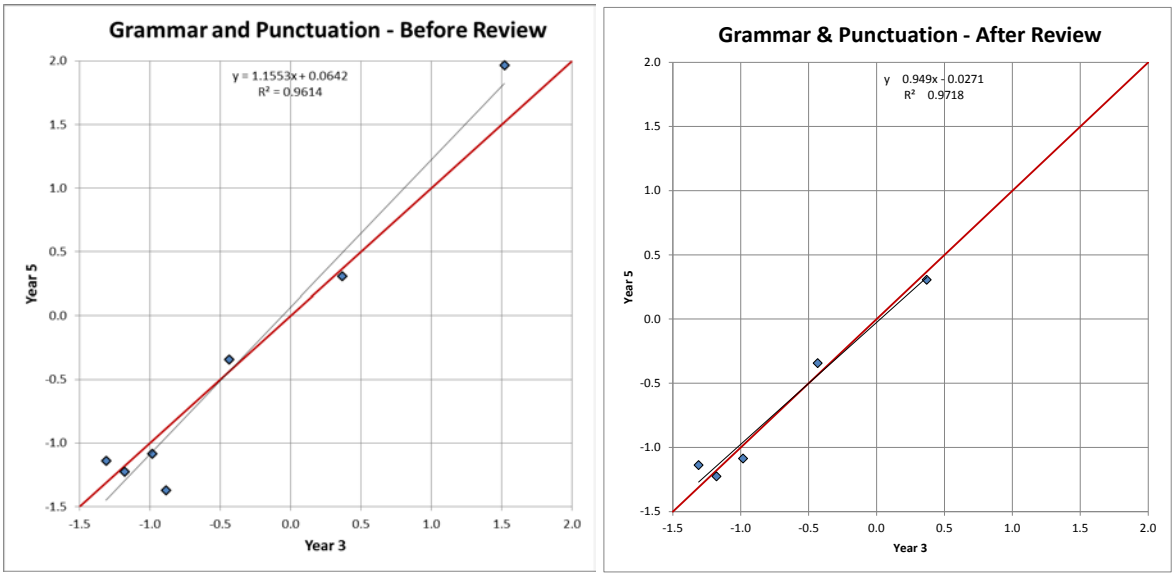

Figure 6.24. Links review for grammar and punctuation Year 3 and Year 5

Grammar and Punctuation – Year 5/Year 7

Figure 6.25 shows the Year 5/Year 7 grammar and punctuation scatter plots of link items before and after review. One item showing cross-level DIF was omitted as links.

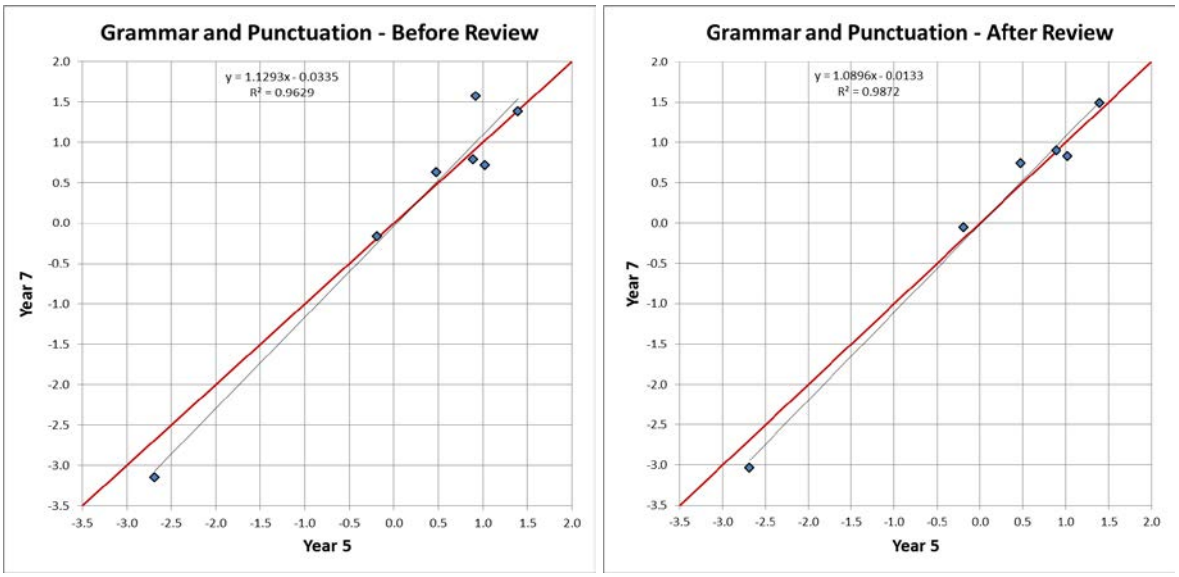

Figure 6.25. Links review for grammar and punctuation Year 5 and Year 7

Grammar and Punctuation – Year 7/Year 9

Figure 6.26 shows the scatterplots for Year 7/ Year 9 vertical links before and after review. One item that showed low discrimination at both Years 7 and 9 was omitted before the evaluation and not shown on the plot. One item showing cross-level DIF was omitted as link.

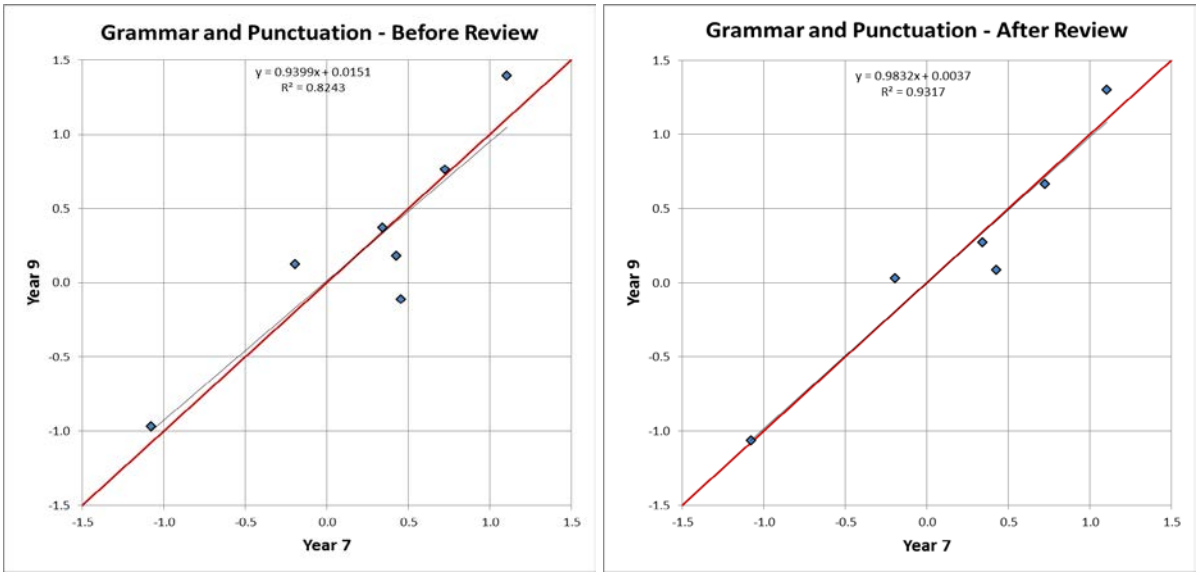

Figure 6.26. Links review for Grammar and Punctuation Year 7 and Year 9

Vertical Equating of 2017 Numeracy Tests

Numeracy – Year 3/Year 5

Figure 6.27 shows the scatterplots for Year 3/ Year 5 vertical links for numeracy before and after review. Two items showing cross-level DIF were omitted as links.

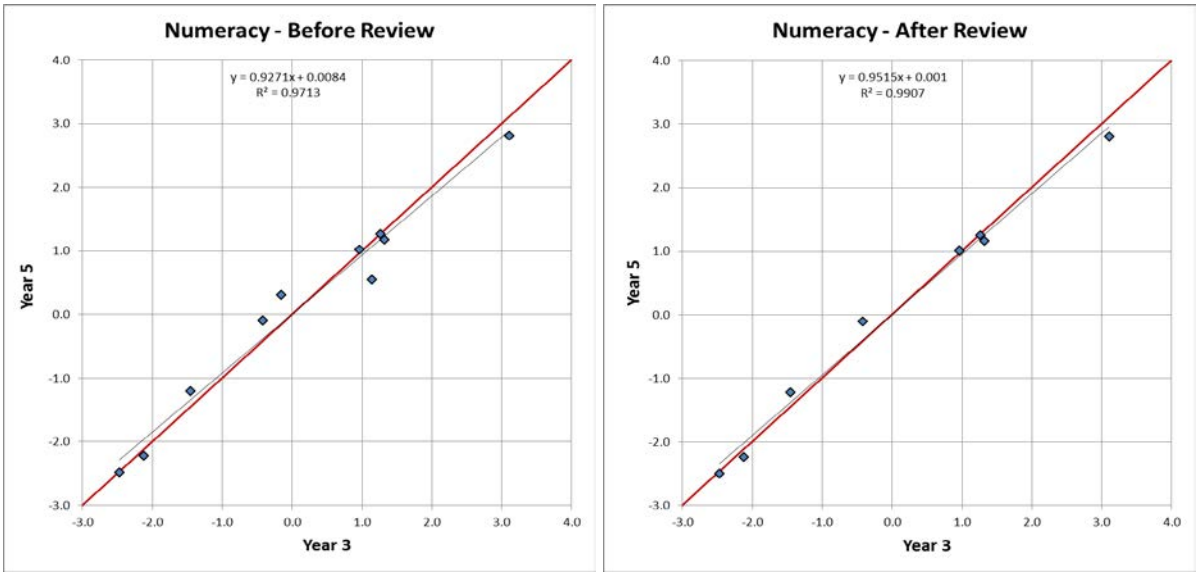

Figure 6.27. Links review for Numeracy Year 3 and Year 5

Numeracy – Year 5/Year 7

Figure 6.28 shows the scatterplot before and after review for numeracy Years 5 and 7. One item that showed low discrimination at both Years 5 and 7 was omitted before the evaluation and not shown on the plot. Four more items were omitted as links due to cross-level DIF.

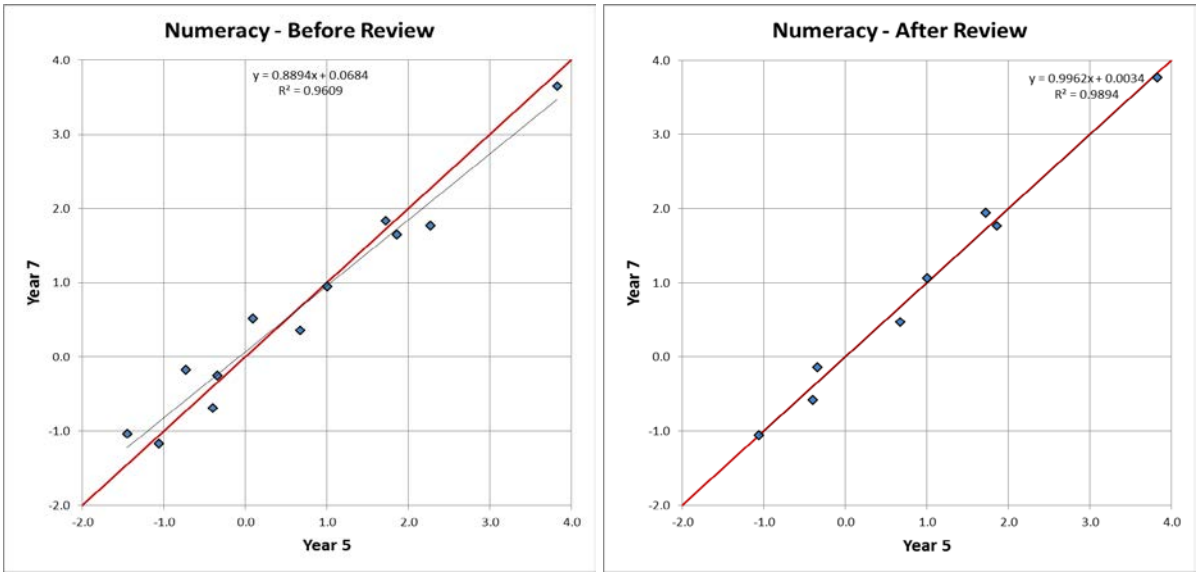

Figure 6.28. Links review for Numeracy Year 5 and Year 7

Numeracy – Year 7/Year 9

Figure 6.29 shows the scatter plots of vertical link items of the Year 7 and Year 9 numeracy tests. Two items that showed low discrimination at Years 7 were omitted before the evaluation and not shown on the plot. Three items were omitted as links based on cross-level DIF. The slope of the best fit line was improved from 0.84 to 1.04.

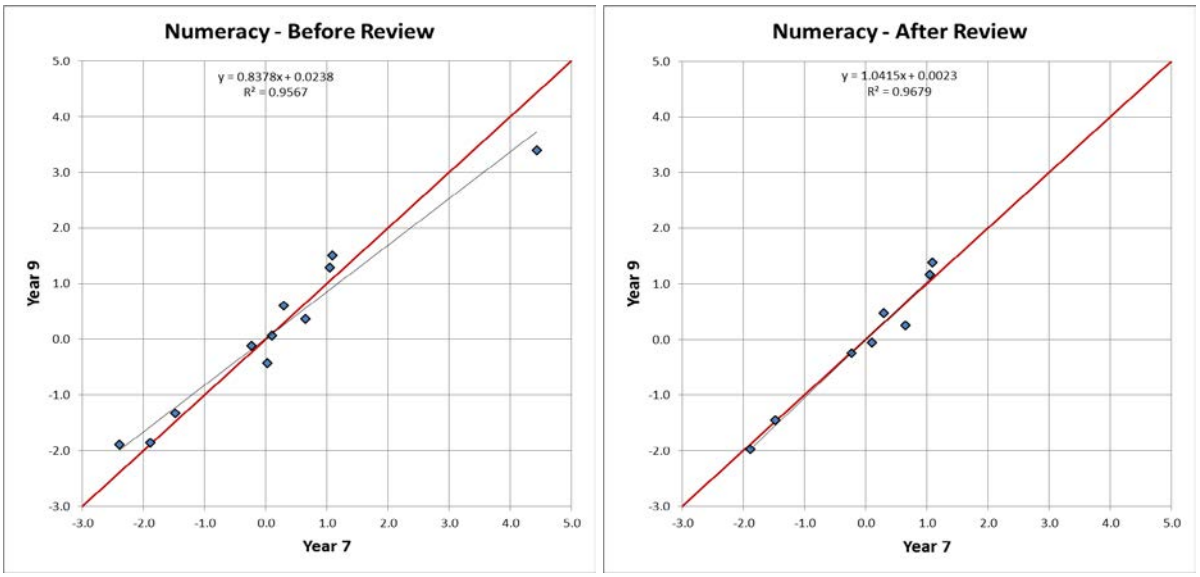

Figure 6.29. Links review for Numeracy Year 7 and Year 9

The numbers of the vertical links used and retained for each adjacent pair of year levels are shown in Table 6.2. Appendix L presents the 2017 item locations (Rasch difficulty parameters), standard errors, mean square statistics, item facilities, and item discriminations by domain for each adjacent pair of year levels.

Table 6.2. Vertical Link Review Summary

Domain	Year 3 / 5		Year 5 / 7		Year 7 / 9	
	No. Links Retained	Total No. of Links	No. Links Retained	Total No. of Links	No. Links Retained	Total No. of Links
Reading	9	13	11	13	6	11
Spelling	6	8	7	8	7	9
Grammar and Punctuation	5	7	6	7	6	8
Numeracy	8	10	8	13	8	13

Summary of Vertical Equating of NAPLAN 2017 Tests

The mean shifts between two adjacent year levels for each of the four domains are shown in Table 6.3. Year 5 has been used as the reference to which other years are vertically equated as in previous administrations of the program.

Table 6.3. Vertical Shift Constants

Shift	Reading	Spelling	Grammar and Punctuation	Numeracy
Year 3 to 5	-0.331	-1.896	-0.666	-0.817
Year 5 to 5	0.000	0.000	0.000	0.000
Year 7 to 5	0.940	1.733	0.829	1.596
Year 9 to 7	0.598	1.114	0.220	0.800
Year 9 to 5	1.538	2.847	1.049	2.396

The final locations of the 2017 tests on each of the NAPLAN domain scales were determined by taking both of the horizontal equating results and the vertical equating results into consideration. The procedure and results are described in Section 6.4.

6.4 Comparing and Combining Results of Horizontal and Vertical Equating

The NAPLAN vertical scale spanning Years 3, 5, 7 and 9 was established in 2008 through vertical equating of the year level tests. The horizontal equating provides one basis for placing the NAPLAN 2017 tests on the vertical scale for each domain. The horizontal equating forms were first used in 2009.

It is useful to check the relative locations of the NAPLAN 2017 tests on the NAPLAN scale by comparing the results based on the horizontal equating against those based on the vertical equating. Figure 6.1 depicts the horizontal and vertical equating design schematically. In principle, each year-level test can be equated directly on to the NAPLAN scale through the horizontal equating without the vertical equating. The vertical equating serves as a quality assurance check.

The equating process that has been used in previous years of NAPLAN is designed to take into consideration both vertical equating and horizontal equating. This process was used again to establish final locations of the reading, spelling, grammar and punctuation and numeracy tests on the NAPLAN reporting scales.

In this section, the results of the horizontal equating based on the equating sample are compared with the vertical equating results based on the 2017 calibration sample for each domain. Specifically, the vertical and horizontal shift constants are plotted for each of the four year-level tests in each domain. The regression-based comparison indicate where there is any divergence. Ideally, any case of divergence between direct and indirect equating would be resolved to the degree possible through checking each specific component of the linking process.

Figure 6.30 shows the plots of the relative positions of the four 2017 tests (Years 3, 5, 7 and 9) based on the common-person horizontal equating to the NAPLAN scale (vertical axes) against their relative positions centred at Year 5 based on the common-item vertical equating (horizontal axes). The regression equation and *R*-square are shown at the top-left corner of each plot. There is one plot for each of reading, spelling, grammar and punctuation, and numeracy.

Ideally, each regression line would have a slope of 1.0 and pass through all four points, showing perfect correspondence of the two methods. It can be seen from the plots that this is not always the case. The slope for reading was rather low at 0.83 with the vertical shift causing Year 9 to behave as a leverage point reducing the regression slope. When the Year 9 leverage point was

omitted, the slope increased to 0.88 and returned to the range of slope coefficients observed in previous NAPLAN equating cycles. The final regression equating shift was based on and used for Years 3, 5 and 7. Year 9 was equated using the method described in the following section.

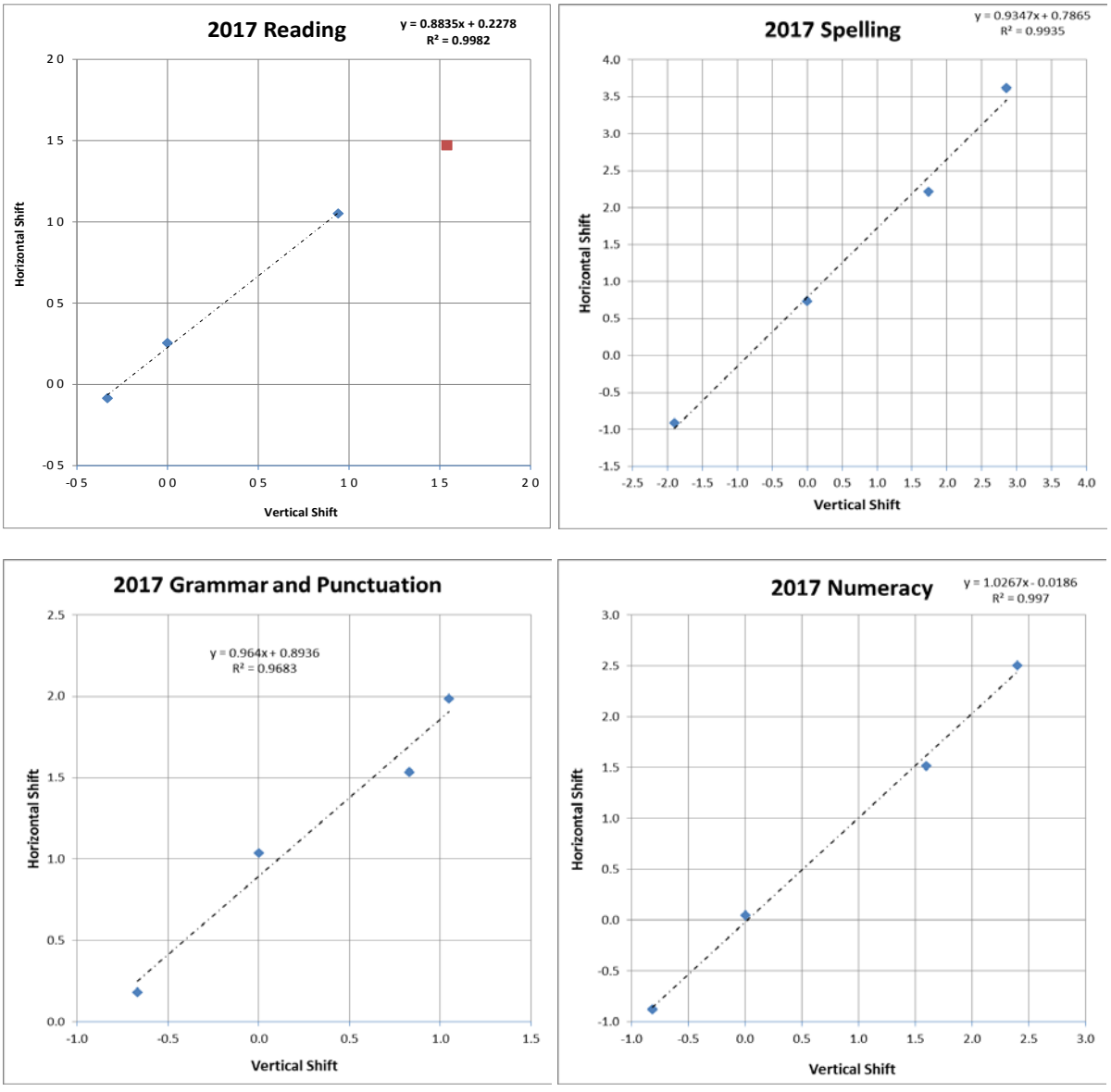

Figure 6.30. Regression-based combination of vertical and horizontal equating shifts

Table 6.4 displays the intercepts and slopes for the regression-based combination of the vertical and horizontal equating.

Table 6.4. Regression Intercepts and Slopes

Regression Coefficient	Reading (Years 3, 5, 7)	Spelling	Grammar and Punctuation	Numeracy
Intercept	0.228	0.787	0.894	0.019
Slope	0.884	0.935	0.964	1.027

As in previous years, the final shifts were calculated using the regression lines of best fit

$$y = a + b \cdot x \qquad (6.1)$$

where y is the final shift onto the NAPLAN scale; x is the Year-5 centred shift based on vertical equating; b is the regression slope; and a is the regression intercept.

The final, regression-based shifts for each domain calculated using Equation 6.1 are shown in Table 6.5 by year level.

Table 6.5. Final Shifts Applied for Equating NAPLAN 2017 onto the NAPLAN Historic Scale

Year Level	Reading	Spelling	Grammar and Punctuation	Numeracy
3	-0.065	-0.986	0.251	-0.858
5	0.228	0.787	0.894	-0.019
7	1.059	2.407	1.693	1.620
9	1.556*	3.448	1.905	2.441

***** *Year 9 reading test linear equating shift.*

Year 9 Reading

Using the national scientific sample data, the results for Year 9 were examined further. It was found that the mean score for Year 9 reading was lower than expected compared to the results of previous years. ACARA undertook to investigate the matter, and based on this investigation, concluded that the distribution of the total correct scores in the 2017 reading tests had a distinctively different shape to that observed in previous NAPLAN cycles. The distribution was arrested at the top which meant that a smaller proportion of students achieved the top range of the available scores. Consequently, the proportion of students who attained Band 9 or Band 10 in 2017 was considerably smaller from that observed in previous years. This effect was limited only to the top end of the Year 9 reading distribution.

To address such a compression of the distribution at the top range of student ability the decision was made to rescale the NAPLAN 2017 Year 9 reading test outcomes to have the same mean and standard deviation that was in the NAPLAN 2016 Year 9 reading test. This equating method is referred to as the liner equating method (Kolen and Brennan, 2004). Its use is justifiable where the assumption that the total population of tests takers are functionally equivalent. Given the size of the NAPLAN Year 9 cohort and the stability of the longitudinal trends in Year 9 the method's assumptions and use was just. ACARA's Measurement Advisory Group reviewed the Year 9 reading test functioning and evaluated the proposed method for addressing the observed Year 9 test effect and agreed that:

1. All equating procedures were properly carried out and had no impact on the observed outcomes of the Year 9 reading test.
2. The source of changes in the Year 9 reading outcomes were the 2017 test and test response data.
3. The data showed that the 2017 Year 9 reading test and its interaction with students' ability was outside of the variability in test performance observed for previous NAPLAN test cycles.
4. The 2017 reading test was not adequately measuring the full spread of Year 9 student ability owing to the interaction of the 2017 tests and item difficulties in the 2017 test and the ability of 2017 student cohort.

5. Given that there was little evidence to assume that the 2017 cohort was significantly different than previous cohorts that most likely source of the observed interaction was the 2017 test and its composition in terms of item difficulty and targeting.
6. Consequently, it is plausible and justifiable to assume that the distribution of performance in 2017 was the same as that of the 2016 cohort.

Following MAG endorsement, the final equating shift and the ability estimates distribution of 2017 Year 9 reading test were adjusted using the proposed linear equating method.

6.5 Calibration and Scaling of Writing

Background

As noted earlier, in 2017 two persuasive writing tasks were administered as part of NAPLAN—one to Year 3 and 5 students and the other to Year 7 and 9 students. The rating of NAPLAN 2017 writing for all participating year groups was based on the same 10 criteria and the same marking guide used for the writing tests in 2011 through 2015.

Raw score summary

Table 6.6 present the distributions of raw scores by year level for both calibration sample and census data, which indicate that the distributions of raw scores were very similar from 2011 to 2017.

Table 6.6. NAPLAN 2011 – 2017 Writing Raw Score Distribution by Year Level

Test Year	Year Level	Calibration Sample N	Calibration Sample Mean	Calibration Sample SD	Census Data N	Census Data Mean	Census Data SD
2011	3	1066	18.14	5.08	252901	19.42	5.12
	5	1131	23.56	5.90	258563	24.74	5.79
	7	2510	26.95	7.05	261475	28.67	6.53
	9	2401	30.31	8.10	244772	31.97	7.54
2012	3	10487	18.73	5.15	259654	19.43	4.96
	5	9644	23.70	5.71	240421	24.28	5.58
	7	20751	27.56	6.45	263986	27.72	6.36
	9	29151	30.60	7.45	253924	30.76	7.46
2013	3	10178	18.83	5.31	262679	19.43	5.25
	5	10008	23.80	5.97	258562	24.35	5.68
	7	19321	27.53	6.64	261373	27.60	6.45
	9	30230	30.69	7.61	254470	30.76	7.66
2014	3	10709	18.23	5.16	274335	18.41	5.24
	5	10337	23.52	5.54	263872	23.57	5.59
	7	19038	27.18	6.24	242127	27.16	6.37
	9	28305	30.67	7.04	255770	30.47	7.50
2015	3	11399	18.86	5.00	285722	19.46	5.03
	5	10671	23.91	5.53	267506	24.36	5.34
	7	26411	27.01	6.34	258921	27.12	6.44
	9	28348	26.07	6.38	253216	30.18	7.48
2016	3	11570	18.94	4.63	292494	19.46	4.57
	5	10879	23.19	5.02	279513	23.54	4.90
	7	27197	26.69	5.72	264959	26.62	5.83
	9	26360	29.50	6.54	235206	29.36	6.74
2017	3	11533	18.63	5.11	291019	19.23	4.90
	5	11410	23.50	5.62	290808	23.88	5.21
	7	26809	27.24	6.68	268162	27.29	6.53
	9	26958	30.54	7.92	252034	30.63	7.72

Equating Methodology

The equating of NAPLAN 2017 writing to the NAPLAN writing scale was conducted by the University of Western Australia (UWA) using pairwise comparison methodology. Appendix M provides a summary of the UWA NAPLAN 2017 Pairwise Equating Summary.

Figure 6.31 shows the comparison graph of criterion delta locations between 2011 and 2017 and Figure 6.32 shows the comparison graph of criterion delta locations between 2015 and 2017. The graphs, with identity lines, show that the 2017 deltas are very similar to those from 2011 and from 2015.

The decision taken was to use base year item parameters and the corresponding raw score to scale score estimates for person locations for the purpose of reporting.

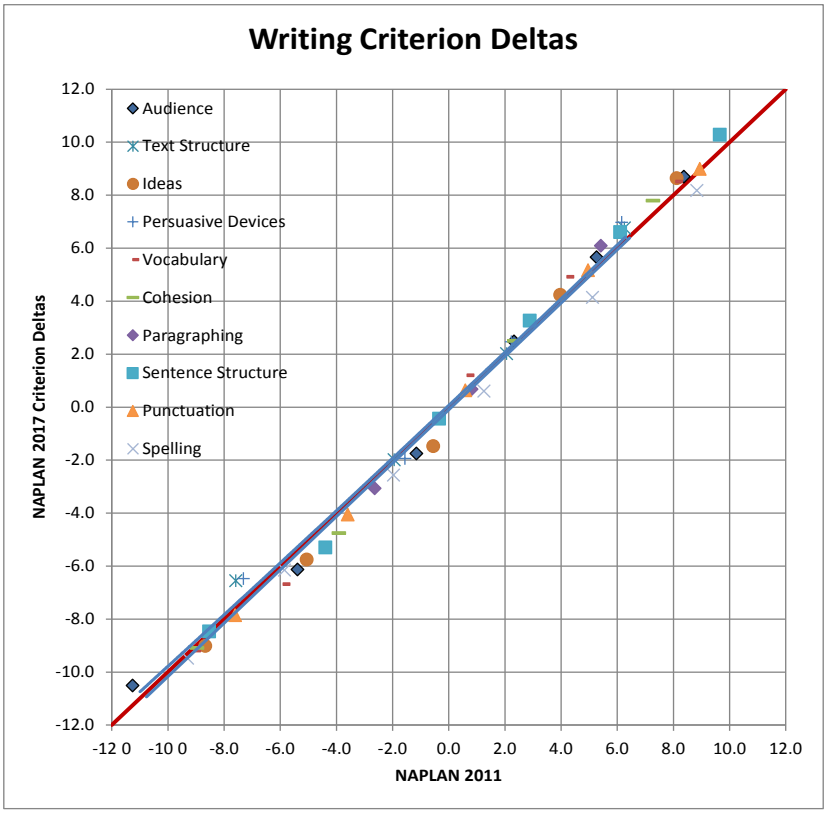

Figure 6.31. Writing deltas for 2017 against 2011

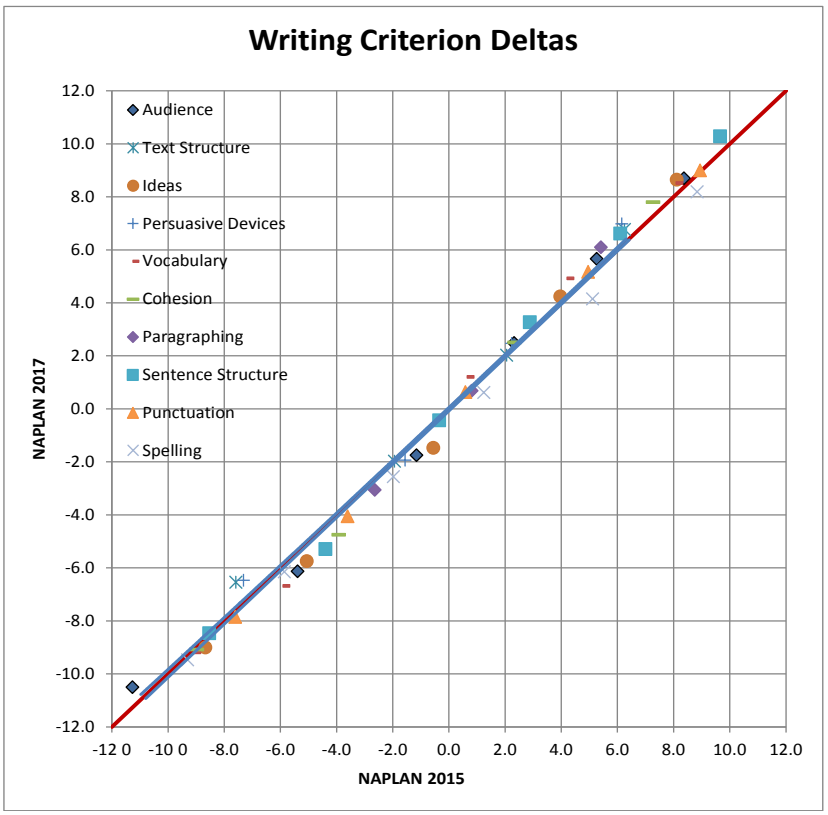

Figure 6.32. Writing deltas for 2017 against 2015

6.6 Estimating Standard Errors of Equating

Multiple steps were involved in the equating of reading, spelling, grammar and punctuation and numeracy. A standard error was estimated for each step. The standard errors were combined on the assumption that the errors from the steps are independent.

The errors considered in the equating processes over the course of the program are shown in Figure 6.33.

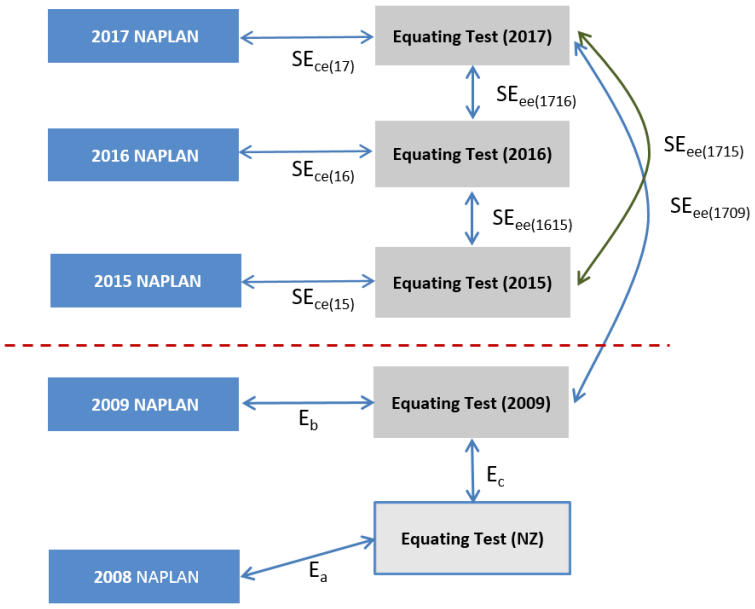

Figure 6.33. Writing deltas for 2017 against 2015

For each domain and year level:

- SEa is the standard error associated with equating the offshore equating form and the 2008 NAPLAN test;
- SEb is the standard error associated with equating the onshore equating form and the 2009 NAPLAN test;
- SEc is the standard error associated with equating the offshore and onshore equating forms;
- $SE_{ce(17)}$ is the standard error associated with equating the NAPLAN 2017 test with the equating test (calibration to equating);
- $SE_{ce(16)}$ is the standard error associated with equating the NAPLAN 2016 test with the equating test (calibration to equating);
- $SE_{ce(15)}$ is the error associated with equating the NAPLAN 2015 test with the equating test; and
- $SE_{ee(1716)}$ is the standard error associated with equating the 2016 and 2017 administrations of the equating test (equating to equating); and so forth

For reporting results of NAPLAN 2017, the equating errors for equating the 2017 scale to the 2016, 2015 and 2008 scales are estimated by combining the relevant standard errors as follows:

$$SE_{2017to2016} = \sqrt{SE_{ce(16)}^2 + SE_{ce(17)}^2 + SE_{ce(1716)}^2}$$

$$SE_{2017to2015} = \sqrt{SE_{ce(15)}^2 + SE_{ce(17)}^2 + SE_{ce(1715)}^2}$$

$$SE_{2017to2008} = \sqrt{SE_a^2 + SE_c^2 + SE_{ee(1709)}^2 + SE_{ce(17)}^2}$$

It was decided in 2011 to include component *c* of equating error, associated with the offshore testing, in equating back to 2008. The reason is that even though most items are in common with the equating form in 2009 and subsequent years, a different population of persons attempted the items in the offshore equating exercise. Component *c* was included again in 2017.

Table 6.7 shows the standard errors of equating associated with each test domain and year level in logits.

Table 6.7. Standard Errors of Equating

Domain	Year	2017 to base	2017 to 2016	2017 to 2015
Reading	3	0.067	0.049	0.061
	5	0.078	0.070	0.070
	7	0.053	0.031	0.040
	9	0.054	0.032	0.033
Writing	3	0.198	0.198	0.147
	5	0.198	0.198	0.147
	7	0.198	0.198	0.147
	9	0.198	0.198	0.147
Spelling	3	0.092	0.071	0.065
	5	0.099	0.060	0.065
	7	0.096	0.056	0.048
	9	0.098	0.060	0.064
Grammar and Punctuation	3	0.092	0.061	0.069
	5	0.105	0.056	0.058
	7	0.090	0.045	0.050
	9	0.081	0.053	0.048
Numeracy	3	0.069	0.051	0.048
	5	0.071	0.039	0.048
	7	0.052	0.037	0.035
	9	0.054	0.036	0.035

*The base year for grammar & punctuation, numeracy, reading and spelling is 2008; base year for writing is 2011.
**The Writing equating error was calculated based on the pairwise equating data in a manner consistent with keeping the item parameters constant.

The equating errors are taken into account, together with sampling and measurement errors, in estimating the standard errors used to determine statistical significance in the comparisons between mean scores across years in NAPLAN reports. The equating errors are not included

when estimating standard errors of estimates used to determine statistical significance in the comparisons between mean scores of different subgroups on NAPLAN 2017. In estimating standard errors for percentages at or above minimum standards, the equating errors were applied to the cut-points for proficiency bands.

CHAPTER 7 REPORTING OF NAPLAN PERFORMANCE IN 2017

NAPLAN 2017 achievement scores for reading, numeracy, spelling and grammar and punctuation were reported on the NAPLAN vertical scales as they were for NAPLAN administrations 2008 through 2016, while the NAPLAN 2017 achievement scores in writing used the same scale as the 2011 through 2016 assessments. This was made possible by applying the equating shifts and scale transformations necessary to bring the 2017 logit scores for each test in each domain onto the NAPLAN reporting scale, the details of which are reported in previous chapters. As in previous years, student results were reported against proficiency bands. The cut-points for proficiency bands established for NAPLAN 2008 reporting were used for NAPLAN 2017 as in previous cycles. The scale equating enabled achievement scores to be compared across NAPLAN administration years for reading, numeracy, spelling and grammar and punctuation and across 2011to 2017 for writing.

7.1 Proficiency Estimates

As for previous NAPLAN cycles, population statistics for the reporting of NAPLAN 2017 achievement at the state/territory and national levels were estimated using *plausible values*. In this approach, student achievement is not estimated as a single value or point estimate such as one would do using weighted likelihood estimates (WLEs). Instead, a range of values from the posterior distribution is generated for each student. The plausible values represent a random selection from this distribution.

Using plausible value methodology to obtain proficiency estimates for populations and subpopulations is a standard approach in large scale national assessment programs, as well as in international assessment programs such as the Programme for International Student Assessment (PISA). An introduction to the conceptual basis of plausible values and calculations involving them in the context of PISA is described in a report from the Organisation for Economic Co-operation and Development (OECD, 2009).

Five plausible values were drawn for each student in each domain using *ACER ConQuest*. The plausible values for reading, spelling, grammar and punctuation and numeracy were drawn concurrently, based on a multidimensional item response model with latent regression (Wu, et al, 2007). In drawing the plausible values, conditioning variables were used as regressors in the model. The regression model used 2017 was the same as that used in previous NAPLAN cycles. The conditioning variables used in the model were gender, LBOTE status, Indigenous status, parental education, parental occupation, school geolocation, school sector, and the school reading WLE average score as a measure of average proficiency at the school level. A diagrammatic representation of the model is shown in Figure 7.1.

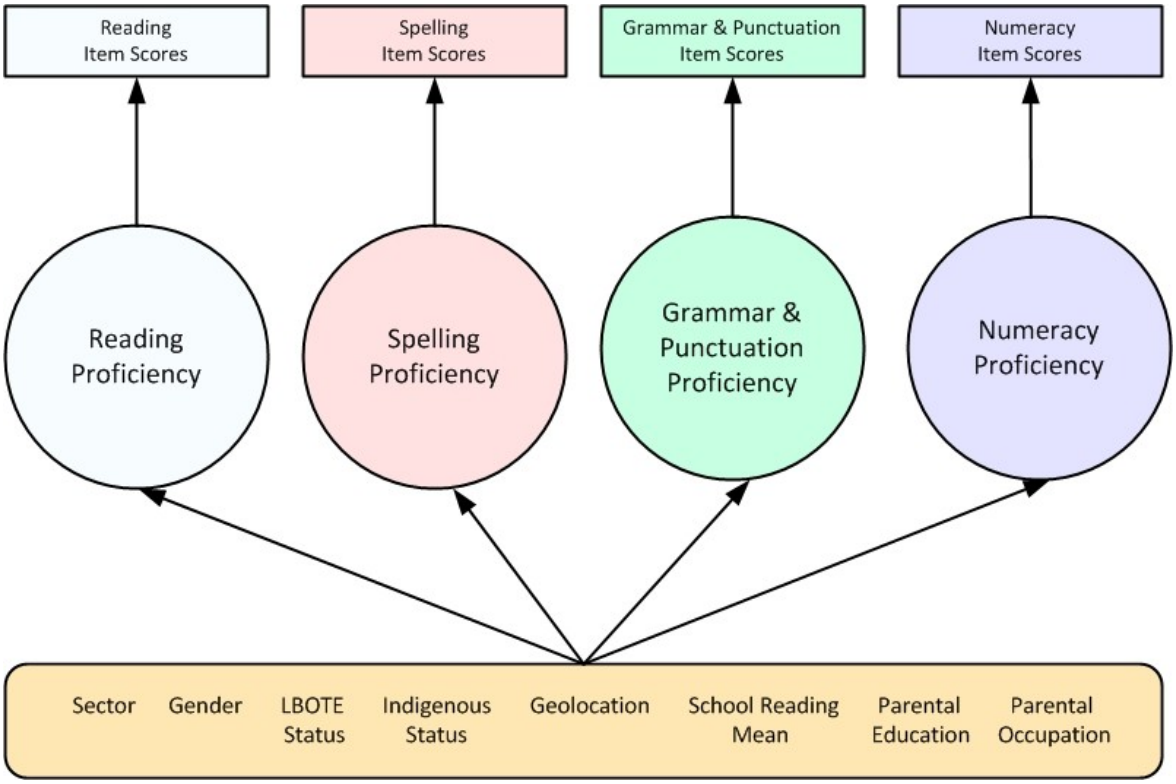

Figure 7.1. Conditioning variables for the multidimensional item response model with latent regression

The categorical variables (gender, LBOTE status, Indigenous status, parental education, parental occupation, school geolocation and school sector) were included in the model using what are referred to as *indicator variables*. In this approach, a single categorical variable is recoded by multiple indicator variables that are coded with a "1" to denote the presence of a category level, and a "0" to denote the absence of the category level. In general, it takes $k - 1$ indicator variables to recode k category levels. For example, the variable gender was designated as having three categories, namely, *male*, *female*, and *missing*. The categories of gender were recoded for each student using one indicator variable to denote *female*, and a second indicator variable to denote *missing*. If the pair of indicator variables had the values 1 and 0 respectively, this meant that the gender category for the student was *female*; when the indicator variables had the values of 0 and 1, then the gender category was *missing*. When both indicators were 0, this indicated that the gender category for the student was *male*. In a similar fashion, this approach was applied to the other categorical variables used in the model.

Due to differences between states/territories with respect to the distributions of students across these variables, some categories of these conditioning variables may not have been observed or may have been perfectly correlated with other conditioning variables. For example, during one NAPLAN administration, in year level 3, the indicator for school geolocation indicating whether this information was missing was perfectly correlated with school sector indicator for home-schooled students. In these cases, categories of conditioning variables were combined or conditioning variables were removed from the generation of plausible values for the state/territory in question.

The plausible values were drawn separately for each jurisdiction to allow for the possibility of different relationships between proficiency estimates and conditioning variables across the

jurisdictions. Plausible values were drawn for all students, including absent students and students that had withdrawn from taking the test. Exempt students were not included.

The plausible values for writing were drawn concurrently for Years 3, 5, 7 and 9 and separately for each state/territory. In this calibration, school sector, gender, LBOTE status, Indigenous status, parental education, parent occupation, school geolocation, year level and the school writing WLE mean score were included as conditioning variables. The WLE mean score of a school was calculated based on students who participated in the writing test. For schools with no student who participated in the writing test, the school WLE average score was set at the jurisdiction mean.

For each domain and each year level, the five sets of plausible values were used to calculate means, standard deviations, percentiles and percentages of students within proficiency bands at the jurisdictional and national level. The statistics were calculated for the full population of students and by selected background variables, such as gender, language background and aboriginal status, and including the absent students and the students that had withdrawn from taking the test. The plausible values were also used to obtain estimations of measurement errors.

Estimates of sampling and measurement errors were combined to obtain final standard errors for the performance statistics reported for the census data. The standard errors were used to determine statistical significance of mean differences and percentage differences in NAPLAN 2017 performance in the reports. Relevant equating errors were taken into consideration, in addition to sampling and measurement errors, to estimate standard errors and evaluate statistical significance of mean and percentage differences between 2017 and 2016 as well as 2017 and 2008 for reading, numeracy, spelling, and grammar and punctuation and between 2017 and 2016 as well as 2017 and 2011 for writing.

7.2 Reporting NAPLAN 2017 Student Achievement on NAPLAN Reporting Scales

The plausible values were drawn on the delta-centred scale for each test. Before the scaling was finalised, the 2017 latent distributions of student achievement were estimated using the plausible values drawn for the 2017 scientific sample, with the student weights applied. The means and standard deviations calculated from the sample provided estimates of the population latent distributions before the full cohort data were available.

The standard deviations obtained for 2017 were then compared to the population standard deviations of the domain's *base year*. For the standard deviations for the reading, numeracy, spelling and grammar and punctuation domains, the base year was 2009, while for writing, it was 2011.The ratio of the base year standard deviation to the 2017 standard deviation was calculated for each domain at each year level. A ratio that was greater than 1.0 indicated that the base year test spread the students out more than the 2017 test did for that domain at the particular year level. Conversely, a ratio that was less than 1.0 indicated that the 2017 test spread the students out more than the base year test for that domain at that particular year level.

These ratios of standard deviations were then used as scaling factors to correct for the different distributions.

For each domain at each year level, a linear transformation was applied to scores on the delta-centred logit scale to correct for the spread in the scores and to apply the appropriate equating

constant to put the scores onto the NAPLAN vertical domain logit scale. The scaling factor was applied for each domain at each year level, with the estimated population mean as the pivot point of the transformation.

For each domain at each year level, a logit score was transformed as follows:

$$TranformedLogitScore = SF \cdot (LogitScore - LocalMean) + LocalMean + EqShift \quad (7.1)$$

where

LocalMean = the mean of the latent distribution estimated using the 2017 scientific sample based on the delta-centred item parameters,

SF = the scale factor that was calculated from the ratio of the base year standard deviation to the 2017 standard deviation.

EqShift = the equating constant pertinent for the domain at the particular year level.

The values for *LocalMean*, *SF*, and *EqShift* are presented in Table 7.1 for each year level by domain.

The same transformation was applied to the WLE ability logit scores in the score equivalence table, the item parameters and the plausible values. For writing, the scaling factor and equating shifts were set to one and zero, respectively, in Table 7.1.

For each domain, estimates in logits were transformed to the NAPLAN reporting scale scores established in NAPLAN 2008 as follows:

$$NAPLANScaleScore = 100 \cdot (Score_{logit} - DomainMean)/(DomainStdDeviation) + 500 \quad (7.2)$$

where *DomainMean* and *DomainStdDeviation* are the estimated overall domain mean and overall domain standard deviation calculated using the 2008 scientific sample. These are presented in Table 7.2.

It should be noted that for each domain, the standard error (SE) in logits associated with each WLE estimate was transformed to the NAPLAN scale metric as follows:

$$SE_{NAPLANScale} = 100 \cdot \frac{SE_{logit}}{DomainStdDeviation}$$

Table 7.1. Parameters for transforming the 2017 logit scores to the NAPLAN Scales

Year	Domain	Local Mean	Scaling Factor	Equating Shift
	Reading	0.2256	1.3066	-0.0648
	Writing	—*	1	0
Year 3	Spelling	-0.2597	0.9194	-0.9859
	Grammar and Punctuation	0.1913	1.4165	0.2512
	Numeracy	0.1953	1.0552	-0.8578
	Reading	1.0267	1.0859	0.2278
	Writing	—*	1	0
Year 5	Spelling	0.2039	0.9372	0.7865
	Grammar and Punctuation	0.2834	1.2897	0.8936
	Numeracy	0.7447	0.8562	-0.0186
	Reading	0.7524	0.9724	1.0586
	Writing	—*	1	0
Year 7	Spelling	-0.1563	1.0413	2.4066
	Grammar and Punctuation	0.1208	1.0388	1.6926
	Numeracy	0.0735	0.9226	1.6204
	Reading	0.7554	0.9801	1.556
	Writing	—*	1	0
Year 9	Spelling	-0.4315	1.0547	3.4479
	Grammar and Punctuation	0.2737	1.2064	1.9049
	Numeracy	-0.1558	0.7519	2.4415

*Not applicable.

Table 7.2. Domain Mean and Standard Deviation for Transforming Logits to NAPLAN Scale Scores

Domain	Domain Mean	Domain SD
Reading	1.1629	1.4867
Writing	1.1160	3.3679
Spelling	0.9406	2.6241
Grammar and Punctuation	1.2529	1.3605
Numeracy	0.8102	1.6652

7.3 Score Equivalence Tables

To facilitate rapid generation of student and school reports, score equivalence tables for converting raw scores to weighted likelihood estimates (WLEs) and their corresponding NAPLAN scale scores were generated for each test and provided to the jurisdictions' Test Administration Authorities. The equivalence tables enable the TAAs to locate individual students on NAPLAN reporting scales using the raw scores for each test. The NAPLAN 2017 score equivalence tables are presented in Appendix K. The tables show the scores and the associated standard errors in logits and in NAPLAN scale scores. For Year 7 and Year 9 numeracy, three separate tables were provided. The first was for the overall numeracy test, the second for the non-calculator form and the third for the calculator form. The second and third tables were for allocating scores to students who sat only one of the forms.

The preliminary national mean, the 20th percentile score and the 80th percentile score (to give the approximate range of the middle 60 percent) based on the calibration sample were provided for each domain and year level for reporting to schools and parents.

7.4 Reporting against Proficiency Bands

As in previous NAPLAN administrations, student achievement was also reported against proficiency bands for each domain. The ten proficiency bands on the NAPLAN reporting scales had the cut-points set at equal intervals apart. Year 3 results were reported against Band 1 to Band 6, Year 5 results reported against Band 3 to Band 8, Year 7 results reported against Band 4 to Band 9, and Year 9 results reported against Band 5 to Band 10. The cut-points for the proficiency bands were developed in 2008 and used in reporting the NAPLAN 2017 results.

The NAPLAN reporting scale for each domain was standardized to be similar in length. Each scale has the same number of proficiency bands and the same nine cut-points on the transformed scales. The performance distribution at each year level could span approximately six bands. A student whose proficiency fell within a specific band would be expected to score at least 50% correct on a test made up of items that fell into that band.

The cut scores separating the proficiency bands are presented in Table 7.3. The cut scores are different on the logit scales for the domains but are the same on the transformed NAPLAN scales.

Table 7.3. Proficiency Bands Cut Scores

Band Cut Score	Scale Score	Logits				
		Reading	Writing	Spelling	Grammar and Punctuation	Numeracy
9/10	686	3.928	7.380	5.821	3.783	3.907
8/9	634	3.155	5.629	4.457	3.076	3.042
7/8	582	2.382	3.878	3.092	2.369	2.176
6/7	530	1.609	2.126	1.728	1.661	1.310
5/6	478	0.836	0.375	0.363	0.954	0.444
4/5	426	0.063	-1.376	-1.001	0.246	-0.422
3/4	374	-0.710	-3.128	-2.366	-0.461	-1.288
2/3	322	-1.483	-4.879	-3.730	-1.169	-2.154
1/2	270	-2.257	-6.630	-5.095	-1.876	-3.020

Figure 7.2 depicts how student results are reported against the proficiency bands. Results in each year level are reported against six bands. For Year 3, scores above Band 6 are reported against Band 6. For Year 5, scores above Band 8 are reported against Band 8 and scores below Band 3 are reported against Band 3. For Year 7, scores above Band 9 are reported against Band 9 and scores below Band 4 are reported against Band 4. For Year 9, scores below Band 5 are reported against Band 5.

The yellow band for each year level in Figure 7.2 is identified as the national minimum standard for that year level. Band 2 is the national minimum standard for Year 3, Band 4 for Year 5, Band 5 for Year 7 and Band 6 for Year 9. Students are deemed to have performed above national minimum standard if their scores fall in the green bands at their respective year level and below national minimum standard if their scores fall in the orange band.

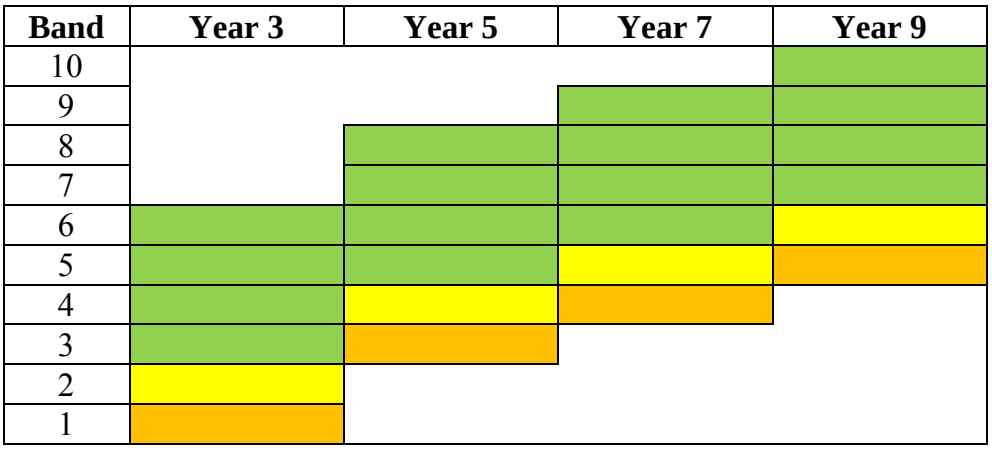

Figure 7.2. Reporting against the NAPLAN proficiency bands

7.5 National Reports

The NAPLAN 2017 Summary Information was released in August 2017. The summary information provides results in each domain at each year level and by state/territory and nationally. This information was released around the same time that student reports were distributed to parents. The National Report released in December 2017 includes subgroup results by gender, language background, Indigenous status, geolocation, parental education and parental occupation.

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NAPLAN 2017
Equating and Calibration Samples

PREPARED FOR:

AUSTRALIAN CURRICULUM, ASSESSMENT AND REPORTING AUTHORITY

MARCH 2017 WITH MAY 2017 ADDENDUM

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Purpose

The purpose of this report is to provide information regarding the 2017 NAPLAN Calibration and Equating Samples that complements existing NAPLAN technical documentation. It should be read in conjunction with the *NAPLAN 2017 Calibration Sample Weighting.pdf*.

These samples explicitly relate to the paper based version of NAPLAN. Schools and students participating in the online assessment were excluded from the calibration and equating samples in 2017.

Sample frame

Primary and Secondary samples

The NAPLAN Calibration and Equating Samples each consist of two sub-samples. For the Calibration Sample, one sample was drawn for the Primary year levels and the other sample for the Secondary year levels. This same procedure was also followed for the NAPLAN Equating Sample. Figure 1 illustrates the relationship between NAPLAN Year Levels, State/Territory and Primary and Secondary Schooling.

Year 7 has been treated as a secondary year level for QLD and WA since 2015. South Australia (SA) was the only state where Year 7 was included as a primary year level.

In 2017, ACT was excluded from both the calibration and equating samples as directed by ACARA given that this jurisdiction had a very high proportion of schools participating in the online version of the assessment.

<table>
<tr><th>State/Territory</th><th>Year 3</th><th>Year 5</th><th>Year 7</th><th>Year 9</th></tr>
<tr><td>ACT</td><td colspan="2" rowspan="7">Primary</td><td colspan="2" rowspan="7">Secondary</td></tr>
<tr><td>NSW</td></tr>
<tr><td>NT</td></tr>
<tr><td>TAS</td></tr>
<tr><td>VIC</td></tr>
<tr><td>QLD</td></tr>
<tr><td>WA</td></tr>
<tr><td>SA</td><td colspan="3">Primary</td><td>Secondary</td></tr>
</table>

Figure 1: Relationship between state/territory, NAPLAN year levels and Primary/Secondary Schooling.

For each sampled school, all students in the target year levels were included in the calibration sample. For the Primary sample, this consisted of Year 3 and Year 5 students in all states and territories as well as Year 7 students in SA (see Figure 1). In relation to the Secondary sample, the target year levels were Year 7 and Year 9 except for SA whose target year levels consisted of Year 9 students only.

Source data

ACARA provided a list of Australian schools which included the number of students enrolled at each school in Years 3, 5, 7 and 9 in 2016. Additional demographic information such as state, sector, geographic location and aggregate NAPLAN performance data was also provided.

Exclusions

Schools were excluded from the calibration and equating sample if any of the following conditions were true:

- The school was an ACT school

- The school was participating online (i.e., field ***Confirmed_NAPLAN_Online_2017*** = 'Y')
- If there were no enrolments (zero or missing value) in all the target year levels
- If the school had a missing value in either the ***NAPLAN2016_Performance*** field or ***NAPLAN_Total_Cohort_3579*** field
- If the school was a 'very remote' school in NSW or WA.

Equating sample additional exclusions

In addition to the general exclusions mentioned previously, all remote and very remote schools were excluded in each state/territory from the equating sample frame. Schools were also excluded if the enrolment was less than the desired target cluster size of 25 students for Primary year levels and 20 students for Secondary year levels. Schools were also excluded if the source data field ***ACARA_Eligible_Primary*** or ***ACARA_Eligible_Secondary*** was equal to 'N' for the primary and secondary samples respectively.

Measures of enrolment size

The measure of enrolment size for a year level was taken to be the enrolment size in the equivalent year level for the calendar year prior. That is, the 2016 enrolment numbers contained in the source data were used to estimate 2017 enrolment sizes. For example, Year 3 enrolment sizes in the 2016 source data were used as the estimate for 2017 Year 3 enrolment sizes.

A change to school starting age in QLD meant that the enrolment numbers for Year 9 students in 2016 are lower than usual (approximately 42,000 students instead of a typical cohort size of approximately 59,000 students). To accommodate this, the QLD Grade 8 enrolments from the sample frame (which is based on 2016 enrolments) were used as the estimate for the 2017 Year 9 enrolments for QLD.

Calibration sample frames

The calibration sample frame consisted of 7071 schools with Primary year levels and 2436 schools with Secondary year levels.

Equating sample frames

The equating sample frame comprised 2983 primary schools and 1058 secondary schools. Sampled schools were then assigned to one of three assessment domains (Reading, Language Conventions or Numeracy).[1]

Sampling methodology

Once sample frames had been created, four samples were drawn: Calibration Primary, Calibration Secondary, Equating Primary and Equating Secondary.

The same general methodology was applied to select schools for each of the four samples. Firstly, this involved explicit and implicit stratification of sample frames. Schools were then selected for inclusion in the sample using random start systematic sampling where schools within each explicit stratum had an equal probability of selection.

[1] The equating sample does not include the Writing domain.

Explicit stratification

As previously mentioned, ACT was excluded from the calibration and equating samples so there was a total of seven jurisdictions available for sampling instead of the usual eight jurisdictions.

For the calibration sample, sample frames were split into 21 explicit strata with each stratum containing a state/territory (n=7) and sector (n=3) combination.

For the equating sample, sample frames were split into 17 explicit strata where NT and TAS were 2 strata[2] while the remaining states (n=5) were split by sector (n=3) into the remaining 15 explicit strata.

Implicit stratification

Within each explicit stratum, schools were implicitly stratified by the variables detailed in Table 1.

Table 1: Implicit stratification variables

Implicit Stratification Variable	Description
Sector	School sector (Catholic, Government, Independent)
SchtypeID	An indicator denoting the inclusion (or absence of) year 7 students in the sample.
Geolocation	Geographic location based on ABS remoteness code provided by ACARA
NAPLAN performance	For each school, a numeric value was provided by ACARA representing performance on NAPLAN across all year levels and domains at the school.
MeanENR	Average of student enrolments across the target year levels within each school.

Further information relating to each implicit stratification variable has been provided below.

Sector

Sector was included as an implicit stratification variable in the instances it wasn't used as an explicit stratification variable.

SchtypeID

SchtypeID was named PriSchtype for primary samples and SecSchtype for secondary samples. The coding scheme used here was consistent with 2016 procedures.

PriSchtype was set to 1 if the primary school had only year 7 students enrolled and no year 3 or 5 students (this only occurs in SA). Set equal to 2 for all other primary schools.

SecSchtype was set to 1 if the secondary school had no year 7 students but had more than five year 9 students (this only occurs in states other than SA). Set equal to 2 for all other secondary schools.

Geolocation

In the provided files, the geolocation value is equivalent to the source data field ***ABS_Remoteness_Code*** + 1. The relationship between values is detailed in Table 2.

[2] An operational decision was made in 2016 to combine sectors for sampling purposes to reduce the burden on schools in smaller jurisdictions.

Table 2: ABS Remoteness Code description and equivalent Geolocation value

ABS Remoteness Code	Geolocation value in supplied files	Description
0	1	Major Cities of Australia
1	2	Inner Regional Australia
2	3	Outer Regional Australia
3	4	Remote Australia*
4	5	Very Remote Australia*

* excluded from the equating sample

NAPLAN performance

Within each state and territory NAPLAN performance values were condensed into five levels with approximately equal numbers of schools in each level within the state. The percentile scores used to create the performance levels within each state are included in Table 3.

For example, level 5 represents schools with NAPLAN performance values that ranked them above the 80th percentile of other schools in the same state/territory (e.g. in SA this was schools with values higher than 0.075). Level 4 denotes schools with a rank in their state/territory above the 60th percentile but less than or equal to the 80th percentile (e.g. in Victoria level 4 indicated that the school had a NAPLAN performance value above 0.077 but equal to or less than 0.313).

Table 3: NAPLAN performance value cut-points for percentile groups

	Percentiles (within state)			
State/Territory	**20**	**40**	**60**	**80**
NSW	-0.528	-0.243	0.000	0.270
NT	-2.626	-2.121	-0.949	-0.386
QLD	-0.566	-0.310	-0.121	0.116
SA	-0.579	-0.322	-0.145	0.075
TAS	-0.617	-0.350	-0.165	0.114
VIC	-0.339	-0.118	0.077	0.313
WA	-0.589	-0.320	-0.075	0.190

MeanENR

For the Primary and Secondary samples, the average enrolment size was estimated by taking the mean of enrolments for each target year level where the enrolment size was greater than zero. For example, the Primary enrolment size for a school in SA was equal to the average enrolment across Years 3, 5 and 7 while for the other states/territories it is equal to the average enrolment across Years 3 and 5. In cases where there were no students in Year 5 for example, then the average was calculated using Years 3 students only (or Year 3 and Year 7 for SA schools). The definition of 'no students' in a year level was when the sample frame contained an enrolment total that was either zero or missing. It appears that zero may sometimes be used to indicate that a school does not cater for a year level while for other schools (especially small schools) zero may indicate that there are simply no enrolments for students in a particular year level for a given calendar year. The implication being that the mean ENR may be slightly overestimated for some small schools.

Selecting schools

Within each explicit stratum schools were selected with equal probability. Further explanation of the steps used, including relevant sampling parameters, are detailed in Appendix B.

Selected schools

The overall calibration sample sizes are equivalent to 2016 minus the number of schools usually sampled for ACT.

For the equating sample, an additional 2 schools were sampled at the primary and secondary levels for NSW, QLD and VIC to compensate for the schools usually included from the ACT. This was to ensure the overall number of expected responses per equating test item was consistent with past practice.

As shown in Table 4, the calibration sample comprised of 289 schools at the primary level and 283 schools at the secondary level. For the equating sample, 109 schools were selected at the primary level while there were 137 schools in the secondary equating sample.

Table 4: Number of selected schools in each state and sample

	Calibration Sample		Equating Sample	
	Primary	Secondary	Primary	Secondary
NSW	48	48	33	42
NT	25	17	6	2
QLD	48	48	19	28
SA	45	46	8	11
TAS	30	30	6	6
VIC	48	48	26	33
WA	45	46	11	15
Total	289	283	109	137

Replacement schools

Up to two replacement schools were also selected for each sampled school. The overall numbers of replacement1 and replacement2 schools were close to, but slightly less than the number of selected schools (as shown in Table 5). In some cases, particularly in smaller states/territories, it was not possible to select any replacement schools. In some cases, only one replacement school could be selected. Selection of replacement schools are consistent with those used in PISA (OECD 2012 p67)[3].

Table 5: Number of selected and replacement schools

Sample type	selected	replacement1	replacement2	Total
Calibration Primary	289	289	289	867
Calibration Secondary	283	280	271	834
Equating Primary	109	106	103	318
Equating Secondary	137	128	119	384

[3] OECD (2012), *PISA 2009 Technical Report*, PISA, OECD Publishing. http://dx.doi.org/10.1787/9789264167872-en

Expected sample sizes

The expected number of students included in the calibration sample is equivalent to the sum of all enrolments at the target year levels for selected schools. The expected calibration sample sizes for 2017 are shown in Table 6. For example, approximately 11000 students are expected to be included in the calibration sample for Year 3 while 28000 students are expected to be included at Year 9. Secondary schools, in general, have higher enrolment numbers per school than primary schools and hence more secondary school students are expected for inclusion in the sample given the number of schools selected at each level (primary and secondary) is approximately equal. The total expected sample size of approximately 26000 students for Year 7 is comprised of students drawn from both the primary and secondary calibration samples.

Table 6: Expected calibration sample sizes by year level

Year	Sum ENR
Year 3	11181
Year 5	10488
Year 7[4]	25610
Year 9	28077

For the equating sample, an indication of the likely number of students included in the sample was estimated by multiplying the number of schools by the target cluster size for each year level. These figures assume 25 students per class for the primary sample and 20 students per class for the secondary sample. As shown in Table 7, approximately 2700 students are sampled at each year level across the 3 domains.

Table 7: Expected equating sample sizes by year level

Year	Number of schools	Expected total sample size (R and LC and N)	Expected sample size per domain
Year 3	109	2725	908
Year 5	109	2725	908
Year 7[5]	134	2720	907
Year 9	137	2740	913

Table 8 contains the number of schools included in the equating sample for each year level and domain.

[4] Comprising 1577 Year 7 students from the primary calibration sample and 24033 students from the secondary calibration sample

[5] Comprising 8 primary schools with Year 7 students (target cluster size of 25) and 126 secondary schools with Year 7 students (target cluster size 20)

Table 8: Equating sample number of schools by domain and year level

Year	R	LC	N
Year 3	36	37	36
Year 5	36	37	36
Year 7[6]	45	44	45
Year 9	45	46	46

[6] Comprising 3 R, 2 LC and 3 N primary schools and 42 R, 42 LC and 42 N secondary schools

Appendix A

Sample Frame

The ACARA sample frame totals displayed in Table 9 and Table 10 are based on the original file from ACARA after the exclusions common to both the calibration and equating samples had been removed. Hence, totals for ACT are not available.

The original sample frame provided by ACARA contains 2016 enrolment information. The number of schools per state/territory is shown in Table 9 compared to ABS 2016 totals. Please note, at the time of sampling, schools participating online had been confirmed in ACT (n=113), QLD (n=109), VIC (n=199) and WA (n=100).

Table 9 Number of schools per state/territory

State/territory	ABS All (2016[7])	ACARA Sample Frame[8]
ACT	127	-
NSW	2918	2899
NT	183	177
QLD	1653	1573
SA	694	692
TAS	253	252
VIC	2120	1975
WA	1005	819

Table 10 contains student enrolment totals by year level and state/territory while Table 11 contains corresponding ABS totals.

[7] Data sourced from the Australian Bureau of Statistics 2017, Table 35b Counts of all schools, 2010-2016 cat. no. 4221.0, ABS, Canberra. Released 2/02/2017. ABS totals are based on Primary + Secondary + Combined only and do not include special schools.

[8] The totals in this table are based on the original file from ACARA after the exclusions common to both the calibration and equating samples had been removed.

Table 10 ACARA sample frame enrolment totals by year level and state/territory

ACARA Sample Frame containing 2016 enrolment information													
State	**Pre Year1**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Year 11**	**Year 12**
ACT	-	-	-	-	-	-	-	-	-	-	-	-	-
NSW	96822	96345	95647	96805	94638	91350	87723	86767	85503	85703	86912	72563	62741
NT	3629	3575	3478	3545	3384	3385	3030	2995	2992	2635	1398	936	661
QLD	60199	61541	60746	61085	60468	59515	57633	54638	52514	37716	53140	52656	46830
SA	19929	20289	20528	20750	20224	19784	18521	19286	18597	18933	19452	19477	17991
TAS	6207	6471	6689	6656	6504	6355	5948	5976	6217	6163	6476	1329	1242
VIC	68987	68503	67615	68118	66671	64024	61169	54584	53574	52472	51387	47090	42021
WA	29012	29031	28875	29626	29259	27817	26721	23359	22695	22752	22517	19941	17471

Table 11 ABS enrolment totals by year level and state/territory

ABS 2016 measure [9]													
State	**Pre Year1**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Year 11**	**Year 12**
ACT	5730	5733	5441	5316	5315	5145	4877	5196	4926	4886	5120	5297	4686
NSW	99035	98333	97532	98257	96041	92860	89182	87739	86440	86544	88616	80291	69170
NT	3788	3702	3642	3640	3514	3438	3186	3205	3200	2898	2762	2354	1813
QLD	66058	67471	66578	66917	66136	65463	63192	61572	59220	42620	60900	61058	54011
SA	20116	20459	20675	20798	20247	19858	18761	19293	18832	19212	19917	21907	20335
TAS	6243	6510	6713	6672	6523	6371	5962	5997	6259	6197	6509	5862	4947
VIC	77071	76477	75702	76420	74903	72078	69246	68994	68096	67355	69637	66671	58986
WA	34295	34206	33783	34485	34024	32463	31234	30505	29995	29727	29559	29101	24559

[9] Data sourced from the Australian Bureau of Statistics 2017, "*Table 42b Number of Full-time and Part-time Students, 2006-2016*", cat. no. 4221.0, ABS, Canberra. Released 02/02/2017.

Appendix B

Sampling parameters

The sampling parameters used to draw the sample are provided in Table 13 . These can be used in conjunction with the sample frame to replicate selection of the samples. An explanation of the sample parameter variables is included in Table 12.

To select schools within each explicit sample frame, the selected schools are those whose row numbers within the sample frame belong to the set of integers produced by the following algorithm:

for each integer (i) *in the range* $(0 \text{ to } units)$ *inclusive,*

select the school if the row number for the school in the sample frame is equal to

$[(i + RN) \times interval]$ *rounded to the nearest integer*

Table 12: Sample parameters glossary

Sample	One of the 4 samples drawn: CP=Calibration Primary; CS=Calibration Secondary; EP=Equating Primary; ES=Equating Secondary
strataID	Explicit strata id
State	state/territory
Sector	C=Catholic; G=Gov; I=Indep, A=All sectors.
cases	Number of schools in sample frame
units	Number of schools sampled (desired)
interval	sampling interval which is equal to cases / units
RN	random number between 0 and 1
inclprob	school inclusion probability (each school within an explicit stratum has the same inclusion probability) = units/cases
designweight	inverse of inclprob
Nsel	Number of schools sampled
Nr1	Number of 1st replacement schools
Nr2	Number of 2nd replacement schools

Table 13: Sampling parameters

Sample	strataID	State	Sector	Cases	units	interval	RN	inclprob	designweight	Nsel	Nr1	Nr2
CP	1	NSW	C	427	9	47.4444	0.9423	0.0211	47.3934	9	9	9
CP	2	NSW	G	1635	33	49.5455	0.0669	0.0202	49.505	33	33	33
CP	3	NSW	I	297	6	49.5	0.247	0.0202	49.505	6	6	6
CP	4	NT	C	12	3	4	0.9455	0.25	4	3	3	3
CP	5	NT	G	132	19	6.9474	0.0864	0.1439	6.9493	19	19	19
CP	6	NT	I	14	3	4.6667	0.3466	0.2143	4.6664	3	3	3
CP	7	QLD	C	215	9	23.8889	0.74	0.0419	23.8663	9	9	9
CP	8	QLD	G	960	34	28.2353	0.2467	0.0354	28.2486	34	34	34
CP	9	QLD	I	155	5	31	0.6277	0.0323	30.9598	5	5	5
CP	10	SA	C	86	8	10.75	0.418	0.093	10.7527	8	8	8
CP	11	SA	G	433	29	14.931	0.7373	0.067	14.9254	29	29	29
CP	12	SA	I	98	8	12.25	0.6984	0.0816	12.2549	8	8	8
CP	13	TAS	C	33	6	5.5	0.0351	0.1818	5.5006	6	6	6
CP	14	TAS	G	150	21	7.1429	0.8981	0.14	7.1429	21	21	21
CP	15	TAS	I	33	3	11	0.1823	0.0909	11.0011	3	3	3
CP	16	VIC	C	365	10	36.5	0.6885	0.0274	36.4964	10	10	10
CP	17	VIC	G	1121	32	35.0313	0.8694	0.0285	35.0877	32	32	32
CP	18	VIC	I	186	6	31	0.0322	0.0323	30.9598	6	6	6
CP	19	WA	C	113	7	16.1429	0.7576	0.0619	16.1551	7	7	7
CP	20	WA	G	500	32	15.625	0.3476	0.064	15.625	32	32	32
CP	21	WA	I	106	6	17.6667	0.3763	0.0566	17.6678	6	6	6

Sample	strataID	State	Sector	cases	units	interval	RN	inclprob	designweight	Nsel	Nr1	Nr2
CS	1	NSW	C	114	9	12.6667	0.0496	0.0789	12.6743	9	9	9
CS	2	NSW	G	440	28	15.7143	0.1408	0.0636	15.7233	28	28	28
CS	3	NSW	I	273	11	24.8182	0.3811	0.0403	24.8139	11	11	11
CS	4	NT	C	9	3	3	0.9002	0.3333	3.0003	3	3	2
CS	5	NT	G	66	11	6	0.4143	0.1667	5.9988	11	11	11
CS	6	NT	I	15	3	5	0.756	0.2	5	3	3	3
CS	7	QLD	C	78	9	8.6667	0.6241	0.1154	8.6655	9	9	9
CS	8	QLD	G	250	30	8.3333	0.7937	0.12	8.3333	30	30	30
CS	9	QLD	I	147	9	16.3333	0.9175	0.0612	16.3399	9	9	9
CS	10	SA	C	30	9	3.3333	0.4076	0.3	3.3333	9	9	9
CS	11	SA	G	133	27	4.9259	0.3557	0.203	4.9261	27	27	27
CS	12	SA	I	58	10	5.8	0.357	0.1724	5.8005	10	10	10
CS	13	TAS	C	12	7	1.7143	0.9625	0.5833	1.7144	7	4	1
CS	14	TAS	G	53	19	2.7895	0.3899	0.3585	2.7894	19	19	14
CS	15	TAS	I	26	4	6.5	0.0161	0.1538	6.502	4	4	4
CS	16	VIC	C	90	13	6.9231	0.9882	0.1444	6.9252	13	13	13
CS	17	VIC	G	263	25	10.52	0.4764	0.0951	10.5152	25	25	25
CS	18	VIC	I	145	10	14.5	0.9608	0.069	14.4928	10	10	10
CS	19	WA	C	35	9	3.8889	0.3669	0.2571	3.8895	9	9	9
CS	20	WA	G	122	27	4.5185	0.8746	0.2213	4.5188	27	27	27
CS	21	WA	I	77	10	7.7	0.2028	0.1299	7.6982	10	10	10

Sample	strataID	State	Sector	cases	units	interval	RN	inclprob	designweight	Nsel	Nr1	Nr2
EP	1	NSW	C	242	6	40.3333	0.4811	0.0248	40.3226	6	6	6
EP	2	NSW	G	806	23	35.0435	0.6814	0.0285	35.0877	23	23	23
EP	3	NSW	I	112	4	28	0.2978	0.0357	28.0112	4	4	4
EP	4	NT	A	9	6	1.5	0.4477	0.6667	1.4999	6	3	0
EP	5	QLD	C	111	3	37	0.2611	0.027	37.037	3	3	3
EP	6	QLD	G	369	14	26.3571	0.9538	0.0379	26.3852	14	14	14
EP	7	QLD	I	65	2	32.5	0.1185	0.0308	32.4675	2	2	2
EP	8	SA	C	19	1	19	0.3398	0.0526	19.0114	1	1	1
EP	9	SA	G	109	5	21.8	0.9812	0.0459	21.7865	5	5	5
EP	10	SA	I	25	2	12.5	0.9474	0.08	12.5	2	2	2
EP	11	TAS	A	23	6	3.8333	0.5006	0.2609	3.8329	6	6	6
EP	12	VIC	C	192	6	32	0.6536	0.0313	31.9489	6	6	6
EP	13	VIC	G	516	17	30.3529	0.6392	0.0329	30.3951	17	17	17
EP	14	VIC	I	75	3	25	0.791	0.04	25	3	3	3
EP	15	WA	C	55	2	27.5	0.9343	0.0364	27.4725	2	2	2
EP	16	WA	G	226	8	28.25	0.609	0.0354	28.2486	8	8	8
EP	17	WA	I	29	1	29	0.9908	0.0345	28.9855	1	1	1

Sample	strataID	State	Sector	cases	units	interval	RN	inclprob	designweight	Nsel	Nr1	Nr2
ES	1	NSW	C	78	8	9.75	0.6034	0.1026	9.7466	8	8	8
ES	2	NSW	G	264	24	11	0.9092	0.0909	11.0011	24	24	24
ES	3	NSW	I	145	10	14.5	0.0576	0.069	14.4928	10	10	10
ES	4	NT	A	7	2	3.5	0.2691	0.2857	3.5002	2	2	1
ES	5	QLD	C	42	5	8.4	0.7718	0.119	8.4034	5	5	5
ES	6	QLD	G	85	18	4.7222	0.8059	0.2118	4.7214	18	18	18
ES	7	QLD	I	60	5	12	0.4266	0.0833	12.0048	5	5	5
ES	8	SA	C	4	2	2	0.3384	0.5	2	2	2	0
ES	9	SA	G	20	7	2.8571	0.1742	0.35	2.8571	7	6	6
ES	10	SA	I	20	2	10	0.6826	0.1	10	2	2	2
ES	11	TAS	A	6	6	1	0.7533	1	1	6	0	0
ES	12	VIC	C	45	9	5	0.1368	0.2	5	9	9	9
ES	13	VIC	G	155	17	9.1176	0.0918	0.1097	9.1158	17	17	17
ES	14	VIC	I	79	7	11.2857	0.3165	0.0886	11.2867	7	7	7
ES	15	WA	C	4	3	1.3333	0.6701	0.75	1.3333	3	1	0
ES	16	WA	G	22	9	2.4444	0.8521	0.4091	2.4444	9	9	4
ES	17	WA	I	22	3	7.3333	0.0351	0.1364	7.3314	3	3	3

Addendum

Calibration sample addendum May 2017

The original calibration sample was drawn in February 2017 and the Equating and Calibration Sample files and technical report were provided to ACARA in March 2017. At the time of writing in March 2017, five TAAs had at least some schools which were expected to participate using the online assessment. By late April 2017 all TAAs had withdrawn from online testing. A supplementary calibration sample was drawn for ACT to minimise the impact this would have on the central analysis of data. The ACT sampling parameters are provided in Table 13.

Other than ACT, the other TAAs which intended to participate in the online assessments to some degree included QLD, SA, VIC, and WA. SA had not provided confirmation at the time of sampling regarding online schools and hence all SA schools were eligible for participation in the calibration sample at the time the sample was drawn. The number of schools excluded from the calibration sample because they had been confirmed as an online school in QLD, VIC and WA are shown in Table 15 (these are the schools with ***Confirmed_NAPLAN_Online_2017*** = 'Y' in the source file provided by ACARA).

Table 14: ACT calibration sampling parameters provided as a supplement in May 2017 due to withdrawal from online assessment participation

Sample	strataID	State	Sector	Cases	units	interval	RN	inclprob	designweight	Nsel	Nr1	Nr2
CP	1	ACT	C	24	5	4.8	0.8535	0.2083	4.8008	5	5	5
CP	2	ACT	G	58	11	5.2727	0.4041	0.1897	5.2715	11	11	11
CP	3	ACT	I	16	4	4	0.3195	0.25	4	4	4	4
CS	1	ACT	C	5	3	1.6667	0.6578	0.6	1.6667	3	2	0
CS	2	ACT	G	18	8	2.25	0.5631	0.4444	2.2502	8	8	2
CS	3	ACT	I	14	6	2.3333	0.4253	0.4286	2.3332	6	6	2

Table 15: Number of QLD, VIC and WA schools confirmed as participating in online assessment in February 2017

TAA	Number of schools confirmed as participating in NAPLAN Online in February 2017	Total number of schools
QLD	109	1835
VIC	199	2639
WA	100	1158

APPENDIX B. ITEM ANALYSIS

B.1. Year 3 Reading

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================================================================================
NAPLAN 2017 Reading 3 - Item Calibration Calibration SampleFri Jun 23 12:25 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (R3Q01)
Cases for this item    4691   Item-Rest Cor.  0.42   Item-Total Cor.  0.46
Item Threshold(s):    -2.84   Weighted MNSQ   0.84
Item Delta(s):        -2.84
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      164       3.50   -0.27   -18.90(.000) -1.47     0.80
   2       0.00       90       1.92   -0.19   -13.41(.000) -1.45     0.78
   3       0.00       92       1.96   -0.20   -14.23(.000) -1.46     0.74
   4       1.00     4316      92.01    0.42    32.03(.000)  0.13     0.91
   7       0.00       12       0.26   -0.11    -7.65(.000) -2.37     0.71
   9       0.00       17       0.36   -0.10    -6.68(.000) -1.75     1.11
================================================================================

Item 2
------
item:2 (R3Q02)
Cases for this item    4691   Item-Rest Cor.  0.44   Item-Total Cor.  0.48
Item Threshold(s):    -2.53   Weighted MNSQ   0.83
Item Delta(s):        -2.53
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      259       5.52   -0.29   -21.08(.000) -1.26     0.81
   2       0.00       92       1.96   -0.21   -14.78(.000) -1.47     0.73
   3       0.00       89       1.90   -0.19   -13.25(.000) -1.38     0.80
   4       1.00     4210      89.75    0.45    34.05(.000)  0.15     0.91
   7       0.00       12       0.26   -0.11    -7.49(.000) -2.35     1.02
   9       0.00       29       0.62   -0.09    -6.31(.000) -1.32     1.18
================================================================================

Item 3
------
item:3 (R3Q03)
Cases for this item    4689   Item-Rest Cor.  0.44   Item-Total Cor.  0.48
Item Threshold(s):    -2.53   Weighted MNSQ   0.83
Item Delta(s):        -2.53
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       1.00     4208      89.74    0.44    33.71(.000)  0.16     0.90
   2       0.00      132       2.82   -0.23   -16.42(.000) -1.45     0.83
   3       0.00      156       3.33   -0.23   -16.07(.000) -1.26     0.66
   4       0.00      135       2.88   -0.23   -16.01(.000) -1.36     0.77
   7       0.00       11       0.23   -0.11    -7.73(.000) -2.45     0.74
   9       0.00       47       1.00   -0.11    -7.56(.000) -1.35     1.14
================================================================================

Item 4
------
item:4 (R3Q04)
Cases for this item    4689   Item-Rest Cor.  0.44   Item-Total Cor.  0.48
Item Threshold(s):    -2.62   Weighted MNSQ   0.83
Item Delta(s):        -2.62
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      160       3.41   -0.25   -17.81(.000) -1.42     0.78
   2       1.00     4240      90.42    0.44    33.64(.000)  0.15     0.90
   3       0.00      130       2.77   -0.21   -14.71(.000) -1.34     0.82
   4       0.00      125       2.67   -0.23   -16.55(.000) -1.43     0.79
   7       0.00       10       0.21   -0.11    -7.45(.000) -2.44     0.77
   9       0.00       24       0.51   -0.09    -6.49(.000) -1.37     1.17
================================================================================
```

Item 5
------
item:5 (R3Q05)
Cases for this item 4689 Item-Rest Cor. 0.31 Item-Total Cor. 0.37
Item Threshold(s): -1.01 Weighted MNSQ 1.03
Item Delta(s): -1.01

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3281	69.97	0.31	22.39(.000)	0.23	0.94
2	0.00	368	7.85	-0.24	-16.79(.000)	-0.85	0.88
3	0.00	715	15.25	-0.05	-3.42(.001)	-0.21	0.93
4	0.00	231	4.93	-0.19	-13.59(.000)	-0.85	0.69
7	0.00	13	0.28	-0.12	-8.07(.000)	-2.34	1.00
9	0.00	81	1.73	-0.09	-6.45(.000)	-0.87	0.97

Item 6
------
item:6 (R3Q06)
Cases for this item 4682 Item-Rest Cor. 0.39 Item-Total Cor. 0.45
Item Threshold(s): -1.29 Weighted MNSQ 0.95
Item Delta(s): -1.30

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	501	10.70	-0.18	-12.68(.000)	-0.59	0.93
2	0.00	204	4.36	-0.24	-16.82(.000)	-1.08	0.84
3	1.00	3502	74.80	0.40	29.44(.000)	0.25	0.90
4	0.00	412	8.80	-0.18	-12.44(.000)	-0.63	0.90
7	0.00	13	0.28	-0.11	-7.86(.000)	-2.27	1.02
9	0.00	50	1.07	-0.10	-6.58(.000)	-0.92	1.11

Item 7
------
item:7 (R3Q07)
Cases for this item 4681 Item-Rest Cor. 0.42 Item-Total Cor. 0.48
Item Threshold(s): -0.63 Weighted MNSQ 0.95
Item Delta(s): -0.62

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	555	11.86	-0.29	-20.83(.000)	-0.82	0.83
2	0.00	494	10.55	-0.16	-10.92(.000)	-0.49	0.87
3	1.00	2939	62.79	0.42	31.38(.000)	0.35	0.90
4	0.00	652	13.93	-0.14	-9.40(.000)	-0.39	0.87
7	0.00	9	0.19	-0.11	-7.32(.000)	-2.66	0.82
9	0.00	32	0.68	-0.09	-5.92(.000)	-1.26	1.11

Item 8
------
item:8 (R3Q08)
Cases for this item 4678 Item-Rest Cor. 0.41 Item-Total Cor. 0.46
Item Threshold(s): -1.84 Weighted MNSQ 0.89
Item Delta(s): -1.84

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	298	6.37	-0.17	-11.69(.000)	-0.74	0.94
2	1.00	3863	82.58	0.41	30.97(.000)	0.21	0.90
3	0.00	259	5.54	-0.22	-15.36(.000)	-0.96	0.86
4	0.00	223	4.77	-0.25	-17.90(.000)	-1.14	0.82
7	0.00	11	0.24	-0.09	-6.27(.000)	-2.15	1.04
9	0.00	24	0.51	-0.10	-6.56(.000)	-1.56	1.16

Item 9
------
item:9 (R3Q09)
Cases for this item 4677 Item-Rest Cor. 0.48 Item-Total Cor. 0.53
Item Threshold(s): -1.49 Weighted MNSQ 0.85
Item Delta(s): -1.49

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	307	6.56	-0.23	-16.14(.000)	-0.89	0.88
2	1.00	3642	77.87	0.49	38.02(.000)	0.27	0.88
3	0.00	277	5.92	-0.18	-12.66(.000)	-0.73	0.78
4	0.00	390	8.34	-0.31	-22.48(.000)	-1.00	0.78
7	0.00	5	0.11	-0.09	-6.30(.000)	-3.07	0.53
9	0.00	56	1.20	-0.12	-7.95(.000)	-1.30	1.18

Item 10
----
item:10 (R3Q10)
Cases for this item 4661 Item-Rest Cor. 0.30 Item-Total Cor. 0.37
Item Threshold(s): -0.43 Weighted MNSQ 1.06
Item Delta(s): -0.43

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2758	59.17	0.30	21.66(.000)	0.30	0.93
2	0.00	1056	22.66	-0.10	-7.18(.000)	-0.24	0.92
3	0.00	359	7.70	-0.16	-11.17(.000)	-0.57	0.88
4	0.00	422	9.05	-0.17	-11.61(.000)	-0.54	0.89
7	0.00	8	0.17	-0.09	-6.20(.000)	-2.36	1.14
9	0.00	58	1.24	-0.09	-6.14(.000)	-0.96	1.19

Item 11
----
item:11 (R3Q11)
Cases for this item 4657 Item-Rest Cor. 0.36 Item-Total Cor. 0.42
Item Threshold(s): -0.16 Weighted MNSQ 1.01
Item Delta(s): -0.16

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	892	19.15	-0.25	-17.80(.000)	-0.51	0.82
2	0.00	682	14.64	-0.04	-2.79(.005)	-0.14	0.98
3	1.00	2494	53.55	0.36	26.08(.000)	0.38	0.91
4	0.00	519	11.14	-0.17	-11.52(.000)	-0.49	0.89
7	0.00	7	0.15	-0.08	-5.23(.000)	-1.98	1.46
9	0.00	63	1.35	-0.08	-5.30(.000)	-0.92	1.16

Item 12
----
item:12 (R3Q12)
Cases for this item 4655 Item-Rest Cor. 0.29 Item-Total Cor. 0.36
Item Threshold(s): 0.14 Weighted MNSQ 1.07
Item Delta(s): 0.14

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	434	9.32	-0.26	-18.46(.000)	-0.80	0.80
2	1.00	2207	47.41	0.29	20.84(.000)	0.37	0.94
3	0.00	1641	35.25	-0.00	-0.12(.901)	-0.05	0.86
4	0.00	307	6.60	-0.24	-16.55(.000)	-0.85	0.80
7	0.00	7	0.15	-0.09	-6.17(.000)	-2.41	1.16
9	0.00	59	1.27	-0.06	-4.34(.000)	-0.78	1.25

Item 13
----
item:13 (R3Q13)
Cases for this item 4653 Item-Rest Cor. 0.49 Item-Total Cor. 0.55
Item Threshold(s): -0.87 Weighted MNSQ 0.88
Item Delta(s): -0.87

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1031	22.16	-0.33	-24.12(.000)	-0.63	0.82
2	0.00	323	6.94	-0.22	-15.55(.000)	-0.80	0.77
3	0.00	117	2.51	-0.17	-11.99(.000)	-1.11	0.83
4	1.00	3149	67.68	0.49	38.59(.000)	0.37	0.86
7	0.00	7	0.15	-0.09	-6.13(.000)	-2.48	1.16
9	0.00	26	0.56	-0.06	-4.40(.000)	-1.30	1.19

Item 14
----
item:14 (R3Q14)
Cases for this item 4645 Item-Rest Cor. 0.31 Item-Total Cor. 0.38
Item Threshold(s): 0.27 Weighted MNSQ 1.05
Item Delta(s): 0.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1999	43.04	-0.18	-12.82(.000)	-0.24	0.80
2	1.00	2081	44.80	0.31	22.07(.000)	0.40	1.00
3	0.00	363	7.81	-0.10	-6.79(.000)	-0.37	1.01
4	0.00	174	3.75	-0.14	-9.52(.000)	-0.63	1.01
7	0.00	6	0.13	-0.09	-6.15(.000)	-2.64	0.97
9	0.00	22	0.47	-0.08	-5.60(.000)	-1.30	1.30

Item 15
----
item:15 (R3Q15)
Cases for this item 4641 Item-Rest Cor. 0.39 Item-Total Cor. 0.46
Item Threshold(s): 0.42 Weighted MNSQ 0.97
Item Delta(s): 0.41

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1356	29.22	-0.15	-10.18(.000)	-0.26	0.81
2	0.00	676	14.57	-0.22	-15.06(.000)	-0.49	0.85
3	0.00	592	12.76	-0.12	-8.56(.000)	-0.32	0.89
4	1.00	1939	41.78	0.39	29.10(.000)	0.52	0.95
7	0.00	10	0.22	-0.09	-5.97(.000)	-1.87	1.56
9	0.00	68	1.47	-0.04	-2.68(.007)	-0.43	1.18

Item 16
----
item:16 (R3Q16)
Cases for this item 4640 Item-Rest Cor. 0.46 Item-Total Cor. 0.51
Item Threshold(s): -1.17 Weighted MNSQ 0.90
Item Delta(s): -1.16

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	577	12.44	-0.24	-17.11(.000)	-0.69	0.82
2	0.00	456	9.83	-0.21	-14.84(.000)	-0.65	0.76
3	1.00	3384	72.93	0.46	35.18(.000)	0.31	0.89
4	0.00	177	3.81	-0.27	-18.84(.000)	-1.24	0.68
7	0.00	9	0.19	-0.10	-7.08(.000)	-2.56	0.81
9	0.00	37	0.80	-0.05	-3.48(.001)	-0.54	1.34

Item 17
----
item:17 (R3Q17)
Cases for this item 4639 Item-Rest Cor. 0.43 Item-Total Cor. 0.49
Item Threshold(s): -1.26 Weighted MNSQ 0.92
Item Delta(s): -1.26

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3455	74.48	0.43	32.71(.000)	0.28	0.91
2	0.00	263	5.67	-0.27	-18.99(.000)	-1.04	0.74
3	0.00	231	4.98	-0.20	-13.62(.000)	-0.82	0.68
4	0.00	608	13.11	-0.20	-14.12(.000)	-0.54	0.75
7	0.00	5	0.11	-0.08	-5.21(.000)	-2.43	1.24
9	0.00	77	1.66	-0.10	-6.95(.000)	-1.08	1.21

Item 18
----
item:18 (R3Q18)
Cases for this item 4619 Item-Rest Cor. 0.41 Item-Total Cor. 0.46
Item Threshold(s): -1.66 Weighted MNSQ 0.92
Item Delta(s): -1.66

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	264	5.72	-0.24	-16.44(.000)	-0.89	0.78
2	1.00	3722	80.58	0.41	30.43(.000)	0.23	0.90
3	0.00	307	6.65	-0.21	-14.37(.000)	-0.79	0.86
4	0.00	272	5.89	-0.20	-13.60(.000)	-0.81	0.77
7	0.00	4	0.09	-0.08	-5.60(.000)	-2.94	0.51
9	0.00	50	1.08	-0.07	-4.53(.000)	-0.84	1.12

Item 19
----
item:19 (R3Q19)
Cases for this item 4616 Item-Rest Cor. 0.33 Item-Total Cor. 0.40
Item Threshold(s): 0.02 Weighted MNSQ 1.03
Item Delta(s): 0.02

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2310	50.04	0.33	24.08(.000)	0.39	0.93
2	0.00	761	16.49	-0.17	-11.65(.000)	-0.38	0.85
3	0.00	973	21.08	-0.15	-10.32(.000)	-0.29	0.86
4	0.00	509	11.03	-0.10	-6.65(.000)	-0.27	0.96
7	0.00	5	0.11	-0.06	-3.78(.000)	-1.81	1.89
9	0.00	58	1.26	-0.10	-6.57(.000)	-1.02	1.05

Item 20
----
item:20 (R3Q20)
Cases for this item 4608 Item-Rest Cor. 0.32 Item-Total Cor. 0.39
Item Threshold(s): 0.82 Weighted MNSQ 1.01
Item Delta(s): 0.82

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1569	34.05	0.32	23.04(.000)	0.52	1.00
2	0.00	644	13.98	-0.16	-10.74(.000)	-0.35	0.88
3	0.00	1070	23.22	-0.01	-0.35(.727)	-0.02	0.91
4	0.00	1145	24.85	-0.20	-13.69(.000)	-0.33	0.76
7	0.00	7	0.15	-0.10	-6.81(.000)	-2.69	0.50
9	0.00	173	3.75	-0.03	-2.37(.018)	-0.32	0.95

Item 21
----
item:21 (R3Q21)
Cases for this item 4577 Item-Rest Cor. 0.20 Item-Total Cor. 0.26
Item Threshold(s): 1.42 Weighted MNSQ 1.07
Item Delta(s): 1.42

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	678	14.81	-0.19	-13.43(.000)	-0.41	0.92
2	1.00	1086	23.73	0.20	13.90(.000)	0.46	1.11
3	0.00	1263	27.59	0.08	5.32(.000)	0.12	0.90
4	0.00	1458	31.85	-0.09	-5.80(.000)	-0.11	0.82
7	0.00	7	0.15	-0.08	-5.58(.000)	-2.10	1.51
9	0.00	85	1.86	-0.06	-4.26(.000)	-0.55	1.03

Item 22
----
item:22 (R3Q22)
Cases for this item 4565 Item-Rest Cor. 0.33 Item-Total Cor. 0.39
Item Threshold(s): 0.65 Weighted MNSQ 1.03
Item Delta(s): 0.65

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	965	21.14	-0.16	-10.86(.000)	-0.28	0.86
2	0.00	1160	25.41	-0.10	-6.48(.000)	-0.16	0.91
3	0.00	658	14.41	-0.11	-7.74(.000)	-0.24	0.93
4	1.00	1704	37.33	0.33	23.37(.000)	0.49	0.93
7	0.00	6	0.13	-0.09	-6.36(.000)	-2.56	0.81
9	0.00	72	1.58	-0.07	-4.58(.000)	-0.61	1.01

Item 23
----
item:23 (R3Q23)
Cases for this item 4558 Item-Rest Cor. 0.28 Item-Total Cor. 0.35
Item Threshold(s): 0.98 Weighted MNSQ 1.04
Item Delta(s): 0.98

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	782	17.16	-0.15	-10.05(.000)	-0.30	0.88
2	0.00	1746	38.31	-0.02	-1.17(.242)	-0.01	0.85
3	0.00	517	11.34	-0.18	-12.26(.000)	-0.45	0.93
4	1.00	1420	31.15	0.28	20.05(.000)	0.50	1.00
7	0.00	7	0.15	-0.08	-5.45(.000)	-2.07	1.13
9	0.00	86	1.89	-0.06	-4.03(.000)	-0.52	0.93

Item 24
----
item:24 (R3Q24)
Cases for this item 4550 Item-Rest Cor. 0.25 Item-Total Cor. 0.32
Item Threshold(s): 0.99 Weighted MNSQ 1.07
Item Delta(s): 0.99

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1766	38.81	-0.12	-8.43(.000)	-0.15	0.84
2	0.00	662	14.55	-0.08	-5.69(.000)	-0.16	0.95
3	1.00	1406	30.90	0.25	17.54(.000)	0.47	1.02
4	0.00	623	13.69	-0.04	-2.78(.005)	-0.10	0.94
7	0.00	8	0.18	-0.06	-4.29(.000)	-1.56	1.99
9	0.00	85	1.87	-0.07	-4.68(.000)	-0.52	0.96

Item 25
----
item:25 (R3Q25)
Cases for this item 4544 Item-Rest Cor. 0.29 Item-Total Cor. 0.36
Item Threshold(s): 0.64 Weighted MNSQ 1.05
Item Delta(s): 0.64

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1446	31.82	-0.14	-9.82(.000)	-0.20	0.82
2	0.00	789	17.36	-0.13	-8.57(.000)	-0.27	0.89
3	0.00	509	11.20	-0.04	-2.81(.005)	-0.12	1.02
4	1.00	1708	37.59	0.29	20.24(.000)	0.47	0.98
7	0.00	8	0.18	-0.09	-5.79(.000)	-2.11	1.44
9	0.00	84	1.85	-0.06	-3.84(.000)	-0.47	0.85

Item 26
----
item:26 (R3Q26)
Cases for this item 4539 Item-Rest Cor. 0.40 Item-Total Cor. 0.46
Item Threshold(s): 0.12 Weighted MNSQ 0.98
Item Delta(s): 0.12

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	781	17.21	-0.18	-12.42(.000)	-0.37	0.86
2	0.00	990	21.81	-0.17	-11.50(.000)	-0.31	0.88
3	0.00	501	11.04	-0.16	-10.81(.000)	-0.43	0.88
4	1.00	2185	48.14	0.40	29.39(.000)	0.48	0.89
7	0.00	6	0.13	-0.06	-4.33(.000)	-1.69	0.95
9	0.00	76	1.67	-0.08	-5.24(.000)	-0.61	1.02

Item 27
----
item:27 (R3Q27)
Cases for this item 4522 Item-Rest Cor. 0.34 Item-Total Cor. 0.41
Item Threshold(s): -0.31 Weighted MNSQ 1.02
Item Delta(s): -0.31

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	902	19.95	-0.08	-5.37(.000)	-0.19	0.89
2	1.00	2588	57.23	0.34	24.55(.000)	0.37	0.94
3	0.00	595	13.16	-0.25	-17.67(.000)	-0.60	0.76
4	0.00	322	7.12	-0.15	-10.48(.000)	-0.50	0.76
7	0.00	4	0.09	-0.05	-3.09(.002)	-1.46	1.66
9	0.00	111	2.45	-0.07	-4.78(.000)	-0.57	0.96

Item 28
----
item:28 (R3Q28)
Cases for this item 4476 Item-Rest Cor. 0.28 Item-Total Cor. 0.34
Item Threshold(s): 0.57 Weighted MNSQ 1.07
Item Delta(s): 0.57

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1755	39.21	0.28	19.16(.000)	0.43	1.01
2	0.00	1076	24.04	0.02	1.60(.109)	0.04	0.85
3	0.00	607	13.56	-0.13	-8.67(.000)	-0.29	0.88
4	0.00	970	21.67	-0.22	-15.18(.000)	-0.37	0.83
7	0.00	3	0.07	-0.03	-1.81(.071)	-1.21	1.08
9	0.00	65	1.45	-0.07	-4.93(.000)	-0.63	1.14

Item 29
----
item:29 (R3Q29)
Cases for this item 4465 Item-Rest Cor. 0.26 Item-Total Cor. 0.33
Item Threshold(s): 1.05 Weighted MNSQ 1.05
Item Delta(s): 1.05

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	476	10.66	-0.19	-13.14(.000)	-0.53	0.83
2	0.00	793	17.76	-0.22	-15.37(.000)	-0.39	0.86
3	1.00	1341	30.03	0.26	18.02(.000)	0.50	1.04
4	0.00	1749	39.17	0.08	5.22(.000)	0.09	0.83
7	0.00	4	0.09	-0.05	-3.33(.001)	-1.51	1.14
9	0.00	102	2.28	-0.07	-4.78(.000)	-0.47	0.98

Item 30
----
item:30 (R3Q30)
Cases for this item 4448 Item-Rest Cor. 0.38 Item-Total Cor. 0.45
Item Threshold(s): -0.44 Weighted MNSQ 0.98
Item Delta(s): -0.44

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	853	19.18	-0.24	-16.37(.000)	-0.46	0.86
2	0.00	608	13.67	-0.17	-11.72(.000)	-0.40	0.86
3	1.00	2670	60.03	0.38	27.76(.000)	0.38	0.91
4	0.00	236	5.31	-0.12	-8.14(.000)	-0.47	0.92
7	0.00	5	0.11	-0.06	-4.09(.000)	-2.03	1.47
9	0.00	76	1.71	-0.04	-2.97(.003)	-0.42	0.98

Item 31
----
item:31 (R3Q31)
Cases for this item 4428 Item-Rest Cor. 0.34 Item-Total Cor. 0.40
Item Threshold(s): 1.11 Weighted MNSQ 0.98
Item Delta(s): 1.11

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1060	23.94	-0.04	-2.52(.012)	-0.06	0.87
2	0.00	917	20.71	-0.17	-11.46(.000)	-0.29	0.83
3	0.00	1095	24.73	-0.14	-9.16(.000)	-0.20	0.82
4	1.00	1290	29.13	0.34	24.22(.000)	0.62	1.04
7	0.00	3	0.07	-0.07	-4.55(.000)	-2.64	1.21
9	0.00	63	1.42	-0.08	-5.56(.000)	-0.57	1.12

Item 32
----
item:32 (R3Q32)
Cases for this item 4417 Item-Rest Cor. 0.11 Item-Total Cor. 0.18
Item Threshold(s): 1.13 Weighted MNSQ 1.18
Item Delta(s): 1.12

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	909	20.58	-0.15	-9.92(.000)	-0.27	0.85
2	1.00	1274	28.84	0.11	7.32(.000)	0.33	1.07
3	0.00	857	19.40	0.00	0.32(.749)	0.03	1.03
4	0.00	1263	28.59	0.05	3.10(.002)	0.05	0.86
7	0.00	9	0.20	-0.06	-4.24(.000)	-1.33	1.31
9	0.00	105	2.38	-0.07	-4.36(.000)	-0.33	0.91

Item 33
----
item:33 (R3Q33)
Cases for this item 4397 Item-Rest Cor. 0.32 Item-Total Cor. 0.37
Item Threshold(s): 1.40 Weighted MNSQ 1.01
Item Delta(s): 1.40

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3251	73.94	-0.30	-20.77(.000)	-0.14	0.92
1	1.00	1069	24.31	0.32	22.01(.000)	0.65	0.94
9	0.00	77	1.75	-0.03	-1.98(.047)	-0.22	0.98

Item 34
----
item:34 (R3Q34)
Cases for this item 4352 Item-Rest Cor. 0.26 Item-Total Cor. 0.32
Item Threshold(s): 1.43 Weighted MNSQ 1.04
Item Delta(s): 1.43

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1692	38.88	-0.15	-10.33(.000)	-0.16	0.85
2	0.00	1067	24.52	-0.09	-5.67(.000)	-0.11	0.93
3	1.00	1038	23.85	0.26	17.56(.000)	0.57	1.06
4	0.00	448	10.29	0.04	2.50(.012)	0.11	0.96
7	0.00	26	0.60	-0.07	-4.38(.000)	-0.80	1.44
9	0.00	81	1.86	-0.03	-1.86(.063)	-0.18	0.89

Item 35
----
item:35 (R3Q35)
Cases for this item 4310 Item-Rest Cor. 0.24 Item-Total Cor. 0.30
Item Threshold(s): 1.32 Weighted MNSQ 1.07
Item Delta(s): 1.32

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1176	27.29	-0.11	-7.06(.000)	-0.13	0.88
2	0.00	909	21.09	-0.17	-11.09(.000)	-0.28	0.89
3	0.00	1042	24.18	0.04	2.63(.009)	0.08	0.94
4	1.00	1108	25.71	0.24	16.23(.000)	0.53	1.01
7	0.00	17	0.39	-0.09	-5.83(.000)	-1.22	1.20
9	0.00	58	1.35	-0.01	-0.52(.605)	-0.05	1.04

Item 36
----
item:36 (R3Q36)
Cases for this item 4289 Item-Rest Cor. 0.28 Item-Total Cor. 0.33
Item Threshold(s): 1.97 Weighted MNSQ 0.99
Item Delta(s): 1.97

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3544	82.63	-0.26	-17.96(.000)	-0.08	0.92
1	1.00	706	16.46	0.28	18.82(.000)	0.73	1.03
9	0.00	39	0.91	-0.02	-1.56(.119)	-0.14	0.67

Item 37
---
item:37 (R3Q37)
Cases for this item 4267 Item-Rest Cor. 0.34 Item-Total Cor. 0.40
Item Threshold(s): 0.72 Weighted MNSQ 1.02
Item Delta(s): 0.72

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1556	36.47	0.34	23.39(.000)	0.53	0.99
2	0.00	519	12.16	-0.29	-19.84(.000)	-0.69	0.77
3	0.00	1125	26.37	-0.16	-10.64(.000)	-0.24	0.81
4	0.00	1012	23.72	0.03	1.69(.091)	0.05	0.85
7	0.00	26	0.61	-0.08	-5.04(.000)	-0.93	1.41
9	0.00	29	0.68	-0.02	-1.15(.248)	-0.27	1.16

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 2.69% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	4691
Mean	19.45
Standard Deviation	6.59
Variance	43.39
Skewness	-0.02
Kurtosis	-0.30
Standard error of mean	0.10
Standard error of measurement	2.66
Coefficient Alpha	0.84

B.2. Year 5 Reading

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================================================================================
NAPLAN 2017 Reading 5 - Item Calibration Calibration SampleFri Jun 23 12:32 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (R5Q01)
Cases for this item    4727   Item-Rest Cor.  0.28   Item-Total Cor.  0.30
Item Threshold(s):    -4.32   Weighted MNSQ   0.91
Item Delta(s):        -4.32
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       66       1.40   -0.21   -15.07(.000) -2.08     0.85
   2       1.00     4618      97.69    0.28    20.30(.000)  0.05     1.07
   3       0.00       21       0.44   -0.12    -8.39(.000) -2.08     0.55
   4       0.00       15       0.32   -0.10    -6.90(.000) -1.94     0.73
   7       0.00        1       0.02   -0.01    -0.85(.394) -0.60     0.00
   9       0.00        6       0.13   -0.10    -6.83(.000) -3.27     0.92
================================================================================

Item 2
------
item:2 (R5Q02)
Cases for this item    4727   Item-Rest Cor.  0.32   Item-Total Cor.  0.34
Item Threshold(s):    -3.98   Weighted MNSQ   0.90
Item Delta(s):        -3.98
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       1.00     4578      96.85    0.32    22.99(.000)  0.06     1.06
   2       0.00       67       1.42   -0.22   -15.23(.000) -2.04     0.69
   3       0.00       75       1.59   -0.21   -14.71(.000) -1.90     0.75
   9       0.00        7       0.15   -0.10    -6.64(.000) -2.97     0.87
================================================================================

Item 3
------
item:3 (R5Q03)
Cases for this item    4727   Item-Rest Cor.  0.36   Item-Total Cor.  0.40
Item Threshold(s):    -2.83   Weighted MNSQ   0.90
Item Delta(s):        -2.83
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      301       6.37   -0.25   -17.56(.000) -1.03     0.98
   2       0.00       53       1.12   -0.18   -12.29(.000) -1.83     0.73
   3       0.00       44       0.93   -0.19   -13.06(.000) -2.11     0.73
   4       1.00     4320      91.39    0.36    26.63(.000)  0.12     1.05
   7       0.00        1       0.02   -0.01    -0.57(.570) -0.64     0.00
   9       0.00        8       0.17   -0.11    -7.27(.000) -2.86     0.87
================================================================================

Item 4
------
item:4 (R5Q04)
Cases for this item    4726   Item-Rest Cor.  0.29   Item-Total Cor.  0.32
Item Threshold(s):    -4.05   Weighted MNSQ   0.90
Item Delta(s):        -4.05
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       1.00     4587      97.06    0.29    21.20(.000)  0.06     1.07
   2       0.00       32       0.68   -0.17   -11.71(.000) -2.25     0.52
   3       0.00       38       0.80   -0.15   -10.50(.000) -1.98     0.66
   4       0.00       56       1.18   -0.16   -11.48(.000) -1.66     0.90
   7       0.00        3       0.06   -0.05    -3.66(.000) -2.50     0.74
   9       0.00       10       0.21   -0.07    -5.06(.000) -2.17     1.39
================================================================================
```

Item 5
------
item:5 (R5Q05)
Cases for this item 4725 Item-Rest Cor. 0.31 Item-Total Cor. 0.34
Item Threshold(s): -3.73 Weighted MNSQ 0.90
Item Delta(s): -3.73

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	84	1.78	-0.22	-15.45(.000)	-1.80	0.77
2	0.00	52	1.10	-0.16	-11.26(.000)	-1.75	0.88
3	1.00	4539	96.06	0.31	22.55(.000)	0.07	1.07
4	0.00	38	0.80	-0.13	-9.13(.000)	-1.59	0.97
9	0.00	12	0.25	-0.06	-4.15(.000)	-1.60	1.55

Item 6
------
item:6 (R5Q06)
Cases for this item 4724 Item-Rest Cor. 0.46 Item-Total Cor. 0.51
Item Threshold(s): -2.03 Weighted MNSQ 0.87
Item Delta(s): -2.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	514	10.88	-0.33	-24.17(.000)	-1.05	0.91
2	0.00	175	3.70	-0.26	-18.32(.000)	-1.39	0.79
3	0.00	55	1.16	-0.14	-9.47(.000)	-1.39	1.00
4	1.00	3970	84.04	0.46	36.08(.000)	0.22	1.01
7	0.00	1	0.02	-0.02	-1.51(.131)	-1.75	0.00
9	0.00	9	0.19	-0.08	-5.25(.000)	-2.14	1.03

Item 7
------
item:7 (R5Q07)
Cases for this item 4724 Item-Rest Cor. 0.48 Item-Total Cor. 0.53
Item Threshold(s): -0.41 Weighted MNSQ 0.94
Item Delta(s): -0.41

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1564	33.11	-0.41	-31.08(.000)	-0.66	0.87
2	1.00	2743	58.07	0.48	37.24(.000)	0.46	1.00
3	0.00	247	5.23	-0.09	-6.15(.000)	-0.47	1.08
4	0.00	153	3.24	-0.10	-6.75(.000)	-0.63	1.11
7	0.00	3	0.06	0.01	0.51(.610)	0.03	2.13
9	0.00	14	0.30	-0.08	-5.34(.000)	-1.99	1.45

Item 8
------
item:8 (R5Q08)
Cases for this item 4722 Item-Rest Cor. 0.53 Item-Total Cor. 0.58
Item Threshold(s): -0.84 Weighted MNSQ 0.87
Item Delta(s): -0.84

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	832	17.62	-0.33	-24.33(.000)	-0.80	0.82
2	0.00	350	7.41	-0.28	-20.04(.000)	-1.05	0.84
3	0.00	380	8.05	-0.17	-11.73(.000)	-0.68	0.93
4	1.00	3129	66.26	0.54	43.54(.000)	0.43	0.97
7	0.00	4	0.08	-0.02	-1.37(.172)	-0.82	1.57
9	0.00	27	0.57	-0.08	-5.68(.000)	-1.42	1.40

Item 9
------
item:9 (R5Q09)
Cases for this item 4722 Item-Rest Cor. 0.41 Item-Total Cor. 0.45
Item Threshold(s): -2.64 Weighted MNSQ 0.88
Item Delta(s): -2.64

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	250	5.29	-0.31	-22.27(.000)	-1.43	0.84
2	0.00	173	3.66	-0.21	-14.75(.000)	-1.18	0.81
3	1.00	4248	89.96	0.41	31.31(.000)	0.15	1.03
4	0.00	37	0.78	-0.15	-10.26(.000)	-1.73	0.74
7	0.00	1	0.02	0.02	1.71(.088)	0.99	0.00
9	0.00	13	0.28	-0.07	-4.62(.000)	-1.67	1.41

Item 10
----
item:10 (R5Q10)
Cases for this item 4719 Item-Rest Cor. 0.44 Item-Total Cor. 0.48
Item Threshold(s): -2.59 Weighted MNSQ 0.86
Item Delta(s): -2.59

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	4229	89.62	0.44	33.78(.000)	0.16	1.03
2	0.00	94	1.99	-0.21	-14.61(.000)	-1.59	0.74
3	0.00	110	2.33	-0.24	-17.05(.000)	-1.67	0.75
4	0.00	272	5.76	-0.28	-19.92(.000)	-1.25	0.77
9	0.00	14	0.30	-0.08	-5.44(.000)	-1.64	0.84

Item 11
----
item:11 (R5Q11)
Cases for this item 4719 Item-Rest Cor. 0.36 Item-Total Cor. 0.39
Item Threshold(s): -2.80 Weighted MNSQ 0.91
Item Delta(s): -2.80

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	116	2.46	-0.19	-13.01(.000)	-1.30	0.85
2	1.00	4305	91.23	0.36	26.43(.000)	0.13	1.05
3	0.00	157	3.33	-0.22	-15.28(.000)	-1.34	1.01
4	0.00	123	2.61	-0.19	-12.97(.000)	-1.28	0.86
9	0.00	18	0.38	-0.07	-4.77(.000)	-1.33	1.38

Item 12
----
item:12 (R5Q12)
Cases for this item 4718 Item-Rest Cor. 0.34 Item-Total Cor. 0.40
Item Threshold(s): -1.11 Weighted MNSQ 1.04
Item Delta(s): -1.11

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3351	71.03	0.34	25.11(.000)	0.27	1.02
2	0.00	513	10.87	-0.18	-12.49(.000)	-0.63	1.08
3	0.00	530	11.23	-0.22	-15.22(.000)	-0.72	1.03
4	0.00	306	6.49	-0.12	-8.05(.000)	-0.54	1.08
7	0.00	4	0.08	0.01	0.70(.486)	0.09	0.78
9	0.00	14	0.30	-0.06	-4.31(.000)	-1.30	1.33

Item 13
----
item:13 (R5Q13)
Cases for this item 4718 Item-Rest Cor. 0.44 Item-Total Cor. 0.50
Item Threshold(s): -0.80 Weighted MNSQ 0.96
Item Delta(s): -0.80

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	821	17.40	-0.31	-22.32(.000)	-0.76	0.86
2	0.00	349	7.40	-0.23	-16.28(.000)	-0.88	0.93
3	1.00	3094	65.58	0.44	33.88(.000)	0.37	1.01
4	0.00	442	9.37	-0.10	-6.85(.000)	-0.40	1.05
9	0.00	12	0.25	-0.07	-5.04(.000)	-1.79	1.39

Item 14
----
item:14 (R5Q14)
Cases for this item 4716 Item-Rest Cor. 0.41 Item-Total Cor. 0.47
Item Threshold(s): -0.42 Weighted MNSQ 1.01
Item Delta(s): -0.42

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2756	58.44	0.41	30.63(.000)	0.42	1.04
2	0.00	831	17.62	-0.25	-17.46(.000)	-0.65	0.86
3	0.00	580	12.30	-0.12	-8.27(.000)	-0.40	0.99
4	0.00	524	11.11	-0.21	-14.55(.000)	-0.66	0.94
9	0.00	25	0.53	-0.03	-2.33(.020)	-0.87	1.28

Item 15
----
item:15 (R5Q15)
Cases for this item 4710 Item-Rest Cor. 0.43 Item-Total Cor. 0.48
Item Threshold(s): -1.35 Weighted MNSQ 0.94
Item Delta(s): -1.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3527	74.88	0.43	32.72(.000)	0.29	1.00
2	0.00	215	4.56	-0.27	-19.52(.000)	-1.32	0.84
3	0.00	488	10.36	-0.17	-11.51(.000)	-0.63	1.02
4	0.00	458	9.72	-0.25	-17.63(.000)	-0.87	0.89
9	0.00	22	0.47	-0.08	-5.45(.000)	-1.33	1.38

Item 16
----
item:16 (R5Q16)
Cases for this item 4710 Item-Rest Cor. 0.28 Item-Total Cor. 0.34
Item Threshold(s): 1.11 Weighted MNSQ 1.06
Item Delta(s): 1.11

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1624	34.48	-0.10	-6.67(.000)	-0.20	0.99
2	0.00	1262	26.79	-0.09	-6.21(.000)	-0.20	0.97
3	0.00	434	9.21	-0.13	-8.71(.000)	-0.46	1.05
4	1.00	1368	29.04	0.28	20.00(.000)	0.59	1.16
9	0.00	22	0.47	-0.07	-4.80(.000)	-1.15	1.28

Item 17
----
item:17 (R5Q17)
Cases for this item 4709 Item-Rest Cor. 0.46 Item-Total Cor. 0.51
Item Threshold(s): -1.30 Weighted MNSQ 0.93
Item Delta(s): -1.30

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	537	11.40	-0.29	-20.92(.000)	-0.89	0.92
2	0.00	477	10.13	-0.25	-17.78(.000)	-0.85	0.92
3	1.00	3491	74.13	0.46	35.37(.000)	0.31	1.01
4	0.00	182	3.86	-0.14	-9.72(.000)	-0.85	0.85
7	0.00	1	0.02	-0.01	-0.69(.492)	-1.19	0.00
9	0.00	21	0.45	-0.08	-5.23(.000)	-1.36	1.29

Item 18
----
item:18 (R5Q18)
Cases for this item 4706 Item-Rest Cor. 0.37 Item-Total Cor. 0.42
Item Threshold(s): -1.23 Weighted MNSQ 1.02
Item Delta(s): -1.23

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	306	6.50	-0.10	-6.84(.000)	-0.45	1.06
2	1.00	3437	73.03	0.37	27.06(.000)	0.26	1.04
3	0.00	287	6.10	-0.24	-17.29(.000)	-1.05	0.96
4	0.00	650	13.81	-0.22	-15.44(.000)	-0.64	0.93
7	0.00	2	0.04	-0.02	-1.40(.160)	-1.07	0.59
9	0.00	24	0.51	-0.05	-3.57(.000)	-0.86	1.22

Item 19
----
item:19 (R5Q19)
Cases for this item 4704 Item-Rest Cor. 0.48 Item-Total Cor. 0.53
Item Threshold(s): 0.03 Weighted MNSQ 0.93
Item Delta(s): 0.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1273	27.06	-0.17	-11.75(.000)	-0.36	0.93
2	1.00	2330	49.53	0.48	37.11(.000)	0.56	0.99
3	0.00	247	5.25	-0.24	-17.13(.000)	-1.05	0.90
4	0.00	836	17.77	-0.27	-19.43(.000)	-0.65	0.89
7	0.00	1	0.02	-0.01	-0.81(.418)	-0.63	0.00
9	0.00	17	0.36	-0.07	-5.08(.000)	-1.46	1.12

Item 20
----
item:20 (R5Q20)
Cases for this item 4704 Item-Rest Cor. 0.38 Item-Total Cor. 0.44
Item Threshold(s): -1.52 Weighted MNSQ 0.97
Item Delta(s): -1.52

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	608	12.93	-0.16	-11.39(.000)	-0.52	1.05
2	1.00	3646	77.51	0.38	28.54(.000)	0.24	1.01
3	0.00	278	5.91	-0.28	-20.30(.000)	-1.25	0.80
4	0.00	110	2.34	-0.22	-15.52(.000)	-1.49	0.76
7	0.00	1	0.02	-0.01	-0.60(.547)	-1.03	0.00
9	0.00	61	1.30	-0.04	-3.06(.002)	-0.60	1.28

Item 21
----
item:21 (R5Q21)
Cases for this item 4699 Item-Rest Cor. 0.44 Item-Total Cor. 0.50
Item Threshold(s): -0.28 Weighted MNSQ 0.97
Item Delta(s): -0.28

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2619	55.74	0.44	33.24(.000)	0.47	1.03
2	0.00	1079	22.96	-0.17	-12.03(.000)	-0.41	0.85
3	0.00	436	9.28	-0.19	-13.14(.000)	-0.65	0.98
4	0.00	539	11.47	-0.26	-18.66(.000)	-0.79	0.92
7	0.00	2	0.04	-0.01	-0.81(.419)	-0.54	0.61
9	0.00	24	0.51	-0.08	-5.26(.000)	-1.32	1.33

Item 22
----
item:22 (R5Q22)
Cases for this item 4697 Item-Rest Cor. 0.46 Item-Total Cor. 0.52
Item Threshold(s): -0.06 Weighted MNSQ 0.94
Item Delta(s): -0.06

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	213	4.53	-0.21	-14.61(.000)	-0.97	0.89
2	0.00	415	8.84	-0.29	-20.52(.000)	-0.97	0.90
3	1.00	2411	51.33	0.46	35.60(.000)	0.53	1.04
4	0.00	1626	34.62	-0.21	-14.55(.000)	-0.37	0.82
7	0.00	1	0.02	-0.03	-2.05(.040)	-2.89	0.00
9	0.00	31	0.66	-0.08	-5.41(.000)	-1.12	1.00

Item 23
----
item:23 (R5Q23)
Cases for this item 4694 Item-Rest Cor. 0.32 Item-Total Cor. 0.38
Item Threshold(s): -1.22 Weighted MNSQ 1.06
Item Delta(s): -1.22

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	508	10.82	-0.20	-14.10(.000)	-0.66	1.09
2	0.00	482	10.27	-0.20	-13.86(.000)	-0.70	0.98
3	1.00	3423	72.92	0.32	23.43(.000)	0.25	1.03
4	0.00	248	5.28	-0.07	-4.99(.000)	-0.44	1.12
9	0.00	33	0.70	-0.06	-3.91(.000)	-1.01	1.10

Item 24
----
item:24 (R5Q24)
Cases for this item 4690 Item-Rest Cor. 0.53 Item-Total Cor. 0.58
Item Threshold(s): 0.04 Weighted MNSQ 0.88
Item Delta(s): 0.04

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1025	21.86	-0.21	-14.68(.000)	-0.46	0.84
2	0.00	618	13.18	-0.24	-16.58(.000)	-0.64	0.84
3	0.00	710	15.14	-0.26	-18.67(.000)	-0.70	0.87
4	1.00	2320	49.47	0.53	42.31(.000)	0.61	1.01
7	0.00	2	0.04	-0.01	-0.38(.704)	-0.07	2.38
9	0.00	15	0.32	-0.04	-2.60(.009)	-0.78	1.19

Item 25
----
item:25 (R5Q25)
Cases for this item 4690 Item-Rest Cor. 0.28 Item-Total Cor. 0.35
Item Threshold(s): 0.43 Weighted MNSQ 1.11
Item Delta(s): 0.43

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	574	12.24	-0.31	-22.14(.000)	-0.85	0.85
2	1.00	1950	41.58	0.28	20.13(.000)	0.45	1.14
3	0.00	978	20.85	0.00	0.12(.903)	-0.08	0.99
4	0.00	1160	24.73	-0.08	-5.25(.000)	-0.21	0.89
9	0.00	28	0.60	-0.08	-5.26(.000)	-1.04	1.20

Item 26
----
item:26 (R5Q26)
Cases for this item 4683 Item-Rest Cor. 0.38 Item-Total Cor. 0.45
Item Threshold(s): 0.35 Weighted MNSQ 1.03
Item Delta(s): 0.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1062	22.68	-0.22	-15.62(.000)	-0.46	0.91
2	0.00	749	15.99	-0.15	-10.66(.000)	-0.43	1.03
3	0.00	783	16.72	-0.09	-6.31(.000)	-0.27	1.03
4	1.00	2030	43.35	0.38	28.41(.000)	0.55	1.02
7	0.00	2	0.04	-0.00	-0.06(.949)	-0.05	0.53
9	0.00	57	1.22	-0.06	-3.80(.000)	-0.77	1.12

Item 27
----
item:27 (R5Q27)
Cases for this item 4665 Item-Rest Cor. 0.40 Item-Total Cor. 0.46
Item Threshold(s): -0.69 Weighted MNSQ 1.01
Item Delta(s): -0.69

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	851	18.24	-0.21	-14.84(.000)	-0.52	0.87
2	1.00	2972	63.71	0.40	29.83(.000)	0.37	1.06
3	0.00	517	11.08	-0.19	-13.41(.000)	-0.63	0.93
4	0.00	288	6.17	-0.19	-13.08(.000)	-0.80	0.87
7	0.00	1	0.02	0.01	0.45(.655)	-0.41	0.00
9	0.00	36	0.77	-0.05	-3.73(.000)	-0.83	1.13

Item 28
----
item:28 (R5Q28)
Cases for this item 4659 Item-Rest Cor. 0.10 Item-Total Cor. 0.17
Item Threshold(s): 0.82 Weighted MNSQ 1.27
Item Delta(s): 0.82

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	968	20.78	-0.17	-11.64(.000)	-0.37	0.92
2	0.00	1322	28.38	0.11	7.44(.000)	0.13	1.01
3	1.00	1606	34.47	0.10	7.12(.000)	0.28	1.19
4	0.00	720	15.45	-0.06	-4.39(.000)	-0.19	1.09
9	0.00	43	0.92	-0.07	-4.81(.000)	-0.89	1.15

Item 29
----
item:29 (R5Q29)
Cases for this item 4654 Item-Rest Cor. 0.23 Item-Total Cor. 0.29
Item Threshold(s): 1.15 Weighted MNSQ 1.12
Item Delta(s): 1.15

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1461	31.39	-0.05	-3.44(.001)	-0.11	0.99
2	0.00	943	20.26	-0.04	-2.54(.011)	-0.10	1.05
3	0.00	877	18.84	-0.15	-10.67(.000)	-0.36	1.00
4	1.00	1332	28.62	0.23	16.06(.000)	0.52	1.15
9	0.00	41	0.88	-0.05	-3.49(.000)	-0.73	1.20

Item 30
----
item:30 (R5Q30)
Cases for this item 4650 Item-Rest Cor. 0.32 Item-Total Cor. 0.39
Item Threshold(s): 0.35 Weighted MNSQ 1.08
Item Delta(s): 0.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2020	43.44	0.32	23.40(.000)	0.49	1.06
2	0.00	812	17.46	-0.13	-9.16(.000)	-0.33	0.99
3	0.00	792	17.03	-0.30	-21.83(.000)	-0.73	0.92
4	0.00	976	20.99	0.03	1.73(.083)	-0.02	0.95
7	0.00	13	0.28	-0.01	-0.65(.519)	-0.02	0.86
9	0.00	37	0.80	-0.06	-4.31(.000)	-0.79	1.27

Item 31
----
item:31 (R5Q31)
Cases for this item 4646 Item-Rest Cor. 0.38 Item-Total Cor. 0.44
Item Threshold(s): 0.27 Weighted MNSQ 1.02
Item Delta(s): 0.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	957	20.60	-0.26	-18.72(.000)	-0.56	0.90
2	0.00	508	10.93	-0.23	-15.75(.000)	-0.70	0.96
3	1.00	2089	44.96	0.38	27.89(.000)	0.53	1.04
4	0.00	1052	22.64	-0.02	-1.11(.266)	-0.09	0.96
7	0.00	2	0.04	-0.01	-0.61(.540)	-0.34	0.93
9	0.00	38	0.82	-0.04	-3.01(.003)	-0.62	1.04

Item 32
----
item:32 (R5Q32)
Cases for this item 4644 Item-Rest Cor. 0.21 Item-Total Cor. 0.27
Item Threshold(s): 0.97 Weighted MNSQ 1.16
Item Delta(s): 0.97

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	894	19.25	0.02	1.10(.271)	0.01	1.11
2	0.00	1417	30.51	-0.15	-10.29(.000)	-0.26	0.98
3	0.00	800	17.23	-0.08	-5.46(.000)	-0.22	1.00
4	1.00	1473	31.72	0.21	14.51(.000)	0.44	1.14
9	0.00	60	1.29	-0.04	-2.68(.007)	-0.40	1.25

Item 33
----
item:33 (R5Q33)
Cases for this item 4641 Item-Rest Cor. 0.52 Item-Total Cor. 0.57
Item Threshold(s): -0.58 Weighted MNSQ 0.90
Item Delta(s): -0.58

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	749	16.14	-0.28	-19.80(.000)	-0.69	0.88
2	0.00	595	12.82	-0.25	-17.28(.000)	-0.72	0.94
3	0.00	392	8.45	-0.22	-15.70(.000)	-0.79	0.88
4	1.00	2868	61.80	0.52	41.33(.000)	0.48	0.96
7	0.00	2	0.04	0.00	0.19(.850)	0.00	1.24
9	0.00	35	0.75	-0.05	-3.74(.000)	-0.77	1.26

Item 34
----
item:34 (R5Q34)
Cases for this item 4618 Item-Rest Cor. 0.42 Item-Total Cor. 0.48
Item Threshold(s): -0.10 Weighted MNSQ 0.99
Item Delta(s): -0.10

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	440	9.53	-0.10	-6.91(.000)	-0.38	1.00
2	0.00	1196	25.90	-0.25	-17.24(.000)	-0.45	0.98
3	1.00	2423	52.47	0.42	31.54(.000)	0.49	1.01
4	0.00	533	11.54	-0.22	-15.10(.000)	-0.63	0.92
7	0.00	4	0.09	0.01	0.39(.699)	-0.16	1.10
9	0.00	22	0.48	-0.05	-3.69(.000)	-0.92	1.14

Item 35
----
item:35 (R5Q35)
Cases for this item 4610 Item-Rest Cor. 0.45 Item-Total Cor. 0.50
Item Threshold(s): -1.24 Weighted MNSQ 0.94
Item Delta(s): -1.24

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	151	3.28	-0.23	-15.69(.000)	-1.30	0.76
2	0.00	498	10.80	-0.27	-19.18(.000)	-0.86	0.82
3	0.00	557	12.08	-0.22	-15.32(.000)	-0.66	0.94
4	1.00	3387	73.47	0.45	34.36(.000)	0.33	1.00
7	0.00	1	0.02	-0.01	-0.78(.435)	-0.78	0.00
9	0.00	16	0.35	-0.05	-3.43(.001)	-1.09	1.50

Item 36
----
item:36 (R5Q36)
Cases for this item 4603 Item-Rest Cor. 0.15 Item-Total Cor. 0.22
Item Threshold(s): 0.96 Weighted MNSQ 1.22
Item Delta(s): 0.96

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	180	3.91	-0.25	-17.77(.000)	-1.22	0.79
2	1.00	1472	31.98	0.15	10.38(.000)	0.37	1.16
3	0.00	1637	35.56	0.15	10.43(.000)	0.16	0.99
4	0.00	1290	28.03	-0.21	-14.65(.000)	-0.37	0.99
7	0.00	10	0.22	0.02	1.12(.263)	0.30	0.90
9	0.00	14	0.30	-0.00	-0.19(.852)	0.00	0.93

Item 37
---
item:37 (R5Q37)
Cases for this item 4600 Item-Rest Cor. 0.35 Item-Total Cor. 0.42
Item Threshold(s): -0.25 Weighted MNSQ 1.06
Item Delta(s): -0.25

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2555	55.54	0.35	25.51(.000)	0.41	1.09
2	0.00	433	9.41	-0.14	-9.91(.000)	-0.50	0.94
3	0.00	482	10.48	-0.19	-13.44(.000)	-0.63	1.01
4	0.00	1112	24.17	-0.16	-11.07(.000)	-0.35	0.86
7	0.00	6	0.13	-0.05	-3.36(.001)	-1.27	0.77
9	0.00	12	0.26	-0.05	-3.24(.001)	-1.11	0.91

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 0.80% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	4727
Mean	23.68
Standard Deviation	6.71
Variance	45.05
Skewness	-0.28
Kurtosis	-0.56
Standard error of mean	0.10
Standard error of measurement	2.47
Coefficient Alpha	0.86

B.3. Year 7 Reading

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================================================================================
NAPLAN 2017 Reading 7 - Item Calibration Calibration SampleFri Jun 23 12:43 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (R7Q01)
Cases for this item    3568   Item-Rest Cor.  0.29   Item-Total Cor.  0.32
Item Threshold(s):    -3.15   Weighted MNSQ   0.93
Item Delta(s):        -3.15
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       1.00     3340      93.61    0.29    18.42(.000)  0.08     1.01
   2       0.00      118       3.31   -0.16    -9.55(.000) -0.96     1.24
   3       0.00       96       2.69   -0.23   -13.92(.000) -1.42     0.97
   4       0.00       12       0.34   -0.10    -6.20(.000) -2.11     0.58
   7       0.00        1       0.03   -0.06    -3.44(.001) -3.87     0.00
   9       0.00        1       0.03   -0.01    -0.57(.571) -0.10     0.00
================================================================================

Item 2
------
item:2 (R7Q02)
Cases for this item    3568   Item-Rest Cor.  0.35   Item-Total Cor.  0.38
Item Threshold(s):    -3.46   Weighted MNSQ   0.88
Item Delta(s):        -3.46
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       64       1.79   -0.20   -12.47(.000) -1.59     0.90
   2       1.00     3394      95.12    0.36    22.69(.000)  0.08     1.01
   3       0.00       70       1.96   -0.22   -13.42(.000) -1.70     0.85
   4       0.00       35       0.98   -0.16    -9.78(.000) -1.65     0.79
   7       0.00        2       0.06   -0.07    -4.19(.000) -3.21     0.94
   9       0.00        3       0.08   -0.05    -2.81(.005) -2.04     1.29
================================================================================

Item 3
------
item:3 (R7Q03)
Cases for this item    3568   Item-Rest Cor.  0.31   Item-Total Cor.  0.33
Item Threshold(s):    -3.03   Weighted MNSQ   0.93
Item Delta(s):        -3.03
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       26       0.73   -0.17   -10.15(.000) -2.15     0.67
   2       0.00      113       3.17   -0.15    -8.91(.000) -0.91     1.25
   3       0.00      106       2.97   -0.22   -13.21(.000) -1.30     0.93
   4       1.00     3316      92.94    0.31    19.22(.000)  0.09     1.00
   7       0.00        2       0.06   -0.05    -3.00(.003) -2.60     1.81
   9       0.00        5       0.14   -0.01    -0.87(.385) -0.52     1.58
================================================================================

Item 4
------
item:4 (R7Q04)
Cases for this item    3568   Item-Rest Cor.  0.44   Item-Total Cor.  0.49
Item Threshold(s):    -1.24   Weighted MNSQ   0.94
Item Delta(s):        -1.24
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      873      24.47   -0.39   -25.39(.000) -0.74     0.92
   2       0.00       49       1.37   -0.14    -8.55(.000) -1.28     0.95
   3       0.00       18       0.50   -0.13    -8.02(.000) -1.80     0.87
   4       1.00     2622      73.49    0.44    29.58(.000)  0.28     0.97
   7       0.00        1       0.03   -0.06    -3.52(.000) -3.87     0.00
   9       0.00        5       0.14   -0.02    -1.34(.180) -0.52     0.97
================================================================================
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Item 5
------
item:5 (R7Q05)
Cases for this item 3567 Item-Rest Cor. 0.40 Item-Total Cor. 0.45
Item Threshold(s): -0.79 Weighted MNSQ 0.99
Item Delta(s): -0.79

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	585	16.40	-0.29	-17.78(.000)	-0.70	0.89
2	0.00	287	8.05	-0.16	-9.55(.000)	-0.59	1.11
3	0.00	349	9.78	-0.14	-8.39(.000)	-0.51	1.07
4	1.00	2341	65.63	0.40	26.31(.000)	0.32	0.95
7	0.00	3	0.08	-0.06	-3.53(.000)	-2.38	1.29
9	0.00	2	0.06	0.00	0.27(.789)	0.04	0.89

Item 6
------
item:6 (R7Q06)
Cases for this item 3567 Item-Rest Cor. 0.31 Item-Total Cor. 0.34
Item Threshold(s): -2.58 Weighted MNSQ 0.99
Item Delta(s): -2.58

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3203	89.80	0.31	19.16(.000)	0.11	1.02
2	0.00	159	4.46	-0.20	-12.31(.000)	-1.03	1.01
3	0.00	166	4.65	-0.17	-10.23(.000)	-0.84	0.90
4	0.00	35	0.98	-0.14	-8.48(.000)	-1.38	0.89
7	0.00	2	0.06	-0.06	-3.44(.001)	-2.59	1.82
9	0.00	2	0.06	-0.00	-0.05(.963)	-0.10	0.44

Item 7
------
item:7 (R7Q07)
Cases for this item 3567 Item-Rest Cor. 0.27 Item-Total Cor. 0.29
Item Threshold(s): -3.91 Weighted MNSQ 0.93
Item Delta(s): -3.91

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	69	1.93	-0.17	-10.10(.000)	-1.39	1.10
2	0.00	20	0.56	-0.16	-9.40(.000)	-2.10	0.77
3	1.00	3452	96.78	0.27	16.75(.000)	0.05	1.03
4	0.00	22	0.62	-0.14	-8.15(.000)	-1.77	0.96
7	0.00	1	0.03	-0.06	-3.43(.001)	-3.87	0.00
9	0.00	3	0.08	-0.05	-3.26(.001)	-1.51	1.03

Item 8
------
item:8 (R7Q08)
Cases for this item 3566 Item-Rest Cor. 0.30 Item-Total Cor. 0.33
Item Threshold(s): -3.24 Weighted MNSQ 0.92
Item Delta(s): -3.24

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3356	94.11	0.30	18.99(.000)	0.08	1.01
2	0.00	79	2.22	-0.15	-8.85(.000)	-1.08	1.18
3	0.00	96	2.69	-0.19	-11.62(.000)	-1.32	0.98
4	0.00	31	0.87	-0.19	-11.29(.000)	-2.02	0.75
7	0.00	2	0.06	-0.04	-2.16(.031)	-1.89	2.80
9	0.00	2	0.06	-0.03	-1.91(.056)	-1.49	1.38

Item 9
------
item:9 (R7Q09)
Cases for this item 3566 Item-Rest Cor. 0.39 Item-Total Cor. 0.43
Item Threshold(s): -1.85 Weighted MNSQ 0.94
Item Delta(s): -1.85

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	395	11.08	-0.23	-14.37(.000)	-0.75	0.97
2	0.00	110	3.08	-0.24	-14.43(.000)	-1.39	0.73
3	1.00	2933	82.25	0.39	25.49(.000)	0.19	0.98
4	0.00	123	3.45	-0.18	-10.85(.000)	-1.01	1.02
7	0.00	1	0.03	-0.06	-3.50(.000)	-3.87	0.00
9	0.00	4	0.11	-0.07	-4.19(.000)	-2.55	1.18

Item 10
----
item:10 (R7Q10)
Cases for this item 3565 Item-Rest Cor. 0.42 Item-Total Cor. 0.47
Item Threshold(s): -1.55 Weighted MNSQ 0.93
Item Delta(s): -1.55

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	95	2.66	-0.19	-11.42(.000)	-1.10	0.98
2	1.00	2791	78.29	0.43	28.05(.000)	0.23	0.96
3	0.00	485	13.60	-0.24	-14.48(.000)	-0.66	0.97
4	0.00	174	4.88	-0.26	-16.29(.000)	-1.19	0.84
7	0.00	2	0.06	-0.06	-3.43(.001)	-2.77	1.57
9	0.00	18	0.50	-0.09	-5.19(.000)	-1.37	0.99

Item 11
----
item:11 (R7Q11)
Cases for this item 3564 Item-Rest Cor. 0.39 Item-Total Cor. 0.43
Item Threshold(s): -0.98 Weighted MNSQ 1.00
Item Delta(s): -0.98

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	72	2.02	-0.08	-5.06(.000)	-0.69	1.16
2	1.00	2461	69.05	0.39	25.10(.000)	0.29	0.98
3	0.00	318	8.92	-0.33	-20.80(.000)	-1.10	0.92
4	0.00	706	19.81	-0.18	-10.82(.000)	-0.44	0.87
7	0.00	2	0.06	-0.06	-3.45(.001)	-2.77	1.57
9	0.00	5	0.14	-0.03	-1.62(.105)	-1.21	1.30

Item 12
----
item:12 (R7Q12)
Cases for this item 3563 Item-Rest Cor. 0.36 Item-Total Cor. 0.40
Item Threshold(s): -1.59 Weighted MNSQ 0.99
Item Delta(s): -1.59

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	332	9.32	-0.28	-17.48(.000)	-0.91	0.88
2	0.00	136	3.82	-0.19	-11.26(.000)	-1.04	1.04
3	1.00	2806	78.75	0.36	23.18(.000)	0.21	0.98
4	0.00	254	7.13	-0.09	-5.45(.000)	-0.44	1.06
7	0.00	2	0.06	-0.06	-3.50(.000)	-2.65	1.73
9	0.00	33	0.93	-0.06	-3.80(.000)	-0.74	0.99

Item 13
----
item:13 (R7Q13)
Cases for this item 3563 Item-Rest Cor. 0.45 Item-Total Cor. 0.49
Item Threshold(s): -0.99 Weighted MNSQ 0.95
Item Delta(s): -0.99

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2467	69.24	0.45	29.91(.000)	0.32	0.96
2	0.00	343	9.63	-0.29	-18.26(.000)	-0.94	0.88
3	0.00	494	13.86	-0.15	-9.11(.000)	-0.45	0.88
4	0.00	242	6.79	-0.25	-15.45(.000)	-0.97	0.86
7	0.00	2	0.06	-0.06	-3.46(.001)	-2.77	1.57
9	0.00	15	0.42	-0.06	-3.59(.000)	-1.15	0.67

Item 14
----
item:14 (R7Q14)
Cases for this item 3562 Item-Rest Cor. 0.34 Item-Total Cor. 0.38
Item Threshold(s): -1.93 Weighted MNSQ 0.98
Item Delta(s): -1.93

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2968	83.32	0.34	21.56(.000)	0.17	0.98
2	0.00	75	2.11	-0.25	-15.18(.000)	-1.70	0.74
3	0.00	351	9.85	-0.13	-7.76(.000)	-0.50	1.00
4	0.00	148	4.15	-0.23	-14.06(.000)	-1.15	0.98
7	0.00	1	0.03	-0.06	-3.49(.000)	-3.87	0.00
9	0.00	19	0.53	-0.08	-5.01(.000)	-1.13	1.03

Item 15
----
item:15 (R7Q15)
Cases for this item 3560 Item-Rest Cor. 0.39 Item-Total Cor. 0.44
Item Threshold(s): 0.51 Weighted MNSQ 0.99
Item Delta(s): 0.51

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1140	32.02	-0.15	-8.77(.000)	-0.25	0.92
2	0.00	730	20.51	-0.18	-11.18(.000)	-0.41	0.92
3	0.00	255	7.16	-0.18	-10.65(.000)	-0.66	0.99
4	1.00	1420	39.89	0.39	25.27(.000)	0.54	1.01
7	0.00	6	0.17	-0.04	-2.29(.022)	-1.09	1.80
9	0.00	9	0.25	-0.04	-2.29(.022)	-0.72	1.37

Item 16
----
item:16 (R7Q16)
Cases for this item 3560 Item-Rest Cor. 0.40 Item-Total Cor. 0.44
Item Threshold(s): -1.98 Weighted MNSQ 0.94
Item Delta(s): -1.98

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	238	6.69	-0.23	-13.92(.000)	-0.89	1.02
2	0.00	239	6.71	-0.23	-14.11(.000)	-0.95	0.93
3	1.00	2985	83.85	0.40	25.95(.000)	0.19	0.97
4	0.00	89	2.50	-0.19	-11.36(.000)	-1.20	0.97
7	0.00	3	0.08	-0.05	-2.77(.006)	-1.58	2.50
9	0.00	6	0.17	-0.05	-2.72(.007)	-1.39	0.90

Item 17
----
item:17 (R7Q17)
Cases for this item 3560 Item-Rest Cor. 0.34 Item-Total Cor. 0.38
Item Threshold(s): -1.86 Weighted MNSQ 0.99
Item Delta(s): -1.86

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	200	5.62	-0.10	-6.16(.000)	-0.49	1.08
2	1.00	2937	82.50	0.34	21.84(.000)	0.17	0.99
3	0.00	113	3.17	-0.23	-13.79(.000)	-1.26	0.92
4	0.00	300	8.43	-0.23	-13.94(.000)	-0.79	0.95
7	0.00	3	0.08	-0.07	-3.97(.000)	-2.53	1.18
9	0.00	7	0.20	-0.05	-3.17(.002)	-1.51	1.02

Item 18
----
item:18 (R7Q18)
Cases for this item 3559 Item-Rest Cor. 0.40 Item-Total Cor. 0.43
Item Threshold(s): -2.05 Weighted MNSQ 0.92
Item Delta(s): -2.05

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	265	7.45	-0.30	-18.44(.000)	-1.07	0.94
2	1.00	3014	84.69	0.40	25.93(.000)	0.18	0.97
3	0.00	91	2.56	-0.23	-14.15(.000)	-1.47	0.82
4	0.00	177	4.97	-0.12	-7.30(.000)	-0.65	0.92
7	0.00	3	0.08	-0.04	-2.29(.022)	-1.47	2.51
9	0.00	9	0.25	-0.04	-2.46(.014)	-0.79	1.49

Item 19
----
item:19 (R7Q19)
Cases for this item 3558 Item-Rest Cor. 0.45 Item-Total Cor. 0.49
Item Threshold(s): -1.74 Weighted MNSQ 0.90
Item Delta(s): -1.74

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2880	80.94	0.45	30.14(.000)	0.23	0.95
2	0.00	189	5.31	-0.23	-14.42(.000)	-1.02	0.93
3	0.00	243	6.83	-0.23	-14.25(.000)	-0.91	0.93
4	0.00	238	6.69	-0.26	-16.02(.000)	-1.04	0.92
7	0.00	2	0.06	-0.06	-3.35(.001)	-2.75	1.59
9	0.00	6	0.17	0.01	0.43(.671)	0.26	1.09

Item 20
----
item:20 (R7Q20)
Cases for this item 3558 Item-Rest Cor. 0.48 Item-Total Cor. 0.53
Item Threshold(s): -0.76 Weighted MNSQ 0.92
Item Delta(s): -0.76

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1226	34.46	-0.47	-31.43(.000)	-0.70	0.92
1	1.00	2316	65.09	0.48	32.81(.000)	0.38	0.92
9	0.00	16	0.45	-0.12	-7.37(.000)	-1.88	0.83

Item 21
----
item:21 (R7Q21)
Cases for this item 3557 Item-Rest Cor. 0.45 Item-Total Cor. 0.50
Item Threshold(s): -0.40 Weighted MNSQ 0.95
Item Delta(s): -0.40

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	731	20.55	-0.24	-14.54(.000)	-0.52	0.89
2	0.00	411	11.55	-0.22	-13.46(.000)	-0.63	0.90
3	1.00	2072	58.25	0.45	30.26(.000)	0.42	0.97
4	0.00	333	9.36	-0.18	-11.22(.000)	-0.63	0.87
7	0.00	2	0.06	-0.05	-3.06(.002)	-2.54	1.89
9	0.00	8	0.22	-0.04	-2.52(.012)	-1.00	0.79

Item 22
----
item:22 (R7Q22)
Cases for this item 3556 Item-Rest Cor. 0.40 Item-Total Cor. 0.45
Item Threshold(s): -1.05 Weighted MNSQ 0.99
Item Delta(s): -1.05

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	256	7.20	-0.22	-13.67(.000)	-0.84	1.00
2	1.00	2501	70.33	0.40	26.19(.000)	0.29	0.98
3	0.00	123	3.46	-0.31	-19.54(.000)	-1.69	0.71
4	0.00	668	18.79	-0.17	-10.41(.000)	-0.43	0.79
7	0.00	2	0.06	-0.05	-3.03(.002)	-2.22	2.34
9	0.00	6	0.17	-0.02	-0.91(.362)	-0.50	1.01

Item 23
----
item:23 (R7Q23)
Cases for this item 3556 Item-Rest Cor. 0.42 Item-Total Cor. 0.47
Item Threshold(s): -0.32 Weighted MNSQ 0.99
Item Delta(s): -0.32

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	565	15.89	-0.23	-14.01(.000)	-0.57	0.95
2	0.00	438	12.32	-0.18	-11.20(.000)	-0.54	0.98
3	0.00	522	14.68	-0.17	-10.11(.000)	-0.47	0.90
4	1.00	2017	56.72	0.42	27.40(.000)	0.41	0.96
7	0.00	2	0.06	-0.06	-3.32(.001)	-2.25	2.30
9	0.00	12	0.34	-0.04	-2.17(.030)	-0.67	1.06

Item 24
----
item:24 (R7Q24)
Cases for this item 3553 Item-Rest Cor. 0.45 Item-Total Cor. 0.49
Item Threshold(s): -1.58 Weighted MNSQ 0.92
Item Delta(s): -1.58

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	367	10.33	-0.30	-18.46(.000)	-0.89	0.84
2	1.00	2800	78.81	0.45	30.21(.000)	0.25	0.97
3	0.00	222	6.25	-0.21	-12.74(.000)	-0.82	0.93
4	0.00	156	4.39	-0.20	-12.33(.000)	-1.04	0.92
7	0.00	2	0.06	-0.05	-2.93(.003)	-2.52	1.91
9	0.00	6	0.17	-0.03	-2.04(.042)	-0.82	1.10

Item 25
----
item:25 (R7Q25)
Cases for this item 3553 Item-Rest Cor. 0.32 Item-Total Cor. 0.38
Item Threshold(s): 0.09 Weighted MNSQ 1.06
Item Delta(s): 0.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	503	14.16	-0.28	-17.38(.000)	-0.70	0.88
2	0.00	935	26.32	-0.08	-4.74(.000)	-0.20	0.85
3	1.00	1720	48.41	0.32	20.43(.000)	0.39	1.08
4	0.00	370	10.41	-0.07	-4.16(.000)	-0.25	0.89
7	0.00	2	0.06	-0.07	-4.44(.000)	-3.26	0.86
9	0.00	23	0.65	-0.08	-4.86(.000)	-1.17	0.96

Item 26
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item:26 (R7Q26)
Cases for this item 3550 Item-Rest Cor. 0.37 Item-Total Cor. 0.42
Item Threshold(s): 0.37 Weighted MNSQ 1.00
Item Delta(s): 0.37

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	785	22.11	-0.20	-12.07(.000)	-0.42	0.82
2	0.00	714	20.11	-0.09	-5.48(.000)	-0.24	0.91
3	0.00	487	13.72	-0.17	-10.32(.000)	-0.45	1.03
4	1.00	1519	42.79	0.37	23.99(.000)	0.51	1.03
7	0.00	3	0.08	-0.03	-2.04(.041)	-0.92	2.56
9	0.00	42	1.18	-0.06	-3.29(.001)	-0.57	0.99

Item 27
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item:27 (R7Q27)
Cases for this item 3550 Item-Rest Cor. 0.38 Item-Total Cor. 0.43
Item Threshold(s): -0.30 Weighted MNSQ 1.03
Item Delta(s): -0.30

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1997	56.25	0.38	24.18(.000)	0.38	0.98
2	0.00	560	15.77	-0.20	-12.46(.000)	-0.50	0.92
3	0.00	327	9.21	-0.28	-17.27(.000)	-0.92	0.92
4	0.00	632	17.80	-0.07	-3.98(.000)	-0.22	0.87
7	0.00	16	0.45	-0.03	-1.92(.055)	-0.48	1.34
9	0.00	18	0.51	-0.05	-3.18(.002)	-0.91	1.14

Item 28
----
item:28 (R7Q28)
Cases for this item 3550 Item-Rest Cor. 0.41 Item-Total Cor. 0.46
Item Threshold(s): -0.59 Weighted MNSQ 0.99
Item Delta(s): -0.59

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	469	13.21	-0.27	-16.76(.000)	-0.73	0.91
2	0.00	252	7.10	-0.25	-15.27(.000)	-0.89	0.94
3	1.00	2200	61.97	0.41	26.97(.000)	0.35	0.94
4	0.00	617	17.38	-0.11	-6.38(.000)	-0.29	0.99
7	0.00	4	0.11	-0.05	-3.16(.002)	-1.72	1.72
9	0.00	8	0.23	-0.06	-3.30(.001)	-1.30	1.13

Item 29
----
item:29 (R7Q29)
Cases for this item 3550 Item-Rest Cor. 0.34 Item-Total Cor. 0.40
Item Threshold(s): 0.31 Weighted MNSQ 1.05
Item Delta(s): 0.31

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	697	19.63	-0.05	-3.16(.002)	-0.16	0.97
2	0.00	885	24.93	-0.20	-12.20(.000)	-0.37	0.98
3	0.00	379	10.68	-0.19	-11.50(.000)	-0.59	0.92
4	1.00	1559	43.92	0.34	21.85(.000)	0.45	0.99
7	0.00	1	0.03	-0.06	-3.58(.000)	-3.87	0.00
9	0.00	29	0.82	-0.04	-2.32(.021)	-0.59	1.11

Item 30
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item:30 (R7Q30)
Cases for this item 3548 Item-Rest Cor. 0.40 Item-Total Cor. 0.45
Item Threshold(s): -0.58 Weighted MNSQ 1.00
Item Delta(s): -0.58

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	562	15.84	-0.17	-10.53(.000)	-0.43	0.93
2	0.00	520	14.66	-0.27	-16.61(.000)	-0.68	1.00
3	1.00	2198	61.95	0.40	25.85(.000)	0.35	0.96
4	0.00	236	6.65	-0.12	-7.30(.000)	-0.57	0.90
7	0.00	2	0.06	-0.04	-2.27(.023)	-1.39	3.51
9	0.00	30	0.85	-0.04	-2.26(.024)	-0.49	1.00

Item 31
----
item:31 (R7Q31)
Cases for this item 3545 Item-Rest Cor. 0.26 Item-Total Cor. 0.32
Item Threshold(s): -0.44 Weighted MNSQ 1.14
Item Delta(s): -0.44

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	568	16.02	-0.06	-3.60(.000)	-0.20	1.07
2	0.00	703	19.83	-0.16	-9.91(.000)	-0.39	0.98
3	1.00	2096	59.13	0.26	16.27(.000)	0.27	1.00
4	0.00	165	4.65	-0.18	-10.70(.000)	-0.78	0.90
7	0.00	1	0.03	-0.06	-3.55(.000)	-3.87	0.00
9	0.00	12	0.34	-0.06	-3.86(.000)	-1.31	0.94

Item 32
----
item:32 (R7Q32)
Cases for this item 3543 Item-Rest Cor. 0.44 Item-Total Cor. 0.49
Item Threshold(s): -0.76 Weighted MNSQ 0.96
Item Delta(s): -0.76

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	684	19.31	-0.25	-15.64(.000)	-0.56	0.81
2	1.00	2314	65.31	0.44	29.56(.000)	0.36	0.99
3	0.00	136	3.84	-0.22	-13.20(.000)	-1.03	0.83
4	0.00	394	11.12	-0.21	-12.51(.000)	-0.65	0.87
7	0.00	5	0.14	-0.04	-2.61(.009)	-1.31	1.56
9	0.00	10	0.28	-0.07	-3.93(.000)	-1.36	0.74

Item 33
----
item:33 (R7Q33)
Cases for this item 3543 Item-Rest Cor. 0.43 Item-Total Cor. 0.48
Item Threshold(s): -0.43 Weighted MNSQ 0.97
Item Delta(s): -0.43

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	436	12.31	-0.33	-21.05(.000)	-0.91	0.81
2	0.00	768	21.68	-0.09	-5.20(.000)	-0.24	0.91
3	0.00	219	6.18	-0.23	-14.22(.000)	-0.92	0.89
4	1.00	2086	58.88	0.43	28.40(.000)	0.41	0.94
7	0.00	1	0.03	-0.06	-3.59(.000)	-3.87	0.00
9	0.00	33	0.93	-0.10	-5.93(.000)	-1.18	0.96

Item 34
----
item:34 (R7Q34)
Cases for this item 3538 Item-Rest Cor. 0.34 Item-Total Cor. 0.38
Item Threshold(s): 2.17 Weighted MNSQ 0.95
Item Delta(s): 2.17

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3011	85.10	-0.31	-19.26(.000)	-0.14	0.99
1	1.00	500	14.13	0.34	21.49(.000)	0.96	0.91
9	0.00	27	0.76	-0.10	-5.98(.000)	-1.16	1.01

Item 35
----
item:35 (R7Q35)
Cases for this item 3537 Item-Rest Cor. 0.14 Item-Total Cor. 0.20
Item Threshold(s): 0.60 Weighted MNSQ 1.25
Item Delta(s): 0.60

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	534	15.10	-0.19	-11.43(.000)	-0.44	1.09
2	0.00	713	20.16	0.10	5.76(.000)	0.14	1.08
3	0.00	862	24.37	-0.07	-4.38(.000)	-0.16	0.99
4	1.00	1356	38.34	0.14	8.59(.000)	0.26	0.97
7	0.00	1	0.03	-0.06	-3.55(.000)	-3.87	0.00
9	0.00	71	2.01	-0.06	-3.43(.001)	-0.45	1.01

Item 36
----
item:36 (R7Q36)
Cases for this item 3534 Item-Rest Cor. 0.30 Item-Total Cor. 0.35
Item Threshold(s): -0.93 Weighted MNSQ 1.07
Item Delta(s): -0.93

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	194	5.49	-0.24	-14.63(.000)	-1.00	0.81
2	1.00	2422	68.53	0.30	18.84(.000)	0.25	0.97
3	0.00	572	16.19	-0.13	-7.81(.000)	-0.36	1.05
4	0.00	320	9.05	-0.11	-6.58(.000)	-0.44	1.09
7	0.00	3	0.08	-0.04	-2.48(.013)	-1.64	1.95
9	0.00	23	0.65	-0.06	-3.79(.000)	-0.78	0.98

Item 37
----
item:37 (R7Q37)
Cases for this item 3531 Item-Rest Cor. 0.33 Item-Total Cor. 0.38
Item Threshold(s): 0.16 Weighted MNSQ 1.07
Item Delta(s): 0.16

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1661	47.04	0.33	20.66(.000)	0.41	1.00
2	0.00	1132	32.06	-0.12	-7.38(.000)	-0.21	0.95
3	0.00	379	10.73	-0.27	-16.50(.000)	-0.80	0.82
4	0.00	331	9.37	-0.06	-3.77(.000)	-0.25	1.05
7	0.00	2	0.06	-0.06	-3.43(.001)	-2.39	2.10
9	0.00	26	0.74	-0.04	-2.61(.009)	-0.62	0.96

Item 38
----
item:38 (R7Q38)
Cases for this item 3529 Item-Rest Cor. 0.41 Item-Total Cor. 0.45
Item Threshold(s): 1.24 Weighted MNSQ 0.93
Item Delta(s): 1.24

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2566	72.71	-0.40	-25.68(.000)	-0.27	0.94
1	1.00	945	26.78	0.41	26.72(.000)	0.79	0.94
9	0.00	18	0.51	-0.07	-4.09(.000)	-0.92	0.84

Item 39
----
item:39 (R7Q39)
Cases for this item 3529 Item-Rest Cor. 0.24 Item-Total Cor. 0.27
Item Threshold(s): 2.75 Weighted MNSQ 1.01
Item Delta(s): 2.75

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3147	89.18	-0.18	-10.79(.000)	-0.07	1.02
1	1.00	316	8.95	0.24	14.74(.000)	0.94	0.93
9	0.00	66	1.87	-0.10	-5.83(.000)	-0.72	0.98

Item 40
----
item:40 (R7Q40)
Cases for this item 3521 Item-Rest Cor. 0.50 Item-Total Cor. 0.54
Item Threshold(s): 0.47 Weighted MNSQ 0.89
Item Delta(s): 0.47

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	699	19.85	-0.19	-11.70(.000)	-0.41	0.90
2	0.00	1055	29.96	-0.21	-12.73(.000)	-0.35	0.86
3	0.00	293	8.32	-0.25	-15.28(.000)	-0.85	0.85
4	1.00	1439	40.87	0.50	34.00(.000)	0.67	0.92
7	0.00	5	0.14	-0.04	-2.09(.036)	-0.98	1.81
9	0.00	30	0.85	-0.01	-0.60(.548)	-0.19	0.94

Item 41
----
item:41 (R7Q41)
Cases for this item 3519 Item-Rest Cor. 0.27 Item-Total Cor. 0.31
Item Threshold(s): 2.18 Weighted MNSQ 0.99
Item Delta(s): 2.18

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3005	85.39	-0.26	-16.16(.000)	-0.12	1.00
1	1.00	494	14.04	0.27	16.69(.000)	0.82	1.04
9	0.00	20	0.57	-0.02	-0.98(.328)	-0.40	0.74

Item 42
----
item:42 (R7Q42)
Cases for this item 3519 Item-Rest Cor. 0.22 Item-Total Cor. 0.27
Item Threshold(s): 0.64 Weighted MNSQ 1.15
Item Delta(s): 0.64

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1325	37.65	0.22	13.24(.000)	0.38	1.07
2	0.00	1107	31.46	-0.23	-13.82(.000)	-0.38	0.92
3	0.00	825	23.44	0.06	3.30(.001)	0.07	1.00
4	0.00	233	6.62	-0.08	-4.47(.000)	-0.30	1.00
7	0.00	2	0.06	-0.05	-2.73(.006)	-1.87	2.83
9	0.00	27	0.77	-0.05	-2.68(.007)	-0.59	0.88

Item 43
----
item:43 (R7Q43)
Cases for this item 3506 Item-Rest Cor. 0.25 Item-Total Cor. 0.30
Item Threshold(s): 0.19 Weighted MNSQ 1.14
Item Delta(s): 0.19

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	626	17.86	-0.18	-10.78(.000)	-0.41	0.87
2	0.00	810	23.10	-0.07	-4.28(.000)	-0.15	0.98
3	1.00	1631	46.52	0.25	15.21(.000)	0.33	1.05
4	0.00	416	11.87	-0.06	-3.78(.000)	-0.20	1.08
7	0.00	1	0.03	-0.06	-3.57(.000)	-3.87	0.00
9	0.00	22	0.63	-0.04	-2.61(.009)	-0.66	0.90

Item 44
----
item:44 (R7Q44)
Cases for this item 3505 Item-Rest Cor. 0.44 Item-Total Cor. 0.49
Item Threshold(s): 0.32 Weighted MNSQ 0.94
Item Delta(s): 0.32

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	782	22.31	-0.28	-17.44(.000)	-0.53	0.78
2	1.00	1542	43.99	0.44	29.20(.000)	0.58	0.99
3	0.00	534	15.24	-0.21	-12.92(.000)	-0.54	0.86
4	0.00	622	17.75	-0.05	-2.97(.003)	-0.16	0.96
7	0.00	2	0.06	-0.06	-3.81(.000)	-2.93	1.34
9	0.00	23	0.66	-0.06	-3.41(.001)	-0.81	0.75

Item 45
----
item:45 (R7Q45)
Cases for this item 3501 Item-Rest Cor. 0.47 Item-Total Cor. 0.52
Item Threshold(s): -0.88 Weighted MNSQ 0.93
Item Delta(s): -0.88

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	354	10.11	-0.21	-12.64(.000)	-0.64	0.96
2	0.00	399	11.40	-0.23	-14.24(.000)	-0.68	0.84
3	1.00	2369	67.67	0.47	31.85(.000)	0.36	0.95
4	0.00	364	10.40	-0.27	-16.49(.000)	-0.80	0.85
7	0.00	2	0.06	-0.06	-3.42(.001)	-2.75	1.59
9	0.00	13	0.37	-0.02	-1.00(.316)	-0.42	0.92

Item 46
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item:46 (R7Q46)
Cases for this item 3500 Item-Rest Cor. 0.37 Item-Total Cor. 0.42
Item Threshold(s): -0.06 Weighted MNSQ 1.03
Item Delta(s): -0.06

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	577	16.49	-0.10	-5.74(.000)	-0.25	0.95
2	0.00	732	20.91	-0.26	-16.02(.000)	-0.54	0.87
3	1.00	1808	51.66	0.37	23.26(.000)	0.42	1.01
4	0.00	331	9.46	-0.12	-7.40(.000)	-0.43	0.94
7	0.00	1	0.03	-0.05	-2.73(.006)	-2.65	0.00
9	0.00	51	1.46	-0.03	-1.77(.077)	-0.37	1.03

Item 47
----
item:47 (R7Q47)
Cases for this item 3470 Item-Rest Cor. 0.31 Item-Total Cor. 0.36
Item Threshold(s): -0.20 Weighted MNSQ 1.09
Item Delta(s): -0.20

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1894	54.58	0.31	19.23(.000)	0.35	0.98
2	0.00	621	17.90	-0.15	-9.07(.000)	-0.37	0.95
3	0.00	722	20.81	-0.13	-7.96(.000)	-0.30	1.01
4	0.00	216	6.22	-0.17	-10.12(.000)	-0.71	1.02
9	0.00	17	0.49	-0.01	-0.80(.424)	-0.29	0.77

Item 48
----
item:48 (R7Q48)
Cases for this item 3466 Item-Rest Cor. 0.30 Item-Total Cor. 0.35
Item Threshold(s): 0.17 Weighted MNSQ 1.10
Item Delta(s): 0.17

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1100	31.74	-0.06	-3.50(.000)	-0.15	0.89
2	0.00	264	7.62	-0.29	-18.07(.000)	-0.98	0.85
3	0.00	464	13.39	-0.13	-7.79(.000)	-0.37	1.00
4	1.00	1633	47.11	0.30	18.51(.000)	0.41	1.02
7	0.00	2	0.06	0.01	0.63(.531)	0.45	0.14
9	0.00	3	0.09	0.00	0.27(.784)	0.12	0.47

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 0.66% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	3568
Mean	29.68
Standard Deviation	8.44
Variance	71.23
Skewness	-0.36
Kurtosis	-0.41
Standard error of mean	0.14
Standard error of measurement	2.82
Coefficient Alpha	0.89

B.4. Year 9 Reading

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================================================================================
NAPLAN 2017 Reading 9 - Item Calibration Calibration SampleFri Jun 23 12:53 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (R9Q01)
Cases for this item    3400   Item-Rest Cor.  0.20   Item-Total Cor.  0.21
Item Threshold(s):    -5.11   Weighted MNSQ   1.00
Item Delta(s):        -5.11
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       14       0.41   -0.13    -7.63(.000) -2.04     0.61
   2       0.00       11       0.32   -0.10    -5.98(.000) -1.81     0.87
   3       0.00        5       0.15   -0.07    -4.20(.000) -2.19     1.09
   4       1.00     3366      99.00    0.20    11.93(.000)  0.01     0.97
   7       0.00        2       0.06   -0.07    -4.11(.000) -3.16     0.60
   9       0.00        2       0.06   -0.06    -3.34(.001) -1.95     0.74
================================================================================

Item 2
------
item:2 (R9Q02)
Cases for this item    3400   Item-Rest Cor.  0.31   Item-Total Cor.  0.34
Item Threshold(s):    -3.46   Weighted MNSQ   0.92
Item Delta(s):        -3.46
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       68       2.00   -0.14    -8.34(.000) -1.12     1.24
   2       0.00       43       1.26   -0.20   -12.00(.000) -1.78     1.04
   3       1.00     3241      95.32    0.32    19.51(.000)  0.06     0.92
   4       0.00       38       1.12   -0.17   -10.33(.000) -1.57     0.92
   7       0.00        4       0.12   -0.09    -5.02(.000) -2.89     0.58
   9       0.00        6       0.18   -0.08    -4.69(.000) -1.71     1.73
================================================================================

Item 3
------
item:3 (R9Q03)
Cases for this item    3399   Item-Rest Cor.  0.33   Item-Total Cor.  0.35
Item Threshold(s):    -3.90   Weighted MNSQ   0.92
Item Delta(s):        -3.90
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       1.00     3292      96.85    0.33    20.37(.000)  0.04     0.93
   2       0.00       42       1.24   -0.20   -11.74(.000) -1.75     0.90
   3       0.00       38       1.12   -0.19   -11.02(.000) -1.71     0.79
   4       0.00       21       0.62   -0.15    -9.04(.000) -2.04     0.64
   7       0.00        1       0.03   -0.06    -3.54(.000) -3.58     0.00
   9       0.00        5       0.15   -0.08    -4.93(.000) -2.23     1.08
================================================================================

Item 4
------
item:4 (R9Q04)
Cases for this item    3399   Item-Rest Cor.  0.42   Item-Total Cor.  0.45
Item Threshold(s):    -2.74   Weighted MNSQ   0.87
Item Delta(s):        -2.74
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      149       4.38   -0.24   -14.35(.000) -1.20     0.97
   2       1.00     3104      91.32    0.42    26.88(.000)  0.12     0.89
   3       0.00       83       2.44   -0.22   -13.27(.000) -1.39     0.74
   4       0.00       53       1.56   -0.22   -13.20(.000) -1.75     0.63
   7       0.00        4       0.12   -0.08    -4.60(.000) -2.29     0.92
   9       0.00        6       0.18   -0.11    -6.45(.000) -2.45     0.85
================================================================================
```

Item 5
------
item:5 (R9Q05)
Cases for this item 3399 Item-Rest Cor. 0.32 Item-Total Cor. 0.35
Item Threshold(s): -3.26 Weighted MNSQ 0.93
Item Delta(s): -3.26

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	113	3.32	-0.27	-16.13(.000)	-1.49	0.86
2	1.00	3209	94.41	0.32	20.01(.000)	0.07	0.92
3	0.00	54	1.59	-0.10	-6.06(.000)	-0.88	1.16
4	0.00	13	0.38	-0.12	-6.90(.000)	-1.94	0.94
7	0.00	6	0.18	-0.10	-6.07(.000)	-2.60	0.67
9	0.00	4	0.12	-0.07	-3.82(.000)	-1.87	1.40

Item 6
------
item:6 (R9Q06)
Cases for this item 3399 Item-Rest Cor. 0.43 Item-Total Cor. 0.47
Item Threshold(s): -2.04 Weighted MNSQ 0.91
Item Delta(s): -2.04

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	57	1.68	-0.20	-11.60(.000)	-1.45	0.74
2	0.00	375	11.03	-0.29	-17.47(.000)	-0.82	0.79
3	0.00	67	1.97	-0.24	-14.22(.000)	-1.72	0.95
4	1.00	2888	84.97	0.43	27.97(.000)	0.17	0.89
7	0.00	4	0.12	-0.07	-3.87(.000)	-2.13	1.20
9	0.00	8	0.24	-0.09	-5.31(.000)	-1.90	1.04

Item 7
------
item:7 (R9Q07)
Cases for this item 3398 Item-Rest Cor. 0.34 Item-Total Cor. 0.37
Item Threshold(s): -3.44 Weighted MNSQ 0.92
Item Delta(s): -3.44

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	73	2.15	-0.22	-13.32(.000)	-1.50	0.95
2	0.00	52	1.53	-0.16	-9.66(.000)	-1.42	0.79
3	1.00	3237	95.26	0.34	21.31(.000)	0.06	0.92
4	0.00	28	0.82	-0.17	-9.80(.000)	-1.95	0.66
7	0.00	1	0.03	-0.06	-3.55(.000)	-3.58	0.00
9	0.00	7	0.21	-0.10	-5.90(.000)	-2.31	0.86

Item 8
------
item:8 (R9Q08)
Cases for this item 3398 Item-Rest Cor. 0.38 Item-Total Cor. 0.41
Item Threshold(s): -2.81 Weighted MNSQ 0.90
Item Delta(s): -2.81

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	122	3.59	-0.28	-17.17(.000)	-1.41	0.89
2	1.00	3121	91.85	0.38	23.92(.000)	0.10	0.90
3	0.00	73	2.15	-0.14	-8.00(.000)	-0.93	1.05
4	0.00	70	2.06	-0.18	-10.47(.000)	-1.23	1.00
7	0.00	2	0.06	-0.07	-3.84(.000)	-2.58	1.41
9	0.00	10	0.29	-0.09	-5.28(.000)	-1.67	1.12

Item 9
------
item:9 (R9Q09)
Cases for this item 3398 Item-Rest Cor. 0.43 Item-Total Cor. 0.46
Item Threshold(s): -3.03 Weighted MNSQ 0.86
Item Delta(s): -3.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	89	2.62	-0.28	-17.19(.000)	-1.74	0.76
2	0.00	64	1.88	-0.22	-12.86(.000)	-1.53	0.86
3	0.00	74	2.18	-0.22	-12.83(.000)	-1.49	0.84
4	1.00	3167	93.20	0.43	27.92(.000)	0.10	0.89
7	0.00	2	0.06	-0.07	-4.01(.000)	-3.11	0.66
9	0.00	2	0.06	-0.05	-2.95(.003)	-2.31	1.03

Item 10
----
item:10 (R9Q10)
Cases for this item 3398 Item-Rest Cor. 0.38 Item-Total Cor. 0.43
Item Threshold(s): 0.06 Weighted MNSQ 1.00
Item Delta(s): 0.06

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	151	4.44	-0.25	-15.19(.000)	-1.08	0.89
2	1.00	1668	49.09	0.38	23.77(.000)	0.39	0.89
3	0.00	1341	39.46	-0.20	-12.15(.000)	-0.31	0.86
4	0.00	229	6.74	-0.13	-7.87(.000)	-0.47	0.97
7	0.00	4	0.12	-0.07	-3.99(.000)	-1.94	1.36
9	0.00	5	0.15	-0.03	-1.68(.093)	-0.84	1.50

Item 11
----
item:11 (R9Q11)
Cases for this item 3398 Item-Rest Cor. 0.28 Item-Total Cor. 0.33
Item Threshold(s): -1.12 Weighted MNSQ 1.06
Item Delta(s): -1.12

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	861	25.34	-0.20	-12.04(.000)	-0.40	1.05
2	0.00	80	2.35	-0.23	-13.79(.000)	-1.46	1.10
3	1.00	2449	72.07	0.28	17.24(.000)	0.17	0.86
7	0.00	4	0.12	-0.09	-5.10(.000)	-2.54	0.74
9	0.00	4	0.12	-0.04	-2.23(.026)	-0.88	1.05

Item 12
----
item:12 (R9Q12)
Cases for this item 3398 Item-Rest Cor. 0.39 Item-Total Cor. 0.43
Item Threshold(s): -1.64 Weighted MNSQ 0.95
Item Delta(s): -1.64

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	354	10.42	-0.14	-8.41(.000)	-0.48	0.96
2	0.00	171	5.03	-0.24	-14.31(.000)	-1.04	1.01
3	1.00	2720	80.05	0.39	24.50(.000)	0.18	0.87
4	0.00	132	3.88	-0.27	-16.64(.000)	-1.31	0.74
7	0.00	7	0.21	-0.05	-2.74(.006)	-1.07	1.17
9	0.00	14	0.41	-0.06	-3.58(.000)	-1.32	1.49

Item 13
----
item:13 (R9Q13)
Cases for this item 3395 Item-Rest Cor. 0.33 Item-Total Cor. 0.38
Item Threshold(s): -1.20 Weighted MNSQ 1.03
Item Delta(s): -1.20

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	65	1.91	-0.16	-9.54(.000)	-1.17	0.88
2	0.00	428	12.61	-0.10	-5.69(.000)	-0.33	0.99
3	0.00	398	11.72	-0.27	-16.60(.000)	-0.79	0.92
4	1.00	2492	73.40	0.33	20.49(.000)	0.20	0.88
7	0.00	2	0.06	-0.03	-1.89(.059)	-1.54	2.88
9	0.00	10	0.29	-0.06	-3.47(.001)	-1.17	1.13

Item 14
----
item:14 (R9Q14)
Cases for this item 3394 Item-Rest Cor. 0.40 Item-Total Cor. 0.43
Item Threshold(s): -2.07 Weighted MNSQ 0.94
Item Delta(s): -2.07

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	70	2.06	-0.23	-13.65(.000)	-1.47	0.85
2	1.00	2899	85.42	0.40	25.16(.000)	0.15	0.90
3	0.00	136	4.01	-0.23	-14.05(.000)	-1.14	0.92
4	0.00	274	8.07	-0.21	-12.38(.000)	-0.71	0.86
7	0.00	2	0.06	-0.07	-4.14(.000)	-3.06	0.73
9	0.00	13	0.38	-0.05	-3.01(.003)	-0.60	0.91

Item 15
----
item:15 (R9Q15)
Cases for this item 3394 Item-Rest Cor. 0.36 Item-Total Cor. 0.41
Item Threshold(s): -0.23 Weighted MNSQ 1.02
Item Delta(s): -0.23

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1873	55.19	0.36	22.44(.000)	0.34	0.89
2	0.00	81	2.39	-0.23	-13.95(.000)	-1.44	0.90
3	0.00	1108	32.65	-0.13	-7.81(.000)	-0.26	0.85
4	0.00	323	9.52	-0.27	-16.11(.000)	-0.79	0.83
7	0.00	2	0.06	-0.06	-3.51(.000)	-2.17	1.99
9	0.00	7	0.21	-0.03	-1.60(.110)	-0.77	1.14

Item 16
----
item:16 (R9Q16)
Cases for this item 3394 Item-Rest Cor. 0.26 Item-Total Cor. 0.31
Item Threshold(s): 0.15 Weighted MNSQ 1.10
Item Delta(s): 0.15

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1608	47.38	0.26	15.46(.000)	0.29	0.90
2	0.00	1328	39.13	-0.21	-12.64(.000)	-0.30	0.85
3	0.00	349	10.28	0.03	1.92(.055)	0.01	1.21
4	0.00	96	2.83	-0.18	-10.89(.000)	-1.04	1.03
7	0.00	1	0.03	-0.06	-3.65(.000)	-3.58	0.00
9	0.00	12	0.35	-0.05	-2.96(.003)	-1.04	1.39

Item 17
----
item:17 (R9Q17)
Cases for this item 3394 Item-Rest Cor. 0.46 Item-Total Cor. 0.51
Item Threshold(s): -0.92 Weighted MNSQ 0.92
Item Delta(s): -0.92

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	154	4.54	-0.28	-17.08(.000)	-1.22	0.86
2	0.00	766	22.57	-0.27	-16.34(.000)	-0.53	0.89
3	1.00	2326	68.53	0.46	30.46(.000)	0.30	0.83
4	0.00	97	2.86	-0.19	-10.97(.000)	-1.06	0.75
7	0.00	1	0.03	-0.06	-3.66(.000)	-3.58	0.00
9	0.00	50	1.47	-0.10	-5.72(.000)	-0.89	1.12

Item 18
----
item:18 (R9Q18)
Cases for this item 3389 Item-Rest Cor. 0.31 Item-Total Cor. 0.36
Item Threshold(s): -0.89 Weighted MNSQ 1.06
Item Delta(s): -0.89

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	642	18.94	-0.19	-11.55(.000)	-0.44	0.93
2	1.00	2309	68.13	0.31	18.93(.000)	0.22	0.88
3	0.00	172	5.08	-0.17	-9.76(.000)	-0.76	0.97
4	0.00	218	6.43	-0.08	-4.76(.000)	-0.36	1.10
7	0.00	2	0.06	-0.07	-3.84(.000)	-2.38	1.70
9	0.00	46	1.36	-0.09	-5.01(.000)	-0.74	1.08

Item 19
----
item:19 (R9Q19)
Cases for this item 3389 Item-Rest Cor. 0.49 Item-Total Cor. 0.54
Item Threshold(s): -0.59 Weighted MNSQ 0.90
Item Delta(s): -0.59

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2114	62.38	0.49	32.92(.000)	0.37	0.84
2	0.00	434	12.81	-0.27	-16.54(.000)	-0.70	0.84
3	0.00	403	11.89	-0.25	-15.13(.000)	-0.67	0.83
4	0.00	385	11.36	-0.16	-9.20(.000)	-0.47	0.87
7	0.00	2	0.06	-0.06	-3.45(.001)	-2.50	1.52
9	0.00	51	1.50	-0.12	-7.10(.000)	-0.95	0.99

Item 20
----
item:20 (R9Q20)
Cases for this item 3389 Item-Rest Cor. 0.62 Item-Total Cor. 0.65
Item Threshold(s): -0.77 Weighted MNSQ 0.78
Item Delta(s): -0.77

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1113	32.84	-0.60	-43.90(.000)	-0.83	0.84
1	1.00	2237	66.01	0.62	45.72(.000)	0.42	0.74
9	0.00	39	1.15	-0.09	-5.36(.000)	-0.85	0.96

Item 21
----
item:21 (R9Q21)
Cases for this item 3389 Item-Rest Cor. 0.39 Item-Total Cor. 0.44
Item Threshold(s): -0.49 Weighted MNSQ 1.00
Item Delta(s): -0.49

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	321	9.47	-0.27	-16.27(.000)	-0.82	0.82
2	0.00	321	9.47	-0.22	-13.31(.000)	-0.66	0.94
3	0.00	691	20.39	-0.11	-6.28(.000)	-0.25	0.90
4	1.00	2047	60.40	0.39	24.84(.000)	0.31	0.87
7	0.00	2	0.06	-0.07	-3.97(.000)	-2.52	1.49
9	0.00	7	0.21	-0.07	-3.81(.000)	-1.59	0.87

Item 22
----
item:22 (R9Q22)
Cases for this item 3388 Item-Rest Cor. 0.29 Item-Total Cor. 0.35
Item Threshold(s): 0.51 Weighted MNSQ 1.06
Item Delta(s): 0.51

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	903	26.65	-0.20	-11.68(.000)	-0.35	0.93
2	0.00	280	8.26	-0.21	-12.38(.000)	-0.62	1.02
3	1.00	1353	39.94	0.29	17.93(.000)	0.37	0.91
4	0.00	838	24.73	0.01	0.48(.633)	-0.03	0.86
7	0.00	6	0.18	-0.03	-1.98(.048)	-0.65	1.63
9	0.00	8	0.24	-0.04	-2.43(.015)	-1.01	0.79

Item 23
----
item:23 (R9Q23)
Cases for this item 3387 Item-Rest Cor. 0.11 Item-Total Cor. 0.16
Item Threshold(s): 0.85 Weighted MNSQ 1.20
Item Delta(s): 0.85

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	87	2.57	-0.19	-11.09(.000)	-1.09	0.87
2	1.00	1125	33.22	0.11	6.20(.000)	0.20	0.96
3	0.00	1937	57.19	0.10	5.73(.000)	0.04	0.89
4	0.00	220	6.50	-0.26	-15.73(.000)	-0.96	0.95
7	0.00	4	0.12	-0.08	-4.54(.000)	-1.87	1.19
9	0.00	14	0.41	-0.03	-1.60(.111)	-0.61	1.16

Item 24
----
item:24 (R9Q24)
Cases for this item 3387 Item-Rest Cor. 0.38 Item-Total Cor. 0.42
Item Threshold(s): -0.98 Weighted MNSQ 1.00
Item Delta(s): -0.98

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	491	14.50	-0.18	-10.56(.000)	-0.51	0.84
2	0.00	339	10.01	-0.26	-15.85(.000)	-0.81	0.98
3	1.00	2365	69.83	0.38	23.57(.000)	0.25	0.88
4	0.00	164	4.84	-0.12	-6.78(.000)	-0.47	0.86
7	0.00	2	0.06	-0.05	-2.70(.007)	-1.82	2.49
9	0.00	26	0.77	-0.05	-3.08(.002)	-0.72	1.08

Item 25
----
item:25 (R9Q25)
Cases for this item 3385 Item-Rest Cor. 0.27 Item-Total Cor. 0.33
Item Threshold(s): -0.71 Weighted MNSQ 1.10
Item Delta(s): -0.71

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	513	15.16	-0.10	-5.88(.000)	-0.31	0.93
2	0.00	549	16.22	-0.15	-9.04(.000)	-0.37	0.99
3	1.00	2196	64.87	0.27	16.50(.000)	0.21	0.89
4	0.00	115	3.40	-0.17	-10.28(.000)	-0.89	0.96
7	0.00	1	0.03	-0.06	-3.65(.000)	-3.58	0.00
9	0.00	11	0.32	-0.09	-5.07(.000)	-1.61	0.97

Item 26
----
item:26 (R9Q26)
Cases for this item 3384 Item-Rest Cor. 0.48 Item-Total Cor. 0.52
Item Threshold(s): -1.32 Weighted MNSQ 0.91
Item Delta(s): -1.32

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	446	13.18	-0.29	-17.68(.000)	-0.72	0.78
2	1.00	2554	75.47	0.48	31.67(.000)	0.26	0.87
3	0.00	101	2.98	-0.22	-13.39(.000)	-1.25	0.93
4	0.00	256	7.57	-0.24	-14.18(.000)	-0.81	0.75
7	0.00	15	0.44	-0.04	-2.30(.021)	-0.71	1.22
9	0.00	12	0.35	-0.07	-3.85(.000)	-1.28	0.91

Item 27
----
item:27 (R9Q27)
Cases for this item 3384 Item-Rest Cor. 0.39 Item-Total Cor. 0.44
Item Threshold(s): -0.72 Weighted MNSQ 0.99
Item Delta(s): -0.72

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	278	8.22	-0.30	-18.33(.000)	-0.93	0.85
2	0.00	722	21.34	-0.12	-6.94(.000)	-0.27	0.85
3	0.00	171	5.05	-0.24	-14.09(.000)	-0.98	0.88
4	1.00	2199	64.98	0.39	24.95(.000)	0.28	0.87
7	0.00	3	0.09	-0.06	-3.55(.000)	-2.10	1.56
9	0.00	11	0.33	-0.06	-3.63(.000)	-1.20	1.23

Item 28
----
item:28 (R9Q28)
Cases for this item 3381 Item-Rest Cor. 0.18 Item-Total Cor. 0.23
Item Threshold(s): 0.27 Weighted MNSQ 1.18
Item Delta(s): 0.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	332	9.82	-0.14	-8.43(.000)	-0.43	1.02
2	0.00	1346	39.81	0.01	0.47(.638)	-0.05	0.90
3	0.00	179	5.29	-0.21	-12.37(.000)	-0.82	0.97
4	1.00	1516	44.84	0.18	10.41(.000)	0.23	0.92
7	0.00	2	0.06	-0.07	-4.13(.000)	-2.92	0.93
9	0.00	6	0.18	-0.01	-0.78(.438)	-0.50	1.01

Item 29
----
item:29 (R9Q29)
Cases for this item 3381 Item-Rest Cor. 0.26 Item-Total Cor. 0.31
Item Threshold(s): -0.09 Weighted MNSQ 1.11
Item Delta(s): -0.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1772	52.41	0.26	15.37(.000)	0.27	0.89
2	0.00	723	21.38	-0.24	-14.52(.000)	-0.47	0.85
3	0.00	548	16.21	-0.17	-9.93(.000)	-0.41	0.94
4	0.00	331	9.79	0.12	7.32(.000)	0.28	1.04
7	0.00	1	0.03	-0.06	-3.67(.000)	-3.58	0.00
9	0.00	6	0.18	-0.05	-3.20(.001)	-1.32	0.60

Item 30
----
item:30 (R9Q30)
Cases for this item 3381 Item-Rest Cor. 0.16 Item-Total Cor. 0.22
Item Threshold(s): 0.22 Weighted MNSQ 1.19
Item Delta(s): 0.22

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	408	12.07	-0.15	-9.07(.000)	-0.41	1.01
2	0.00	642	18.99	0.06	3.37(.001)	0.07	1.02
3	0.00	746	22.06	-0.13	-7.39(.000)	-0.28	0.90
4	1.00	1556	46.02	0.16	9.66(.000)	0.21	0.90
7	0.00	3	0.09	-0.03	-1.99(.047)	-0.87	2.35
9	0.00	26	0.77	-0.01	-0.61(.540)	-0.28	0.92

Item 31
----
item:31 (R9Q31)
Cases for this item 3380 Item-Rest Cor. 0.37 Item-Total Cor. 0.41
Item Threshold(s): -1.38 Weighted MNSQ 0.98
Item Delta(s): -1.38

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	138	4.08	-0.24	-14.10(.000)	-1.04	0.91
2	1.00	2585	76.48	0.37	22.92(.000)	0.20	0.87
3	0.00	401	11.86	-0.19	-11.47(.000)	-0.57	0.94
4	0.00	250	7.40	-0.17	-9.76(.000)	-0.58	1.06
7	0.00	2	0.06	-0.07	-4.11(.000)	-2.92	0.93
9	0.00	4	0.12	-0.04	-2.20(.028)	-0.98	1.11

Item 32
----
item:32 (R9Q32)
Cases for this item 3380 Item-Rest Cor. 0.36 Item-Total Cor. 0.41
Item Threshold(s): -0.43 Weighted MNSQ 1.02
Item Delta(s): -0.43

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2008	59.41	0.36	22.42(.000)	0.31	0.86
2	0.00	793	23.46	-0.20	-11.80(.000)	-0.39	0.90
3	0.00	299	8.85	-0.27	-16.61(.000)	-0.87	0.85
4	0.00	254	7.51	-0.04	-2.20(.028)	-0.16	1.00
7	0.00	3	0.09	-0.03	-1.62(.105)	-0.87	2.46
9	0.00	23	0.68	-0.04	-2.56(.010)	-0.62	0.84

Item 33
----
item:33 (R9Q33)
Cases for this item 3377 Item-Rest Cor. 0.48 Item-Total Cor. 0.53
Item Threshold(s): 0.35 Weighted MNSQ 0.90
Item Delta(s): 0.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1906	56.44	-0.47	-31.22(.000)	-0.42	0.88
1	1.00	1459	43.20	0.48	31.96(.000)	0.56	0.78
9	0.00	12	0.36	-0.07	-3.99(.000)	-1.29	0.86

Item 34
----
item:34 (R9Q34)
Cases for this item 3376 Item-Rest Cor. 0.32 Item-Total Cor. 0.37
Item Threshold(s): 1.76 Weighted MNSQ 0.96
Item Delta(s): 1.76

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2698	79.92	-0.28	-16.70(.000)	-0.15	0.93
1	1.00	623	18.45	0.32	19.94(.000)	0.71	0.77
9	0.00	55	1.63	-0.12	-7.04(.000)	-0.84	0.99

Item 35
----
item:35 (R9Q35)
Cases for this item 3376 Item-Rest Cor. 0.57 Item-Total Cor. 0.61
Item Threshold(s): -0.72 Weighted MNSQ 0.83
Item Delta(s): -0.72

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	348	10.31	-0.24	-14.20(.000)	-0.65	0.88
2	0.00	589	17.45	-0.33	-20.25(.000)	-0.69	0.78
3	0.00	209	6.19	-0.29	-17.33(.000)	-1.01	0.81
4	1.00	2201	65.20	0.57	40.45(.000)	0.39	0.79
7	0.00	3	0.09	-0.03	-2.00(.046)	-1.33	1.99
9	0.00	26	0.77	-0.06	-3.46(.001)	-0.67	0.83

Item 36
----
item:36 (R9Q36)
Cases for this item 3374 Item-Rest Cor. 0.42 Item-Total Cor. 0.47
Item Threshold(s): 0.74 Weighted MNSQ 0.94
Item Delta(s): 0.74

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2167	64.23	-0.42	-26.98(.000)	-0.32	0.91
1	1.00	1200	35.57	0.42	27.26(.000)	0.59	0.77
9	0.00	7	0.21	-0.03	-1.91(.057)	-0.59	0.59

Item 37
----
item:37 (R9Q37)
Cases for this item 3374 Item-Rest Cor. 0.33 Item-Total Cor. 0.39
Item Threshold(s): -0.57 Weighted MNSQ 1.04
Item Delta(s): -0.57

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	371	11.00	-0.35	-21.35(.000)	-0.89	0.72
2	1.00	2100	62.24	0.33	20.63(.000)	0.27	0.87
3	0.00	359	10.64	-0.21	-12.69(.000)	-0.63	0.93
4	0.00	527	15.62	0.04	2.43(.015)	-0.00	0.97
7	0.00	1	0.03	-0.06	-3.68(.000)	-3.58	0.00
9	0.00	16	0.47	-0.04	-2.19(.029)	-0.32	0.69

Item 38
----
item:38 (R9Q38)
Cases for this item 3372 Item-Rest Cor. 0.21 Item-Total Cor. 0.26
Item Threshold(s): 1.35 Weighted MNSQ 1.05
Item Delta(s): 1.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	827	24.53	0.21	12.49(.000)	0.44	1.02
2	0.00	835	24.76	-0.01	-0.76(.448)	-0.06	0.96
3	0.00	875	25.95	-0.15	-9.04(.000)	-0.26	0.85
4	0.00	817	24.23	-0.03	-1.78(.075)	-0.10	0.90
7	0.00	1	0.03	-0.06	-3.69(.000)	-3.58	0.00
9	0.00	17	0.50	-0.04	-2.61(.009)	-0.58	0.79

Item 39
----
item:39 (R9Q39)
Cases for this item 3371 Item-Rest Cor. 0.34 Item-Total Cor. 0.39
Item Threshold(s): -0.16 Weighted MNSQ 1.04
Item Delta(s): -0.16

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	680	20.17	-0.09	-5.02(.000)	-0.21	0.91
2	0.00	282	8.37	-0.20	-11.65(.000)	-0.63	0.95
3	0.00	579	17.18	-0.20	-11.86(.000)	-0.45	0.89
4	1.00	1816	53.87	0.34	20.82(.000)	0.33	0.88
7	0.00	2	0.06	-0.03	-1.86(.062)	-1.41	1.20
9	0.00	12	0.36	-0.05	-2.85(.004)	-0.73	1.28

Item 40
----
item:40 (R9Q40)
Cases for this item 3369 Item-Rest Cor. 0.27 Item-Total Cor. 0.32
Item Threshold(s): 0.08 Weighted MNSQ 1.10
Item Delta(s): 0.08

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	607	18.02	-0.15	-8.69(.000)	-0.34	0.90
2	0.00	366	10.86	-0.26	-15.87(.000)	-0.72	0.92
3	1.00	1650	48.98	0.27	16.14(.000)	0.31	0.93
4	0.00	728	21.61	0.02	1.21(.226)	-0.03	0.83
9	0.00	18	0.53	-0.05	-2.82(.005)	-0.63	1.28

Item 41
----
item:41 (R9Q41)
Cases for this item 3368 Item-Rest Cor. 0.41 Item-Total Cor. 0.46
Item Threshold(s): -0.81 Weighted MNSQ 0.98
Item Delta(s): -0.81

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2253	66.89	0.41	26.13(.000)	0.29	0.87
2	0.00	316	9.38	-0.24	-14.20(.000)	-0.73	0.91
3	0.00	687	20.40	-0.20	-11.54(.000)	-0.41	0.86
4	0.00	96	2.85	-0.24	-14.28(.000)	-1.23	0.78
7	0.00	2	0.06	-0.01	-0.70(.483)	-0.75	1.62
9	0.00	14	0.42	-0.08	-4.74(.000)	-1.17	1.22

Item 42
----
item:42 (R9Q42)
Cases for this item 3368 Item-Rest Cor. 0.24 Item-Total Cor. 0.29
Item Threshold(s): 1.28 Weighted MNSQ 1.05
Item Delta(s): 1.28

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	134	3.98	-0.25	-15.10(.000)	-1.08	0.74
2	0.00	1556	46.20	-0.07	-4.12(.000)	-0.10	0.90
3	1.00	866	25.71	0.24	14.03(.000)	0.47	0.93
4	0.00	805	23.90	-0.04	-2.07(.039)	-0.10	0.94
9	0.00	7	0.21	-0.07	-3.84(.000)	-1.30	1.35

Item 43
----
item:43 (R9Q43)
Cases for this item 3367 Item-Rest Cor. 0.11 Item-Total Cor. 0.15
Item Threshold(s): 1.94 Weighted MNSQ 1.10
Item Delta(s): 1.94

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1439	42.74	0.04	2.42(.016)	0.03	0.95
2	1.00	544	16.16	0.11	6.23(.000)	0.32	0.99
3	0.00	929	27.59	-0.16	-9.58(.000)	-0.25	0.91
4	0.00	443	13.16	0.04	2.44(.015)	0.07	1.00
9	0.00	12	0.36	-0.02	-1.25(.210)	-0.23	1.42

Item 44
----
item:44 (R9Q44)
Cases for this item 3366 Item-Rest Cor. 0.31 Item-Total Cor. 0.37
Item Threshold(s): -0.37 Weighted MNSQ 1.07
Item Delta(s): -0.37

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	199	5.91	-0.28	-17.12(.000)	-1.04	0.88
2	1.00	1964	58.35	0.31	19.02(.000)	0.27	0.88
3	0.00	674	20.02	-0.14	-8.23(.000)	-0.30	0.92
4	0.00	518	15.39	-0.08	-4.50(.000)	-0.22	0.93
7	0.00	1	0.03	-0.03	-1.94(.053)	-1.98	0.00
9	0.00	10	0.30	-0.04	-2.35(.019)	-0.56	1.22

Item 45
----
item:45 (R9Q45)
Cases for this item 3362 Item-Rest Cor. 0.46 Item-Total Cor. 0.51
Item Threshold(s): -0.35 Weighted MNSQ 0.93
Item Delta(s): -0.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1947	57.91	0.46	30.08(.000)	0.39	0.83
2	0.00	584	17.37	-0.12	-7.28(.000)	-0.30	0.95
3	0.00	572	17.01	-0.33	-20.11(.000)	-0.69	0.77
4	0.00	234	6.96	-0.20	-12.06(.000)	-0.72	0.84
7	0.00	1	0.03	-0.04	-2.33(.020)	-2.55	0.00
9	0.00	24	0.71	-0.05	-3.10(.002)	-0.58	1.09

Item 46
----
item:46 (R9Q46)
Cases for this item 3360 Item-Rest Cor. 0.38 Item-Total Cor. 0.43
Item Threshold(s): 0.09 Weighted MNSQ 0.99
Item Delta(s): 0.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	325	9.67	-0.32	-19.64(.000)	-0.90	0.78
2	0.00	928	27.62	-0.08	-4.52(.000)	-0.17	0.85
3	1.00	1642	48.87	0.38	23.96(.000)	0.41	0.85
4	0.00	448	13.33	-0.17	-10.15(.000)	-0.44	0.96
7	0.00	2	0.06	-0.04	-2.51(.012)	-1.70	0.06
9	0.00	15	0.45	-0.03	-1.46(.144)	-0.33	1.08

Item 47
----
item:47 (R9Q47)
Cases for this item 3358 Item-Rest Cor. 0.52 Item-Total Cor. 0.57
Item Threshold(s): -0.01 Weighted MNSQ 0.87
Item Delta(s): -0.01

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	535	15.93	-0.20	-11.83(.000)	-0.48	0.91
2	0.00	480	14.29	-0.23	-13.80(.000)	-0.55	0.86
3	0.00	620	18.46	-0.27	-15.97(.000)	-0.53	0.75
4	1.00	1707	50.83	0.52	35.56(.000)	0.51	0.80
7	0.00	4	0.12	-0.07	-4.15(.000)	-2.16	1.39
9	0.00	12	0.36	-0.03	-1.52(.128)	-0.32	0.85

Item 48
----
item:48 (R9Q48)
Cases for this item 3349 Item-Rest Cor. 0.34 Item-Total Cor. 0.39
Item Threshold(s): 0.07 Weighted MNSQ 1.03
Item Delta(s): 0.07

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1652	49.33	0.34	20.83(.000)	0.36	0.89
2	0.00	595	17.77	-0.37	-22.97(.000)	-0.74	0.87
3	0.00	827	24.69	-0.02	-1.14(.253)	-0.08	0.88
4	0.00	261	7.79	-0.06	-3.54(.000)	-0.23	0.77
7	0.00	2	0.06	-0.06	-3.21(.001)	-2.09	2.11
9	0.00	12	0.36	-0.03	-1.97(.049)	-0.66	0.52

Item 49
----
item:49 (R9Q49)
Cases for this item 3344 Item-Rest Cor. 0.34 Item-Total Cor. 0.38
Item Threshold(s): 1.40 Weighted MNSQ 0.97
Item Delta(s): 1.40

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2541	75.99	-0.33	-20.50(.000)	-0.19	0.94
1	1.00	795	23.77	0.34	20.80(.000)	0.63	0.79
9	0.00	8	0.24	-0.03	-1.57(.118)	-0.45	1.07

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 0.50% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	3400
Mean	30.05
Standard Deviation	8.29
Variance	68.71
Skewness	-0.48
Kurtosis	-0.34
Standard error of mean	0.14
Standard error of measurement	2.90
Coefficient Alpha	0.88

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B.5. Year 3 Spelling

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================================================================================
NAPLAN 2017 Spelling 3 - Item Calibration Calibration SamplFri Jun 23 12:49 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (S3Q01)
Cases for this item    4678   Item-Rest Cor.  0.51   Item-Total Cor.  0.56
Item Threshold(s):    -2.87   Weighted MNSQ   1.00
Item Delta(s):        -2.87
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      770      16.46   -0.50   -39.20(.000) -3.07     1.87
   1       1.00     3878      82.90    0.51    40.91(.000)  0.64     2.05
   9       0.00       30       0.64   -0.11    -7.65(.000) -4.44     1.55
================================================================================

Item 2
------
item:2 (S3Q02)
Cases for this item    4678   Item-Rest Cor.  0.46   Item-Total Cor.  0.50
Item Threshold(s):    -3.33   Weighted MNSQ   1.03
Item Delta(s):        -3.33
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      601      12.85   -0.44   -33.39(.000) -3.21     2.01
   1       1.00     4039      86.34    0.46    35.24(.000)  0.51     2.12
   9       0.00       38       0.81   -0.12    -8.03(.000) -3.85     2.02
================================================================================

Item 3
------
item:3 (S3Q03)
Cases for this item    4671   Item-Rest Cor.  0.61   Item-Total Cor.  0.66
Item Threshold(s):    -1.72   Weighted MNSQ   0.94
Item Delta(s):        -1.72
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00     1207      25.84   -0.58   -48.44(.000) -2.49     1.82
   1       1.00     3369      72.13    0.61    53.11(.000)  0.98     1.90
   9       0.00       95       2.03   -0.16   -10.79(.000) -3.12     2.18
================================================================================

Item 4
------
item:4 (S3Q04)
Cases for this item    4666   Item-Rest Cor.  0.61   Item-Total Cor.  0.66
Item Threshold(s):    -0.91   Weighted MNSQ   1.04
Item Delta(s):        -0.91
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00     1690      36.22   -0.60   -50.65(.000) -1.96     1.95
   1       1.00     2921      62.60    0.62    53.39(.000)  1.20     1.89
   9       0.00       55       1.18   -0.11    -7.44(.000) -2.89     2.05
================================================================================

Item 5
------
item:5 (S3Q05)
Cases for this item    4661   Item-Rest Cor.  0.55   Item-Total Cor.  0.60
Item Threshold(s):    -2.17   Weighted MNSQ   1.00
Item Delta(s):        -2.17
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00     1006      21.58   -0.52   -41.42(.000) -2.59     1.95
   1       1.00     3584      76.89    0.55    45.33(.000)  0.82     1.97
   9       0.00       71       1.52   -0.16   -11.16(.000) -3.91     1.78
================================================================================
```

Item 6
------
item:6 (S3Q06)
Cases for this item 4652 Item-Rest Cor. 0.61 Item-Total Cor. 0.66
Item Threshold(s): 0.54 Weighted MNSQ 1.08
Item Delta(s): 0.53

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2485	53.42	-0.55	-45.29(.000)	-1.25	1.99
1	1.00	2029	43.62	0.61	52.87(.000)	1.75	1.79
9	0.00	138	2.97	-0.16	-11.35(.000)	-2.57	2.16

Item 7
------
item:7 (S3Q07)
Cases for this item 4646 Item-Rest Cor. 0.62 Item-Total Cor. 0.66
Item Threshold(s): 0.11 Weighted MNSQ 1.07
Item Delta(s): 0.11

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2230	48.00	-0.57	-46.93(.000)	-1.41	1.99
1	1.00	2294	49.38	0.62	53.31(.000)	1.55	1.81
9	0.00	122	2.63	-0.15	-10.64(.000)	-2.58	2.30

Item 8
------
item:8 (S3Q08)
Cases for this item 4640 Item-Rest Cor. 0.62 Item-Total Cor. 0.67
Item Threshold(s): -0.43 Weighted MNSQ 1.05
Item Delta(s): -0.43

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1930	41.59	-0.59	-49.80(.000)	-1.69	1.92
1	1.00	2627	56.62	0.62	54.48(.000)	1.38	1.85
9	0.00	83	1.79	-0.14	-9.68(.000)	-2.90	2.17

Item 9
------
item:9 (S3Q09)
Cases for this item 4638 Item-Rest Cor. 0.65 Item-Total Cor. 0.69
Item Threshold(s): 1.31 Weighted MNSQ 0.90
Item Delta(s): 1.31

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2946	63.52	-0.58	-48.99(.000)	-1.01	1.94
1	1.00	1562	33.68	0.65	58.57(.000)	2.21	1.67
9	0.00	130	2.80	-0.16	-11.32(.000)	-2.71	2.34

Item 10
----
item:10 (S3Q10)
Cases for this item 4628 Item-Rest Cor. 0.61 Item-Total Cor. 0.66
Item Threshold(s): 0.05 Weighted MNSQ 1.08
Item Delta(s): 0.05

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2064	44.60	-0.53	-42.28(.000)	-1.41	1.97
1	1.00	2329	50.32	0.61	52.99(.000)	1.55	1.81
9	0.00	235	5.08	-0.20	-14.20(.000)	-2.30	2.10

Item 11
----
item:11 (S3Q11)
Cases for this item 4615 Item-Rest Cor. 0.53 Item-Total Cor. 0.57
Item Threshold(s): 2.08 Weighted MNSQ 1.10
Item Delta(s): 2.08

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2980	64.57	-0.32	-22.92(.000)	-0.55	2.08
1	1.00	1145	24.81	0.53	42.06(.000)	2.35	1.82
9	0.00	490	10.62	-0.24	-16.93(.000)	-1.75	2.06

Item 12
----
item:12 (S3Q12)
Cases for this item 4585 Item-Rest Cor. 0.60 Item-Total Cor. 0.65
Item Threshold(s): -1.50 Weighted MNSQ 0.98
Item Delta(s): -1.50

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1248	27.22	-0.56	-45.85(.000)	-2.21	1.86
1	1.00	3237	70.60	0.60	50.92(.000)	1.04	1.89
9	0.00	100	2.18	-0.17	-11.40(.000)	-3.08	1.91

Item 13
----
item:13 (S3Q13)
Cases for this item 4562 Item-Rest Cor. 0.64 Item-Total Cor. 0.68
Item Threshold(s): -1.50 Weighted MNSQ 0.86
Item Delta(s): -1.50

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1238	27.14	-0.60	-50.76(.000)	-2.31	1.73
1	1.00	3229	70.78	0.64	56.90(.000)	1.11	1.83
9	0.00	95	2.08	-0.18	-12.44(.000)	-3.30	1.78

Item 14
----
item:14 (S3Q14)
Cases for this item 4539 Item-Rest Cor. 0.63 Item-Total Cor. 0.68
Item Threshold(s): -0.34 Weighted MNSQ 1.01
Item Delta(s): -0.34

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1606	35.38	-0.53	-42.07(.000)	-1.60	1.91
1	1.00	2565	56.51	0.63	54.83(.000)	1.45	1.80
9	0.00	368	8.11	-0.22	-15.09(.000)	-1.83	1.82

Item 15
----
item:15 (S3Q15)
Cases for this item 4495 Item-Rest Cor. 0.60 Item-Total Cor. 0.65
Item Threshold(s): -0.90 Weighted MNSQ 1.04
Item Delta(s): -0.90

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1468	32.66	-0.55	-43.71(.000)	-1.78	1.93
1	1.00	2887	64.23	0.60	50.44(.000)	1.24	1.84
9	0.00	140	3.11	-0.18	-12.60(.000)	-2.53	1.95

Item 16
----
item:16 (S3Q16)
Cases for this item 4479 Item-Rest Cor. 0.65 Item-Total Cor. 0.69
Item Threshold(s): 0.42 Weighted MNSQ 0.97
Item Delta(s): 0.42

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2192	48.94	-0.57	-46.40(.000)	-1.23	1.90
1	1.00	2092	46.71	0.65	56.80(.000)	1.79	1.70
9	0.00	195	4.35	-0.19	-12.68(.000)	-2.06	1.90

Item 17
----
item:17 (S3Q17)
Cases for this item 4456 Item-Rest Cor. 0.62 Item-Total Cor. 0.67
Item Threshold(s): 0.48 Weighted MNSQ 1.03
Item Delta(s): 0.48

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2236	50.18	-0.55	-43.91(.000)	-1.13	1.95
1	1.00	2053	46.07	0.62	53.03(.000)	1.76	1.73
9	0.00	167	3.75	-0.19	-12.61(.000)	-2.21	1.87

Item 18
----
item:18 (S3Q18)
Cases for this item 4428 Item-Rest Cor. 0.64 Item-Total Cor. 0.68
Item Threshold(s): 0.53 Weighted MNSQ 0.99
Item Delta(s): 0.53

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2231	50.38	-0.56	-44.79(.000)	-1.13	1.89
1	1.00	2018	45.57	0.64	55.22(.000)	1.83	1.73
9	0.00	179	4.04	-0.20	-13.39(.000)	-2.12	1.81

Item 19
----
item:19 (S3Q19)
Cases for this item 4402 Item-Rest Cor. 0.56 Item-Total Cor. 0.61
Item Threshold(s): 2.54 Weighted MNSQ 0.91
Item Delta(s): 2.54

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3066	69.65	-0.38	-26.99(.000)	-0.42	2.01
1	1.00	928	21.08	0.56	45.30(.000)	2.85	1.58
9	0.00	408	9.27	-0.20	-13.23(.000)	-1.26	1.88

Item 20
----
item:20 (S3Q20)
Cases for this item 4364 Item-Rest Cor. 0.54 Item-Total Cor. 0.58
Item Threshold(s): 2.92 Weighted MNSQ 0.90
Item Delta(s): 2.92

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3159	72.39	-0.36	-25.21(.000)	-0.33	2.05
1	1.00	768	17.60	0.54	41.85(.000)	3.04	1.57
9	0.00	437	10.01	-0.15	-9.87(.000)	-0.85	1.97

Item 21
----
item:21 (S3Q21)
Cases for this item 4336 Item-Rest Cor. 0.43 Item-Total Cor. 0.48
Item Threshold(s): 3.22 Weighted MNSQ 1.11
Item Delta(s): 3.22

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3584	82.66	-0.36	-25.34(.000)	-0.19	2.12
1	1.00	657	15.15	0.43	31.77(.000)	2.79	1.79
9	0.00	95	2.19	-0.14	-9.00(.000)	-2.17	2.41

Item 22
----
item:22 (S3Q22)
Cases for this item 4285 Item-Rest Cor. 0.56 Item-Total Cor. 0.60
Item Threshold(s): 2.78 Weighted MNSQ 0.87
Item Delta(s): 2.78

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3240	75.61	-0.43	-31.23(.000)	-0.33	2.00
1	1.00	824	19.23	0.56	44.68(.000)	3.02	1.48
9	0.00	221	5.16	-0.17	-11.20(.000)	-1.44	1.83

Item 23
----
item:23 (S3Q23)
Cases for this item 4177 Item-Rest Cor. 0.45 Item-Total Cor. 0.49
Item Threshold(s): 3.22 Weighted MNSQ 1.07
Item Delta(s): 3.22

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3216	76.99	-0.34	-23.10(.000)	-0.14	2.13
1	1.00	654	15.66	0.45	32.49(.000)	2.88	1.74
9	0.00	307	7.35	-0.08	-5.36(.000)	-0.45	1.98

Item 24
----
item:24 (S3Q24)
Cases for this item 4080 Item-Rest Cor. 0.42 Item-Total Cor. 0.45
Item Threshold(s): 4.04 Weighted MNSQ 0.98
Item Delta(s): 4.04

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3517	86.20	-0.33	-22.38(.000)	-0.01	2.15
1	1.00	410	10.05	0.42	29.24(.000)	3.48	1.58
9	0.00	153	3.75	-0.06	-3.74(.000)	-0.32	2.06

Item 25
----
item:25 (S3Q25)
Cases for this item 4002 Item-Rest Cor. 0.44 Item-Total Cor. 0.48
Item Threshold(s): 3.81 Weighted MNSQ 0.95
Item Delta(s): 3.81

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3298	82.41	-0.34	-23.11(.000)	-0.05	2.13
1	1.00	464	11.59	0.44	31.26(.000)	3.43	1.57
9	0.00	240	6.00	-0.05	-2.99(.003)	-0.06	1.94

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 3.92% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	4678
Mean	11.42
Standard Deviation	6.70
Variance	44.89
Skewness	0.05
Kurtosis	-0.95
Standard error of mean	0.10
Standard error of measurement	1.84
Coefficient Alpha	0.92

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B.6. Year 5 Spelling

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================================================================================
NAPLAN 2017 Spelling 5 - Item Calibration Calibration SamplFri Jun 23 12:51 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (S5Q01)
Cases for this item    4728   Item-Rest Cor.  0.45   Item-Total Cor.  0.49
Item Threshold(s):    -3.48   Weighted MNSQ   0.92
Item Delta(s):        -3.48
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      480      10.15   -0.43   -32.89(.000) -3.09     1.75
   1       1.00     4228      89.42    0.45    34.22(.000)  0.39     1.84
   9       0.00       20       0.42   -0.10    -7.12(.000) -3.94     1.38
================================================================================

Item 2
------
item:2 (S5Q02)
Cases for this item    4728   Item-Rest Cor.  0.59   Item-Total Cor.  0.64
Item Threshold(s):    -1.56   Weighted MNSQ   0.96
Item Delta(s):        -1.56
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00     1249      26.42   -0.57   -47.32(.000) -2.03     1.69
   1       1.00     3415      72.23    0.59    50.57(.000)  0.82     1.67
   9       0.00       64       1.35   -0.13    -9.26(.000) -2.92     2.06
================================================================================

Item 3
------
item:3 (S5Q03)
Cases for this item    4722   Item-Rest Cor.  0.41   Item-Total Cor.  0.45
Item Threshold(s):    -3.86   Weighted MNSQ   0.89
Item Delta(s):        -3.86
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      368       7.79   -0.39   -29.36(.000) -3.30     1.80
   1       1.00     4327      91.63    0.41    30.84(.000)  0.33     1.87
   9       0.00       27       0.57   -0.11    -7.37(.000) -3.64     1.71
================================================================================

Item 4
------
item:4 (S5Q04)
Cases for this item    4719   Item-Rest Cor.  0.41   Item-Total Cor.  0.46
Item Threshold(s):    -2.69   Weighted MNSQ   1.14
Item Delta(s):        -2.69
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      704      14.92   -0.39   -28.81(.000) -2.23     2.04
   1       1.00     3954      83.79    0.41    31.28(.000)  0.47     1.82
   9       0.00       61       1.29   -0.13    -9.18(.000) -3.09     2.05
================================================================================

Item 5
------
item:5 (S5Q05)
Cases for this item    4712   Item-Rest Cor.  0.60   Item-Total Cor.  0.64
Item Threshold(s):    -1.26   Weighted MNSQ   0.97
Item Delta(s):        -1.26
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00     1406      29.84   -0.57   -47.28(.000) -1.85     1.72
   1       1.00     3235      68.65    0.60    51.33(.000)  0.91     1.63
   9       0.00       71       1.51   -0.15   -10.40(.000) -3.02     1.98
================================================================================
```

Item 6
------
item:6 (S5Q06)
Cases for this item 4711 Item-Rest Cor. 0.66 Item-Total Cor. 0.70
Item Threshold(s): -1.15 Weighted MNSQ 0.83
Item Delta(s): -1.15

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1462	31.03	-0.63	-55.41(.000)	-1.95	1.57
1	1.00	3169	67.27	0.66	60.67(.000)	1.02	1.54
9	0.00	80	1.70	-0.16	-10.84(.000)	-3.00	2.10

Item 7
------
item:7 (S5Q07)
Cases for this item 4707 Item-Rest Cor. 0.53 Item-Total Cor. 0.59
Item Threshold(s): -0.79 Weighted MNSQ 1.15
Item Delta(s): -0.79

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1685	35.80	-0.50	-40.06(.000)	-1.45	1.85
1	1.00	2938	62.42	0.53	43.15(.000)	0.95	1.68
9	0.00	84	1.78	-0.12	-8.43(.000)	-2.18	2.21

Item 8
------
item:8 (S5Q08)
Cases for this item 4706 Item-Rest Cor. 0.59 Item-Total Cor. 0.64
Item Threshold(s): -0.41 Weighted MNSQ 1.04
Item Delta(s): -0.41

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1936	41.14	-0.56	-45.79(.000)	-1.38	1.77
1	1.00	2683	57.01	0.59	50.29(.000)	1.14	1.59
9	0.00	87	1.85	-0.14	-10.03(.000)	-2.61	2.27

Item 9
------
item:9 (S5Q09)
Cases for this item 4702 Item-Rest Cor. 0.59 Item-Total Cor. 0.64
Item Threshold(s): 1.26 Weighted MNSQ 0.95
Item Delta(s): 1.26

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3043	64.72	-0.54	-44.11(.000)	-0.80	1.79
1	1.00	1546	32.88	0.59	50.69(.000)	1.83	1.42
9	0.00	113	2.40	-0.14	-9.36(.000)	-2.05	2.12

Item 10
----
item:10 (S5Q10)
Cases for this item 4700 Item-Rest Cor. 0.61 Item-Total Cor. 0.66
Item Threshold(s): 0.04 Weighted MNSQ 1.00
Item Delta(s): 0.04

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2196	46.72	-0.56	-46.36(.000)	-1.23	1.71
1	1.00	2376	50.55	0.61	53.36(.000)	1.34	1.55
9	0.00	128	2.72	-0.17	-11.79(.000)	-2.38	2.06

Item 11
----
item:11 (S5Q11)
Cases for this item 4695 Item-Rest Cor. 0.52 Item-Total Cor. 0.57
Item Threshold(s): 1.39 Weighted MNSQ 1.05
Item Delta(s): 1.39

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3101	66.05	-0.45	-34.64(.000)	-0.66	1.82
1	1.00	1465	31.20	0.52	41.79(.000)	1.73	1.59
9	0.00	129	2.75	-0.17	-11.72(.000)	-2.30	1.97

Item 12
----
item:12 (S5Q12)
Cases for this item 4681 Item-Rest Cor. 0.47 Item-Total Cor. 0.51
Item Threshold(s): 2.65 Weighted MNSQ 0.96
Item Delta(s): 2.65

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3783	80.82	-0.39	-28.62(.000)	-0.36	1.87
1	1.00	782	16.71	0.47	36.29(.000)	2.36	1.39
9	0.00	116	2.48	-0.15	-10.17(.000)	-2.11	2.20

Item 13
----
item:13 (S5Q13)
Cases for this item 4676 Item-Rest Cor. 0.54 Item-Total Cor. 0.58
Item Threshold(s): -2.58 Weighted MNSQ 0.87
Item Delta(s): -2.58

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	674	14.41	-0.49	-38.57(.000)	-2.62	1.61
1	1.00	3898	83.36	0.54	43.33(.000)	0.60	1.73
9	0.00	104	2.22	-0.18	-12.63(.000)	-2.82	1.66

Item 14
----
item:14 (S5Q14)
Cases for this item 4668 Item-Rest Cor. 0.55 Item-Total Cor. 0.60
Item Threshold(s): -1.09 Weighted MNSQ 1.08
Item Delta(s): -1.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1446	30.98	-0.51	-40.26(.000)	-1.60	1.77
1	1.00	3126	66.97	0.55	44.78(.000)	0.92	1.65
9	0.00	96	2.06	-0.16	-11.25(.000)	-2.69	2.01

Item 15
----
item:15 (S5Q15)
Cases for this item 4657 Item-Rest Cor. 0.66 Item-Total Cor. 0.70
Item Threshold(s): -0.04 Weighted MNSQ 0.90
Item Delta(s): -0.04

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2036	43.72	-0.58	-48.42(.000)	-1.27	1.65
1	1.00	2424	52.05	0.66	59.89(.000)	1.38	1.48
9	0.00	197	4.23	-0.21	-14.74(.000)	-2.23	1.75

Item 16
----
item:16 (S5Q16)
Cases for this item 4645 Item-Rest Cor. 0.61 Item-Total Cor. 0.66
Item Threshold(s): 0.30 Weighted MNSQ 0.99
Item Delta(s): 0.30

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2191	47.17	-0.54	-43.46(.000)	-1.09	1.74
1	1.00	2188	47.10	0.61	52.40(.000)	1.43	1.53
9	0.00	266	5.73	-0.15	-10.65(.000)	-1.37	1.84

Item 17
----
item:17 (S5Q17)
Cases for this item 4639 Item-Rest Cor. 0.53 Item-Total Cor. 0.59
Item Threshold(s): 0.63 Weighted MNSQ 1.12
Item Delta(s): 0.63

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2272	48.98	-0.46	-35.13(.000)	-0.90	1.81
1	1.00	1964	42.34	0.53	42.94(.000)	1.42	1.62
9	0.00	403	8.69	-0.12	-8.38(.000)	-0.89	1.89

Item 18
----
item:18 (S5Q18)
Cases for this item 4628 Item-Rest Cor. 0.55 Item-Total Cor. 0.60
Item Threshold(s): 0.90 Weighted MNSQ 1.07
Item Delta(s): 0.90

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2775	59.96	-0.51	-39.92(.000)	-0.78	1.79
1	1.00	1780	38.46	0.55	45.14(.000)	1.57	1.53
9	0.00	73	1.58	-0.17	-11.63(.000)	-2.92	1.99

Item 19
----
item:19 (S5Q19)
Cases for this item 4615 Item-Rest Cor. 0.67 Item-Total Cor. 0.71
Item Threshold(s): -0.06 Weighted MNSQ 0.87
Item Delta(s): -0.06

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2040	44.20	-0.61	-51.80(.000)	-1.28	1.64
1	1.00	2435	52.76	0.67	61.11(.000)	1.39	1.45
9	0.00	140	3.03	-0.19	-13.21(.000)	-2.25	1.73

Item 20
----
item:20 (S5Q20)
Cases for this item 4584 Item-Rest Cor. 0.61 Item-Total Cor. 0.66
Item Threshold(s): 0.97 Weighted MNSQ 0.93
Item Delta(s): 0.97

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2591	56.52	-0.52	-40.72(.000)	-0.82	1.71
1	1.00	1728	37.70	0.61	52.26(.000)	1.75	1.44
9	0.00	265	5.78	-0.17	-11.96(.000)	-1.45	1.81

Item 21
----
item:21 (S5Q21)
Cases for this item 4549 Item-Rest Cor. 0.55 Item-Total Cor. 0.60
Item Threshold(s): 1.52 Weighted MNSQ 0.98
Item Delta(s): 1.52

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2744	60.32	-0.46	-35.19(.000)	-0.67	1.80
1	1.00	1376	30.25	0.55	44.53(.000)	1.91	1.47
9	0.00	429	9.43	-0.09	-6.21(.000)	-0.50	1.73

Item 22
----
item:22 (S5Q22)
Cases for this item 4507 Item-Rest Cor. 0.57 Item-Total Cor. 0.62
Item Threshold(s): 1.33 Weighted MNSQ 0.99
Item Delta(s): 1.33

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2880	63.90	-0.52	-40.53(.000)	-0.66	1.79
1	1.00	1491	33.08	0.57	46.57(.000)	1.82	1.42
9	0.00	136	3.02	-0.12	-7.90(.000)	-1.32	2.03

Item 23
----
item:23 (S5Q23)
Cases for this item 4475 Item-Rest Cor. 0.54 Item-Total Cor. 0.58
Item Threshold(s): 1.98 Weighted MNSQ 0.95
Item Delta(s): 1.98

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3059	68.36	-0.43	-31.64(.000)	-0.46	1.80
1	1.00	1105	24.69	0.54	42.62(.000)	2.16	1.38
9	0.00	311	6.95	-0.13	-8.71(.000)	-0.84	1.74

Item 24
----
item:24 (S5Q24)
Cases for this item 4363 Item-Rest Cor. 0.34 Item-Total Cor. 0.38
Item Threshold(s): 3.46 Weighted MNSQ 1.08
Item Delta(s): 3.46

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3651	83.68	-0.26	-17.74(.000)	-0.07	1.94
1	1.00	472	10.82	0.34	23.67(.000)	2.36	1.58
9	0.00	240	5.50	-0.04	-2.58(.010)	-0.17	2.02

Item 25
----
item:25 (S5Q25)
Cases for this item 4281 Item-Rest Cor. 0.25 Item-Total Cor. 0.30
Item Threshold(s): 3.15 Weighted MNSQ 1.30
Item Delta(s): 3.15

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3560	83.16	-0.18	-11.92(.000)	-0.01	1.99
1	1.00	565	13.20	0.25	16.99(.000)	1.78	1.77
9	0.00	156	3.64	-0.10	-6.31(.000)	-0.79	1.74

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 2.03% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	4728
Mean	12.52
Standard Deviation	6.50
Variance	42.27
Skewness	-0.08
Kurtosis	-0.96
Standard error of mean	0.09
Standard error of measurement	1.87
Coefficient Alpha	0.92

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B.7. Year 7 Spelling

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================================================================================
NAPLAN 2017 Spelling 7 - Item Calibration Calibration SamplFri Jun 23 12:52 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (S7Q01)
Cases for this item    3571   Item-Rest Cor.  0.42   Item-Total Cor.  0.46
Item Threshold(s):    -3.26   Weighted MNSQ   0.89
Item Delta(s):        -3.26
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      351       9.83   -0.41   -26.58(.000) -2.61     1.71
   1       1.00     3208      89.83    0.42    27.40(.000)  0.29     1.57
   9       0.00       12       0.34   -0.09    -5.15(.000) -3.10     1.78
================================================================================

Item 2
------
item:2 (S7Q02)
Cases for this item    3571   Item-Rest Cor.  0.39   Item-Total Cor.  0.43
Item Threshold(s):    -3.72   Weighted MNSQ   0.87
Item Delta(s):        -3.72
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      255       7.14   -0.37   -24.16(.000) -2.98     1.67
   1       1.00     3302      92.47    0.39    25.22(.000)  0.24     1.60
   9       0.00       14       0.39   -0.10    -5.86(.000) -3.59     1.55
================================================================================

Item 3
------
item:3 (S7Q03)
Cases for this item    3570   Item-Rest Cor.  0.59   Item-Total Cor.  0.65
Item Threshold(s):    -0.47   Weighted MNSQ   0.94
Item Delta(s):        -0.47
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00     1443      40.42   -0.57   -41.61(.000) -1.28     1.57
   1       1.00     2081      58.29    0.59    44.11(.000)  0.93     1.35
   9       0.00       46       1.29   -0.11    -6.61(.000) -1.83     1.66
================================================================================

Item 4
------
item:4 (S7Q04)
Cases for this item    3570   Item-Rest Cor.  0.60   Item-Total Cor.  0.65
Item Threshold(s):    -1.21   Weighted MNSQ   0.87
Item Delta(s):        -1.21
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00     1055      29.55   -0.58   -42.31(.000) -1.66     1.54
   1       1.00     2474      69.30    0.60    44.79(.000)  0.74     1.38
   9       0.00       41       1.15   -0.12    -7.33(.000) -2.23     1.54
================================================================================

Item 5
------
item:5 (S7Q05)
Cases for this item    3569   Item-Rest Cor.  0.54   Item-Total Cor.  0.60
Item Threshold(s):    -0.88   Weighted MNSQ   1.02
Item Delta(s):        -0.88
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00     1185      33.20   -0.50   -34.07(.000) -1.33     1.64
   1       1.00     2304      64.56    0.54    38.02(.000)  0.75     1.42
   9       0.00       80       2.24   -0.16    -9.61(.000) -2.09     1.48
================================================================================
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Item 6
------
item:6 (S7Q06)
Cases for this item 3568 Item-Rest Cor. 0.49 Item-Total Cor. 0.55
Item Threshold(s): -1.10 Weighted MNSQ 1.08
Item Delta(s): -1.10

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1111	31.14	-0.46	-31.32(.000)	-1.33	1.71
1	1.00	2417	67.74	0.49	33.83(.000)	0.66	1.45
9	0.00	40	1.12	-0.15	-8.80(.000)	-2.83	1.53

Item 7
------
item:7 (S7Q07)
Cases for this item 3568 Item-Rest Cor. 0.56 Item-Total Cor. 0.62
Item Threshold(s): 0.38 Weighted MNSQ 0.99
Item Delta(s): 0.38

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1906	53.42	-0.51	-35.40(.000)	-0.87	1.61
1	1.00	1598	44.79	0.56	40.11(.000)	1.14	1.33
9	0.00	64	1.79	-0.17	-10.47(.000)	-2.43	1.32

Item 8
------
item:8 (S7Q08)
Cases for this item 3567 Item-Rest Cor. 0.57 Item-Total Cor. 0.63
Item Threshold(s): 0.22 Weighted MNSQ 0.99
Item Delta(s): 0.22

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1813	50.83	-0.52	-36.77(.000)	-0.94	1.57
1	1.00	1691	47.41	0.57	41.25(.000)	1.10	1.36
9	0.00	63	1.77	-0.16	-9.96(.000)	-2.41	1.46

Item 9
------
item:9 (S7Q09)
Cases for this item 3566 Item-Rest Cor. 0.54 Item-Total Cor. 0.60
Item Threshold(s): -0.77 Weighted MNSQ 1.02
Item Delta(s): -0.77

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1155	32.39	-0.47	-31.68(.000)	-1.26	1.64
1	1.00	2249	63.07	0.54	38.68(.000)	0.78	1.41
9	0.00	162	4.54	-0.21	-12.61(.000)	-1.82	1.51

Item 10
----
item:10 (S7Q10)
Cases for this item 3564 Item-Rest Cor. 0.49 Item-Total Cor. 0.56
Item Threshold(s): 0.98 Weighted MNSQ 1.07
Item Delta(s): 0.98

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2184	61.28	-0.42	-27.75(.000)	-0.62	1.64
1	1.00	1259	35.33	0.49	33.97(.000)	1.26	1.34
9	0.00	121	3.40	-0.17	-10.39(.000)	-1.80	1.66

Item 11
----
item:11 (S7Q11)
Cases for this item 3564 Item-Rest Cor. 0.54 Item-Total Cor. 0.60
Item Threshold(s): 1.38 Weighted MNSQ 0.93
Item Delta(s): 1.38

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2458	68.97	-0.50	-34.66(.000)	-0.60	1.59
1	1.00	1050	29.46	0.54	38.57(.000)	1.53	1.28
9	0.00	56	1.57	-0.12	-7.32(.000)	-2.06	1.64

Item 12
----
item:12 (S7Q12)
Cases for this item 3564 Item-Rest Cor. 0.50 Item-Total Cor. 0.55
Item Threshold(s): 2.20 Weighted MNSQ 0.90
Item Delta(s): 2.20

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2803	78.65	-0.41	-27.15(.000)	-0.39	1.61
1	1.00	677	19.00	0.50	34.16(.000)	1.89	1.21
9	0.00	84	2.36	-0.17	-10.04(.000)	-1.99	1.58

Item 13
----
item:13 (S7Q13)
Cases for this item 3564 Item-Rest Cor. 0.27 Item-Total Cor. 0.32
Item Threshold(s): 3.67 Weighted MNSQ 1.06
Item Delta(s): 3.66

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3139	88.08	-0.08	-4.75(.000)	-0.06	1.72
1	1.00	253	7.10	0.27	17.05(.000)	1.95	1.46
9	0.00	172	4.83	-0.21	-12.76(.000)	-1.74	1.54

Item 14
----
item:14 (S7Q14)
Cases for this item 3564 Item-Rest Cor. 0.32 Item-Total Cor. 0.35
Item Threshold(s): -4.14 Weighted MNSQ 0.93
Item Delta(s): -4.14

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	184	5.16	-0.30	-18.60(.000)	-2.93	1.90
1	1.00	3366	94.44	0.32	19.96(.000)	0.18	1.64
9	0.00	14	0.39	-0.11	-6.54(.000)	-3.87	1.18

Item 15
----
item:15 (S7Q15)
Cases for this item 3560 Item-Rest Cor. 0.58 Item-Total Cor. 0.63
Item Threshold(s): -1.12 Weighted MNSQ 0.92
Item Delta(s): -1.12

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1025	28.79	-0.54	-37.94(.000)	-1.59	1.55
1	1.00	2426	68.15	0.58	42.15(.000)	0.76	1.38
9	0.00	109	3.06	-0.15	-9.07(.000)	-1.62	1.48

Item 16
---
item:16 (S7Q16)
Cases for this item 3551 Item-Rest Cor. 0.49 Item-Total Cor. 0.56
Item Threshold(s): -0.71 Weighted MNSQ 1.11
Item Delta(s): -0.71

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1129	31.79	-0.44	-29.02(.000)	-1.21	1.62
1	1.00	2213	62.32	0.49	33.82(.000)	0.76	1.47
9	0.00	209	5.89	-0.15	-9.04(.000)	-1.20	1.63

Item 17
---
item:17 (S7Q17)
Cases for this item 3540 Item-Rest Cor. 0.61 Item-Total Cor. 0.67
Item Threshold(s): 0.03 Weighted MNSQ 0.91
Item Delta(s): 0.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1638	46.27	-0.54	-38.61(.000)	-1.02	1.50
1	1.00	1794	50.68	0.61	46.33(.000)	1.11	1.30
9	0.00	108	3.05	-0.21	-12.64(.000)	-2.21	1.55

Item 18
---
item:18 (S7Q18)
Cases for this item 3521 Item-Rest Cor. 0.55 Item-Total Cor. 0.61
Item Threshold(s): 0.38 Weighted MNSQ 1.01
Item Delta(s): 0.38

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1754	49.82	-0.46	-30.55(.000)	-0.81	1.58
1	1.00	1592	45.21	0.55	38.75(.000)	1.15	1.32
9	0.00	175	4.97	-0.20	-12.04(.000)	-1.54	1.54

Item 19
---
item:19 (S7Q19)
Cases for this item 3513 Item-Rest Cor. 0.52 Item-Total Cor. 0.59
Item Threshold(s): 0.93 Weighted MNSQ 1.01
Item Delta(s): 0.93

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2033	57.87	-0.43	-28.23(.000)	-0.62	1.59
1	1.00	1286	36.61	0.52	36.54(.000)	1.29	1.34
9	0.00	194	5.52	-0.18	-10.67(.000)	-1.31	1.60

Item 20
---
item:20 (S7Q20)
Cases for this item 3507 Item-Rest Cor. 0.54 Item-Total Cor. 0.60
Item Threshold(s): 0.54 Weighted MNSQ 1.01
Item Delta(s): 0.54

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1834	52.30	-0.46	-30.90(.000)	-0.77	1.59
1	1.00	1500	42.77	0.54	38.22(.000)	1.20	1.30
9	0.00	173	4.93	-0.17	-10.33(.000)	-1.36	1.60

Item 21
----
item:21 (S7Q21)
Cases for this item 3497 Item-Rest Cor. 0.32 Item-Total Cor. 0.38
Item Threshold(s): 1.97 Weighted MNSQ 1.21
Item Delta(s): 1.97

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2573	73.58	-0.25	-15.10(.000)	-0.26	1.70
1	1.00	769	21.99	0.32	19.71(.000)	1.28	1.51
9	0.00	155	4.43	-0.11	-6.32(.000)	-0.90	1.52

Item 22
----
item:22 (S7Q22)
Cases for this item 3465 Item-Rest Cor. 0.43 Item-Total Cor. 0.49
Item Threshold(s): 2.17 Weighted MNSQ 1.01
Item Delta(s): 2.17

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2404	69.38	-0.30	-18.25(.000)	-0.30	1.69
1	1.00	685	19.77	0.43	28.36(.000)	1.68	1.30
9	0.00	376	10.85	-0.12	-6.93(.000)	-0.52	1.38

Item 23
----
item:23 (S7Q23)
Cases for this item 3427 Item-Rest Cor. 0.38 Item-Total Cor. 0.43
Item Threshold(s): 2.92 Weighted MNSQ 1.00
Item Delta(s): 2.92

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2830	82.58	-0.27	-16.10(.000)	-0.15	1.67
1	1.00	427	12.46	0.38	23.98(.000)	1.95	1.31
9	0.00	170	4.96	-0.11	-6.67(.000)	-0.76	1.53

Item 24
----
item:24 (S7Q24)
Cases for this item 3405 Item-Rest Cor. 0.37 Item-Total Cor. 0.43
Item Threshold(s): 2.40 Weighted MNSQ 1.06
Item Delta(s): 2.40

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2656	78.00	-0.27	-16.43(.000)	-0.19	1.67
1	1.00	595	17.47	0.37	23.38(.000)	1.63	1.43
9	0.00	154	4.52	-0.14	-8.22(.000)	-0.97	1.40

Item 25
----
item:25 (S7Q25)
Cases for this item 3333 Item-Rest Cor. 0.27 Item-Total Cor. 0.31
Item Threshold(s): 4.13 Weighted MNSQ 1.01
Item Delta(s): 4.13

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3030	90.91	-0.14	-8.41(.000)	0.02	1.70
1	1.00	174	5.22	0.27	16.14(.000)	2.35	1.45
9	0.00	129	3.87	-0.10	-5.55(.000)	-0.65	1.65

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 1.14% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	3571
Mean	11.65
Standard Deviation	5.73
Variance	32.81
Skewness	-0.02
Kurtosis	-0.80
Standard error of mean	0.10
Standard error of measurement	1.85
Coefficient Alpha	0.90

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B.8. Year 9 Spelling

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================================================================================
NAPLAN 2017 Spelling 9 - Item Calibration Calibration SamplFri Jun 23 12:54 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (S9Q01)
Cases for this item    3424   Item-Rest Cor.  0.40   Item-Total Cor.  0.45
Item Threshold(s):    -3.54   Weighted MNSQ   0.84
Item Delta(s):        -3.54
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      264       7.71   -0.38   -24.31(.000) -2.86     1.65
   1       1.00     3141      91.73    0.40    25.76(.000)  0.26     1.57
   9       0.00       19       0.55   -0.12    -6.81(.000) -3.16     1.39
================================================================================

Item 2
------
item:2 (S9Q02)
Cases for this item    3424   Item-Rest Cor.  0.51   Item-Total Cor.  0.57
Item Threshold(s):    -1.75   Weighted MNSQ   0.95
Item Delta(s):        -1.75
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      717      20.94   -0.47   -30.88(.000) -1.74     1.59
   1       1.00     2616      76.40    0.51    34.97(.000)  0.55     1.46
   9       0.00       91       2.66   -0.17   -10.31(.000) -2.27     1.63
================================================================================

Item 3
------
item:3 (S9Q03)
Cases for this item    3420   Item-Rest Cor.  0.56   Item-Total Cor.  0.62
Item Threshold(s):    -0.70   Weighted MNSQ   0.97
Item Delta(s):        -0.70
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00     1237      36.17   -0.52   -35.35(.000) -1.27     1.52
   1       1.00     2116      61.87    0.56    39.50(.000)  0.82     1.41
   9       0.00       67       1.96   -0.17    -9.99(.000) -2.51     1.54
================================================================================

Item 4
------
item:4 (S9Q04)
Cases for this item    3412   Item-Rest Cor.  0.53   Item-Total Cor.  0.59
Item Threshold(s):    -1.21   Weighted MNSQ   0.98
Item Delta(s):        -1.21
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      936      27.43   -0.47   -31.18(.000) -1.41     1.61
   1       1.00     2372      69.52    0.53    36.59(.000)  0.66     1.44
   9       0.00      104       3.05   -0.20   -11.90(.000) -2.27     1.48
================================================================================

Item 5
------
item:5 (S9Q05)
Cases for this item    3410   Item-Rest Cor.  0.47   Item-Total Cor.  0.53
Item Threshold(s):    -1.09   Weighted MNSQ   1.06
Item Delta(s):        -1.09
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      982      28.80   -0.40   -25.46(.000) -1.25     1.76
   1       1.00     2313      67.83    0.47    31.00(.000)  0.65     1.41
   9       0.00      115       3.37   -0.21   -12.60(.000) -2.29     1.33
================================================================================
```

Item 6
------
item:6 (S9Q06)
Cases for this item 3408 Item-Rest Cor. 0.56 Item-Total Cor. 0.62
Item Threshold(s): -0.55 Weighted MNSQ 0.96
Item Delta(s): -0.55

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1329	39.00	-0.53	-36.26(.000)	-1.21	1.50
1	1.00	2034	59.68	0.56	39.82(.000)	0.87	1.39
9	0.00	45	1.32	-0.17	-9.89(.000)	-2.91	1.62

Item 7
------
item:7 (S9Q07)
Cases for this item 3407 Item-Rest Cor. 0.50 Item-Total Cor. 0.56
Item Threshold(s): -1.53 Weighted MNSQ 0.98
Item Delta(s): -1.53

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	687	20.16	-0.41	-26.06(.000)	-1.55	1.67
1	1.00	2517	73.88	0.50	34.07(.000)	0.59	1.45
9	0.00	203	5.96	-0.24	-14.71(.000)	-1.96	1.45

Item 8
------
item:8 (S9Q08)
Cases for this item 3400 Item-Rest Cor. 0.50 Item-Total Cor. 0.57
Item Threshold(s): -0.02 Weighted MNSQ 1.08
Item Delta(s): -0.02

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1514	44.53	-0.43	-27.69(.000)	-0.87	1.61
1	1.00	1742	51.24	0.50	33.74(.000)	0.93	1.42
9	0.00	144	4.24	-0.18	-10.95(.000)	-1.77	1.54

Item 9
------
item:9 (S9Q09)
Cases for this item 3397 Item-Rest Cor. 0.55 Item-Total Cor. 0.61
Item Threshold(s): -0.27 Weighted MNSQ 0.99
Item Delta(s): -0.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1362	40.09	-0.47	-30.63(.000)	-1.03	1.56
1	1.00	1882	55.40	0.55	38.77(.000)	0.94	1.38
9	0.00	153	4.50	-0.23	-13.65(.000)	-2.02	1.45

Item 10
----
item:10 (S9Q10)
Cases for this item 3395 Item-Rest Cor. 0.57 Item-Total Cor. 0.62
Item Threshold(s): 1.15 Weighted MNSQ 0.92
Item Delta(s): 1.15

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2179	64.18	-0.48	-32.02(.000)	-0.62	1.50
1	1.00	1105	32.55	0.57	40.01(.000)	1.48	1.30
9	0.00	111	3.27	-0.19	-11.45(.000)	-2.12	1.74

Item 11
----
item:11 (S9Q11)
Cases for this item 3393 Item-Rest Cor. 0.37 Item-Total Cor. 0.44
Item Threshold(s): 1.40 Weighted MNSQ 1.21
Item Delta(s): 1.40

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2197	64.75	-0.24	-14.15(.000)	-0.32	1.64
1	1.00	982	28.94	0.37	23.43(.000)	1.16	1.52
9	0.00	214	6.31	-0.23	-13.91(.000)	-1.71	1.53

Item 12
----
item:12 (S9Q12)
Cases for this item 3384 Item-Rest Cor. 0.48 Item-Total Cor. 0.54
Item Threshold(s): 1.84 Weighted MNSQ 0.98
Item Delta(s): 1.84

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2444	72.22	-0.36	-22.50(.000)	-0.38	1.57
1	1.00	781	23.08	0.48	31.89(.000)	1.65	1.37
9	0.00	159	4.70	-0.19	-11.47(.000)	-1.66	1.59

Item 13
----
item:13 (S9Q13)
Cases for this item 3381 Item-Rest Cor. 0.39 Item-Total Cor. 0.46
Item Threshold(s): -1.52 Weighted MNSQ 1.19
Item Delta(s): -1.52

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	770	22.77	-0.32	-19.53(.000)	-1.19	1.76
1	1.00	2503	74.03	0.39	24.99(.000)	0.51	1.51
9	0.00	108	3.19	-0.23	-13.44(.000)	-2.55	1.50

Item 14
----
item:14 (S9Q14)
Cases for this item 3357 Item-Rest Cor. 0.48 Item-Total Cor. 0.55
Item Threshold(s): -0.90 Weighted MNSQ 1.07
Item Delta(s): -0.90

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	963	28.69	-0.39	-24.60(.000)	-1.10	1.62
1	1.00	2208	65.77	0.48	31.96(.000)	0.71	1.46
9	0.00	186	5.54	-0.23	-13.64(.000)	-1.87	1.52

Item 15
----
item:15 (S9Q15)
Cases for this item 3346 Item-Rest Cor. 0.58 Item-Total Cor. 0.64
Item Threshold(s): -0.89 Weighted MNSQ 0.90
Item Delta(s): -0.89

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1056	31.56	-0.52	-35.24(.000)	-1.30	1.44
1	1.00	2199	65.72	0.58	41.47(.000)	0.82	1.38
9	0.00	91	2.72	-0.21	-12.64(.000)	-2.58	1.51

Item 16
----
item:16 (S9Q16)
Cases for this item 3335 Item-Rest Cor. 0.52 Item-Total Cor. 0.58
Item Threshold(s): 0.06 Weighted MNSQ 1.04
Item Delta(s): 0.06

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1587	47.59	-0.47	-30.72(.000)	-0.83	1.54
1	1.00	1687	50.58	0.52	34.74(.000)	1.01	1.36
9	0.00	61	1.83	-0.17	-10.15(.000)	-2.59	1.73

Item 17
----
item:17 (S9Q17)
Cases for this item 3323 Item-Rest Cor. 0.59 Item-Total Cor. 0.65
Item Threshold(s): 0.77 Weighted MNSQ 0.89
Item Delta(s): 0.77

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1740	52.36	-0.43	-27.81(.000)	-0.66	1.47
1	1.00	1298	39.06	0.59	42.58(.000)	1.39	1.26
9	0.00	285	8.58	-0.26	-15.53(.000)	-1.40	1.38

Item 18
----
item:18 (S9Q18)
Cases for this item 3298 Item-Rest Cor. 0.44 Item-Total Cor. 0.50
Item Threshold(s): 1.33 Weighted MNSQ 1.09
Item Delta(s): 1.33

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2035	61.70	-0.30	-17.90(.000)	-0.35	1.54
1	1.00	1010	30.62	0.44	27.95(.000)	1.32	1.49
9	0.00	253	7.67	-0.21	-12.60(.000)	-1.24	1.58

Item 19
----
item:19 (S9Q19)
Cases for this item 3282 Item-Rest Cor. 0.46 Item-Total Cor. 0.52
Item Threshold(s): 1.73 Weighted MNSQ 1.04
Item Delta(s): 1.73

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1905	58.04	-0.23	-13.63(.000)	-0.27	1.60
1	1.00	827	25.20	0.46	29.43(.000)	1.54	1.35
9	0.00	550	16.76	-0.23	-13.25(.000)	-0.79	1.45

Item 20
----
item:20 (S9Q20)
Cases for this item 3262 Item-Rest Cor. 0.40 Item-Total Cor. 0.46
Item Threshold(s): 2.64 Weighted MNSQ 1.00
Item Delta(s): 2.64

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2483	76.12	-0.20	-11.52(.000)	-0.10	1.59
1	1.00	486	14.90	0.40	25.29(.000)	1.88	1.38
9	0.00	293	8.98	-0.21	-12.23(.000)	-1.01	1.45

Item 21
----
item:21 (S9Q21)
Cases for this item 3256 Item-Rest Cor. 0.55 Item-Total Cor. 0.60
Item Threshold(s): 2.20 Weighted MNSQ 0.84
Item Delta(s): 2.20

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2449	75.21	-0.41	-25.63(.000)	-0.29	1.48
1	1.00	637	19.56	0.55	37.28(.000)	2.04	1.16
9	0.00	170	5.22	-0.18	-10.44(.000)	-1.23	1.62

Item 22
----
item:22 (S9Q22)
Cases for this item 3221 Item-Rest Cor. 0.40 Item-Total Cor. 0.44
Item Threshold(s): 3.23 Weighted MNSQ 0.95
Item Delta(s): 3.23

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2620	81.34	-0.16	-8.94(.000)	0.01	1.56
1	1.00	328	10.18	0.40	24.44(.000)	2.20	1.33
9	0.00	273	8.48	-0.21	-12.30(.000)	-1.05	1.58

Item 23
----
item:23 (S9Q23)
Cases for this item 3168 Item-Rest Cor. 0.47 Item-Total Cor. 0.52
Item Threshold(s): 2.62 Weighted MNSQ 0.88
Item Delta(s): 2.62

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2356	74.37	-0.24	-13.97(.000)	-0.09	1.51
1	1.00	490	15.47	0.47	30.15(.000)	2.12	1.30
9	0.00	322	10.16	-0.22	-12.51(.000)	-0.83	1.35

Item 24
----
item:24 (S9Q24)
Cases for this item 3103 Item-Rest Cor. 0.41 Item-Total Cor. 0.45
Item Threshold(s): 3.27 Weighted MNSQ 0.90
Item Delta(s): 3.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2540	81.86	-0.20	-11.49(.000)	0.03	1.56
1	1.00	318	10.25	0.41	24.96(.000)	2.34	1.33
9	0.00	245	7.90	-0.17	-9.68(.000)	-0.76	1.36

Item 25
----
item:25 (S9Q25)
Cases for this item 3051 Item-Rest Cor. 0.32 Item-Total Cor. 0.37
Item Threshold(s): 3.33 Weighted MNSQ 1.03
Item Delta(s): 3.33

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2632	86.27	-0.21	-11.81(.000)	0.07	1.59
1	1.00	304	9.96	0.32	18.84(.000)	1.98	1.50
9	0.00	115	3.77	-0.13	-7.24(.000)	-0.80	1.51

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 2.74% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	3424
Mean	11.20
Standard Deviation	5.78
Variance	33.44
Skewness	0.02
Kurtosis	-0.63
Standard error of mean	0.10
Standard error of measurement	1.94
Coefficient Alpha	0.89

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B.9. Year 3 Grammar and Punctuation

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================================================================================
NAPLAN 2017 GrammarPunctuation 3 - Item Calibration CalibraFri Jun 23 12:56 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (G3Q26)
Cases for this item    4672   Item-Rest Cor.  0.39   Item-Total Cor.  0.45
Item Threshold(s):    -2.74   Weighted MNSQ   0.89
Item Delta(s):        -2.74
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      121       2.59   -0.20   -14.10(.000) -1.04     0.71
   2       0.00       87       1.86   -0.20   -13.95(.000) -1.23     0.63
   3       0.00      123       2.63   -0.19   -13.26(.000) -1.08     0.79
   4       1.00     4295      91.93    0.40    29.40(.000)  0.09     0.81
   7       0.00       20       0.43   -0.16   -11.18(.000) -1.84     1.14
   9       0.00       26       0.56   -0.10    -6.90(.000) -1.17     1.00
================================================================================

Item 2
------
item:2 (G3Q27)
Cases for this item    4672   Item-Rest Cor.  0.39   Item-Total Cor.  0.47
Item Threshold(s):    -1.78   Weighted MNSQ   0.91
Item Delta(s):        -1.78
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       1.00     3859      82.60    0.40    29.66(.000)  0.16     0.79
   2       0.00      147       3.15   -0.20   -13.68(.000) -0.97     0.89
   3       0.00      245       5.24   -0.22   -15.53(.000) -0.86     0.68
   4       0.00      372       7.96   -0.18   -12.86(.000) -0.64     0.77
   7       0.00       14       0.30   -0.14    -9.98(.000) -1.95     0.76
   9       0.00       35       0.75   -0.11    -7.45(.000) -1.06     1.08
================================================================================

Item 3
------
item:3 (G3Q28)
Cases for this item    4668   Item-Rest Cor.  0.43   Item-Total Cor.  0.51
Item Threshold(s):    -1.47   Weighted MNSQ   0.90
Item Delta(s):        -1.47
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      159       3.41   -0.20   -14.08(.000) -0.93     0.77
   2       0.00       85       1.82   -0.17   -11.70(.000) -1.06     0.71
   3       1.00     3653      78.26    0.43    32.89(.000)  0.19     0.79
   4       0.00      669      14.33   -0.25   -17.80(.000) -0.60     0.72
   7       0.00       34       0.73   -0.14    -9.33(.000) -1.49     1.25
   9       0.00       68       1.46   -0.17   -11.51(.000) -1.00     0.61
================================================================================

Item 4
------
item:4 (G3Q29)
Cases for this item    4647   Item-Rest Cor.  0.47   Item-Total Cor.  0.54
Item Threshold(s):    -1.52   Weighted MNSQ   0.87
Item Delta(s):        -1.52
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      249       5.36   -0.21   -14.29(.000) -0.77     0.74
   2       0.00      269       5.79   -0.24   -16.55(.000) -0.82     0.69
   3       0.00      308       6.63   -0.24   -16.87(.000) -0.81     0.78
   4       1.00     3678      79.15    0.47    36.63(.000)  0.21     0.77
   7       0.00       19       0.41   -0.17   -11.65(.000) -2.28     1.10
   9       0.00      124       2.67   -0.13    -8.74(.000) -0.71     0.77
================================================================================
```

Item 5
------
item:5 (G3Q30)
Cases for this item 4643 Item-Rest Cor. 0.31 Item-Total Cor. 0.40
Item Threshold(s): -1.32 Weighted MNSQ 0.98
Item Delta(s): -1.32

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	361	7.78	-0.26	-18.42(.000)	-0.78	0.80
2	0.00	122	2.63	-0.18	-12.35(.000)	-0.90	0.69
3	1.00	3532	76.07	0.31	22.21(.000)	0.17	0.80
4	0.00	568	12.23	-0.05	-3.11(.002)	-0.25	0.81
7	0.00	16	0.34	-0.16	-11.12(.000)	-2.42	0.98
9	0.00	44	0.95	-0.10	-6.69(.000)	-0.93	0.86

Item 6
------
item:6 (G3Q31)
Cases for this item 4642 Item-Rest Cor. 0.34 Item-Total Cor. 0.43
Item Threshold(s): -1.46 Weighted MNSQ 0.96
Item Delta(s): -1.46

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3627	78.13	0.34	24.90(.000)	0.17	0.80
2	0.00	498	10.73	-0.15	-10.36(.000)	-0.43	0.82
3	0.00	324	6.98	-0.18	-12.30(.000)	-0.60	0.81
4	0.00	129	2.78	-0.18	-12.29(.000)	-0.95	0.71
7	0.00	17	0.37	-0.17	-11.68(.000)	-2.38	0.88
9	0.00	47	1.01	-0.11	-7.33(.000)	-1.02	0.90

Item 7
------
item:7 (G3Q32)
Cases for this item 4641 Item-Rest Cor. 0.36 Item-Total Cor. 0.46
Item Threshold(s): -0.50 Weighted MNSQ 0.97
Item Delta(s): -0.50

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2826	60.89	0.37	26.74(.000)	0.28	0.79
2	0.00	606	13.06	-0.12	-8.39(.000)	-0.34	0.79
3	0.00	584	12.58	-0.19	-13.53(.000)	-0.47	0.78
4	0.00	474	10.21	-0.14	-9.46(.000)	-0.39	0.77
7	0.00	17	0.37	-0.17	-11.52(.000)	-2.35	0.83
9	0.00	134	2.89	-0.12	-8.51(.000)	-0.66	0.80

Item 8
------
item:8 (G3Q33)
Cases for this item 4632 Item-Rest Cor. 0.30 Item-Total Cor. 0.40
Item Threshold(s): -0.72 Weighted MNSQ 1.01
Item Delta(s): -0.72

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	832	17.96	-0.12	-8.54(.000)	-0.33	0.78
2	1.00	3025	65.31	0.30	21.59(.000)	0.23	0.81
3	0.00	269	5.81	-0.16	-10.78(.000)	-0.56	0.81
4	0.00	401	8.66	-0.13	-8.63(.000)	-0.38	0.77
7	0.00	16	0.35	-0.17	-11.80(.000)	-2.57	0.59
9	0.00	89	1.92	-0.10	-7.06(.000)	-0.86	0.77

Item 9
------
item:9 (G3Q34)
Cases for this item 4617 Item-Rest Cor. 0.38 Item-Total Cor. 0.47
Item Threshold(s): -1.13 Weighted MNSQ 0.94
Item Delta(s): -1.13

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	358	7.75	-0.24	-16.95(.000)	-0.73	0.74
2	1.00	3367	72.93	0.38	28.19(.000)	0.22	0.79
3	0.00	404	8.75	-0.19	-13.14(.000)	-0.54	0.77
4	0.00	385	8.34	-0.11	-7.34(.000)	-0.41	0.77
7	0.00	20	0.43	-0.16	-11.34(.000)	-2.16	1.10
9	0.00	83	1.80	-0.09	-5.84(.000)	-0.66	0.84

Item 10
----
item:10 (G3Q35)
Cases for this item 4611 Item-Rest Cor. 0.40 Item-Total Cor. 0.50
Item Threshold(s): -0.23 Weighted MNSQ 0.93
Item Delta(s): -0.23

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	907	19.67	-0.10	-6.84(.000)	-0.23	0.71
2	0.00	634	13.75	-0.22	-15.31(.000)	-0.50	0.78
3	1.00	2553	55.37	0.41	30.15(.000)	0.35	0.78
4	0.00	412	8.94	-0.21	-14.84(.000)	-0.58	0.76
7	0.00	15	0.33	-0.17	-11.88(.000)	-2.58	0.59
9	0.00	90	1.95	-0.11	-7.63(.000)	-0.77	0.78

Item 11
----
item:11 (G3Q36)
Cases for this item 4599 Item-Rest Cor. 0.31 Item-Total Cor. 0.42
Item Threshold(s): -0.00 Weighted MNSQ 1.00
Item Delta(s): -0.00

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1093	23.77	-0.15	-10.51(.000)	-0.27	0.80
2	0.00	322	7.00	-0.18	-12.53(.000)	-0.59	0.76
3	1.00	2322	50.49	0.31	22.13(.000)	0.32	0.79
4	0.00	757	16.46	-0.06	-4.26(.000)	-0.19	0.80
7	0.00	16	0.35	-0.15	-10.45(.000)	-2.33	1.00
9	0.00	89	1.94	-0.08	-5.62(.000)	-0.67	0.87

Item 12
----
item:12 (G3Q37)
Cases for this item 4582 Item-Rest Cor. 0.40 Item-Total Cor. 0.49
Item Threshold(s): -1.03 Weighted MNSQ 0.92
Item Delta(s): -1.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	630	13.75	-0.16	-10.69(.000)	-0.40	0.76
2	1.00	3267	71.30	0.41	30.03(.000)	0.25	0.77
3	0.00	306	6.68	-0.29	-20.19(.000)	-0.90	0.68
4	0.00	261	5.70	-0.15	-9.96(.000)	-0.54	0.75
7	0.00	19	0.41	-0.15	-9.92(.000)	-1.89	1.44
9	0.00	99	2.16	-0.10	-7.14(.000)	-0.68	0.84

Item 13
----
item:13 (G3Q38)
Cases for this item 4571 Item-Rest Cor. 0.33 Item-Total Cor. 0.43
Item Threshold(s): 0.04 Weighted MNSQ 0.99
Item Delta(s): 0.04

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	788	17.24	-0.15	-10.24(.000)	-0.29	0.79
2	1.00	2267	49.60	0.33	23.44(.000)	0.35	0.80
3	0.00	489	10.70	-0.18	-12.07(.000)	-0.47	0.76
4	0.00	898	19.65	-0.07	-4.95(.000)	-0.19	0.74
7	0.00	12	0.26	-0.11	-7.73(.000)	-1.94	1.39
9	0.00	117	2.56	-0.11	-7.78(.000)	-0.74	0.90

Item 14
----
item:14 (G3Q39)
Cases for this item 4541 Item-Rest Cor. 0.33 Item-Total Cor. 0.43
Item Threshold(s): -0.58 Weighted MNSQ 0.99
Item Delta(s): -0.58

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	256	5.64	-0.25	-17.36(.000)	-0.82	0.71
2	0.00	1049	23.10	-0.10	-6.45(.000)	-0.23	0.77
3	1.00	2855	62.87	0.33	23.62(.000)	0.27	0.78
4	0.00	293	6.45	-0.20	-13.91(.000)	-0.64	0.76
7	0.00	16	0.35	-0.14	-9.56(.000)	-1.95	1.24
9	0.00	72	1.59	-0.03	-2.23(.026)	-0.38	0.87

Item 15
----
item:15 (G3Q40)
Cases for this item 4527 Item-Rest Cor. 0.20 Item-Total Cor. 0.32
Item Threshold(s): -0.04 Weighted MNSQ 1.08
Item Delta(s): -0.04

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2331	51.49	0.21	14.13(.000)	0.26	0.81
2	0.00	728	16.08	-0.15	-9.97(.000)	-0.32	0.84
3	0.00	816	18.03	-0.05	-3.42(.001)	-0.16	0.80
4	0.00	494	10.91	-0.03	-1.97(.048)	-0.15	0.83
7	0.00	12	0.27	-0.13	-8.88(.000)	-2.04	1.28
9	0.00	146	3.23	-0.08	-5.14(.000)	-0.50	0.84

Item 16
----
item:16 (G3Q41)
Cases for this item 4504 Item-Rest Cor. 0.24 Item-Total Cor. 0.35
Item Threshold(s): 0.68 Weighted MNSQ 1.04
Item Delta(s): 0.68

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1166	25.89	-0.06	-3.82(.000)	-0.11	0.75
2	1.00	1642	36.46	0.24	16.56(.000)	0.37	0.83
3	0.00	979	21.74	-0.11	-7.32(.000)	-0.20	0.85
4	0.00	602	13.37	-0.09	-6.37(.000)	-0.22	0.78
7	0.00	13	0.29	-0.13	-8.50(.000)	-1.92	1.28
9	0.00	102	2.26	-0.05	-3.09(.002)	-0.32	0.93

Item 17
----
item:17 (G3Q42)
Cases for this item 4495 Item-Rest Cor. 0.42 Item-Total Cor. 0.51
Item Threshold(s): 0.22 Weighted MNSQ 0.92
Item Delta(s): 0.22

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1204	26.79	-0.14	-9.76(.000)	-0.22	0.76
2	0.00	585	13.01	-0.20	-13.58(.000)	-0.43	0.73
3	0.00	542	12.06	-0.19	-12.79(.000)	-0.41	0.71
4	1.00	2065	45.94	0.42	31.04(.000)	0.44	0.77
7	0.00	9	0.20	-0.14	-9.68(.000)	-2.60	0.50
9	0.00	90	2.00	-0.08	-5.45(.000)	-0.66	0.77

Item 18
----
item:18 (G3Q43)
Cases for this item 4469 Item-Rest Cor. 0.47 Item-Total Cor. 0.56
Item Threshold(s): -0.09 Weighted MNSQ 0.89
Item Delta(s): -0.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1079	24.14	-0.27	-18.78(.000)	-0.39	0.70
2	0.00	481	10.76	-0.18	-12.53(.000)	-0.45	0.79
3	0.00	438	9.80	-0.16	-10.98(.000)	-0.41	0.81
4	1.00	2361	52.83	0.47	35.60(.000)	0.42	0.74
7	0.00	13	0.29	-0.12	-7.95(.000)	-1.84	1.26
9	0.00	97	2.17	-0.05	-3.33(.001)	-0.44	0.86

Item 19
----
item:19 (G3Q44)
Cases for this item 4449 Item-Rest Cor. 0.10 Item-Total Cor. 0.21
Item Threshold(s): 1.13 Weighted MNSQ 1.11
Item Delta(s): 1.13

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1239	27.85	0.10	6.81(.000)	0.27	0.89
2	0.00	1455	32.70	-0.04	-2.61(.009)	-0.07	0.77
3	0.00	773	17.37	-0.12	-8.29(.000)	-0.22	0.82
4	0.00	869	19.53	0.11	7.11(.000)	0.14	0.84
7	0.00	9	0.20	-0.14	-9.42(.000)	-2.60	0.50
9	0.00	104	2.34	-0.11	-7.20(.000)	-0.65	0.84

Item 20
----
item:20 (G3Q45)
Cases for this item 4427 Item-Rest Cor. 0.11 Item-Total Cor. 0.22
Item Threshold(s): 0.94 Weighted MNSQ 1.11
Item Delta(s): 0.94

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1985	44.84	0.09	6.33(.000)	0.04	0.77
2	1.00	1389	31.38	0.11	7.35(.000)	0.30	0.88
3	0.00	456	10.30	-0.12	-7.82(.000)	-0.30	0.84
4	0.00	449	10.14	-0.16	-10.51(.000)	-0.38	0.77
7	0.00	9	0.20	-0.14	-9.43(.000)	-2.60	0.50
9	0.00	139	3.14	-0.05	-3.47(.001)	-0.32	0.91

Item 21
----
item:21 (G3Q46)
Cases for this item 4406 Item-Rest Cor. 0.06 Item-Total Cor. 0.17
Item Threshold(s): 0.87 Weighted MNSQ 1.16
Item Delta(s): 0.87

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1443	32.75	0.06	3.95(.000)	0.21	0.90
2	0.00	1131	25.67	-0.04	-2.34(.019)	-0.08	0.83
3	0.00	937	21.27	0.01	0.86(.389)	-0.01	0.80
4	0.00	749	17.00	-0.01	-0.56(.573)	-0.02	0.80
7	0.00	12	0.27	-0.14	-9.19(.000)	-2.18	1.11
9	0.00	134	3.04	-0.04	-2.88(.004)	-0.25	0.89

Item 22
----
item:22 (G3Q47)
Cases for this item 4357 Item-Rest Cor. -0.03 Item-Total Cor. 0.07
Item Threshold(s): 1.71 Weighted MNSQ 1.17
Item Delta(s): 1.71

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1355	31.10	0.05	3.25(.001)	0.06	0.91
2	0.00	1003	23.02	0.03	1.74(.082)	0.04	0.86
3	0.00	1020	23.41	-0.02	-1.39(.164)	-0.04	0.79
4	1.00	819	18.80	-0.03	-1.82(.068)	0.14	0.81
7	0.00	11	0.25	-0.11	-7.62(.000)	-1.98	1.17
9	0.00	149	3.42	-0.05	-3.05(.002)	-0.25	0.84

Item 23
----
item:23 (G3Q48)
Cases for this item 4326 Item-Rest Cor. 0.14 Item-Total Cor. 0.24
Item Threshold(s): 1.38 Weighted MNSQ 1.06
Item Delta(s): 1.38

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	887	20.50	-0.12	-7.74(.000)	-0.18	0.80
2	0.00	1048	24.23	0.01	0.72(.474)	-0.00	0.83
3	1.00	1032	23.86	0.14	9.45(.000)	0.36	0.93
4	0.00	1255	29.01	-0.02	-1.01(.314)	-0.02	0.75
7	0.00	11	0.25	-0.14	-9.14(.000)	-2.28	0.96
9	0.00	93	2.15	-0.03	-1.89(.058)	-0.19	0.85

Item 24
----
item:24 (G3Q49)
Cases for this item 4295 Item-Rest Cor. 0.13 Item-Total Cor. 0.24
Item Threshold(s): 1.02 Weighted MNSQ 1.09
Item Delta(s): 1.02

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1553	36.16	-0.07	-4.72(.000)	-0.09	0.75
2	0.00	645	15.02	-0.00	-0.22(.825)	-0.02	0.79
3	0.00	717	16.69	-0.02	-1.62(.106)	-0.04	0.83
4	1.00	1294	30.13	0.13	8.51(.000)	0.30	0.94
7	0.00	13	0.30	-0.15	-9.82(.000)	-2.19	0.98
9	0.00	73	1.70	-0.05	-3.07(.002)	-0.32	0.89

Item 25
---
item:25 (G3Q50)
Cases for this item 4269 Item-Rest Cor. 0.15 Item-Total Cor. 0.21
Item Threshold(s): 2.99 Weighted MNSQ 1.01
Item Delta(s): 2.99

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1114	26.10	-0.04	-2.62(.009)	-0.02	0.85
2	0.00	1834	42.96	-0.15	-10.15(.000)	-0.11	0.76
3	0.00	735	17.22	0.15	10.24(.000)	0.28	0.86
4	1.00	283	6.63	0.15	9.96(.000)	0.65	0.92
5	0.00	218	5.11	0.02	1.47(.142)	0.10	0.90
7	0.00	25	0.59	-0.08	-5.29(.000)	-0.84	1.60
9	0.00	60	1.41	-0.01	-0.62(.536)	-0.16	0.85

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 3.03% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	4672
Mean	13.40
Standard Deviation	4.33
Variance	18.77
Skewness	-0.29
Kurtosis	-0.14
Standard error of mean	0.06
Standard error of measurement	2.25
Coefficient Alpha	0.73

B.10. Year 5 Grammar and Punctuation

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================================================================================
NAPLAN 2017 GrammarPunctuation 5 - Item Calibration CalibraFri Jun 23 12:58 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (G5Q26)
Cases for this item    4726   Item-Rest Cor.  0.26   Item-Total Cor.  0.33
Item Threshold(s):    -2.21   Weighted MNSQ   0.97
Item Delta(s):        -2.21
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      109       2.31   -0.17   -11.92(.000) -1.01     0.77
   2       0.00       58       1.23   -0.17   -11.73(.000) -1.50     0.68
   3       1.00     4134      87.47    0.26    18.44(.000)  0.10     0.83
   4       0.00      396       8.38   -0.11    -7.85(.000) -0.42     0.75
   7       0.00       14       0.30   -0.08    -5.19(.000) -1.40     0.83
   9       0.00       15       0.32   -0.11    -7.49(.000) -1.61     0.76
================================================================================

Item 2
------
item:2 (G5Q27)
Cases for this item    4726   Item-Rest Cor.  0.25   Item-Total Cor.  0.31
Item Threshold(s):    -2.99   Weighted MNSQ   0.95
Item Delta(s):        -2.99
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      101       2.14   -0.18   -12.48(.000) -1.16     0.83
   2       1.00     4422      93.57    0.25    18.08(.000)  0.07     0.83
   3       0.00       58       1.23   -0.11    -7.27(.000) -0.96     1.00
   4       0.00      107       2.26   -0.11    -7.88(.000) -0.78     0.83
   7       0.00       18       0.38   -0.04    -2.57(.010) -0.65     0.88
   9       0.00       20       0.42   -0.09    -6.10(.000) -1.15     1.09
================================================================================

Item 3
------
item:3 (G5Q28)
Cases for this item    4726   Item-Rest Cor.  0.27   Item-Total Cor.  0.35
Item Threshold(s):    -2.12   Weighted MNSQ   0.97
Item Delta(s):        -2.12
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       1.00     4091      86.56    0.28    19.84(.000)  0.11     0.83
   2       0.00      364       7.70   -0.16   -11.10(.000) -0.57     0.81
   3       0.00      193       4.08   -0.15   -10.62(.000) -0.71     0.88
   4       0.00       44       0.93   -0.15   -10.17(.000) -1.41     0.79
   7       0.00        9       0.19   -0.06    -3.98(.000) -1.11     0.72
   9       0.00       25       0.53   -0.07    -5.02(.000) -1.18     0.86
================================================================================

Item 4
------
item:4 (G5Q29)
Cases for this item    4723   Item-Rest Cor.  0.31   Item-Total Cor.  0.39
Item Threshold(s):    -1.70   Weighted MNSQ   0.96
Item Delta(s):        -1.70
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       1.00     3852      81.56    0.31    22.32(.000)  0.15     0.81
   2       0.00      160       3.39   -0.17   -11.82(.000) -0.81     0.85
   3       0.00      155       3.28   -0.16   -11.34(.000) -0.81     0.83
   4       0.00      310       6.56   -0.21   -14.75(.000) -0.76     0.78
   7       0.00      192       4.07   -0.01    -0.99(.321) -0.19     0.77
   9       0.00       54       1.14   -0.05    -3.44(.001) -0.49     1.10
================================================================================
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Item 5
------
item:5 (G5Q30)
Cases for this item 4721 Item-Rest Cor. 0.29 Item-Total Cor. 0.36
Item Threshold(s): -2.07 Weighted MNSQ 0.95
Item Delta(s): -2.07

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	133	2.82	-0.20	-13.72(.000)	-1.03	0.71
2	1.00	4061	86.02	0.29	21.01(.000)	0.13	0.82
3	0.00	239	5.06	-0.15	-10.68(.000)	-0.65	0.81
4	0.00	216	4.58	-0.11	-7.42(.000)	-0.58	0.90
7	0.00	11	0.23	-0.08	-5.19(.000)	-1.31	0.92
9	0.00	61	1.29	-0.08	-5.66(.000)	-0.89	0.94

Item 6
------
item:6 (G5Q31)
Cases for this item 4708 Item-Rest Cor. 0.33 Item-Total Cor. 0.40
Item Threshold(s): -2.35 Weighted MNSQ 0.92
Item Delta(s): -2.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	273	5.80	-0.17	-11.61(.000)	-0.65	0.79
2	1.00	4185	88.89	0.33	24.05(.000)	0.12	0.82
3	0.00	91	1.93	-0.20	-14.04(.000)	-1.23	0.70
4	0.00	109	2.32	-0.17	-11.84(.000)	-1.00	0.75
7	0.00	6	0.13	-0.07	-4.86(.000)	-1.60	0.67
9	0.00	44	0.93	-0.10	-6.63(.000)	-0.98	0.98

Item 7
------
item:7 (G5Q32)
Cases for this item 4705 Item-Rest Cor. 0.23 Item-Total Cor. 0.34
Item Threshold(s): 0.24 Weighted MNSQ 1.06
Item Delta(s): 0.24

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	984	20.91	0.02	1.34(.180)	-0.04	0.84
2	0.00	401	8.52	-0.11	-7.91(.000)	-0.31	0.86
3	1.00	2113	44.91	0.23	16.08(.000)	0.30	0.84
4	0.00	1162	24.70	-0.18	-12.47(.000)	-0.32	0.76
7	0.00	4	0.09	-0.05	-3.55(.000)	-1.99	0.96
9	0.00	41	0.87	-0.12	-8.08(.000)	-1.12	0.87

Item 8
------
item:8 (G5Q33)
Cases for this item 4700 Item-Rest Cor. 0.41 Item-Total Cor. 0.50
Item Threshold(s): -0.50 Weighted MNSQ 0.93
Item Delta(s): -0.50

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2851	60.66	0.41	30.62(.000)	0.32	0.79
2	0.00	652	13.87	-0.17	-12.06(.000)	-0.41	0.76
3	0.00	796	16.94	-0.19	-13.36(.000)	-0.42	0.77
4	0.00	339	7.21	-0.20	-14.04(.000)	-0.59	0.73
7	0.00	1	0.02	-0.04	-2.97(.003)	-3.14	0.00
9	0.00	61	1.30	-0.13	-9.21(.000)	-1.00	0.86

Item 9
------
item:9 (G5Q34)
Cases for this item 4695 Item-Rest Cor. 0.34 Item-Total Cor. 0.43
Item Threshold(s): -1.33 Weighted MNSQ 0.96
Item Delta(s): -1.32

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	95	2.02	-0.16	-11.33(.000)	-0.91	0.91
2	0.00	880	18.74	-0.22	-15.77(.000)	-0.47	0.72
3	1.00	3571	76.06	0.34	24.75(.000)	0.20	0.81
4	0.00	99	2.11	-0.17	-12.00(.000)	-0.95	0.92
7	0.00	12	0.26	-0.04	-2.85(.004)	-0.80	1.09
9	0.00	38	0.81	-0.09	-5.85(.000)	-0.94	0.88

Item 10
----
item:10 (G5Q35)
Cases for this item 4693 Item-Rest Cor. 0.28 Item-Total Cor. 0.39
Item Threshold(s): -0.41 Weighted MNSQ 1.03
Item Delta(s): -0.41

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	812	17.30	-0.21	-14.77(.000)	-0.44	0.79
2	0.00	988	21.05	-0.09	-6.53(.000)	-0.21	0.75
3	1.00	2765	58.92	0.28	20.04(.000)	0.25	0.85
7	0.00	74	1.58	-0.09	-6.31(.000)	-0.60	0.81
9	0.00	54	1.15	-0.08	-5.36(.000)	-0.62	0.96

Item 11
----
item:11 (G5Q36)
Cases for this item 4688 Item-Rest Cor. 0.40 Item-Total Cor. 0.50
Item Threshold(s): -0.21 Weighted MNSQ 0.93
Item Delta(s): -0.20

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2086	44.50	-0.39	-28.64(.000)	-0.39	0.79
1	1.00	2556	54.52	0.40	30.23(.000)	0.36	0.78
9	0.00	46	0.98	-0.09	-6.51(.000)	-0.84	0.80

Item 12
----
item:12 (G5Q37)
Cases for this item 4680 Item-Rest Cor. 0.45 Item-Total Cor. 0.53
Item Threshold(s): -0.68 Weighted MNSQ 0.90
Item Delta(s): -0.68

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	875	18.70	-0.20	-14.29(.000)	-0.43	0.72
2	0.00	410	8.76	-0.22	-15.55(.000)	-0.60	0.74
3	0.00	338	7.22	-0.23	-16.29(.000)	-0.69	0.74
4	1.00	3011	64.34	0.45	34.18(.000)	0.32	0.77
7	0.00	6	0.13	-0.06	-4.28(.000)	-1.23	0.96
9	0.00	40	0.85	-0.10	-7.13(.000)	-1.14	1.10

Item 13
----
item:13 (G5Q38)
Cases for this item 4661 Item-Rest Cor. 0.42 Item-Total Cor. 0.52
Item Threshold(s): -0.15 Weighted MNSQ 0.93
Item Delta(s): -0.15

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	619	13.28	-0.20	-14.16(.000)	-0.43	0.69
2	0.00	588	12.62	-0.22	-15.23(.000)	-0.50	0.75
3	0.00	882	18.92	-0.16	-11.01(.000)	-0.29	0.71
4	1.00	2491	53.44	0.42	31.93(.000)	0.38	0.81
7	0.00	10	0.21	-0.04	-2.69(.007)	-0.66	1.08
9	0.00	71	1.52	-0.05	-3.33(.001)	-0.40	0.84

Item 14
----
item:14 (G5Q39)
Cases for this item 4652 Item-Rest Cor. 0.29 Item-Total Cor. 0.40
Item Threshold(s): 0.39 Weighted MNSQ 1.02
Item Delta(s): 0.39

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1952	41.96	0.29	20.67(.000)	0.38	0.82
2	0.00	366	7.87	-0.12	-8.04(.000)	-0.30	0.89
3	0.00	402	8.64	-0.12	-8.19(.000)	-0.37	0.85
4	0.00	1841	39.57	-0.14	-9.79(.000)	-0.19	0.76
7	0.00	6	0.13	-0.04	-2.96(.003)	-0.85	1.25
9	0.00	85	1.83	-0.05	-3.57(.000)	-0.33	0.86

Item 15
----
item:15 (G5Q40)
Cases for this item 4646 Item-Rest Cor. 0.39 Item-Total Cor. 0.49
Item Threshold(s): 0.71 Weighted MNSQ 0.94
Item Delta(s): 0.71

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	957	20.60	-0.31	-22.48(.000)	-0.47	0.72
2	0.00	75	1.61	-0.17	-11.91(.000)	-1.03	0.72
3	0.00	1921	41.35	-0.06	-4.34(.000)	-0.09	0.75
4	1.00	1645	35.41	0.39	29.20(.000)	0.51	0.80
7	0.00	6	0.13	-0.05	-3.75(.000)	-1.47	0.49
9	0.00	42	0.90	-0.07	-4.82(.000)	-0.66	0.86

Item 16
----
item:16 (G5Q41)
Cases for this item 4645 Item-Rest Cor. 0.16 Item-Total Cor. 0.27
Item Threshold(s): 0.17 Weighted MNSQ 1.12
Item Delta(s): 0.17

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2173	46.78	0.16	10.96(.000)	0.25	0.84
2	0.00	1356	29.19	-0.03	-2.37(.018)	-0.09	0.86
3	0.00	722	15.54	-0.09	-6.45(.000)	-0.24	0.79
4	0.00	340	7.32	-0.08	-5.67(.000)	-0.30	0.79
7	0.00	4	0.09	-0.05	-3.65(.000)	-1.56	1.05
9	0.00	50	1.08	-0.06	-4.04(.000)	-0.65	0.74

Item 17
----
item:17 (G5Q42)
Cases for this item 4635 Item-Rest Cor. 0.29 Item-Total Cor. 0.40
Item Threshold(s): 0.58 Weighted MNSQ 1.01
Item Delta(s): 0.59

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1761	37.99	0.29	20.82(.000)	0.40	0.84
2	0.00	421	9.08	-0.19	-12.87(.000)	-0.46	0.78
3	0.00	1511	32.60	-0.01	-0.67(.506)	-0.04	0.78
4	0.00	897	19.35	-0.19	-13.07(.000)	-0.32	0.73
7	0.00	6	0.13	-0.05	-3.50(.000)	-1.14	1.37
9	0.00	39	0.84	-0.08	-5.69(.000)	-0.82	0.83

Item 18
----
item:18 (G5Q43)
Cases for this item 4620 Item-Rest Cor. 0.23 Item-Total Cor. 0.33
Item Threshold(s): 0.71 Weighted MNSQ 1.05
Item Delta(s): 0.71

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1011	21.88	-0.09	-6.27(.000)	-0.17	0.80
2	1.00	1644	35.58	0.23	15.87(.000)	0.37	0.87
3	0.00	763	16.52	-0.01	-0.36(.716)	-0.04	0.83
4	0.00	1139	24.65	-0.15	-10.16(.000)	-0.21	0.74
7	0.00	11	0.24	-0.07	-4.77(.000)	-1.11	0.66
9	0.00	52	1.13	-0.02	-1.13(.257)	-0.30	0.91

Item 19
----
item:19 (G5Q44)
Cases for this item 4607 Item-Rest Cor. 0.24 Item-Total Cor. 0.34
Item Threshold(s): 0.82 Weighted MNSQ 1.04
Item Delta(s): 0.82

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1593	34.58	-0.06	-4.08(.000)	-0.09	0.76
2	1.00	1540	33.43	0.24	16.51(.000)	0.39	0.88
3	0.00	763	16.56	-0.19	-12.94(.000)	-0.33	0.77
4	0.00	551	11.96	-0.01	-0.67(.500)	-0.05	0.85
7	0.00	7	0.15	-0.03	-1.71(.088)	-0.50	1.49
9	0.00	153	3.32	-0.05	-3.46(.001)	-0.27	0.85

Item 20
----
item:20 (G5Q45)
Cases for this item 4590 Item-Rest Cor. 0.38 Item-Total Cor. 0.47
Item Threshold(s): 1.09 Weighted MNSQ 0.94
Item Delta(s): 1.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3235	70.48	-0.36	-26.09(.000)	-0.19	0.78
1	1.00	1303	28.39	0.38	27.58(.000)	0.59	0.80
9	0.00	52	1.13	-0.06	-3.89(.000)	-0.46	0.88

Item 21
----
item:21 (G5Q46)
Cases for this item 4581 Item-Rest Cor. 0.23 Item-Total Cor. 0.32
Item Threshold(s): 1.19 Weighted MNSQ 1.03
Item Delta(s): 1.19

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1379	30.10	0.03	2.00(.045)	0.02	0.82
2	0.00	504	11.00	-0.10	-6.78(.000)	-0.23	0.85
3	0.00	1414	30.87	-0.17	-11.73(.000)	-0.22	0.72
4	1.00	1218	26.59	0.23	15.75(.000)	0.45	0.90
7	0.00	5	0.11	-0.02	-1.36(.173)	-0.28	1.17
9	0.00	61	1.33	-0.03	-1.75(.081)	-0.24	0.72

Item 22
----
item:22 (G5Q47)
Cases for this item 4552 Item-Rest Cor. 0.07 Item-Total Cor. 0.18
Item Threshold(s): 0.61 Weighted MNSQ 1.17
Item Delta(s): 0.61

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1003	22.03	0.00	0.08(.935)	-0.05	0.85
2	1.00	1709	37.54	0.07	4.45(.000)	0.22	0.87
3	0.00	829	18.21	-0.06	-4.26(.000)	-0.14	0.87
4	0.00	900	19.77	-0.00	-0.26(.798)	-0.03	0.77
7	0.00	7	0.15	-0.06	-3.73(.000)	-1.06	1.07
9	0.00	104	2.28	-0.03	-1.98(.048)	-0.17	0.88

Item 23
----
item:23 (G5Q48)
Cases for this item 4527 Item-Rest Cor. 0.37 Item-Total Cor. 0.47
Item Threshold(s): 0.48 Weighted MNSQ 0.96
Item Delta(s): 0.48

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1351	29.84	-0.11	-7.37(.000)	-0.14	0.74
2	0.00	731	16.15	-0.21	-14.27(.000)	-0.38	0.80
3	0.00	560	12.37	-0.15	-9.99(.000)	-0.29	0.75
4	1.00	1822	40.25	0.37	26.63(.000)	0.45	0.83
7	0.00	14	0.31	-0.04	-2.47(.014)	-0.47	1.02
9	0.00	49	1.08	-0.04	-2.57(.010)	-0.29	0.74

Item 24
----
item:24 (G5Q49)
Cases for this item 4505 Item-Rest Cor. 0.34 Item-Total Cor. 0.44
Item Threshold(s): 0.99 Weighted MNSQ 0.96
Item Delta(s): 0.98

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	694	15.41	-0.15	-10.38(.000)	-0.27	0.77
2	0.00	1322	29.35	-0.07	-4.93(.000)	-0.10	0.73
3	1.00	1370	30.41	0.34	24.37(.000)	0.53	0.87
4	0.00	1066	23.66	-0.15	-10.25(.000)	-0.21	0.77
7	0.00	5	0.11	-0.05	-3.42(.001)	-1.30	1.37
9	0.00	48	1.07	-0.02	-1.67(.094)	-0.11	0.85

Item 25
---
item:25 (G5Q50)
Cases for this item 4482 Item-Rest Cor. 0.09 Item-Total Cor. 0.20
Item Threshold(s): 1.09 Weighted MNSQ 1.13
Item Delta(s): 1.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	875	19.52	-0.00	-0.18(.857)	-0.02	0.80
2	0.00	1170	26.10	0.04	2.61(.009)	0.03	0.84
3	0.00	1066	23.78	-0.12	-8.22(.000)	-0.16	0.81
4	1.00	1282	28.60	0.09	6.27(.000)	0.27	0.89
7	0.00	13	0.29	-0.06	-3.97(.000)	-0.92	1.18
9	0.00	76	1.70	-0.02	-1.60(.110)	-0.21	0.89

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 1.66% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	4726
Mean	13.64
Standard Deviation	4.30
Variance	18.48
Skewness	0.02
Kurtosis	-0.27
Standard error of mean	0.06
Standard error of measurement	2.20
Coefficient Alpha	0.74

B.11. Year 7 Grammar and Punctuation

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================================================================================
NAPLAN 2017 GrammarPunctuation 7 - Item Calibration CalibraFri Jun 23 13:00 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (G7Q26)
Cases for this item    3571   Item-Rest Cor.  0.21   Item-Total Cor.  0.25
Item Threshold(s):    -3.94   Weighted MNSQ   0.94
Item Delta(s):        -3.94
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00        41       1.15   -0.13    -8.10(.000) -1.36     0.74
   2       1.00      3467      97.09    0.22    13.25(.000)  0.04     0.94
   3       0.00        22       0.62   -0.11    -6.42(.000) -1.40     0.67
   4       0.00        36       1.01   -0.11    -6.75(.000) -1.33     1.01
   7       0.00         2       0.06   -0.05    -3.26(.001) -2.60     1.27
   9       0.00         3       0.08   -0.04    -2.53(.011) -1.51     2.29
================================================================================

Item 2
------
item:2 (G7Q27)
Cases for this item    3571   Item-Rest Cor.  0.24   Item-Total Cor.  0.29
Item Threshold(s):    -3.30   Weighted MNSQ   0.94
Item Delta(s):        -3.30
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       123       3.44   -0.18   -10.71(.000) -1.06     0.95
   2       0.00        31       0.87   -0.11    -6.45(.000) -1.33     0.81
   3       1.00      3384      94.76    0.25    15.29(.000)  0.07     0.92
   4       0.00        29       0.81   -0.13    -8.04(.000) -1.76     0.74
   7       0.00         1       0.03   -0.04    -2.61(.009) -3.49     0.00
   9       0.00         3       0.08   -0.01    -0.79(.428) -0.58     1.64
================================================================================

Item 3
------
item:3 (G7Q28)
Cases for this item    3570   Item-Rest Cor.  0.26   Item-Total Cor.  0.32
Item Threshold(s):    -2.54   Weighted MNSQ   0.97
Item Delta(s):        -2.54
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       310       8.68   -0.21   -12.74(.000) -0.73     0.87
   2       0.00         9       0.25   -0.09    -5.42(.000) -1.93     0.92
   3       1.00      3211      89.94    0.26    16.17(.000)  0.09     0.93
   4       0.00        31       0.87   -0.13    -7.79(.000) -1.42     0.74
   7       0.00         4       0.11   -0.04    -2.37(.018) -1.53     1.44
   9       0.00         5       0.14   -0.05    -3.18(.001) -1.60     0.59
================================================================================

Item 4
------
item:4 (G7Q29)
Cases for this item    3567   Item-Rest Cor.  0.28   Item-Total Cor.  0.37
Item Threshold(s):    -1.15   Weighted MNSQ   1.04
Item Delta(s):        -1.15
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       792      22.20   -0.17   -10.54(.000) -0.41     0.82
   2       0.00        66       1.85   -0.11    -6.82(.000) -0.83     0.84
   3       0.00        99       2.78   -0.19   -11.27(.000) -1.15     0.85
   4       1.00      2587      72.53    0.28    17.13(.000)  0.20     0.93
   7       0.00         2       0.06   -0.03    -2.04(.041) -1.89     2.27
   9       0.00        21       0.59   -0.06    -3.32(.001) -0.69     1.09
================================================================================
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Item 5
------
item:5 (G7Q30)
Cases for this item 3567 Item-Rest Cor. 0.42 Item-Total Cor. 0.50
Item Threshold(s): -1.41 Weighted MNSQ 0.91
Item Delta(s): -1.41

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	253	7.09	-0.24	-15.05(.000)	-0.89	0.78
2	0.00	466	13.06	-0.26	-15.86(.000)	-0.67	0.76
3	1.00	2735	76.68	0.42	27.64(.000)	0.23	0.90
4	0.00	90	2.52	-0.13	-7.64(.000)	-0.81	0.68
7	0.00	17	0.48	-0.10	-5.70(.000)	-1.43	0.96
9	0.00	6	0.17	-0.05	-2.85(.004)	-0.88	1.32

Item 6
------
item:6 (G7Q31)
Cases for this item 3567 Item-Rest Cor. 0.35 Item-Total Cor. 0.44
Item Threshold(s): -0.88 Weighted MNSQ 1.00
Item Delta(s): -0.88

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	188	5.27	-0.17	-10.29(.000)	-0.73	0.77
2	1.00	2415	67.70	0.35	22.25(.000)	0.26	0.91
3	0.00	797	22.34	-0.21	-12.86(.000)	-0.45	0.83
4	0.00	151	4.23	-0.16	-9.48(.000)	-0.78	0.84
7	0.00	2	0.06	-0.05	-2.73(.006)	-2.33	1.65
9	0.00	14	0.39	-0.08	-4.70(.000)	-1.12	1.06

Item 7
------
item:7 (G7Q32)
Cases for this item 3567 Item-Rest Cor. 0.35 Item-Total Cor. 0.44
Item Threshold(s): -0.95 Weighted MNSQ 0.98
Item Delta(s): -0.95

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2459	68.94	0.35	22.27(.000)	0.26	0.90
2	0.00	458	12.84	-0.20	-12.13(.000)	-0.56	0.82
3	0.00	491	13.77	-0.19	-11.27(.000)	-0.52	0.87
4	0.00	139	3.90	-0.12	-7.51(.000)	-0.65	0.94
7	0.00	2	0.06	-0.04	-2.24(.025)	-1.89	2.27
9	0.00	18	0.50	-0.09	-5.21(.000)	-1.53	0.90

Item 8
------
item:8 (G7Q33)
Cases for this item 3561 Item-Rest Cor. 0.29 Item-Total Cor. 0.39
Item Threshold(s): -0.27 Weighted MNSQ 1.05
Item Delta(s): -0.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	226	6.35	-0.20	-12.11(.000)	-0.78	0.90
2	1.00	1980	55.60	0.29	18.30(.000)	0.31	0.91
3	0.00	572	16.06	-0.08	-4.98(.000)	-0.25	0.90
4	0.00	752	21.12	-0.14	-8.71(.000)	-0.32	0.84
7	0.00	9	0.25	-0.04	-2.67(.008)	-1.02	1.05
9	0.00	22	0.62	-0.07	-4.21(.000)	-0.98	0.54

Item 9
------
item:9 (G7Q34)
Cases for this item 3560 Item-Rest Cor. 0.50 Item-Total Cor. 0.58
Item Threshold(s): -0.35 Weighted MNSQ 0.87
Item Delta(s): -0.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1518	42.64	-0.50	-34.64(.000)	-0.57	0.81
1	1.00	2036	57.19	0.50	34.70(.000)	0.43	0.84
9	0.00	6	0.17	-0.01	-0.69(.492)	-0.73	1.19

Item 10
----
item:10 (G7Q35)
Cases for this item 3558 Item-Rest Cor. 0.34 Item-Total Cor. 0.43
Item Threshold(s): 1.03 Weighted MNSQ 1.00
Item Delta(s): 1.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2462	69.20	-0.32	-19.98(.000)	-0.22	0.88
1	1.00	1056	29.68	0.34	21.39(.000)	0.56	0.92
9	0.00	40	1.12	-0.07	-4.33(.000)	-0.71	0.96

Item 11
----
item:11 (G7Q36)
Cases for this item 3552 Item-Rest Cor. 0.29 Item-Total Cor. 0.39
Item Threshold(s): 0.27 Weighted MNSQ 1.06
Item Delta(s): 0.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1582	44.54	0.29	17.77(.000)	0.39	0.92
2	0.00	454	12.78	-0.20	-11.86(.000)	-0.48	0.82
3	0.00	841	23.68	0.01	0.68(.494)	-0.06	0.91
4	0.00	589	16.58	-0.18	-10.87(.000)	-0.44	0.77
7	0.00	48	1.35	-0.05	-3.27(.001)	-0.49	0.96
9	0.00	38	1.07	-0.08	-5.04(.000)	-0.86	1.07

Item 12
----
item:12 (G7Q37)
Cases for this item 3551 Item-Rest Cor. 0.46 Item-Total Cor. 0.54
Item Threshold(s): -0.07 Weighted MNSQ 0.92
Item Delta(s): -0.07

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	470	13.24	-0.33	-20.70(.000)	-0.76	0.74
2	0.00	40	1.13	-0.13	-8.06(.000)	-1.14	0.82
3	0.00	1174	33.06	-0.20	-12.19(.000)	-0.31	0.81
4	1.00	1828	51.48	0.46	30.51(.000)	0.45	0.87
7	0.00	20	0.56	-0.06	-3.51(.000)	-0.64	0.97
9	0.00	19	0.54	-0.05	-3.07(.002)	-0.66	0.98

Item 13
----
item:13 (G7Q38)
Cases for this item 3550 Item-Rest Cor. 0.32 Item-Total Cor. 0.42
Item Threshold(s): -0.15 Weighted MNSQ 1.03
Item Delta(s): -0.15

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1893	53.32	0.32	20.39(.000)	0.34	0.91
2	0.00	954	26.87	-0.14	-8.24(.000)	-0.26	0.85
3	0.00	483	13.61	-0.18	-10.78(.000)	-0.49	0.87
4	0.00	184	5.18	-0.14	-8.70(.000)	-0.61	0.81
7	0.00	17	0.48	-0.04	-2.48(.013)	-0.51	1.14
9	0.00	19	0.54	-0.07	-3.94(.000)	-0.89	1.02

Item 14
----
item:14 (G7Q39)
Cases for this item 3548 Item-Rest Cor. 0.37 Item-Total Cor. 0.47
Item Threshold(s): 0.00 Weighted MNSQ 0.99
Item Delta(s): 0.00

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1778	50.11	0.37	23.95(.000)	0.41	0.90
2	0.00	202	5.69	-0.14	-8.48(.000)	-0.54	0.84
3	0.00	1018	28.69	-0.14	-8.69(.000)	-0.28	0.83
4	0.00	523	14.74	-0.23	-14.02(.000)	-0.51	0.82
7	0.00	6	0.17	-0.05	-3.18(.001)	-1.36	1.26
9	0.00	21	0.59	-0.07	-4.01(.000)	-0.91	0.99

Item 15
----
item:15 (G7Q40)
Cases for this item 3547 Item-Rest Cor. 0.45 Item-Total Cor. 0.54
Item Threshold(s): 0.59 Weighted MNSQ 0.92
Item Delta(s): 0.59

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2182	61.52	-0.44	-28.86(.000)	-0.34	0.83
1	1.00	1345	37.92	0.45	30.22(.000)	0.59	0.86
9	0.00	20	0.56	-0.10	-5.90(.000)	-1.14	0.81

Item 16
----
item:16 (G7Q41)
Cases for this item 3546 Item-Rest Cor. 0.37 Item-Total Cor. 0.47
Item Threshold(s): 0.38 Weighted MNSQ 0.99
Item Delta(s): 0.38

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	923	26.03	-0.23	-13.90(.000)	-0.39	0.82
2	0.00	636	17.94	-0.03	-1.95(.051)	-0.14	0.93
3	0.00	445	12.55	-0.21	-12.58(.000)	-0.49	0.77
4	1.00	1498	42.24	0.37	23.97(.000)	0.48	0.89
7	0.00	27	0.76	-0.00	-0.01(.989)	-0.10	1.13
9	0.00	17	0.48	-0.05	-3.11(.002)	-0.73	0.92

Item 17
----
item:17 (G7Q42)
Cases for this item 3540 Item-Rest Cor. 0.17 Item-Total Cor. 0.28
Item Threshold(s): 0.38 Weighted MNSQ 1.16
Item Delta(s): 0.38

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	667	18.84	-0.09	-5.28(.000)	-0.21	0.86
2	1.00	1499	42.34	0.17	10.38(.000)	0.29	0.95
3	0.00	641	18.11	-0.09	-5.21(.000)	-0.24	0.93
4	0.00	689	19.46	-0.02	-1.39(.165)	-0.11	0.93
7	0.00	9	0.25	-0.02	-1.29(.197)	-0.32	1.32
9	0.00	35	0.99	-0.06	-3.87(.000)	-0.71	0.96

Item 18
----
item:18 (G7Q43)
Cases for this item 3535 Item-Rest Cor. 0.14 Item-Total Cor. 0.24
Item Threshold(s): 0.79 Weighted MNSQ 1.16
Item Delta(s): 0.79

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	786	22.23	-0.00	-0.06(.955)	-0.05	0.92
2	1.00	1211	34.26	0.14	8.21(.000)	0.28	1.01
3	0.00	719	20.34	-0.06	-3.78(.000)	-0.14	0.89
4	0.00	744	21.05	-0.07	-4.26(.000)	-0.17	0.87
7	0.00	8	0.23	-0.00	-0.11(.912)	-0.19	1.58
9	0.00	67	1.90	-0.07	-4.27(.000)	-0.48	0.89

Item 19
----
item:19 (G7Q44)
Cases for this item 3533 Item-Rest Cor. 0.32 Item-Total Cor. 0.41
Item Threshold(s): 0.61 Weighted MNSQ 1.03
Item Delta(s): 0.61

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	745	21.09	-0.13	-7.94(.000)	-0.24	0.88
2	1.00	1331	37.67	0.32	19.80(.000)	0.45	0.95
3	0.00	452	12.79	-0.10	-5.84(.000)	-0.26	0.81
4	0.00	953	26.97	-0.13	-7.83(.000)	-0.25	0.85
7	0.00	10	0.28	-0.03	-1.80(.072)	-0.63	1.22
9	0.00	42	1.19	-0.06	-3.83(.000)	-0.42	0.97

Item 20
----
item:20 (G7Q45)
Cases for this item 3531 Item-Rest Cor. 0.41 Item-Total Cor. 0.49
Item Threshold(s): 1.20 Weighted MNSQ 0.93
Item Delta(s): 1.19

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	35	0.99	-0.13	-7.54(.000)	-1.11	0.80
2	0.00	1020	28.89	-0.14	-8.16(.000)	-0.22	0.83
3	0.00	1515	42.91	-0.22	-13.11(.000)	-0.24	0.86
4	1.00	951	26.93	0.41	26.99(.000)	0.71	0.88
7	0.00	2	0.06	-0.03	-1.91(.056)	-1.67	2.58
9	0.00	8	0.23	-0.04	-2.39(.017)	-0.66	0.83

Item 21
----
item:21 (G7Q46)
Cases for this item 3530 Item-Rest Cor. 0.34 Item-Total Cor. 0.44
Item Threshold(s): 0.35 Weighted MNSQ 1.01
Item Delta(s): 0.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	932	26.40	-0.02	-1.44(.149)	-0.10	0.86
2	0.00	773	21.90	-0.21	-12.64(.000)	-0.39	0.81
3	0.00	283	8.02	-0.25	-15.62(.000)	-0.75	0.80
4	1.00	1515	42.92	0.34	21.74(.000)	0.44	0.91
7	0.00	6	0.17	-0.03	-1.87(.062)	-0.71	1.41
9	0.00	21	0.59	-0.04	-2.32(.020)	-0.58	1.09

Item 22
----
item:22 (G7Q47)
Cases for this item 3526 Item-Rest Cor. 0.22 Item-Total Cor. 0.30
Item Threshold(s): 2.03 Weighted MNSQ 1.02
Item Delta(s): 2.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	649	18.41	-0.09	-5.08(.000)	-0.17	0.96
2	0.00	654	18.55	-0.01	-0.56(.573)	-0.03	0.92
3	1.00	536	15.20	0.22	13.39(.000)	0.65	1.05
4	0.00	1654	46.91	-0.07	-4.44(.000)	-0.09	0.85
7	0.00	9	0.26	-0.04	-2.55(.011)	-0.72	1.14
9	0.00	24	0.68	-0.04	-2.09(.036)	-0.37	0.83

Item 23
----
item:23 (G7Q48)
Cases for this item 3524 Item-Rest Cor. 0.19 Item-Total Cor. 0.26
Item Threshold(s): 2.26 Weighted MNSQ 1.05
Item Delta(s): 2.26

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3022	85.75	-0.16	-9.35(.000)	-0.06	0.93
1	1.00	447	12.68	0.19	11.64(.000)	0.61	0.91
9	0.00	55	1.56	-0.08	-4.64(.000)	-0.57	0.92

Item 24
----
item:24 (G7Q49)
Cases for this item 3515 Item-Rest Cor. 0.43 Item-Total Cor. 0.52
Item Threshold(s): 0.65 Weighted MNSQ 0.94
Item Delta(s): 0.65

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2196	62.48	-0.42	-27.70(.000)	-0.32	0.85
1	1.00	1298	36.93	0.43	28.27(.000)	0.59	0.84
9	0.00	21	0.60	-0.04	-2.16(.031)	-0.49	1.03

Item 25
----
item:25 (G7Q50)
Cases for this item 3502 Item-Rest Cor. 0.24 Item-Total Cor. 0.30
Item Threshold(s): 2.67 Weighted MNSQ 1.00
Item Delta(s): 2.67

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3172	90.58	-0.23	-13.83(.000)	-0.06	0.92
1	1.00	320	9.14	0.24	14.51(.000)	0.82	0.97
9	0.00	10	0.29	-0.04	-2.36(.018)	-0.54	0.75

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 0.66% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	3571
Mean	12.48
Standard Deviation	4.49
Variance	20.12
Skewness	0.14
Kurtosis	-0.50
Standard error of mean	0.08
Standard error of measurement	2.09
Coefficient Alpha	0.78

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B.12. Year 9 Grammar and Punctuation

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================================================================================
NAPLAN 2017 GrammarPunctuation 9 - Item Calibration CalibraFri Jun 23 13:01 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (G9Q26)
Cases for this item    3424   Item-Rest Cor.  0.29   Item-Total Cor.  0.35
Item Threshold(s):    -2.97   Weighted MNSQ   0.94
Item Delta(s):        -2.97
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00        33       0.96   -0.11    -6.68(.000) -0.78     0.87
   2       1.00      3208      93.69    0.29    18.03(.000)  0.07     0.76
   3       0.00       169       4.94   -0.25   -14.79(.000) -0.96     0.78
   4       0.00         5       0.15   -0.07    -3.82(.000) -1.33     0.70
   7       0.00         4       0.12   -0.08    -4.97(.000) -1.88     0.33
   9       0.00         5       0.15   -0.05    -3.15(.002) -1.16     1.48
================================================================================

Item 2
------
item:2 (G9Q27)
Cases for this item    3424   Item-Rest Cor.  0.42   Item-Total Cor.  0.49
Item Threshold(s):    -2.13   Weighted MNSQ   0.89
Item Delta(s):        -2.13
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       125       3.65   -0.24   -14.58(.000) -0.98     0.71
   2       0.00        56       1.64   -0.20   -11.86(.000) -1.23     0.75
   3       1.00      2982      87.09    0.42    27.11(.000)  0.13     0.73
   4       0.00       246       7.18   -0.24   -14.43(.000) -0.70     0.69
   7       0.00         2       0.06   -0.05    -3.21(.001) -1.56     0.71
   9       0.00        13       0.38   -0.12    -6.98(.000) -1.37     0.69
================================================================================

Item 3
------
item:3 (G9Q28)
Cases for this item    3424   Item-Rest Cor.  0.30   Item-Total Cor.  0.39
Item Threshold(s):    -1.57   Weighted MNSQ   0.97
Item Delta(s):        -1.57
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       536      15.65   -0.17   -10.29(.000) -0.40     0.71
   2       0.00        67       1.96   -0.17   -10.23(.000) -1.06     0.67
   3       0.00        56       1.64   -0.19   -11.35(.000) -1.12     0.91
   4       1.00      2746      80.20    0.30    18.68(.000)  0.14     0.75
   7       0.00         6       0.18   -0.09    -5.38(.000) -1.64     0.66
   9       0.00        13       0.38   -0.10    -6.13(.000) -1.35     0.91
================================================================================

Item 4
------
item:4 (G9Q29)
Cases for this item    3421   Item-Rest Cor.  0.35   Item-Total Cor.  0.42
Item Threshold(s):    -2.20   Weighted MNSQ   0.92
Item Delta(s):        -2.20
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00        68       1.99   -0.21   -12.30(.000) -1.21     0.77
   2       0.00       123       3.60   -0.16    -9.41(.000) -0.67     0.78
   3       1.00      3003      87.78    0.35    22.10(.000)  0.11     0.75
   4       0.00       216       6.31   -0.21   -12.69(.000) -0.63     0.70
   7       0.00         1       0.03   -0.06    -3.27(.001) -2.06     0.00
   9       0.00        10       0.29   -0.09    -5.34(.000) -1.41     0.82
================================================================================
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Item 5
------
item:5 (G9Q30)
Cases for this item 3419 Item-Rest Cor. 0.31 Item-Total Cor. 0.40
Item Threshold(s): -1.32 Weighted MNSQ 0.98
Item Delta(s): -1.32

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	234	6.84	-0.12	-6.81(.000)	-0.39	0.75
2	0.00	325	9.51	-0.17	-10.11(.000)	-0.45	0.78
3	1.00	2612	76.40	0.31	18.86(.000)	0.15	0.75
4	0.00	227	6.64	-0.18	-10.93(.000)	-0.58	0.75
7	0.00	2	0.06	-0.03	-1.82(.069)	-0.90	1.63
9	0.00	19	0.56	-0.06	-3.66(.000)	-0.76	1.13

Item 6
------
item:6 (G9Q31)
Cases for this item 3419 Item-Rest Cor. 0.40 Item-Total Cor. 0.47
Item Threshold(s): -2.03 Weighted MNSQ 0.89
Item Delta(s): -2.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2943	86.08	0.40	25.59(.000)	0.13	0.73
2	0.00	108	3.16	-0.11	-6.31(.000)	-0.50	0.82
3	0.00	98	2.87	-0.25	-15.24(.000)	-1.12	0.65
4	0.00	257	7.52	-0.27	-16.56(.000)	-0.79	0.67
7	0.00	2	0.06	-0.06	-3.23(.001)	-1.61	0.63
9	0.00	11	0.32	-0.08	-4.94(.000)	-1.37	1.03

Item 7
------
item:7 (G9Q32)
Cases for this item 3419 Item-Rest Cor. 0.33 Item-Total Cor. 0.43
Item Threshold(s): 0.61 Weighted MNSQ 0.96
Item Delta(s): 0.61

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1627	47.59	-0.11	-6.33(.000)	-0.16	0.71
2	1.00	1266	37.03	0.33	20.47(.000)	0.40	0.74
3	0.00	400	11.70	-0.21	-12.41(.000)	-0.40	0.74
4	0.00	95	2.78	-0.16	-9.39(.000)	-0.61	0.86
7	0.00	3	0.09	-0.07	-3.92(.000)	-1.54	0.47
9	0.00	28	0.82	-0.12	-7.20(.000)	-0.97	0.82

Item 8
------
item:8 (G9Q33)
Cases for this item 3415 Item-Rest Cor. 0.19 Item-Total Cor. 0.31
Item Threshold(s): -0.34 Weighted MNSQ 1.07
Item Delta(s): -0.34

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1966	57.57	0.19	11.35(.000)	0.18	0.78
2	0.00	558	16.34	-0.08	-4.52(.000)	-0.20	0.78
3	0.00	672	19.68	-0.09	-5.01(.000)	-0.21	0.72
4	0.00	194	5.68	-0.09	-5.37(.000)	-0.37	0.77
7	0.00	10	0.29	-0.10	-5.92(.000)	-1.43	0.89
9	0.00	15	0.44	-0.08	-4.59(.000)	-0.91	0.97

Item 9
------
item:9 (G9Q34)
Cases for this item 3414 Item-Rest Cor. 0.31 Item-Total Cor. 0.41
Item Threshold(s): -0.99 Weighted MNSQ 0.98
Item Delta(s): -0.99

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	122	3.57	-0.17	-9.80(.000)	-0.72	0.72
2	1.00	2411	70.62	0.31	19.27(.000)	0.18	0.74
3	0.00	569	16.67	-0.20	-12.02(.000)	-0.39	0.75
4	0.00	283	8.29	-0.09	-5.51(.000)	-0.32	0.74
7	0.00	2	0.06	-0.06	-3.31(.001)	-1.61	0.63
9	0.00	27	0.79	-0.11	-6.33(.000)	-1.05	0.80

Item 10
----
item:10 (G9Q35)
Cases for this item 3409 Item-Rest Cor. 0.34 Item-Total Cor. 0.44
Item Threshold(s): -0.83 Weighted MNSQ 0.97
Item Delta(s): -0.83

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	256	7.51	-0.16	-9.27(.000)	-0.43	0.73
2	1.00	2309	67.73	0.34	20.97(.000)	0.22	0.74
3	0.00	422	12.38	-0.24	-14.22(.000)	-0.56	0.71
4	0.00	391	11.47	-0.09	-5.51(.000)	-0.29	0.74
7	0.00	1	0.03	-0.06	-3.39(.001)	-2.06	0.00
9	0.00	30	0.88	-0.08	-4.89(.000)	-0.77	1.00

Item 11
----
item:11 (G9Q36)
Cases for this item 3408 Item-Rest Cor. 0.31 Item-Total Cor. 0.41
Item Threshold(s): -0.48 Weighted MNSQ 0.99
Item Delta(s): -0.48

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	191	5.60	-0.19	-11.21(.000)	-0.58	0.73
2	1.00	2064	60.56	0.31	18.88(.000)	0.23	0.73
3	0.00	613	17.99	-0.05	-2.92(.004)	-0.17	0.75
4	0.00	498	14.61	-0.21	-12.29(.000)	-0.41	0.77
7	0.00	7	0.21	-0.06	-3.65(.000)	-0.85	0.73
9	0.00	35	1.03	-0.12	-7.12(.000)	-1.01	0.91

Item 12
----
item:12 (G9Q37)
Cases for this item 3405 Item-Rest Cor. 0.36 Item-Total Cor. 0.46
Item Threshold(s): 0.79 Weighted MNSQ 0.95
Item Delta(s): 0.79

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2224	65.32	-0.33	-20.14(.000)	-0.20	0.74
1	1.00	1139	33.45	0.36	22.40(.000)	0.45	0.72
9	0.00	42	1.23	-0.13	-7.36(.000)	-0.89	0.84

Item 13
----
item:13 (G9Q38)
Cases for this item 3402 Item-Rest Cor. 0.30 Item-Total Cor. 0.41
Item Threshold(s): -0.24 Weighted MNSQ 1.00
Item Delta(s): -0.24

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1885	55.41	0.30	18.38(.000)	0.25	0.73
2	0.00	282	8.29	-0.23	-13.47(.000)	-0.56	0.79
3	0.00	849	24.96	-0.02	-1.42(.156)	-0.11	0.75
4	0.00	366	10.76	-0.22	-13.08(.000)	-0.48	0.67
7	0.00	2	0.06	-0.06	-3.39(.001)	-1.61	0.63
9	0.00	18	0.53	-0.11	-6.18(.000)	-1.23	1.14

Item 14
----
item:14 (G9Q39)
Cases for this item 3396 Item-Rest Cor. 0.26 Item-Total Cor. 0.37
Item Threshold(s): 0.02 Weighted MNSQ 1.03
Item Delta(s): 0.02

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	665	19.58	-0.14	-8.30(.000)	-0.27	0.78
2	0.00	437	12.87	-0.08	-4.59(.000)	-0.20	0.77
3	1.00	1694	49.88	0.26	15.67(.000)	0.27	0.75
4	0.00	528	15.55	-0.10	-5.93(.000)	-0.23	0.69
7	0.00	4	0.12	-0.06	-3.53(.000)	-1.37	0.66
9	0.00	68	2.00	-0.06	-3.67(.000)	-0.42	0.89

Item 15
----
item:15 (G9Q40)
Cases for this item 3395 Item-Rest Cor. 0.24 Item-Total Cor. 0.35
Item Threshold(s): 0.47 Weighted MNSQ 1.02
Item Delta(s): 0.47

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1380	40.65	-0.00	-0.29(.772)	-0.07	0.70
2	0.00	251	7.39	-0.18	-10.40(.000)	-0.48	0.78
3	1.00	1361	40.09	0.24	14.31(.000)	0.31	0.77
4	0.00	387	11.40	-0.20	-11.65(.000)	-0.41	0.76
7	0.00	3	0.09	-0.03	-1.68(.093)	-0.73	1.15
9	0.00	13	0.38	-0.08	-4.96(.000)	-0.88	1.20

Item 16
----
item:16 (G9Q41)
Cases for this item 3395 Item-Rest Cor. 0.14 Item-Total Cor. 0.26
Item Threshold(s): 0.39 Weighted MNSQ 1.09
Item Delta(s): 0.39

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	320	9.43	-0.10	-6.03(.000)	-0.25	0.81
2	0.00	687	20.24	0.04	2.23(.026)	-0.03	0.78
3	0.00	918	27.04	-0.10	-5.56(.000)	-0.14	0.79
4	1.00	1415	41.68	0.14	8.35(.000)	0.21	0.75
7	0.00	4	0.12	-0.06	-3.26(.001)	-1.26	1.04
9	0.00	51	1.50	-0.09	-5.35(.000)	-0.61	0.93

Item 17
----
item:17 (G9Q42)
Cases for this item 3394 Item-Rest Cor. 0.40 Item-Total Cor. 0.49
Item Threshold(s): -0.71 Weighted MNSQ 0.93
Item Delta(s): -0.71

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	485	14.29	-0.23	-13.70(.000)	-0.46	0.70
2	0.00	390	11.49	-0.10	-5.68(.000)	-0.29	0.76
3	0.00	280	8.25	-0.26	-15.37(.000)	-0.63	0.63
4	1.00	2222	65.47	0.40	25.13(.000)	0.25	0.72
7	0.00	5	0.15	-0.04	-2.33(.020)	-0.83	1.56
9	0.00	12	0.35	-0.09	-5.50(.000)	-1.13	0.99

Item 18
----
item:18 (G9Q43)
Cases for this item 3390 Item-Rest Cor. 0.16 Item-Total Cor. 0.28
Item Threshold(s): 0.22 Weighted MNSQ 1.09
Item Delta(s): 0.22

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	497	14.66	-0.03	-1.56(.118)	-0.11	0.76
2	1.00	1544	45.55	0.16	9.37(.000)	0.23	0.76
3	0.00	697	20.56	-0.11	-6.37(.000)	-0.22	0.78
4	0.00	619	18.26	-0.04	-2.04(.041)	-0.11	0.75
7	0.00	2	0.06	-0.06	-3.38(.001)	-1.61	0.63
9	0.00	31	0.91	-0.11	-6.62(.000)	-1.00	0.93

Item 19
----
item:19 (G9Q44)
Cases for this item 3387 Item-Rest Cor. 0.27 Item-Total Cor. 0.38
Item Threshold(s): 0.56 Weighted MNSQ 1.01
Item Delta(s): 0.56

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1296	38.26	0.27	16.02(.000)	0.35	0.75
2	0.00	593	17.51	-0.11	-6.64(.000)	-0.21	0.74
3	0.00	1038	30.65	-0.11	-6.52(.000)	-0.17	0.72
4	0.00	431	12.73	-0.08	-4.38(.000)	-0.18	0.78
7	0.00	7	0.21	-0.03	-2.03(.042)	-0.74	0.86
9	0.00	22	0.65	-0.10	-5.84(.000)	-0.98	1.09

Item 20
----
item:20 (G9Q45)
Cases for this item 3385 Item-Rest Cor. 0.34 Item-Total Cor. 0.44
Item Threshold(s): -0.42 Weighted MNSQ 0.98
Item Delta(s): -0.42

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	672	19.85	-0.09	-5.00(.000)	-0.20	0.70
2	0.00	484	14.30	-0.19	-11.22(.000)	-0.39	0.72
3	0.00	190	5.61	-0.24	-14.60(.000)	-0.76	0.70
4	1.00	2015	59.53	0.34	21.01(.000)	0.27	0.72
7	0.00	4	0.12	-0.07	-3.79(.000)	-1.31	0.55
9	0.00	20	0.59	-0.10	-6.08(.000)	-1.09	1.01

Item 21
----
item:21 (G9Q46)
Cases for this item 3378 Item-Rest Cor. 0.17 Item-Total Cor. 0.29
Item Threshold(s): 0.26 Weighted MNSQ 1.08
Item Delta(s): 0.26

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	616	18.24	0.05	2.97(.003)	0.01	0.79
2	0.00	470	13.91	-0.13	-7.32(.000)	-0.26	0.78
3	0.00	337	9.98	-0.10	-6.07(.000)	-0.31	0.82
4	1.00	1508	44.64	0.17	10.00(.000)	0.24	0.74
5	0.00	414	12.26	-0.06	-3.61(.000)	-0.17	0.70
7	0.00	3	0.09	-0.04	-2.11(.035)	-0.85	1.08
9	0.00	30	0.89	-0.09	-5.11(.000)	-0.73	0.99

Item 22
----
item:22 (G9Q47)
Cases for this item 3374 Item-Rest Cor. 0.19 Item-Total Cor. 0.28
Item Threshold(s): 1.52 Weighted MNSQ 1.02
Item Delta(s): 1.52

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	703	20.84	0.19	11.14(.000)	0.40	0.78
2	0.00	742	21.99	-0.05	-2.65(.008)	-0.09	0.77
3	0.00	544	16.12	-0.13	-7.69(.000)	-0.20	0.80
4	0.00	1304	38.65	-0.00	-0.17(.862)	-0.02	0.74
7	0.00	3	0.09	-0.04	-2.06(.040)	-0.71	1.62
9	0.00	78	2.31	-0.05	-2.66(.008)	-0.26	0.82

Item 23
----
item:23 (G9Q48)
Cases for this item 3373 Item-Rest Cor. 0.04 Item-Total Cor. 0.16
Item Threshold(s): 0.95 Weighted MNSQ 1.13
Item Delta(s): 0.95

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1466	43.46	0.13	7.36(.000)	0.08	0.71
2	0.00	563	16.69	-0.12	-7.15(.000)	-0.19	0.81
3	1.00	1028	30.48	0.04	2.56(.011)	0.15	0.81
4	0.00	284	8.42	-0.10	-5.63(.000)	-0.28	0.84
7	0.00	5	0.15	-0.04	-2.57(.010)	-0.89	1.08
9	0.00	27	0.80	-0.10	-5.57(.000)	-0.90	1.07

Item 24
----
item:24 (G9Q49)
Cases for this item 3367 Item-Rest Cor. -0.08 Item-Total Cor. -0.02
Item Threshold(s): 3.00 Weighted MNSQ 1.07
Item Delta(s): 3.00

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	414	12.30	-0.01	-0.85(.393)	-0.04	0.79
2	0.00	2006	59.58	0.11	6.32(.000)	0.08	0.76
3	0.00	702	20.85	-0.05	-2.84(.005)	-0.06	0.81
4	1.00	207	6.15	-0.08	-4.38(.000)	-0.07	0.86
7	0.00	3	0.09	-0.06	-3.36(.001)	-1.31	1.24
9	0.00	35	1.04	-0.09	-4.95(.000)	-0.58	0.87

Item 25
----
item:25 (G9Q50)
Cases for this item 3359 Item-Rest Cor. 0.39 Item-Total Cor. 0.50
Item Threshold(s): 0.16 Weighted MNSQ 0.94
Item Delta(s): 0.16

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1770	52.69	-0.39	-24.39(.000)	-0.27	0.76
1	1.00	1579	47.01	0.39	24.91(.000)	0.35	0.69
9	0.00	10	0.30	-0.06	-3.60(.000)	-0.90	0.78

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 0.71% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	3424
Mean	13.82
Standard Deviation	4.10
Variance	16.80
Skewness	-0.28
Kurtosis	-0.25
Standard error of mean	0.07
Standard error of measurement	2.15
Coefficient Alpha	0.73

B.13. Year 3 Numeracy

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================================================================================
NAPLAN 2017 Numeracy 3 - Item Calibration Calibration SamplFri Jun 23 11:58 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (N3Q01)
Cases for this item    4657   Item-Rest Cor.  0.12   Item-Total Cor.  0.14
Item Threshold(s):    -4.16   Weighted MNSQ   1.03
Item Delta(s):        -4.16
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       16       0.34   -0.10    -7.17(.000) -2.18     1.10
   2       0.00       66       1.42   -0.05    -3.18(.001) -0.51     1.19
   3       1.00     4525      97.17    0.12     8.11(.000)  0.03     1.17
   4       0.00       38       0.82   -0.04    -2.80(.005) -0.72     1.28
   7       0.00        3       0.06   -0.05    -3.58(.000) -2.81     1.67
   9       0.00        9       0.19   -0.07    -4.58(.000) -2.35     1.59
================================================================================

Item 2
------
item:2 (N3Q02)
Cases for this item    4657   Item-Rest Cor.  0.36   Item-Total Cor.  0.39
Item Threshold(s):    -3.15   Weighted MNSQ   0.87
Item Delta(s):        -3.15
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       30       0.64   -0.10    -6.65(.000) -1.57     1.13
   2       1.00     4337      93.13    0.36    26.07(.000)  0.13     1.10
   3       0.00      195       4.19   -0.26   -18.62(.000) -1.66     0.91
   4       0.00       78       1.67   -0.19   -12.95(.000) -1.78     0.94
   7       0.00        5       0.11   -0.07    -4.62(.000) -2.76     1.33
   9       0.00       12       0.26   -0.07    -4.93(.000) -2.13     1.58
================================================================================

Item 3
------
item:3 (N3Q03)
Cases for this item    4656   Item-Rest Cor.  0.43   Item-Total Cor.  0.47
Item Threshold(s):    -2.68   Weighted MNSQ   0.83
Item Delta(s):        -2.68
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      440       9.45   -0.41   -30.42(.000) -1.54     0.90
   1       1.00     4187      89.93    0.43    32.59(.000)  0.18     1.08
   9       0.00       29       0.62   -0.13    -9.28(.000) -2.27     0.80
================================================================================

Item 4
------
item:4 (N3Q04)
Cases for this item    4656   Item-Rest Cor.  0.53   Item-Total Cor.  0.58
Item Threshold(s):    -0.83   Weighted MNSQ   0.87
Item Delta(s):        -0.83
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      954      20.49   -0.42   -31.46(.000) -0.99     0.86
   2       0.00      295       6.34   -0.15   -10.52(.000) -0.74     0.94
   3       1.00     3060      65.72    0.53    42.68(.000)  0.47     1.02
   4       0.00      270       5.80   -0.12    -8.28(.000) -0.59     0.94
   7       0.00        5       0.11   -0.07    -4.60(.000) -2.61     1.30
   9       0.00       72       1.55   -0.12    -8.48(.000) -1.36     1.23
================================================================================
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Item 5
------
item:5 (N3Q05)
Cases for this item 4656 Item-Rest Cor. 0.45 Item-Total Cor. 0.49
Item Threshold(s): -2.02 Weighted MNSQ 0.87
Item Delta(s): -2.02

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3891	83.57	0.45	34.10(.000)	0.25	1.06
2	0.00	135	2.90	-0.18	-12.28(.000)	-1.23	0.94
3	0.00	445	9.56	-0.30	-21.72(.000)	-1.19	0.94
4	0.00	76	1.63	-0.13	-9.07(.000)	-1.30	0.96
5	0.00	72	1.55	-0.16	-10.98(.000)	-1.48	0.87
7	0.00	5	0.11	-0.04	-2.79(.005)	-1.54	1.93
9	0.00	32	0.69	-0.11	-7.58(.000)	-1.85	0.99

Item 6
------
item:6 (N3Q06)
Cases for this item 4655 Item-Rest Cor. 0.33 Item-Total Cor. 0.37
Item Threshold(s): -2.55 Weighted MNSQ 0.98
Item Delta(s): -2.55

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	348	7.48	-0.26	-18.05(.000)	-1.14	0.98
2	1.00	4136	88.85	0.33	23.48(.000)	0.15	1.12
3	0.00	71	1.53	-0.12	-8.53(.000)	-1.15	1.12
4	0.00	82	1.76	-0.12	-8.37(.000)	-1.25	0.92
7	0.00	1	0.02	-0.04	-2.80(.005)	-4.30	0.00
9	0.00	17	0.37	-0.06	-3.78(.000)	-1.37	1.57

Item 7
------
item:7 (N3Q07)
Cases for this item 4655 Item-Rest Cor. 0.38 Item-Total Cor. 0.42
Item Threshold(s): -2.21 Weighted MNSQ 0.94
Item Delta(s): -2.21

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	231	4.96	-0.15	-10.65(.000)	-0.83	0.90
2	1.00	3985	85.61	0.38	27.74(.000)	0.19	1.10
3	0.00	101	2.17	-0.13	-9.12(.000)	-1.07	1.07
4	0.00	300	6.44	-0.30	-21.29(.000)	-1.40	1.02
7	0.00	4	0.09	-0.03	-2.38(.017)	-1.53	1.93
9	0.00	34	0.73	-0.06	-4.23(.000)	-1.05	1.54

Item 8
------
item:8 (N3Q08)
Cases for this item 4655 Item-Rest Cor. 0.37 Item-Total Cor. 0.42
Item Threshold(s): -2.15 Weighted MNSQ 0.94
Item Delta(s): -2.15

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	311	6.68	-0.21	-14.41(.000)	-1.00	1.04
2	1.00	3959	85.05	0.37	27.02(.000)	0.20	1.09
3	0.00	217	4.66	-0.19	-13.35(.000)	-1.06	0.99
4	0.00	114	2.45	-0.15	-10.18(.000)	-1.23	1.01
7	0.00	23	0.49	-0.13	-9.11(.000)	-2.31	1.05
9	0.00	31	0.67	-0.09	-6.01(.000)	-1.54	1.19

Item 9
------
item:9 (N3Q09)
Cases for this item 4655 Item-Rest Cor. 0.50 Item-Total Cor. 0.56
Item Threshold(s): 0.31 Weighted MNSQ 0.91
Item Delta(s): 0.31

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2312	49.67	-0.44	-33.13(.000)	-0.53	1.00
1	1.00	2039	43.80	0.51	39.93(.000)	0.70	1.00
9	0.00	304	6.53	-0.13	-8.97(.000)	-0.64	1.16

Item 10
----
item:10 (N3Q10)
Cases for this item 4655 Item-Rest Cor. 0.32 Item-Total Cor. 0.38
Item Threshold(s): -1.54 Weighted MNSQ 1.06
Item Delta(s): -1.54

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3597	77.27	0.32	23.35(.000)	0.23	1.12
2	0.00	389	8.36	-0.16	-10.90(.000)	-0.69	1.08
3	0.00	314	6.75	-0.15	-10.44(.000)	-0.74	1.07
4	0.00	322	6.92	-0.19	-12.91(.000)	-0.85	1.04
7	0.00	5	0.11	-0.05	-3.13(.002)	-1.69	2.00
9	0.00	28	0.60	-0.07	-4.81(.000)	-1.29	1.28

Item 11
----
item:11 (N3Q11)
Cases for this item 4655 Item-Rest Cor. 0.37 Item-Total Cor. 0.44
Item Threshold(s): -0.78 Weighted MNSQ 1.02
Item Delta(s): -0.78

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1593	34.22	-0.35	-25.51(.000)	-0.63	1.14
1	1.00	3016	64.79	0.37	27.53(.000)	0.36	1.03
9	0.00	46	0.99	-0.13	-8.72(.000)	-1.76	1.32

Item 12
----
item:12 (N3Q12)
Cases for this item 4655 Item-Rest Cor. 0.35 Item-Total Cor. 0.41
Item Threshold(s): 0.38 Weighted MNSQ 1.08
Item Delta(s): 0.38

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	649	13.94	-0.34	-25.06(.000)	-0.95	0.92
2	0.00	730	15.68	-0.14	-9.36(.000)	-0.43	1.06
3	0.00	477	10.25	-0.02	-1.28(.201)	-0.13	0.97
4	0.00	721	15.49	0.04	2.49(.013)	0.01	0.86
5	1.00	1978	42.49	0.35	25.28(.000)	0.55	1.16
7	0.00	6	0.13	-0.07	-4.58(.000)	-2.43	1.82
9	0.00	94	2.02	-0.06	-3.89(.000)	-0.71	1.11

Item 13
----
item:13 (N3Q13)
Cases for this item 4653 Item-Rest Cor. 0.38 Item-Total Cor. 0.45
Item Threshold(s): -0.50 Weighted MNSQ 1.05
Item Delta(s): -0.50

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	433	9.31	-0.16	-11.04(.000)	-0.62	0.92
2	0.00	585	12.57	-0.20	-13.71(.000)	-0.67	1.01
3	0.00	794	17.06	-0.17	-11.73(.000)	-0.49	1.08
4	1.00	2781	59.77	0.38	28.25(.000)	0.41	1.10
7	0.00	10	0.21	-0.06	-3.91(.000)	-1.38	1.26
9	0.00	50	1.07	-0.09	-6.29(.000)	-1.30	1.34

Item 14
----
item:14 (N3Q14)
Cases for this item 4651 Item-Rest Cor. 0.44 Item-Total Cor. 0.50
Item Threshold(s): -0.76 Weighted MNSQ 0.97
Item Delta(s): -0.76

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	126	2.71	-0.11	-7.29(.000)	-0.82	1.12
2	0.00	397	8.54	-0.12	-8.20(.000)	-0.51	1.00
3	0.00	1052	22.62	-0.36	-25.97(.000)	-0.79	0.94
4	1.00	3005	64.61	0.44	33.81(.000)	0.41	1.07
7	0.00	7	0.15	-0.05	-3.42(.001)	-1.67	1.55
9	0.00	64	1.38	-0.09	-6.44(.000)	-1.12	1.32

Item 15
----
item:15 (N3Q15)
Cases for this item 4651 Item-Rest Cor. 0.45 Item-Total Cor. 0.51
Item Threshold(s): -0.18 Weighted MNSQ 0.99
Item Delta(s): -0.18

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1964	42.23	-0.39	-29.04(.000)	-0.56	1.04
1	1.00	2492	53.58	0.45	34.10(.000)	0.52	1.02
9	0.00	195	4.19	-0.15	-10.16(.000)	-0.92	1.23

Item 16
----
item:16 (N3Q16)
Cases for this item 4650 Item-Rest Cor. 0.28 Item-Total Cor. 0.34
Item Threshold(s): -1.14 Weighted MNSQ 1.13
Item Delta(s): -1.14

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	144	3.10	-0.19	-13.06(.000)	-1.26	1.04
2	0.00	164	3.53	-0.17	-11.81(.000)	-1.04	1.17
3	1.00	3307	71.12	0.28	19.53(.000)	0.24	1.12
4	0.00	289	6.22	-0.11	-7.41(.000)	-0.58	0.91
5	0.00	683	14.69	-0.05	-3.68(.000)	-0.25	1.05
7	0.00	18	0.39	-0.08	-5.45(.000)	-1.49	1.10
9	0.00	45	0.97	-0.11	-7.46(.000)	-1.56	1.19

Item 17
----
item:17 (N3Q17)
Cases for this item 4648 Item-Rest Cor. 0.39 Item-Total Cor. 0.44
Item Threshold(s): -1.51 Weighted MNSQ 0.98
Item Delta(s): -1.51

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1022	21.99	-0.35	-25.85(.000)	-0.84	1.07
1	1.00	3579	77.00	0.39	28.64(.000)	0.27	1.07
9	0.00	47	1.01	-0.16	-11.16(.000)	-2.11	1.26

Item 18
----
item:18 (N3Q18)
Cases for this item 4646 Item-Rest Cor. 0.38 Item-Total Cor. 0.45
Item Threshold(s): -0.36 Weighted MNSQ 1.05
Item Delta(s): -0.36

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	568	12.23	-0.24	-16.81(.000)	-0.78	1.00
2	1.00	2653	57.10	0.38	28.39(.000)	0.44	1.10
3	0.00	602	12.96	-0.18	-12.74(.000)	-0.60	0.96
4	0.00	617	13.28	-0.08	-5.78(.000)	-0.31	1.02
7	0.00	3	0.06	-0.05	-3.40(.001)	-2.38	1.72
9	0.00	203	4.37	-0.10	-6.78(.000)	-0.71	1.06

Item 19
----
item:19 (N3Q19)
Cases for this item 4642 Item-Rest Cor. 0.42 Item-Total Cor. 0.48
Item Threshold(s): -0.97 Weighted MNSQ 0.99
Item Delta(s): -0.97

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	623	13.42	-0.24	-16.68(.000)	-0.75	0.98
2	0.00	522	11.25	-0.21	-14.92(.000)	-0.74	1.04
3	1.00	3171	68.31	0.42	31.43(.000)	0.37	1.06
4	0.00	233	5.02	-0.16	-10.99(.000)	-0.81	1.03
7	0.00	23	0.50	-0.05	-3.70(.000)	-1.09	1.54
9	0.00	70	1.51	-0.06	-4.32(.000)	-0.86	1.44

Item 20
----
item:20 (N3Q20)
Cases for this item 4633 Item-Rest Cor. 0.56 Item-Total Cor. 0.62
Item Threshold(s): -0.30 Weighted MNSQ 0.84
Item Delta(s): -0.30

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1938	41.83	-0.53	-42.96(.000)	-0.73	0.95
1	1.00	2597	56.05	0.56	46.57(.000)	0.61	0.97
9	0.00	98	2.12	-0.12	-8.09(.000)	-1.07	1.18

Item 21
----
item:21 (N3Q21)
Cases for this item 4631 Item-Rest Cor. 0.33 Item-Total Cor. 0.40
Item Threshold(s): 0.49 Weighted MNSQ 1.08
Item Delta(s): 0.49

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1879	40.57	0.33	23.82(.000)	0.54	1.19
2	0.00	666	14.38	-0.14	-9.70(.000)	-0.43	1.09
3	0.00	932	20.13	-0.16	-11.18(.000)	-0.36	0.97
4	0.00	1011	21.83	-0.09	-5.84(.000)	-0.23	0.98
7	0.00	3	0.06	-0.04	-2.65(.008)	-2.00	2.00
9	0.00	140	3.02	-0.07	-4.53(.000)	-0.69	1.14

Item 22
----
item:22 (N3Q22)
Cases for this item 4620 Item-Rest Cor. 0.47 Item-Total Cor. 0.53
Item Threshold(s): 0.53 Weighted MNSQ 0.95
Item Delta(s): 0.53

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2681	58.03	-0.44	-33.15(.000)	-0.44	1.02
1	1.00	1844	39.91	0.47	35.98(.000)	0.72	1.02
9	0.00	95	2.06	-0.09	-6.15(.000)	-0.83	1.23

Item 23
----
item:23 (N3Q23)
Cases for this item 4620 Item-Rest Cor. 0.32 Item-Total Cor. 0.39
Item Threshold(s): -0.24 Weighted MNSQ 1.11
Item Delta(s): -0.23

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	544	11.77	-0.19	-12.90(.000)	-0.58	1.11
2	0.00	1001	21.67	-0.08	-5.56(.000)	-0.24	1.09
3	1.00	2530	54.76	0.32	22.93(.000)	0.40	1.08
4	0.00	483	10.45	-0.17	-11.65(.000)	-0.60	1.04
7	0.00	5	0.11	-0.05	-3.71(.000)	-2.12	1.83
9	0.00	57	1.23	-0.11	-7.38(.000)	-1.39	1.26

Item 24
----
item:24 (N3Q24)
Cases for this item 4606 Item-Rest Cor. 0.30 Item-Total Cor. 0.36
Item Threshold(s): 1.19 Weighted MNSQ 1.07
Item Delta(s): 1.19

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	532	11.55	-0.24	-16.56(.000)	-0.71	1.02
2	0.00	2022	43.90	-0.11	-7.44(.000)	-0.17	0.99
3	0.00	581	12.61	0.03	2.09(.037)	0.06	1.10
4	1.00	1302	28.27	0.30	21.41(.000)	0.68	1.21
7	0.00	7	0.15	-0.04	-2.43(.015)	-0.89	1.88
9	0.00	162	3.52	-0.08	-5.34(.000)	-0.55	1.10

Item 25
----
item:25 (N3Q25)
Cases for this item 4600 Item-Rest Cor. 0.41 Item-Total Cor. 0.47
Item Threshold(s): 0.35 Weighted MNSQ 1.01
Item Delta(s): 0.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1008	21.91	-0.09	-5.88(.000)	-0.23	1.11
2	0.00	538	11.70	-0.24	-16.43(.000)	-0.72	0.94
3	0.00	939	20.41	-0.19	-13.37(.000)	-0.44	0.87
4	1.00	2001	43.50	0.41	30.12(.000)	0.60	1.11
7	0.00	4	0.09	-0.07	-4.54(.000)	-2.71	1.46
9	0.00	110	2.39	-0.06	-4.41(.000)	-0.60	1.05

Item 26
----
item:26 (N3Q26)
Cases for this item 4597 Item-Rest Cor. 0.41 Item-Total Cor. 0.47
Item Threshold(s): 1.24 Weighted MNSQ 0.98
Item Delta(s): 1.24

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3220	70.05	-0.36	-26.22(.000)	-0.27	1.06
1	1.00	1263	27.47	0.41	30.63(.000)	0.86	1.02
9	0.00	114	2.48	-0.12	-8.15(.000)	-0.98	1.13

Item 27
----
item:27 (N3Q27)
Cases for this item 4583 Item-Rest Cor. 0.36 Item-Total Cor. 0.42
Item Threshold(s): 1.72 Weighted MNSQ 1.00
Item Delta(s): 1.72

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3494	76.24	-0.28	-20.09(.000)	-0.18	1.07
1	1.00	936	20.42	0.37	26.54(.000)	0.94	1.04
9	0.00	153	3.34	-0.15	-9.93(.000)	-0.96	1.13

Item 28
----
item:28 (N3Q28)
Cases for this item 4571 Item-Rest Cor. 0.20 Item-Total Cor. 0.27
Item Threshold(s): 1.29 Weighted MNSQ 1.18
Item Delta(s): 1.29

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1528	33.43	0.04	2.51(.012)	0.04	1.10
2	0.00	529	11.57	-0.06	-4.11(.000)	-0.20	1.16
3	0.00	1173	25.66	-0.17	-11.49(.000)	-0.31	1.07
4	1.00	1221	26.71	0.20	13.74(.000)	0.51	1.18
7	0.00	14	0.31	-0.06	-4.22(.000)	-1.43	1.43
9	0.00	106	2.32	-0.06	-4.33(.000)	-0.64	1.06

Item 29
----
item:29 (N3Q29)
Cases for this item 4549 Item-Rest Cor. 0.49 Item-Total Cor. 0.54
Item Threshold(s): 1.41 Weighted MNSQ 0.89
Item Delta(s): 1.41

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3224	70.87	-0.41	-29.94(.000)	-0.28	1.02
1	1.00	1132	24.88	0.49	37.54(.000)	1.04	0.97
9	0.00	193	4.24	-0.13	-8.74(.000)	-0.78	1.12

Item 30
----
item:30 (N3Q30)
Cases for this item 4536 Item-Rest Cor. 0.32 Item-Total Cor. 0.39
Item Threshold(s): 0.88 Weighted MNSQ 1.07
Item Delta(s): 0.88

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	2113	46.58	-0.08	-5.72(.000)	-0.13	0.98
2	1.00	1525	33.62	0.32	22.89(.000)	0.63	1.21
3	0.00	92	2.03	-0.16	-10.85(.000)	-1.16	1.00
4	0.00	697	15.37	-0.20	-13.46(.000)	-0.50	0.99
7	0.00	35	0.77	-0.08	-5.19(.000)	-1.02	1.51
9	0.00	74	1.63	-0.08	-5.32(.000)	-0.88	1.08

Item 31
----
item:31 (N3Q31)
Cases for this item 4519 Item-Rest Cor. 0.17 Item-Total Cor. 0.23
Item Threshold(s): 1.67 Weighted MNSQ 1.18
Item Delta(s): 1.67

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	905	20.03	-0.07	-4.41(.000)	-0.16	1.10
2	1.00	956	21.16	0.17	11.43(.000)	0.53	1.21
3	0.00	987	21.84	0.15	9.87(.000)	0.30	1.15
4	0.00	1229	27.20	-0.13	-8.95(.000)	-0.24	1.05
5	0.00	282	6.24	-0.13	-8.50(.000)	-0.50	1.04
7	0.00	7	0.15	-0.07	-4.70(.000)	-2.26	1.67
9	0.00	153	3.39	-0.06	-3.90(.000)	-0.46	1.06

Item 32
----
item:32 (N3Q32)
Cases for this item 4489 Item-Rest Cor. 0.38 Item-Total Cor. 0.44
Item Threshold(s): 1.06 Weighted MNSQ 0.99
Item Delta(s): 1.06

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1377	30.67	0.38	27.21(.000)	0.76	1.21
2	0.00	305	6.79	-0.21	-14.13(.000)	-0.85	0.91
3	0.00	2452	54.62	-0.13	-8.98(.000)	-0.15	0.95
4	0.00	212	4.72	-0.13	-9.09(.000)	-0.62	1.03
7	0.00	69	1.54	-0.15	-10.35(.000)	-1.32	1.14
9	0.00	74	1.65	-0.06	-4.31(.000)	-0.71	1.09

Item 33
----
item:33 (N3Q33)
Cases for this item 4455 Item-Rest Cor. 0.38 Item-Total Cor. 0.41
Item Threshold(s): 3.03 Weighted MNSQ 0.90
Item Delta(s): 3.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3886	87.23	-0.26	-17.85(.000)	-0.08	1.07
1	1.00	351	7.88	0.38	27.33(.000)	1.67	0.94
9	0.00	218	4.89	-0.07	-4.91(.000)	-0.38	1.25

Item 34
----
item:34 (N3Q34)
Cases for this item   4378   Item-Rest Cor. 0.31   Item-Total Cor. 0.34
Item Threshold(s):   3.42   Weighted MNSQ   0.95
Item Delta(s):   3.42

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3874	88.49	-0.18	-12.32(.000)	-0.03	1.10
1	1.00	250	5.71	0.31	21.68(.000)	1.60	1.02
9	0.00	254	5.80	-0.06	-3.92(.000)	-0.26	1.07

Item 35
----
item:35 (N3Q35)
Cases for this item   4327   Item-Rest Cor. 0.45   Item-Total Cor. 0.49
Item Threshold(s):   2.32   Weighted MNSQ   0.87
Item Delta(s):   2.32

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3561	82.30	-0.38	-27.15(.000)	-0.16	1.04
1	1.00	594	13.73	0.45	33.33(.000)	1.44	0.94
9	0.00	172	3.98	-0.05	-3.35(.001)	-0.23	1.03

Item 36
----
item:36 (N3Q36)
Cases for this item   4272   Item-Rest Cor. 0.16   Item-Total Cor. 0.19
Item Threshold(s):   3.91   Weighted MNSQ   1.03
Item Delta(s):   3.91

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	4051	94.83	-0.13	-8.66(.000)	0.02	1.12
1	1.00	161	3.77	0.16	10.58(.000)	1.19	1.62
9	0.00	60	1.40	-0.01	-0.74(.457)	-0.00	1.20

The following traditional statistics are only meaningful for complete
designs and when the amount of missing data is minimal.
In this analysis 1.35% of the data are missing.

The following results are scaled to assume that a single response
was provided for each item.

N	4657
Mean	18.60
Standard Deviation	6.44
Variance	41.51
Skewness	-0.01
Kurtosis	-0.42
Standard error of mean	0.09
Standard error of measurement	2.36
Coefficient Alpha	0.87

B.14. Year 5 Numeracy

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================================================================================
NAPLAN 2017 Numeracy 5 - Item Calibration Calibration SamplFri Jun 23 12:06 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (N5Q01)
Cases for this item    4695   Item-Rest Cor.  0.32   Item-Total Cor.  0.34
Item Threshold(s):    -3.79   Weighted MNSQ   0.88
Item Delta(s):        -3.78
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       75       1.60   -0.22   -15.18(.000) -2.15     0.90
   2       0.00       99       2.11   -0.20   -13.82(.000) -1.75     0.99
   3       1.00     4493      95.70    0.32    22.79(.000)  0.08     1.25
   4       0.00       19       0.40   -0.09    -6.05(.000) -1.75     0.81
   7       0.00        1       0.02   -0.04    -2.94(.003) -3.92     0.00
   9       0.00        8       0.17   -0.06    -3.86(.000) -1.96     0.67
================================================================================

Item 2
------
item:2 (N5Q02)
Cases for this item    4695   Item-Rest Cor.  0.27   Item-Total Cor.  0.29
Item Threshold(s):    -3.93   Weighted MNSQ   0.93
Item Delta(s):        -3.93
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      110       2.34   -0.23   -16.47(.000) -1.99     0.83
   2       1.00     4517      96.21    0.27    19.28(.000)  0.07     1.26
   3       0.00       40       0.85   -0.10    -6.74(.000) -1.51     1.14
   4       0.00       22       0.47   -0.08    -5.84(.000) -1.61     0.61
   7       0.00        2       0.04   -0.04    -2.93(.003) -2.90     1.44
   9       0.00        4       0.09   -0.02    -1.65(.100) -1.39     0.78
================================================================================

Item 3
------
item:3 (N5Q03)
Cases for this item    4695   Item-Rest Cor.  0.31   Item-Total Cor.  0.33
Item Threshold(s):    -3.67   Weighted MNSQ   0.90
Item Delta(s):        -3.67
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       82       1.75   -0.15   -10.52(.000) -1.37     1.03
   2       1.00     4471      95.23    0.31    22.12(.000)  0.08     1.25
   3       0.00       43       0.92   -0.12    -8.25(.000) -1.70     1.02
   4       0.00       95       2.02   -0.24   -16.81(.000) -2.17     0.89
   9       0.00        4       0.09   -0.02    -1.53(.127) -1.39     0.78
================================================================================

Item 4
------
item:4 (N5Q04)
Cases for this item    4695   Item-Rest Cor.  0.28   Item-Total Cor.  0.31
Item Threshold(s):    -3.17   Weighted MNSQ   0.96
Item Delta(s):        -3.17
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       46       0.98   -0.11    -7.83(.000) -1.47     1.26
   2       1.00     4354      92.74    0.28    19.88(.000)  0.10     1.25
   3       0.00      129       2.75   -0.23   -15.88(.000) -1.77     0.96
   4       0.00       85       1.81   -0.09    -6.37(.000) -1.01     1.21
   7       0.00       75       1.60   -0.09    -5.87(.000) -0.98     1.01
   9       0.00        6       0.13   -0.03    -2.30(.021) -1.43     1.68
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Item 5
------
item:5 (N5Q05)
Cases for this item 4695 Item-Rest Cor. 0.43 Item-Total Cor. 0.46
Item Threshold(s): -2.52 Weighted MNSQ 0.87
Item Delta(s): -2.52

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	116	2.47	-0.24	-16.60(.000)	-1.89	0.95
2	0.00	76	1.62	-0.20	-14.33(.000)	-1.92	0.73
3	0.00	356	7.58	-0.29	-20.61(.000)	-1.32	0.91
4	1.00	4124	87.84	0.43	32.52(.000)	0.20	1.20
9	0.00	23	0.49	-0.02	-1.45(.147)	-0.87	1.12

Item 6
------
item:6 (N5Q06)
Cases for this item 4695 Item-Rest Cor. 0.29 Item-Total Cor. 0.32
Item Threshold(s): -2.65 Weighted MNSQ 1.03
Item Delta(s): -2.65

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	4177	88.97	0.29	20.55(.000)	0.13	1.26
2	0.00	210	4.47	-0.14	-9.60(.000)	-0.87	1.08
3	0.00	163	3.47	-0.16	-10.98(.000)	-1.19	1.07
4	0.00	134	2.85	-0.18	-12.44(.000)	-1.34	0.93
7	0.00	3	0.06	-0.04	-2.56(.011)	-2.04	1.08
9	0.00	8	0.17	-0.04	-2.80(.005)	-1.50	0.49

Item 7
------
item:7 (N5Q07)
Cases for this item 4695 Item-Rest Cor. 0.39 Item-Total Cor. 0.42
Item Threshold(s): -2.94 Weighted MNSQ 0.88
Item Delta(s): -2.94

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	4283	91.22	0.39	29.23(.000)	0.15	1.22
2	0.00	190	4.05	-0.27	-19.33(.000)	-1.66	0.90
3	0.00	113	2.41	-0.17	-11.66(.000)	-1.35	0.82
4	0.00	87	1.85	-0.20	-13.97(.000)	-1.80	0.94
7	0.00	10	0.21	-0.05	-3.49(.000)	-1.76	1.73
9	0.00	12	0.26	-0.05	-3.42(.001)	-1.26	1.35

Item 8
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item:8 (N5Q08)
Cases for this item 4694 Item-Rest Cor. 0.44 Item-Total Cor. 0.47
Item Threshold(s): -2.07 Weighted MNSQ 0.93
Item Delta(s): -2.07

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3905	83.19	0.44	33.22(.000)	0.24	1.22
2	0.00	261	5.56	-0.30	-21.52(.000)	-1.52	0.86
3	0.00	382	8.14	-0.23	-16.22(.000)	-1.01	0.92
4	0.00	120	2.56	-0.18	-12.81(.000)	-1.44	1.00
7	0.00	1	0.02	-0.01	-0.44(.661)	-0.18	0.00
9	0.00	25	0.53	-0.03	-2.26(.024)	-0.60	1.02

Item 9
------
item:9 (N5Q09)
Cases for this item 4694 Item-Rest Cor. 0.41 Item-Total Cor. 0.46
Item Threshold(s): -1.53 Weighted MNSQ 1.01
Item Delta(s): -1.53

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	224	4.77	-0.20	-13.97(.000)	-1.14	0.97
2	0.00	340	7.24	-0.21	-14.77(.000)	-1.00	0.96
3	0.00	521	11.10	-0.24	-16.88(.000)	-0.94	1.00
4	1.00	3580	76.27	0.41	31.02(.000)	0.30	1.23
7	0.00	4	0.09	-0.03	-1.83(.067)	-1.39	0.71
9	0.00	25	0.53	-0.03	-2.20(.028)	-0.67	1.08

Item 10
----
item:10 (N5Q10)
Cases for this item 4694 Item-Rest Cor. 0.42 Item-Total Cor. 0.46
Item Threshold(s): -1.35 Weighted MNSQ 1.00
Item Delta(s): -1.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	153	3.26	-0.21	-14.68(.000)	-1.37	1.00
2	0.00	370	7.88	-0.26	-18.15(.000)	-1.13	1.03
3	0.00	701	14.93	-0.21	-14.79(.000)	-0.72	1.05
4	1.00	3451	73.52	0.42	31.60(.000)	0.33	1.21
9	0.00	19	0.40	-0.05	-3.68(.000)	-1.23	1.20

Item 11
----
item:11 (N5Q11)
Cases for this item 4694 Item-Rest Cor. 0.51 Item-Total Cor. 0.54
Item Threshold(s): -1.68 Weighted MNSQ 0.88
Item Delta(s): -1.68

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	945	20.13	-0.48	-37.84(.000)	-1.22	0.96
1	1.00	3674	78.27	0.51	40.19(.000)	0.33	1.17
9	0.00	75	1.60	-0.12	-8.14(.000)	-1.17	0.92

Item 12
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item:12 (N5Q12)
Cases for this item 4694 Item-Rest Cor. 0.47 Item-Total Cor. 0.50
Item Threshold(s): -2.00 Weighted MNSQ 0.89
Item Delta(s): -2.00

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	118	2.51	-0.20	-14.09(.000)	-1.61	1.02
2	1.00	3866	82.36	0.47	36.32(.000)	0.27	1.19
3	0.00	126	2.68	-0.20	-13.76(.000)	-1.53	0.85
4	0.00	206	4.39	-0.23	-16.37(.000)	-1.36	0.89
5	0.00	360	7.67	-0.24	-17.05(.000)	-1.08	0.95
7	0.00	1	0.02	-0.03	-2.38(.017)	-3.01	0.00
9	0.00	17	0.36	-0.05	-3.17(.002)	-1.19	0.96

Item 13
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item:13 (N5Q13)
Cases for this item 4694 Item-Rest Cor. 0.32 Item-Total Cor. 0.37
Item Threshold(s): -1.13 Weighted MNSQ 1.13
Item Delta(s): -1.13

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	279	5.94	-0.20	-14.13(.000)	-1.04	1.15
2	0.00	921	19.62	-0.16	-11.14(.000)	-0.51	1.16
3	1.00	3291	70.11	0.32	23.20(.000)	0.29	1.24
4	0.00	188	4.01	-0.17	-12.05(.000)	-1.11	1.02
7	0.00	2	0.04	-0.01	-0.38(.706)	-0.60	0.20
9	0.00	13	0.28	-0.02	-1.64(.101)	-0.81	0.92

Item 14
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item:14 (N5Q14)
Cases for this item 4694 Item-Rest Cor. 0.48 Item-Total Cor. 0.52
Item Threshold(s): -1.24 Weighted MNSQ 0.94
Item Delta(s): -1.24

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1249	26.61	-0.45	-34.93(.000)	-0.99	1.05
1	1.00	3369	71.77	0.48	37.13(.000)	0.39	1.17
9	0.00	76	1.62	-0.11	-7.49(.000)	-1.10	1.02

Item 15
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item:15 (N5Q15)
Cases for this item 4694 Item-Rest Cor. 0.54 Item-Total Cor. 0.58
Item Threshold(s): -0.41 Weighted MNSQ 0.91
Item Delta(s): -0.41

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1955	41.65	-0.52	-42.08(.000)	-0.80	1.03
1	1.00	2695	57.41	0.54	44.26(.000)	0.60	1.14
9	0.00	44	0.94	-0.11	-7.37(.000)	-1.33	1.15

Item 16
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item:16 (N5Q16)
Cases for this item 4693 Item-Rest Cor. 0.28 Item-Total Cor. 0.33
Item Threshold(s): -1.12 Weighted MNSQ 1.19
Item Delta(s): -1.12

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	825	17.58	-0.07	-4.89(.000)	-0.29	1.17
2	0.00	391	8.33	-0.21	-14.86(.000)	-0.93	1.07
3	1.00	3277	69.83	0.28	19.83(.000)	0.26	1.25
4	0.00	164	3.49	-0.21	-14.67(.000)	-1.41	1.02
7	0.00	2	0.04	-0.03	-2.14(.033)	-2.34	2.24
9	0.00	34	0.72	-0.03	-2.27(.023)	-0.83	1.02

Item 17
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item:17 (N5Q17)
Cases for this item 4693 Item-Rest Cor. 0.47 Item-Total Cor. 0.51
Item Threshold(s): -1.02 Weighted MNSQ 0.97
Item Delta(s): -1.02

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3199	68.17	0.47	36.30(.000)	0.42	1.20
2	0.00	329	7.01	-0.22	-15.53(.000)	-1.04	1.03
3	0.00	439	9.35	-0.23	-16.20(.000)	-0.95	0.93
4	0.00	97	2.07	-0.14	-9.68(.000)	-1.25	0.94
5	0.00	591	12.59	-0.21	-14.64(.000)	-0.73	1.03
7	0.00	2	0.04	-0.03	-1.72(.086)	-1.78	1.16
9	0.00	36	0.77	-0.06	-3.80(.000)	-1.22	0.82

Item 18
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item:18 (N5Q18)
Cases for this item 4690 Item-Rest Cor. 0.35 Item-Total Cor. 0.41
Item Threshold(s): -0.52 Weighted MNSQ 1.14
Item Delta(s): -0.52

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	92	1.96	-0.18	-12.51(.000)	-1.54	1.02
2	0.00	1137	24.24	-0.12	-8.50(.000)	-0.36	1.13
3	0.00	258	5.50	-0.17	-12.12(.000)	-0.91	1.06
4	0.00	196	4.18	-0.16	-11.34(.000)	-1.02	1.20
5	0.00	202	4.31	-0.10	-6.63(.000)	-0.64	0.98
6	1.00	2786	59.40	0.35	25.78(.000)	0.40	1.23
7	0.00	5	0.11	-0.03	-2.25(.024)	-1.16	1.45
9	0.00	14	0.30	-0.04	-2.85(.004)	-0.97	1.00

Item 19
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item:19 (N5Q19)
Cases for this item 4689 Item-Rest Cor. 0.47 Item-Total Cor. 0.52
Item Threshold(s): -0.69 Weighted MNSQ 0.98
Item Delta(s): -0.69

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	383	8.17	-0.21	-14.72(.000)	-0.93	1.05
2	0.00	686	14.63	-0.28	-20.10(.000)	-0.88	0.96
3	1.00	2933	62.55	0.47	36.94(.000)	0.49	1.20
4	0.00	619	13.20	-0.19	-13.14(.000)	-0.68	1.00
9	0.00	68	1.45	-0.07	-5.10(.000)	-0.97	0.89

Item 20
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item:20 (N5Q20)
Cases for this item 4684 Item-Rest Cor. 0.42 Item-Total Cor. 0.47
Item Threshold(s): -1.01 Weighted MNSQ 1.03
Item Delta(s): -1.01

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	412	8.80	-0.11	-7.77(.000)	-0.56	0.98
2	1.00	3189	68.08	0.43	32.15(.000)	0.39	1.25
3	0.00	734	15.67	-0.28	-19.66(.000)	-0.84	0.93
4	0.00	321	6.85	-0.25	-17.59(.000)	-1.17	0.89
9	0.00	28	0.60	-0.04	-2.66(.008)	-0.75	1.04

Item 21
----
item:21 (N5Q21)
Cases for this item 4682 Item-Rest Cor. 0.50 Item-Total Cor. 0.55
Item Threshold(s): -0.18 Weighted MNSQ 0.96
Item Delta(s): -0.18

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	295	6.30	-0.25	-18.00(.000)	-1.20	0.92
2	0.00	1269	27.10	-0.34	-24.35(.000)	-0.72	1.01
3	0.00	555	11.85	-0.10	-7.01(.000)	-0.41	0.99
4	1.00	2488	53.14	0.50	39.80(.000)	0.62	1.19
7	0.00	8	0.17	-0.02	-1.59(.113)	-0.90	1.41
9	0.00	67	1.43	-0.05	-3.55(.000)	-0.67	0.97

Item 22
----
item:22 (N5Q22)
Cases for this item 4682 Item-Rest Cor. 0.48 Item-Total Cor. 0.52
Item Threshold(s): -0.27 Weighted MNSQ 1.00
Item Delta(s): -0.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2072	44.25	-0.46	-35.31(.000)	-0.69	1.09
1	1.00	2565	54.78	0.48	37.02(.000)	0.58	1.16
9	0.00	45	0.96	-0.09	-6.38(.000)	-1.27	0.87

Item 23
----
item:23 (N5Q23)
Cases for this item 4680 Item-Rest Cor. 0.44 Item-Total Cor. 0.49
Item Threshold(s): -0.11 Weighted MNSQ 1.03
Item Delta(s): -0.11

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	422	9.02	-0.23	-16.41(.000)	-0.94	1.06
2	0.00	470	10.04	-0.21	-14.41(.000)	-0.80	1.07
3	0.00	1317	28.14	-0.19	-13.15(.000)	-0.45	1.04
4	1.00	2421	51.73	0.44	33.73(.000)	0.58	1.21
7	0.00	11	0.24	-0.05	-3.19(.001)	-1.32	1.25
9	0.00	39	0.83	-0.06	-3.83(.000)	-0.82	1.19

Item 24
----
item:24 (N5Q24)
Cases for this item 4680 Item-Rest Cor. 0.56 Item-Total Cor. 0.60
Item Threshold(s): 0.34 Weighted MNSQ 0.89
Item Delta(s): 0.34

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2536	54.19	-0.52	-42.13(.000)	-0.63	1.05
1	1.00	2033	43.44	0.56	46.46(.000)	0.84	1.09
9	0.00	111	2.37	-0.11	-7.78(.000)	-0.96	0.98

Item 25
----
item:25 (N5Q25)
Cases for this item 4676 Item-Rest Cor. 0.30 Item-Total Cor. 0.35
Item Threshold(s): -0.53 Weighted MNSQ 1.20
Item Delta(s): -0.53

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	759	16.23	-0.11	-7.31(.000)	-0.40	1.08
2	1.00	2787	59.60	0.30	21.38(.000)	0.36	1.31
3	0.00	624	13.34	-0.21	-14.67(.000)	-0.72	1.01
4	0.00	428	9.15	-0.10	-7.16(.000)	-0.49	1.07
7	0.00	6	0.13	-0.02	-1.50(.133)	-0.83	1.81
9	0.00	72	1.54	-0.04	-2.85(.004)	-0.62	1.14

Item 26
----
item:26 (N5Q26)
Cases for this item 4674 Item-Rest Cor. 0.50 Item-Total Cor. 0.54
Item Threshold(s): 0.79 Weighted MNSQ 0.91
Item Delta(s): 0.79

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	828	17.72	-0.40	-29.51(.000)	-1.02	0.85
2	0.00	1820	38.94	-0.12	-8.32(.000)	-0.28	1.00
3	1.00	1651	35.32	0.50	39.48(.000)	0.94	1.21
4	0.00	288	6.16	-0.07	-5.12(.000)	-0.44	1.09
7	0.00	1	0.02	-0.01	-0.57(.571)	-0.95	0.00
9	0.00	86	1.84	-0.08	-5.48(.000)	-0.75	1.06

Item 27
----
item:27 (N5Q27)
Cases for this item 4673 Item-Rest Cor. 0.48 Item-Total Cor. 0.53
Item Threshold(s): -0.42 Weighted MNSQ 0.98
Item Delta(s): -0.42

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1496	32.01	-0.35	-25.48(.000)	-0.68	0.97
2	1.00	2693	57.63	0.48	37.87(.000)	0.55	1.21
3	0.00	49	1.05	-0.13	-9.15(.000)	-1.52	1.06
4	0.00	398	8.52	-0.22	-15.45(.000)	-0.91	1.03
7	0.00	23	0.49	-0.00	-0.08(.939)	-0.12	1.15
9	0.00	14	0.30	-0.02	-1.71(.088)	-0.71	0.84

Item 28
----
item:28 (N5Q28)
Cases for this item 4672 Item-Rest Cor. 0.32 Item-Total Cor. 0.37
Item Threshold(s): 0.12 Weighted MNSQ 1.18
Item Delta(s): 0.12

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	675	14.45	-0.08	-5.17(.000)	-0.31	1.10
2	1.00	2224	47.60	0.32	22.80(.000)	0.50	1.33
3	0.00	724	15.50	-0.05	-3.56(.000)	-0.25	1.11
4	0.00	920	19.69	-0.27	-19.10(.000)	-0.70	1.00
7	0.00	2	0.04	-0.01	-0.60(.551)	-0.42	0.76
9	0.00	127	2.72	-0.03	-2.30(.022)	-0.45	1.00

Item 29
----
item:29 (N5Q29)
Cases for this item 4666 Item-Rest Cor. 0.51 Item-Total Cor. 0.55
Item Threshold(s): -0.90 Weighted MNSQ 0.92
Item Delta(s): -0.90

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3094	66.31	0.51	40.67(.000)	0.47	1.16
2	0.00	157	3.36	-0.21	-14.92(.000)	-1.38	0.84
3	0.00	1203	25.78	-0.36	-26.43(.000)	-0.79	1.00
4	0.00	135	2.89	-0.15	-10.60(.000)	-1.08	1.03
7	0.00	46	0.99	-0.14	-9.80(.000)	-1.82	1.05
9	0.00	31	0.66	-0.07	-4.84(.000)	-1.30	0.98

Item 30
----
item:30 (N5Q30)
Cases for this item 4658 Item-Rest Cor. 0.53 Item-Total Cor. 0.57
Item Threshold(s): 0.06 Weighted MNSQ 0.92
Item Delta(s): 0.06

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	424	9.10	-0.16	-11.15(.000)	-0.66	1.07
2	0.00	572	12.28	-0.31	-21.90(.000)	-1.00	0.90
3	0.00	1274	27.35	-0.23	-16.38(.000)	-0.53	0.99
4	1.00	2274	48.82	0.53	42.56(.000)	0.73	1.16
7	0.00	3	0.06	-0.03	-2.06(.040)	-1.30	1.21
9	0.00	111	2.38	-0.09	-5.85(.000)	-0.81	1.07

Item 31
----
item:31 (N5Q31)
Cases for this item 4655 Item-Rest Cor. 0.48 Item-Total Cor. 0.53
Item Threshold(s): -0.96 Weighted MNSQ 0.95
Item Delta(s): -0.96

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	593	12.74	-0.26	-18.03(.000)	-0.84	1.05
2	0.00	454	9.75	-0.24	-17.01(.000)	-0.92	1.07
3	0.00	429	9.22	-0.22	-15.16(.000)	-0.90	0.92
4	1.00	3137	67.39	0.48	37.70(.000)	0.44	1.18
7	0.00	4	0.09	-0.01	-0.93(.352)	-0.71	1.32
9	0.00	38	0.82	-0.07	-5.04(.000)	-1.20	0.81

Item 32
----
item:32 (N5Q32)
Cases for this item 4647 Item-Rest Cor. 0.39 Item-Total Cor. 0.44
Item Threshold(s): 0.07 Weighted MNSQ 1.09
Item Delta(s): 0.07

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2259	48.61	0.39	29.16(.000)	0.57	1.25
2	0.00	631	13.58	-0.15	-10.45(.000)	-0.53	1.12
3	0.00	1158	24.92	-0.23	-16.08(.000)	-0.54	1.11
4	0.00	544	11.71	-0.12	-8.38(.000)	-0.46	1.04
7	0.00	5	0.11	-0.04	-2.72(.007)	-1.65	0.76
9	0.00	50	1.08	-0.05	-3.18(.001)	-0.67	0.91

Item 33
----
item:33 (N5Q33)
Cases for this item 4639 Item-Rest Cor. 0.55 Item-Total Cor. 0.60
Item Threshold(s): 0.39 Weighted MNSQ 0.88
Item Delta(s): 0.39

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	183	3.94	-0.10	-7.07(.000)	-0.66	1.09
2	0.00	360	7.76	-0.17	-11.96(.000)	-0.78	1.13
3	0.00	1781	38.39	-0.40	-29.82(.000)	-0.64	0.94
4	1.00	1979	42.66	0.55	45.40(.000)	0.86	1.13
5	0.00	276	5.95	-0.04	-2.68(.007)	-0.27	1.21
7	0.00	2	0.04	-0.03	-2.23(.026)	-1.86	0.58
9	0.00	58	1.25	-0.03	-1.81(.070)	-0.43	1.08

Item 34
----
item:34 (N5Q34)
Cases for this item 4625 Item-Rest Cor. 0.32 Item-Total Cor. 0.38
Item Threshold(s): -0.04 Weighted MNSQ 1.18
Item Delta(s): -0.04

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	526	11.37	-0.09	-5.85(.000)	-0.36	1.33
2	0.00	1038	22.44	-0.17	-11.47(.000)	-0.44	1.15
3	1.00	2344	50.68	0.32	23.35(.000)	0.47	1.24
4	0.00	628	13.58	-0.17	-11.83(.000)	-0.57	1.08
7	0.00	2	0.04	-0.02	-1.29(.197)	-1.38	0.67
9	0.00	87	1.88	-0.05	-3.34(.001)	-0.53	1.05

Item 35
----
item:35 (N5Q35)
Cases for this item 4620 Item-Rest Cor. 0.46 Item-Total Cor. 0.50
Item Threshold(s): 1.24 Weighted MNSQ 0.95
Item Delta(s): 1.24

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3079	66.65	-0.39	-28.66(.000)	-0.37	1.11
1	1.00	1296	28.05	0.46	35.29(.000)	1.03	1.19
9	0.00	245	5.30	-0.11	-7.26(.000)	-0.64	0.94

Item 36
----
item:36 (N5Q36)
Cases for this item 4601 Item-Rest Cor. 0.31 Item-Total Cor. 0.36
Item Threshold(s): 1.10 Weighted MNSQ 1.12
Item Delta(s): 1.10

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	520	11.30	-0.24	-16.90(.000)	-0.83	1.08
2	0.00	196	4.26	-0.19	-13.30(.000)	-1.07	0.94
3	1.00	1394	30.30	0.31	21.97(.000)	0.73	1.37
4	0.00	827	17.97	-0.13	-9.16(.000)	-0.39	1.18
5	0.00	1580	34.34	0.08	5.22(.000)	0.05	1.00
7	0.00	3	0.07	-0.03	-2.13(.033)	-1.56	0.57
9	0.00	81	1.76	-0.08	-5.42(.000)	-0.80	1.00

Item 37
----
item:37 (N5Q37)
Cases for this item   4594   Item-Rest Cor. 0.42   Item-Total Cor. 0.46
Item Threshold(s):   0.77   Weighted MNSQ   1.04
Item Delta(s):   0.77

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2891	62.93	-0.40	-29.77(.000)	-0.42	1.13
1	1.00	1647	35.85	0.42	30.94(.000)	0.79	1.22
9	0.00	56	1.22	-0.04	-3.05(.002)	-0.62	1.04

Item 38
----
item:38 (N5Q38)
Cases for this item   4573   Item-Rest Cor. 0.46   Item-Total Cor. 0.50
Item Threshold(s):   1.71   Weighted MNSQ   0.90
Item Delta(s):   1.71

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3268	71.46	-0.37	-26.91(.000)	-0.31	1.12
1	1.00	982	21.47	0.46	34.87(.000)	1.26	1.18
9	0.00	323	7.06	-0.08	-5.63(.000)	-0.43	1.01

Item 39
----
item:39 (N5Q39)
Cases for this item   4546   Item-Rest Cor. 0.20   Item-Total Cor. 0.25
Item Threshold(s):   1.65   Weighted MNSQ   1.17
Item Delta(s):   1.65

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	2738	60.23	-0.17	-11.28(.000)	-0.20	1.06
2	1.00	1011	22.24	0.20	13.56(.000)	0.65	1.55
3	0.00	311	6.84	-0.11	-7.12(.000)	-0.50	1.28
4	0.00	432	9.50	0.10	6.98(.000)	0.39	1.40
7	0.00	8	0.18	-0.04	-2.50(.012)	-1.18	1.56
9	0.00	46	1.01	-0.03	-2.23(.026)	-0.37	1.21

Item 40
----
item:40 (N5Q40)
Cases for this item   4542   Item-Rest Cor. 0.52   Item-Total Cor. 0.56
Item Threshold(s):   1.37   Weighted MNSQ   0.88
Item Delta(s):   1.37

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3221	70.92	-0.47	-36.16(.000)	-0.39	1.09
1	1.00	1192	26.24	0.52	40.73(.000)	1.20	1.09
9	0.00	129	2.84	-0.08	-5.24(.000)	-0.61	0.88

Item 41
----
item:41 (N5Q41)
Cases for this item   4490   Item-Rest Cor. 0.35   Item-Total Cor. 0.38
Item Threshold(s):   3.27   Weighted MNSQ   0.93
Item Delta(s):   3.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	4029	89.73	-0.28	-19.49(.000)	-0.11	1.21
1	1.00	322	7.17	0.35	24.84(.000)	1.88	1.04
9	0.00	139	3.10	-0.03	-1.90(.057)	-0.26	0.94

Item 42
----
item:42 (N5Q42)
Cases for this item 4436 Item-Rest Cor. 0.33 Item-Total Cor. 0.36
Item Threshold(s): 3.21 Weighted MNSQ 0.95
Item Delta(s): 3.21

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	4027	90.78	-0.29	-19.91(.000)	-0.11	1.21
1	1.00	334	7.53	0.33	23.23(.000)	1.77	1.15
9	0.00	75	1.69	-0.03	-2.07(.038)	-0.30	1.08

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 0.82% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	4695
Mean	24.84
Standard Deviation	8.20
Variance	67.20
Skewness	-0.15
Kurtosis	-0.71
Standard error of mean	0.12
Standard error of measurement	2.55
Coefficient Alpha	0.90

B.15. Year 7 Numeracy

NAPLAN 2017 Numeracy 7 - Item Calibration Calibration SamplFri Jun 23 12:13 2017
GENERALISED ITEM ANALYSIS
Group: All Students

Item 1

item:1 (N7CAQ01)
Cases for this item 3540 Item-Rest Cor. 0.26 Item-Total Cor. 0.29
Item Threshold(s): -2.98 Weighted MNSQ 0.97
Item Delta(s): -2.98

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	127	3.59	-0.10	-5.85(.000)	-0.74	1.27
2	0.00	139	3.93	-0.21	-13.06(.000)	-1.35	0.98
3	0.00	13	0.37	-0.10	-5.99(.000)	-2.21	0.90
4	1.00	3252	91.86	0.26	16.14(.000)	0.10	1.19
7	0.00	2	0.06	-0.04	-2.48(.013)	-2.20	2.03
9	0.00	7	0.20	-0.11	-6.33(.000)	-3.19	0.50

Item 2

item:2 (N7CAQ02)
Cases for this item 3540 Item-Rest Cor. 0.33 Item-Total Cor. 0.36
Item Threshold(s): -2.36 Weighted MNSQ 0.97
Item Delta(s): -2.36

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	232	6.55	-0.13	-8.01(.000)	-0.72	1.08
2	1.00	3071	86.75	0.33	20.50(.000)	0.17	1.17
3	0.00	93	2.63	-0.22	-13.23(.000)	-1.65	0.73
4	0.00	121	3.42	-0.18	-11.08(.000)	-1.30	1.02
7	0.00	4	0.11	-0.03	-1.89(.059)	-1.71	1.30
9	0.00	19	0.54	-0.11	-6.84(.000)	-1.99	1.50

Item 3

item:3 (N7CAQ03)
Cases for this item 3539 Item-Rest Cor. 0.18 Item-Total Cor. 0.21
Item Threshold(s): -2.86 Weighted MNSQ 1.07
Item Delta(s): -2.86

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	37	1.05	-0.13	-7.98(.000)	-1.67	0.91
2	0.00	184	5.20	-0.10	-5.74(.000)	-0.59	1.09
3	1.00	3222	91.04	0.18	11.03(.000)	0.08	1.21
4	0.00	83	2.35	-0.07	-4.35(.000)	-0.67	1.21
7	0.00	1	0.03	-0.04	-2.59(.010)	-3.64	0.00
9	0.00	12	0.34	-0.09	-5.59(.000)	-2.10	1.56

Item 4

item:4 (N7CAQ04)
Cases for this item 3539 Item-Rest Cor. 0.39 Item-Total Cor. 0.42
Item Threshold(s): -2.61 Weighted MNSQ 0.88
Item Delta(s): -2.61

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	348	9.83	-0.35	-22.34(.000)	-1.37	0.95
1	1.00	3153	89.09	0.39	25.12(.000)	0.18	1.15
9	0.00	38	1.07	-0.16	-9.69(.000)	-1.96	0.85

Item 5
------
item:5 (N7CAQ05)
Cases for this item 3539 Item-Rest Cor. 0.33 Item-Total Cor. 0.37
Item Threshold(s): -1.74 Weighted MNSQ 1.05
Item Delta(s): -1.74

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2817	79.60	0.33	21.01(.000)	0.22	1.19
2	0.00	512	14.47	-0.21	-12.65(.000)	-0.69	0.99
3	0.00	159	4.49	-0.19	-11.72(.000)	-1.08	0.96
4	0.00	37	1.05	-0.14	-8.11(.000)	-1.65	1.15
7	0.00	1	0.03	-0.04	-2.63(.009)	-3.64	0.00
9	0.00	13	0.37	-0.11	-6.48(.000)	-2.34	1.17

Item 6
------
item:6 (N7CAQ06)
Cases for this item 3539 Item-Rest Cor. 0.57 Item-Total Cor. 0.60
Item Threshold(s): -1.40 Weighted MNSQ 0.79
Item Delta(s): -1.40

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	788	22.27	-0.52	-35.93(.000)	-1.20	0.85
1	1.00	2645	74.74	0.57	41.05(.000)	0.41	1.07
9	0.00	106	3.00	-0.19	-11.26(.000)	-1.26	1.00

Item 7
------
item:7 (N7CAQ07)
Cases for this item 3539 Item-Rest Cor. 0.41 Item-Total Cor. 0.45
Item Threshold(s): -1.74 Weighted MNSQ 0.95
Item Delta(s): -1.74

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2819	79.66	0.41	26.63(.000)	0.26	1.16
2	0.00	210	5.93	-0.31	-19.18(.000)	-1.48	0.83
3	0.00	99	2.80	-0.19	-11.75(.000)	-1.42	0.81
4	0.00	390	11.02	-0.17	-10.08(.000)	-0.61	0.92
7	0.00	1	0.03	-0.04	-2.64(.008)	-3.64	0.00
9	0.00	20	0.57	-0.09	-5.51(.000)	-1.68	1.38

Item 8
------
item:8 (N7CAQ08)
Cases for this item 3539 Item-Rest Cor. 0.40 Item-Total Cor. 0.44
Item Threshold(s): -1.85 Weighted MNSQ 0.96
Item Delta(s): -1.85

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	230	6.50	-0.26	-16.22(.000)	-1.22	0.81
2	0.00	194	5.48	-0.21	-12.99(.000)	-1.10	0.90
3	1.00	2868	81.04	0.40	26.31(.000)	0.25	1.17
4	0.00	222	6.27	-0.16	-9.58(.000)	-0.80	1.03
7	0.00	1	0.03	-0.04	-2.64(.008)	-3.64	0.00
9	0.00	24	0.68	-0.07	-4.24(.000)	-1.21	1.44

Item 9
------
item:9 (N7CAQ09)
Cases for this item 3539 Item-Rest Cor. 0.47 Item-Total Cor. 0.51
Item Threshold(s): -1.15 Weighted MNSQ 0.93
Item Delta(s): -1.15

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2505	70.78	0.47	32.00(.000)	0.39	1.12
2	0.00	296	8.36	-0.21	-12.78(.000)	-0.84	0.90
3	0.00	300	8.48	-0.30	-18.96(.000)	-1.24	0.93
4	0.00	115	3.25	-0.20	-12.14(.000)	-1.37	0.90
5	0.00	297	8.39	-0.11	-6.46(.000)	-0.52	0.99
7	0.00	2	0.06	-0.03	-1.67(.096)	-1.76	2.65
9	0.00	24	0.68	-0.08	-4.82(.000)	-1.31	1.44

Item 10
----
item:10 (N7CAQ10)
Cases for this item 3539 Item-Rest Cor. 0.40 Item-Total Cor. 0.43
Item Threshold(s): -2.14 Weighted MNSQ 0.92
Item Delta(s): -2.14

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2989	84.46	0.40	26.07(.000)	0.22	1.16
2	0.00	140	3.96	-0.19	-11.47(.000)	-1.23	0.90
3	0.00	156	4.41	-0.19	-11.21(.000)	-1.09	0.95
4	0.00	31	0.88	-0.10	-6.22(.000)	-1.45	0.89
5	0.00	194	5.48	-0.22	-13.35(.000)	-1.12	0.93
7	0.00	4	0.11	-0.02	-1.17(.242)	-0.89	2.03
9	0.00	25	0.71	-0.12	-7.37(.000)	-1.95	1.30

Item 11
----
item:11 (N7CAQ11)
Cases for this item 3539 Item-Rest Cor. 0.37 Item-Total Cor. 0.41
Item Threshold(s): -0.53 Weighted MNSQ 1.10
Item Delta(s): -0.53

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	400	11.30	-0.11	-6.80(.000)	-0.44	1.09
2	1.00	2119	59.88	0.37	23.42(.000)	0.40	1.17
3	0.00	904	25.54	-0.29	-17.92(.000)	-0.64	1.03
4	0.00	93	2.63	-0.06	-3.77(.000)	-0.54	1.25
7	0.00	1	0.03	-0.04	-2.67(.008)	-3.64	0.00
9	0.00	22	0.62	-0.09	-5.25(.000)	-1.50	1.85

Item 12
----
item:12 (N7CAQ12)
Cases for this item 3539 Item-Rest Cor. 0.47 Item-Total Cor. 0.51
Item Threshold(s): -0.19 Weighted MNSQ 0.99
Item Delta(s): -0.19

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	652	18.42	-0.23	-14.05(.000)	-0.60	0.95
2	0.00	628	17.75	-0.28	-17.37(.000)	-0.75	0.93
3	1.00	1891	53.43	0.47	31.52(.000)	0.56	1.18
4	0.00	312	8.82	-0.09	-5.24(.000)	-0.41	0.96
7	0.00	1	0.03	-0.05	-2.69(.007)	-3.64	0.00
9	0.00	55	1.55	-0.09	-5.65(.000)	-0.99	1.33

Item 13
----
item:13 (N7CAQ13)
Cases for this item 3539 Item-Rest Cor. 0.33 Item-Total Cor. 0.38
Item Threshold(s): -0.93 Weighted MNSQ 1.11
Item Delta(s): -0.93

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	27	0.76	-0.12	-6.89(.000)	-1.53	0.88
2	0.00	814	23.00	-0.18	-11.05(.000)	-0.46	1.04
3	0.00	112	3.16	-0.15	-9.31(.000)	-1.10	1.06
4	0.00	86	2.43	-0.08	-4.77(.000)	-0.68	1.12
5	0.00	103	2.91	-0.11	-6.66(.000)	-0.85	1.25
6	1.00	2372	67.02	0.33	20.92(.000)	0.31	1.18
7	0.00	3	0.08	-0.06	-3.42(.001)	-2.50	1.00
9	0.00	22	0.62	-0.12	-7.13(.000)	-1.96	1.11

Item 14
----
item:14 (N7CAQ14)
Cases for this item 3539 Item-Rest Cor. 0.48 Item-Total Cor. 0.52
Item Threshold(s): -1.09 Weighted MNSQ 0.93
Item Delta(s): -1.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	161	4.55	-0.14	-8.20(.000)	-0.81	1.00
2	0.00	196	5.54	-0.25	-15.67(.000)	-1.31	1.00
3	0.00	667	18.85	-0.30	-18.84(.000)	-0.79	0.94
4	1.00	2469	69.77	0.48	32.20(.000)	0.40	1.11
7	0.00	10	0.28	0.01	0.54(.589)	0.20	1.56
9	0.00	36	1.02	-0.14	-8.57(.000)	-1.82	1.13

Item 15
----
item:15 (N7CAQ15)
Cases for this item 3538 Item-Rest Cor. 0.56 Item-Total Cor. 0.60
Item Threshold(s): 0.06 Weighted MNSQ 0.88
Item Delta(s): 0.06

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	608	17.18	-0.27	-16.87(.000)	-0.75	0.89
2	0.00	489	13.82	-0.13	-7.84(.000)	-0.40	0.97
3	0.00	129	3.65	-0.23	-13.91(.000)	-1.34	0.73
4	0.00	300	8.48	-0.12	-6.89(.000)	-0.55	1.00
5	0.00	237	6.70	-0.15	-8.89(.000)	-0.65	0.91
6	1.00	1720	48.62	0.56	40.31(.000)	0.72	1.07
7	0.00	3	0.08	-0.04	-2.37(.018)	-1.80	2.24
9	0.00	52	1.47	-0.16	-9.77(.000)	-1.68	1.05

Item 16
----
item:16 (N7CAQ16)
Cases for this item 3538 Item-Rest Cor. 0.28 Item-Total Cor. 0.33
Item Threshold(s): 0.07 Weighted MNSQ 1.21
Item Delta(s): 0.07

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1148	32.45	-0.03	-1.92(.055)	-0.12	1.03
2	1.00	1713	48.42	0.28	17.13(.000)	0.41	1.28
3	0.00	477	13.48	-0.22	-13.53(.000)	-0.72	0.95
4	0.00	127	3.59	-0.15	-9.25(.000)	-0.95	0.94
7	0.00	2	0.06	-0.04	-2.25(.024)	-2.62	1.44
9	0.00	71	2.01	-0.13	-7.70(.000)	-1.14	1.16

Item 17
----
item:17 (N7CAQ17)
Cases for this item 3538 Item-Rest Cor. 0.40 Item-Total Cor. 0.44
Item Threshold(s): -1.69 Weighted MNSQ 0.95
Item Delta(s): -1.69

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	293	8.28	-0.23	-14.11(.000)	-0.98	1.05
2	0.00	208	5.88	-0.16	-9.74(.000)	-0.84	1.09
3	0.00	203	5.74	-0.20	-11.95(.000)	-1.01	0.94
4	1.00	2794	78.97	0.40	25.84(.000)	0.27	1.14
7	0.00	3	0.08	-0.02	-0.96(.336)	-0.64	3.12
9	0.00	37	1.05	-0.14	-8.57(.000)	-1.79	1.58

Item 18
----
item:18 (N7CAQ18)
Cases for this item 3538 Item-Rest Cor. 0.57 Item-Total Cor. 0.60
Item Threshold(s): -0.50 Weighted MNSQ 0.86
Item Delta(s): -0.49

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	154	4.35	-0.10	-5.90(.000)	-0.58	0.98
2	0.00	168	4.75	-0.16	-9.65(.000)	-0.90	1.00
3	0.00	878	24.82	-0.45	-29.61(.000)	-0.94	0.90
4	1.00	2093	59.16	0.57	40.78(.000)	0.58	1.06
5	0.00	200	5.65	-0.07	-3.96(.000)	-0.37	0.85
7	0.00	3	0.08	-0.04	-2.28(.023)	-1.88	2.11
9	0.00	42	1.19	-0.14	-8.19(.000)	-1.55	1.52

Item 19
----
item:19 (N7CAQ19)
Cases for this item 3538 Item-Rest Cor. 0.26 Item-Total Cor. 0.31
Item Threshold(s): -0.65 Weighted MNSQ 1.21
Item Delta(s): -0.65

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	441	12.46	-0.03	-1.64(.102)	-0.16	1.09
2	0.00	607	17.16	-0.19	-11.19(.000)	-0.55	1.10
3	1.00	2198	62.13	0.26	16.29(.000)	0.29	1.20
4	0.00	212	5.99	-0.16	-9.71(.000)	-0.82	1.08
7	0.00	7	0.20	0.00	0.05(.956)	0.03	2.04
9	0.00	73	2.06	-0.08	-4.66(.000)	-0.74	1.55

Item 20
----
item:20 (N7CAQ20)
Cases for this item 3538 Item-Rest Cor. 0.39 Item-Total Cor. 0.43
Item Threshold(s): -1.44 Weighted MNSQ 1.01
Item Delta(s): -1.44

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	240	6.78	-0.15	-8.81(.000)	-0.71	0.94
2	0.00	134	3.79	-0.17	-10.42(.000)	-1.09	0.96
3	1.00	2669	75.44	0.39	25.16(.000)	0.29	1.17
4	0.00	465	13.14	-0.26	-16.00(.000)	-0.86	1.00
7	0.00	1	0.03	-0.04	-2.65(.008)	-3.64	0.00
9	0.00	29	0.82	-0.10	-6.20(.000)	-1.56	1.59

Item 21
----
item:21 (N7CAQ21)
Cases for this item 3538 Item-Rest Cor. 0.43 Item-Total Cor. 0.48
Item Threshold(s): 0.14 Weighted MNSQ 1.02
Item Delta(s): 0.14

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	387	10.94	-0.04	-2.60(.009)	-0.22	1.20
2	1.00	1667	47.12	0.43	28.72(.000)	0.60	1.21
3	0.00	341	9.64	-0.20	-12.34(.000)	-0.74	0.99
4	0.00	1074	30.36	-0.26	-16.27(.000)	-0.51	0.84
7	0.00	2	0.06	-0.05	-2.84(.005)	-2.43	1.71
9	0.00	67	1.89	-0.15	-9.25(.000)	-1.53	1.26

Item 22
----
item:22 (N7CAQ22)
Cases for this item 3538 Item-Rest Cor. 0.61 Item-Total Cor. 0.64
Item Threshold(s): 0.44 Weighted MNSQ 0.82
Item Delta(s): 0.44

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1802	50.93	-0.51	-35.62(.000)	-0.62	0.95
1	1.00	1464	41.38	0.61	45.38(.000)	0.90	1.00
9	0.00	272	7.69	-0.16	-9.47(.000)	-0.71	1.12

Item 23
----
item:23 (N7CAQ23)
Cases for this item 3538 Item-Rest Cor. 0.41 Item-Total Cor. 0.46
Item Threshold(s): 0.31 Weighted MNSQ 1.05
Item Delta(s): 0.31

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	90	2.54	-0.16	-9.78(.000)	-1.19	0.96
2	0.00	606	17.13	-0.24	-14.65(.000)	-0.64	0.95
3	0.00	878	24.82	-0.15	-8.79(.000)	-0.35	1.00
4	1.00	1551	43.84	0.41	27.12(.000)	0.62	1.18
5	0.00	337	9.53	-0.03	-1.72(.085)	-0.18	1.13
7	0.00	4	0.11	-0.04	-2.30(.021)	-1.50	1.91
9	0.00	72	2.04	-0.12	-7.31(.000)	-1.11	1.42

Item 24
----
item:24 (N7CAQ24)
Cases for this item 3537 Item-Rest Cor. 0.31 Item-Total Cor. 0.35
Item Threshold(s): 0.74 Weighted MNSQ 1.15
Item Delta(s): 0.74

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1268	35.85	0.31	19.09(.000)	0.58	1.28
2	0.00	481	13.60	-0.17	-10.33(.000)	-0.57	1.04
3	0.00	1353	38.25	-0.07	-4.06(.000)	-0.15	1.08
4	0.00	332	9.39	-0.11	-6.75(.000)	-0.43	0.89
7	0.00	2	0.06	-0.04	-2.51(.012)	-2.07	2.21
9	0.00	101	2.86	-0.13	-7.52(.000)	-1.00	1.47

Item 25
----
item:25 (N7CAQ25)
Cases for this item 3537 Item-Rest Cor. 0.43 Item-Total Cor. 0.48
Item Threshold(s): 0.20 Weighted MNSQ 1.03
Item Delta(s): 0.20

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1620	45.80	0.43	28.39(.000)	0.61	1.18
2	0.00	414	11.70	-0.29	-17.93(.000)	-0.93	0.91
3	0.00	262	7.41	-0.24	-14.40(.000)	-1.00	0.81
4	0.00	1145	32.37	-0.07	-4.19(.000)	-0.18	0.97
7	0.00	2	0.06	-0.04	-2.52(.012)	-2.07	2.21
9	0.00	94	2.66	-0.16	-9.87(.000)	-1.32	1.25

Item 26
----
item:26 (N7CAQ26)
Cases for this item 3537 Item-Rest Cor. 0.34 Item-Total Cor. 0.39
Item Threshold(s): 0.33 Weighted MNSQ 1.13
Item Delta(s): 0.33

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	305	8.62	-0.18	-10.80(.000)	-0.73	0.98
2	0.00	1039	29.38	-0.17	-10.00(.000)	-0.36	0.99
3	0.00	556	15.72	-0.06	-3.67(.000)	-0.21	1.21
4	1.00	1535	43.40	0.34	21.77(.000)	0.54	1.21
7	0.00	15	0.42	0.01	0.78(.438)	0.15	1.45
9	0.00	87	2.46	-0.15	-8.98(.000)	-1.22	1.28

Item 27
----
item:27 (N7CAQ27)
Cases for this item 3536 Item-Rest Cor. 0.40 Item-Total Cor. 0.44
Item Threshold(s): 1.23 Weighted MNSQ 0.99
Item Delta(s): 1.23

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	898	25.40	-0.04	-2.31(.021)	-0.13	1.01
2	1.00	979	27.69	0.40	26.10(.000)	0.86	1.30
3	0.00	296	8.37	-0.19	-11.45(.000)	-0.72	1.00
4	0.00	1164	32.92	-0.17	-10.11(.000)	-0.32	0.98
7	0.00	12	0.34	0.01	0.43(.664)	0.06	1.43
9	0.00	187	5.29	-0.14	-8.63(.000)	-0.76	1.25

Item 28
----
item:28 (N7CAQ28)
Cases for this item 3536 Item-Rest Cor. 0.47 Item-Total Cor. 0.51
Item Threshold(s): 0.68 Weighted MNSQ 0.98
Item Delta(s): 0.68

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1948	55.09	-0.34	-21.18(.000)	-0.40	1.04
1	1.00	1307	36.96	0.47	31.44(.000)	0.80	1.10
9	0.00	281	7.95	-0.22	-13.24(.000)	-0.90	1.09

Item 29
----
item:29 (N7CAQ29)
Cases for this item 3536 Item-Rest Cor. 0.31 Item-Total Cor. 0.36
Item Threshold(s): 1.08 Weighted MNSQ 1.13
Item Delta(s): 1.08

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1061	30.01	0.31	19.39(.000)	0.64	1.29
2	0.00	375	10.61	-0.05	-2.77(.006)	-0.21	1.26
3	0.00	692	19.57	-0.20	-11.82(.000)	-0.47	1.05
4	0.00	1354	38.29	-0.07	-4.05(.000)	-0.14	1.04
7	0.00	5	0.14	-0.05	-2.77(.006)	-1.34	1.78
9	0.00	49	1.39	-0.13	-8.01(.000)	-1.35	1.44

Item 30
----
item:30 (N7CAQ30)
Cases for this item 3536 Item-Rest Cor. 0.41 Item-Total Cor. 0.44
Item Threshold(s): 2.52 Weighted MNSQ 0.91
Item Delta(s): 2.52

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2788	78.85	-0.22	-13.22(.000)	-0.15	1.11
1	1.00	421	11.91	0.41	26.61(.000)	1.45	1.11
9	0.00	327	9.25	-0.15	-9.06(.000)	-0.57	1.17

Item 31
----
item:31 (N7CAQ31)
Cases for this item 3536 Item-Rest Cor. 0.36 Item-Total Cor. 0.41
Item Threshold(s): 0.39 Weighted MNSQ 1.11
Item Delta(s): 0.39

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	225	6.36	-0.16	-9.79(.000)	-0.75	1.11
2	0.00	86	2.43	-0.16	-9.81(.000)	-1.22	0.86
3	1.00	1496	42.31	0.36	23.02(.000)	0.56	1.23
4	0.00	351	9.93	-0.12	-7.39(.000)	-0.46	1.06
5	0.00	1282	36.26	-0.11	-6.47(.000)	-0.22	1.00
7	0.00	3	0.08	-0.04	-2.62(.009)	-1.98	1.61
9	0.00	93	2.63	-0.15	-8.80(.000)	-1.16	1.27

Item 32
----
item:32 (N7CAQ32)
Cases for this item 3536 Item-Rest Cor. 0.37 Item-Total Cor. 0.40
Item Threshold(s): 2.03 Weighted MNSQ 1.01
Item Delta(s): 2.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2861	80.91	-0.29	-17.85(.000)	-0.19	1.11
1	1.00	594	16.80	0.37	23.34(.000)	1.11	1.17
9	0.00	81	2.29	-0.16	-9.49(.000)	-1.28	1.29

Item 33
----
item:33 (N7CAQ33)
Cases for this item 3536 Item-Rest Cor. 0.37 Item-Total Cor. 0.41
Item Threshold(s): 2.16 Weighted MNSQ 1.00
Item Delta(s): 2.16

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2690	76.07	-0.19	-11.47(.000)	-0.14	1.13
1	1.00	545	15.41	0.37	24.01(.000)	1.15	1.13
9	0.00	301	8.51	-0.19	-11.81(.000)	-0.78	1.09

Item 34
----
item:34 (N7CAQ34)
Cases for this item 3535 Item-Rest Cor. 0.50 Item-Total Cor. 0.53
Item Threshold(s): 1.60 Weighted MNSQ 0.89
Item Delta(s): 1.60

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2476	70.04	-0.34	-21.60(.000)	-0.29	1.06
1	1.00	784	22.18	0.50	34.33(.000)	1.21	1.02
9	0.00	275	7.78	-0.19	-11.60(.000)	-0.78	1.08

Item 35
----
item:35 (N7CAQ35)
Cases for this item 3535 Item-Rest Cor. 0.53 Item-Total Cor. 0.57
Item Threshold(s): 0.99 Weighted MNSQ 0.89
Item Delta(s): 0.99

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2089	59.09	-0.43	-28.68(.000)	-0.44	1.00
1	1.00	1116	31.57	0.53	37.41(.000)	0.97	1.08
9	0.00	330	9.34	-0.12	-6.97(.000)	-0.46	1.21

Item 36
----
item:36 (N7CAQ36)
Cases for this item 3535 Item-Rest Cor. 0.10 Item-Total Cor. 0.14
Item Threshold(s): 1.99 Weighted MNSQ 1.32
Item Delta(s): 1.99

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	549	15.53	-0.19	-11.24(.000)	-0.49	0.95
2	0.00	810	22.91	-0.21	-12.54(.000)	-0.47	1.09
3	0.00	1385	39.18	0.31	19.16(.000)	0.43	1.23
4	1.00	613	17.34	0.10	5.97(.000)	0.34	1.18
7	0.00	1	0.03	-0.04	-2.67(.008)	-3.64	0.00
9	0.00	177	5.01	-0.15	-9.04(.000)	-0.82	1.20

Item 37
----
item:37 (N7CAQ37)
Cases for this item 3534 Item-Rest Cor. 0.17 Item-Total Cor. 0.18
Item Threshold(s): 4.47 Weighted MNSQ 1.05
Item Delta(s): 4.47

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3198	90.49	-0.03	-1.77(.077)	-0.02	1.19
1	1.00	84	2.38	0.17	10.11(.000)	1.57	1.63
9	0.00	252	7.13	-0.07	-3.89(.000)	-0.27	1.32

Item 38
----
item:38 (N7CAQ38)
Cases for this item 3534 Item-Rest Cor. 0.48 Item-Total Cor. 0.52
Item Threshold(s): 1.65 Weighted MNSQ 0.92
Item Delta(s): 1.65

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2330	65.93	-0.31	-19.49(.000)	-0.28	1.09
1	1.00	762	21.56	0.48	32.73(.000)	1.17	0.99
9	0.00	442	12.51	-0.15	-9.22(.000)	-0.50	1.12

Item 39
----
item:39 (N7CAQ39)
Cases for this item 3534 Item-Rest Cor. 0.37 Item-Total Cor. 0.39
Item Threshold(s): 3.56 Weighted MNSQ 0.91
Item Delta(s): 3.56

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2779	78.64	-0.11	-6.36(.000)	-0.07	1.15
1	1.00	186	5.26	0.37	23.53(.000)	2.04	0.89
9	0.00	569	16.10	-0.10	-6.27(.000)	-0.30	1.15

Item 40
----
item:40 (N7CAQ40)
Cases for this item 3533 Item-Rest Cor. 0.34 Item-Total Cor. 0.37
Item Threshold(s): 3.59 Weighted MNSQ 0.93
Item Delta(s): 3.59

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2815	79.68	-0.13	-7.69(.000)	-0.08	1.15
1	1.00	181	5.12	0.34	21.80(.000)	1.93	1.04
9	0.00	537	15.20	-0.07	-4.03(.000)	-0.19	1.18

Item 41
----
item:41 (N7NCQ01)
Cases for this item 3533 Item-Rest Cor. 0.41 Item-Total Cor. 0.44
Item Threshold(s): -2.48 Weighted MNSQ 0.88
Item Delta(s): -2.48

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	3109	88.00	0.41	27.05(.000)	0.20	1.15
2	0.00	158	4.47	-0.28	-17.19(.000)	-1.61	0.76
3	0.00	199	5.63	-0.25	-15.14(.000)	-1.30	0.92
4	0.00	59	1.67	-0.14	-8.26(.000)	-1.25	1.00
7	0.00	2	0.06	-0.05	-2.83(.005)	-2.74	1.27
9	0.00	6	0.17	-0.04	-2.20(.028)	-1.49	1.82

Item 42
----
item:42 (N7NCQ02)
Cases for this item 3532 Item-Rest Cor. 0.38 Item-Total Cor. 0.42
Item Threshold(s): -1.62 Weighted MNSQ 0.99
Item Delta(s): -1.62

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	84	2.38	-0.15	-8.96(.000)	-1.26	0.92
2	0.00	253	7.16	-0.24	-14.76(.000)	-1.08	1.00
3	0.00	431	12.20	-0.22	-13.15(.000)	-0.76	1.07
4	1.00	2756	78.03	0.38	24.78(.000)	0.27	1.15
7	0.00	2	0.06	-0.05	-2.86(.004)	-2.74	1.27
9	0.00	6	0.17	-0.06	-3.73(.000)	-2.03	1.42

Item 43
----
item:43 (N7NCQ03)
Cases for this item 3532 Item-Rest Cor. 0.53 Item-Total Cor. 0.57
Item Threshold(s): -0.73 Weighted MNSQ 0.89
Item Delta(s): -0.73

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	331	9.37	-0.26	-15.71(.000)	-0.95	0.88
2	0.00	667	18.88	-0.33	-20.64(.000)	-0.83	0.94
3	1.00	2247	63.62	0.53	36.87(.000)	0.50	1.11
4	0.00	264	7.47	-0.17	-10.11(.000)	-0.75	0.96
7	0.00	2	0.06	-0.04	-2.10(.036)	-2.00	2.32
9	0.00	21	0.59	-0.08	-4.51(.000)	-1.24	1.48

Item 44
----
item:44 (N7NCQ04)
Cases for this item 3531 Item-Rest Cor. 0.53 Item-Total Cor. 0.57
Item Threshold(s): 0.43 Weighted MNSQ 0.91
Item Delta(s): 0.43

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2002	56.70	-0.49	-33.44(.000)	-0.53	1.02
1	1.00	1468	41.57	0.53	37.56(.000)	0.79	1.06
9	0.00	61	1.73	-0.16	-9.38(.000)	-1.44	1.05

Item 45
----
item:45 (N7NCQ05)
Cases for this item 3526 Item-Rest Cor. 0.50 Item-Total Cor. 0.54
Item Threshold(s): 0.21 Weighted MNSQ 0.95
Item Delta(s): 0.21

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1795	50.91	-0.45	-29.52(.000)	-0.54	1.02
1	1.00	1615	45.80	0.50	34.57(.000)	0.69	1.09
9	0.00	116	3.29	-0.16	-9.47(.000)	-1.06	1.09

Item 46
----
item:46 (N7NCQ06)
Cases for this item 3512 Item-Rest Cor. 0.36 Item-Total Cor. 0.40
Item Threshold(s): 1.13 Weighted MNSQ 1.06
Item Delta(s): 1.13

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	494	14.07	-0.22	-13.38(.000)	-0.62	0.99
2	0.00	1451	41.32	-0.21	-12.57(.000)	-0.32	1.05
3	1.00	1035	29.47	0.36	22.87(.000)	0.77	1.27
4	0.00	492	14.01	0.06	3.40(.001)	0.12	1.05
7	0.00	1	0.03	-0.03	-1.93(.054)	-2.18	0.00
9	0.00	39	1.11	-0.05	-2.70(.007)	-0.52	1.08

Item 47
----
item:47 (N7NCQ07)
Cases for this item 3501 Item-Rest Cor. 0.37 Item-Total Cor. 0.42
Item Threshold(s): 0.33 Weighted MNSQ 1.08
Item Delta(s): 0.33

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1264	36.10	-0.33	-20.52(.000)	-0.54	0.95
2	1.00	1530	43.70	0.37	23.81(.000)	0.58	1.25
3	0.00	325	9.28	-0.13	-7.74(.000)	-0.50	1.12
4	0.00	357	10.20	0.05	2.85(.004)	0.09	1.01
7	0.00	4	0.11	-0.01	-0.33(.745)	-0.30	2.45
9	0.00	21	0.60	-0.06	-3.50(.000)	-0.84	0.83

Item 48
----
item:48 (N7NCQ08)
Cases for this item 3494 Item-Rest Cor. 0.42 Item-Total Cor. 0.46
Item Threshold(s): 2.21 Weighted MNSQ 0.92
Item Delta(s): 2.21

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2881	82.46	-0.36	-22.81(.000)	-0.20	1.10
1	1.00	524	15.00	0.42	27.73(.000)	1.34	1.08
9	0.00	89	2.55	-0.09	-5.54(.000)	-0.72	1.07

The following traditional statistics are only meaningful for complete
designs and when the amount of missing data is minimal.
In this analysis 0.16% of the data are missing.

The following results are scaled to assume that a single response
was provided for each item.

N	3540
Mean	24.00
Standard Deviation	8.98
Variance	80.67
Skewness	0.11
Kurtosis	-0.56
Standard error of mean	0.15
Standard error of measurement	2.69
Coefficient Alpha	0.91

B.16. Year 9 Numeracy

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================================================================================
NAPLAN 2017 Numeracy 9 - Item Calibration Calibration SamplFri Jun 23 12:21 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
item:1 (N9CAQ01)
Cases for this item    3385   Item-Rest Cor.  0.26   Item-Total Cor.  0.29
Item Threshold(s):    -2.60   Weighted MNSQ   1.03
Item Delta(s):        -2.60
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      254       7.50   -0.12    -7.10(.000) -0.69     1.09
   2       1.00     2989      88.30    0.26    15.56(.000)  0.14     1.32
   3       0.00       68       2.01   -0.19   -11.19(.000) -1.84     0.80
   4       0.00       64       1.89   -0.15    -8.71(.000) -1.51     0.89
   7       0.00        1       0.03   -0.04    -2.08(.038) -3.67     0.00
   9       0.00        9       0.27   -0.07    -4.33(.000) -2.54     1.02
================================================================================

Item 2
------
item:2 (N9CAQ02)
Cases for this item    3385   Item-Rest Cor.  0.42   Item-Total Cor.  0.46
Item Threshold(s):    -0.98   Weighted MNSQ   1.04
Item Delta(s):        -0.98
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       33       0.97   -0.12    -7.02(.000) -1.69     0.92
   2       1.00     2267      66.97    0.42    27.03(.000)  0.41     1.31
   3       0.00     1033      30.52   -0.37   -23.16(.000) -0.78     0.99
   4       0.00       41       1.21   -0.11    -6.37(.000) -1.31     0.98
   7       0.00        1       0.03   -0.04    -2.12(.034) -3.67     0.00
   9       0.00       10       0.30   -0.07    -3.82(.000) -2.15     1.36
================================================================================

Item 3
------
item:3 (N9CAQ03)
Cases for this item    3385   Item-Rest Cor.  0.35   Item-Total Cor.  0.38
Item Threshold(s):    -2.21   Weighted MNSQ   0.98
Item Delta(s):        -2.21
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00       23       0.68   -0.05    -3.14(.002) -0.95     1.03
   2       0.00      280       8.27   -0.22   -12.92(.000) -1.04     0.86
   3       0.00      131       3.87   -0.19   -11.33(.000) -1.37     1.00
   4       1.00     2859      84.46    0.35    21.74(.000)  0.21     1.31
   5       0.00       50       1.48   -0.14    -8.10(.000) -1.47     0.92
   7       0.00        1       0.03   -0.04    -2.09(.036) -3.67     0.00
   9       0.00       41       1.21   -0.08    -4.57(.000) -1.14     1.21
================================================================================

Item 4
------
item:4 (N9CAQ04)
Cases for this item    3383   Item-Rest Cor.  0.36   Item-Total Cor.  0.39
Item Threshold(s):    -2.56   Weighted MNSQ   0.93
Item Delta(s):        -2.56
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   1       0.00      119       3.52   -0.21   -12.73(.000) -1.61     0.78
   2       0.00      128       3.78   -0.19   -11.19(.000) -1.32     0.92
   3       1.00     2977      88.00    0.36    22.66(.000)  0.19     1.29
   4       0.00      144       4.26   -0.18   -10.74(.000) -1.23     0.92
   7       0.00        1       0.03   -0.04    -2.09(.037) -3.67     0.00
   9       0.00       14       0.41   -0.08    -4.80(.000) -2.16     0.99
================================================================================
```

Item 5
------
item:5 (N9CAQ05)
Cases for this item 3383 Item-Rest Cor. 0.49 Item-Total Cor. 0.52
Item Threshold(s): -0.83 Weighted MNSQ 0.97
Item Delta(s): -0.83

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	482	14.25	-0.29	-17.36(.000)	-0.96	0.89
2	0.00	444	13.12	-0.28	-17.09(.000)	-0.98	0.88
3	1.00	2176	64.32	0.49	32.62(.000)	0.50	1.28
4	0.00	230	6.80	-0.10	-6.04(.000)	-0.52	1.02
7	0.00	3	0.09	-0.03	-1.71(.087)	-1.71	1.71
9	0.00	48	1.42	-0.10	-6.09(.000)	-1.46	1.08

Item 6
------
item:6 (N9CAQ06)
Cases for this item 3382 Item-Rest Cor. 0.42 Item-Total Cor. 0.46
Item Threshold(s): -0.89 Weighted MNSQ 1.06
Item Delta(s): -0.89

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	236	6.98	-0.20	-11.59(.000)	-1.00	0.99
2	1.00	2212	65.41	0.42	27.08(.000)	0.43	1.32
3	0.00	366	10.82	-0.26	-15.48(.000)	-0.97	0.90
4	0.00	498	14.73	-0.16	-9.46(.000)	-0.58	0.95
7	0.00	3	0.09	-0.02	-1.31(.191)	-1.42	2.04
9	0.00	67	1.98	-0.10	-5.67(.000)	-1.05	1.23

Item 7
------
item:7 (N9CAQ07)
Cases for this item 3382 Item-Rest Cor. 0.53 Item-Total Cor. 0.56
Item Threshold(s): -1.14 Weighted MNSQ 0.87
Item Delta(s): -1.14

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	420	12.42	-0.26	-15.63(.000)	-0.96	1.01
2	0.00	222	6.56	-0.23	-13.63(.000)	-1.14	0.78
3	0.00	49	1.45	-0.15	-8.71(.000)	-1.62	0.77
4	0.00	160	4.73	-0.18	-10.79(.000)	-1.13	0.70
5	0.00	129	3.81	-0.15	-8.86(.000)	-1.02	0.83
6	1.00	2356	69.66	0.53	36.23(.000)	0.48	1.23
7	0.00	5	0.15	-0.06	-3.38(.001)	-2.40	1.19
9	0.00	41	1.21	-0.12	-7.21(.000)	-1.62	1.11

Item 8
------
item:8 (N9CAQ08)
Cases for this item 3381 Item-Rest Cor. 0.38 Item-Total Cor. 0.41
Item Threshold(s): -1.10 Weighted MNSQ 1.08
Item Delta(s): -1.10

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	694	20.53	-0.19	-11.49(.000)	-0.56	1.05
2	1.00	2331	68.94	0.38	23.61(.000)	0.37	1.30
3	0.00	259	7.66	-0.25	-15.32(.000)	-1.27	0.97
4	0.00	72	2.13	-0.13	-7.80(.000)	-1.23	0.87
7	0.00	1	0.03	-0.04	-2.12(.034)	-3.67	0.00
9	0.00	24	0.71	-0.10	-5.72(.000)	-1.64	1.24

Item 9
------
item:9 (N9CAQ09)
Cases for this item 3381 Item-Rest Cor. 0.34 Item-Total Cor. 0.37
Item Threshold(s): -2.04 Weighted MNSQ 1.01
Item Delta(s): -2.04

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	132	3.90	-0.14	-8.33(.000)	-0.99	1.00
2	0.00	60	1.77	-0.12	-7.12(.000)	-1.28	0.86
3	1.00	2789	82.49	0.34	20.78(.000)	0.22	1.30
4	0.00	387	11.45	-0.25	-15.12(.000)	-0.99	1.12
7	0.00	3	0.09	-0.05	-2.96(.003)	-2.84	0.97
9	0.00	10	0.30	-0.05	-2.95(.003)	-1.65	1.25

Item 10
----
item:10 (N9CAQ10)
Cases for this item 3380 Item-Rest Cor. 0.55 Item-Total Cor. 0.58
Item Threshold(s): 0.09 Weighted MNSQ 0.92
Item Delta(s): 0.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	287	8.49	-0.27	-16.07(.000)	-1.18	0.85
2	0.00	1118	33.08	-0.28	-17.27(.000)	-0.56	1.03
3	1.00	1611	47.66	0.55	38.23(.000)	0.78	1.25
4	0.00	338	10.00	-0.20	-12.15(.000)	-0.78	0.84
7	0.00	1	0.03	-0.04	-2.16(.031)	-3.67	0.00
9	0.00	25	0.74	-0.05	-2.85(.004)	-0.94	1.53

Item 11
----
item:11 (N9CAQ11)
Cases for this item 3378 Item-Rest Cor. 0.62 Item-Total Cor. 0.65
Item Threshold(s): -0.55 Weighted MNSQ 0.80
Item Delta(s): -0.55

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1146	33.93	-0.52	-35.67(.000)	-0.98	0.92
1	1.00	2006	59.38	0.62	45.87(.000)	0.69	1.16
9	0.00	226	6.69	-0.23	-13.52(.000)	-1.10	0.80

Item 12
----
item:12 (N9CAQ12)
Cases for this item 3378 Item-Rest Cor. 0.51 Item-Total Cor. 0.54
Item Threshold(s): -0.65 Weighted MNSQ 0.94
Item Delta(s): -0.65

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	323	9.56	-0.10	-5.55(.000)	-0.42	1.21
2	1.00	2065	61.13	0.51	34.20(.000)	0.55	1.26
3	0.00	233	6.90	-0.17	-10.32(.000)	-0.89	0.93
4	0.00	726	21.49	-0.40	-25.30(.000)	-1.02	0.82
7	0.00	2	0.06	-0.03	-1.71(.088)	-2.11	2.21
9	0.00	29	0.86	-0.11	-6.50(.000)	-1.57	1.36

Item 13
----
item:13 (N9CAQ13)
Cases for this item 3378 Item-Rest Cor. 0.46 Item-Total Cor. 0.50
Item Threshold(s): -0.92 Weighted MNSQ 1.00
Item Delta(s): -0.92

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	750	22.20	-0.28	-17.23(.000)	-0.74	0.93
2	1.00	2230	66.02	0.46	30.21(.000)	0.46	1.29
3	0.00	218	6.45	-0.22	-13.09(.000)	-1.11	0.89
4	0.00	139	4.11	-0.17	-10.09(.000)	-1.18	0.99
7	0.00	2	0.06	-0.05	-2.81(.005)	-3.38	0.41
9	0.00	39	1.15	-0.10	-6.11(.000)	-1.38	1.39

Item 14
----
item:14 (N9CAQ14)
Cases for this item 3378 Item-Rest Cor. 0.50 Item-Total Cor. 0.53
Item Threshold(s): -0.72 Weighted MNSQ 0.95
Item Delta(s): -0.72

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	445	13.17	-0.26	-15.96(.000)	-0.95	0.97
2	0.00	366	10.83	-0.24	-14.61(.000)	-0.95	1.02
3	0.00	403	11.93	-0.18	-10.77(.000)	-0.67	0.97
4	1.00	2109	62.43	0.50	33.20(.000)	0.53	1.25
7	0.00	11	0.33	-0.07	-4.22(.000)	-1.73	1.18
9	0.00	44	1.30	-0.10	-6.04(.000)	-1.26	1.37

Item 15
----
item:15 (N9CAQ15)
Cases for this item 3378 Item-Rest Cor. 0.59 Item-Total Cor. 0.62
Item Threshold(s): -0.14 Weighted MNSQ 0.86
Item Delta(s): -0.14

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1319	39.05	-0.49	-33.01(.000)	-0.83	0.96
1	1.00	1752	51.87	0.59	42.40(.000)	0.77	1.18
9	0.00	307	9.09	-0.19	-11.02(.000)	-0.79	1.06

Item 16
----
item:16 (N9CAQ16)
Cases for this item 3378 Item-Rest Cor. 0.48 Item-Total Cor. 0.52
Item Threshold(s): -0.15 Weighted MNSQ 1.01
Item Delta(s): -0.15

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	189	5.60	-0.14	-8.31(.000)	-0.83	0.94
2	0.00	1045	30.94	-0.29	-17.82(.000)	-0.62	0.97
3	1.00	1760	52.10	0.48	31.92(.000)	0.65	1.32
4	0.00	310	9.18	-0.20	-12.05(.000)	-0.84	0.89
7	0.00	4	0.12	-0.03	-1.65(.100)	-1.24	1.65
9	0.00	70	2.07	-0.09	-5.29(.000)	-0.88	1.25

Item 17
----
item:17 (N9CAQ17)
Cases for this item 3378 Item-Rest Cor. 0.36 Item-Total Cor. 0.40
Item Threshold(s): -0.95 Weighted MNSQ 1.11
Item Delta(s): -0.95

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	217	6.42	-0.13	-7.73(.000)	-0.75	1.12
2	1.00	2244	66.43	0.36	22.48(.000)	0.37	1.31
3	0.00	734	21.73	-0.22	-13.28(.000)	-0.60	1.12
4	0.00	128	3.79	-0.17	-10.16(.000)	-1.15	0.95
7	0.00	2	0.06	-0.04	-2.24(.025)	-2.16	2.14
9	0.00	53	1.57	-0.10	-5.81(.000)	-1.15	1.35

Item 18
----
item:18 (N9CAQ18)
Cases for this item 3378 Item-Rest Cor. 0.32 Item-Total Cor. 0.37
Item Threshold(s): 0.58 Weighted MNSQ 1.23
Item Delta(s): 0.58

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1312	38.84	0.32	19.86(.000)	0.61	1.36
2	0.00	397	11.75	-0.02	-1.01(.311)	-0.11	1.32
3	0.00	466	13.80	-0.34	-21.14(.000)	-1.13	0.86
4	0.00	1172	34.70	-0.05	-3.01(.003)	-0.14	1.12
7	0.00	3	0.09	-0.03	-1.80(.071)	-1.86	1.61
9	0.00	28	0.83	-0.09	-5.52(.000)	-1.43	1.27

Item 19
----
item:19 (N9CAQ19)
Cases for this item 3378 Item-Rest Cor. 0.38 Item-Total Cor. 0.42
Item Threshold(s): -0.11 Weighted MNSQ 1.15
Item Delta(s): -0.11

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	193	5.71	-0.17	-10.03(.000)	-0.93	0.96
2	0.00	821	24.30	-0.27	-16.45(.000)	-0.67	0.96
3	0.00	598	17.70	-0.07	-3.93(.000)	-0.25	1.25
4	1.00	1733	51.30	0.38	23.78(.000)	0.53	1.34
7	0.00	9	0.27	-0.02	-1.42(.155)	-0.71	1.34
9	0.00	24	0.71	-0.07	-4.15(.000)	-1.28	1.71

Item 20
----
item:20 (N9CAQ20)
Cases for this item 3378 Item-Rest Cor. 0.47 Item-Total Cor. 0.50
Item Threshold(s): -0.34 Weighted MNSQ 1.02
Item Delta(s): -0.34

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1265	37.45	-0.35	-21.60(.000)	-0.63	1.06
1	1.00	1877	55.57	0.47	30.71(.000)	0.58	1.28
9	0.00	236	6.99	-0.25	-14.96(.000)	-1.21	0.85

Item 21
----
item:21 (N9CAQ21)
Cases for this item 3377 Item-Rest Cor. 0.57 Item-Total Cor. 0.60
Item Threshold(s): -0.33 Weighted MNSQ 0.89
Item Delta(s): -0.33

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1870	55.37	0.57	40.30(.000)	0.70	1.23
2	0.00	280	8.29	-0.20	-11.91(.000)	-0.90	0.92
3	0.00	226	6.69	-0.21	-12.26(.000)	-1.02	0.93
4	0.00	955	28.28	-0.36	-22.55(.000)	-0.79	0.90
7	0.00	5	0.15	-0.03	-1.94(.052)	-1.17	1.65
9	0.00	41	1.21	-0.11	-6.47(.000)	-1.40	1.19

Item 22
----
item:22 (N9CAQ22)
Cases for this item 3377 Item-Rest Cor. 0.18 Item-Total Cor. 0.22
Item Threshold(s): 1.09 Weighted MNSQ 1.40
Item Delta(s): 1.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	427	12.64	-0.05	-3.20(.001)	-0.23	1.26
2	0.00	1352	40.04	-0.15	-8.75(.000)	-0.27	1.18
3	1.00	1030	30.50	0.18	10.33(.000)	0.43	1.43
4	0.00	417	12.35	0.08	4.54(.000)	0.23	1.45
7	0.00	8	0.24	-0.04	-2.07(.038)	-1.13	1.31
9	0.00	143	4.23	-0.07	-3.84(.000)	-0.47	1.28

Item 23
----
item:23 (N9CAQ23)
Cases for this item 3377 Item-Rest Cor. 0.38 Item-Total Cor. 0.42
Item Threshold(s): 0.61 Weighted MNSQ 1.14
Item Delta(s): 0.61

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1297	38.41	0.38	24.16(.000)	0.71	1.35
2	0.00	980	29.02	-0.10	-5.86(.000)	-0.26	1.19
3	0.00	757	22.42	-0.28	-16.81(.000)	-0.69	1.00
4	0.00	261	7.73	-0.04	-2.46(.014)	-0.24	1.12
7	0.00	3	0.09	-0.01	-0.79(.430)	-1.20	2.29
9	0.00	79	2.34	-0.09	-5.25(.000)	-0.82	1.42

Item 24
----
item:24 (N9CAQ24)
Cases for this item 3377 Item-Rest Cor. 0.43 Item-Total Cor. 0.47
Item Threshold(s): 0.92 Weighted MNSQ 1.08
Item Delta(s): 0.92

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2159	63.93	-0.35	-21.92(.000)	-0.37	1.16
1	1.00	1119	33.14	0.43	27.69(.000)	0.86	1.28
9	0.00	99	2.93	-0.20	-11.59(.000)	-1.48	0.91

Item 25
----
item:25 (N9CAQ25)
Cases for this item 3377 Item-Rest Cor. 0.58 Item-Total Cor. 0.61
Item Threshold(s): -0.61 Weighted MNSQ 0.85
Item Delta(s): -0.61

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	2046	60.59	0.58	41.52(.000)	0.63	1.22
2	0.00	564	16.70	-0.37	-23.27(.000)	-1.10	0.81
3	0.00	536	15.87	-0.26	-15.69(.000)	-0.82	0.88
4	0.00	160	4.74	-0.15	-8.53(.000)	-0.85	0.91
7	0.00	4	0.12	-0.06	-3.51(.000)	-2.67	0.91
9	0.00	67	1.98	-0.12	-7.25(.000)	-1.22	1.14

Item 26
----
item:26 (N9CAQ26)
Cases for this item 3377 Item-Rest Cor. 0.53 Item-Total Cor. 0.56
Item Threshold(s): 1.65 Weighted MNSQ 0.87
Item Delta(s): 1.65

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2275	67.37	-0.37	-23.45(.000)	-0.36	1.09
1	1.00	758	22.45	0.53	36.67(.000)	1.39	1.24
9	0.00	344	10.19	-0.16	-9.18(.000)	-0.63	1.07

Item 27
----
item:27 (N9CAQ27)
Cases for this item 3377 Item-Rest Cor. 0.36 Item-Total Cor. 0.41
Item Threshold(s): 0.58 Weighted MNSQ 1.17
Item Delta(s): 0.58

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	1.00	1311	38.82	0.36	22.75(.000)	0.66	1.34
2	0.00	316	9.36	-0.05	-2.94(.003)	-0.26	1.39
3	0.00	484	14.33	-0.22	-13.03(.000)	-0.73	1.02
4	0.00	1227	36.33	-0.16	-9.37(.000)	-0.30	1.15
7	0.00	5	0.15	-0.04	-2.23(.026)	-1.48	1.52
9	0.00	34	1.01	-0.08	-4.83(.000)	-1.25	1.34

Item 28
----
item:28 (N9CAQ28)
Cases for this item 3376 Item-Rest Cor. 0.25 Item-Total Cor. 0.29
Item Threshold(s): 1.83 Weighted MNSQ 1.21
Item Delta(s): 1.84

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	416	12.32	-0.22	-13.06(.000)	-0.75	1.03
2	0.00	566	16.77	-0.22	-13.41(.000)	-0.68	1.07
3	0.00	1634	48.40	0.16	9.22(.000)	0.17	1.17
4	1.00	677	20.05	0.25	14.95(.000)	0.79	1.55
7	0.00	5	0.15	-0.04	-2.60(.009)	-1.78	1.57
9	0.00	78	2.31	-0.14	-7.92(.000)	-1.24	1.19

Item 29
----
item:29 (N9CAQ29)
Cases for this item 3376 Item-Rest Cor. 0.52 Item-Total Cor. 0.55
Item Threshold(s): -0.26 Weighted MNSQ 0.95
Item Delta(s): -0.26

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1369	40.55	-0.43	-27.96(.000)	-0.71	1.07
1	1.00	1826	54.09	0.52	35.25(.000)	0.66	1.21
9	0.00	181	5.36	-0.20	-12.00(.000)	-1.16	1.03

Item 30
----
item:30 (N9CAQ30)
Cases for this item 3376 Item-Rest Cor. 0.54 Item-Total Cor. 0.57
Item Threshold(s): 0.88 Weighted MNSQ 0.94
Item Delta(s): 0.88

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1988	58.89	-0.38	-24.19(.000)	-0.44	1.11
1	1.00	1143	33.86	0.54	37.40(.000)	1.04	1.15
9	0.00	245	7.26	-0.26	-15.53(.000)	-1.21	0.88

Item 31
----
item:31 (N9CAQ31)
Cases for this item 3376 Item-Rest Cor. 0.32 Item-Total Cor. 0.36
Item Threshold(s): 0.67 Weighted MNSQ 1.22
Item Delta(s): 0.67

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	519	15.37	-0.18	-10.34(.000)	-0.55	0.99
2	0.00	627	18.57	-0.07	-4.04(.000)	-0.23	1.21
3	0.00	556	16.47	-0.09	-5.23(.000)	-0.31	1.17
4	1.00	1260	37.32	0.32	19.78(.000)	0.62	1.39
5	0.00	320	9.48	-0.05	-2.72(.007)	-0.23	1.27
7	0.00	3	0.09	-0.05	-2.65(.008)	-2.51	1.54
9	0.00	91	2.70	-0.11	-6.24(.000)	-0.97	1.36

Item 32
----
item:32 (N9CAQ32)
Cases for this item 3376 Item-Rest Cor. 0.52 Item-Total Cor. 0.55
Item Threshold(s): 1.33 Weighted MNSQ 0.91
Item Delta(s): 1.33

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	72	2.13	-0.09	-5.40(.000)	-0.85	1.06
2	0.00	1384	41.00	-0.13	-7.81(.000)	-0.23	1.07
3	0.00	591	17.51	-0.24	-14.15(.000)	-0.67	0.97
4	0.00	308	9.12	-0.12	-7.06(.000)	-0.50	1.04
5	1.00	907	26.87	0.52	35.09(.000)	1.17	1.34
7	0.00	6	0.18	-0.03	-1.79(.073)	-1.26	1.72
9	0.00	108	3.20	-0.14	-8.09(.000)	-1.03	1.12

Item 33
----
item:33 (N9CAQ33)
Cases for this item 3376 Item-Rest Cor. 0.53 Item-Total Cor. 0.56
Item Threshold(s): 1.49 Weighted MNSQ 0.92
Item Delta(s): 1.49

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2010	59.54	-0.31	-19.05(.000)	-0.36	1.16
1	1.00	827	24.50	0.53	36.21(.000)	1.29	1.16
9	0.00	539	15.97	-0.20	-12.08(.000)	-0.61	1.01

Item 34
----
item:34 (N9CAQ34)
Cases for this item 3375 Item-Rest Cor. 0.57 Item-Total Cor. 0.60
Item Threshold(s): 2.08 Weighted MNSQ 0.80
Item Delta(s): 2.08

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2303	68.24	-0.33	-20.64(.000)	-0.31	1.12
1	1.00	582	17.24	0.57	40.53(.000)	1.72	1.02
9	0.00	490	14.52	-0.17	-10.09(.000)	-0.54	1.07

Item 35
----
item:35 (N9CAQ35)
Cases for this item 3375 Item-Rest Cor. 0.55 Item-Total Cor. 0.57
Item Threshold(s): 2.28 Weighted MNSQ 0.82
Item Delta(s): 2.28

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2208	65.42	-0.26	-15.68(.000)	-0.26	1.16
1	1.00	512	15.17	0.55	38.25(.000)	1.79	0.99
9	0.00	655	19.41	-0.19	-10.96(.000)	-0.50	1.06

Item 36
----
item:36 (N9CAQ36)
Cases for this item 3373 Item-Rest Cor. 0.53 Item-Total Cor. 0.56
Item Threshold(s): 1.92 Weighted MNSQ 0.87
Item Delta(s): 1.92

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2127	63.06	-0.26	-15.77(.000)	-0.28	1.13
1	1.00	642	19.03	0.53	36.33(.000)	1.52	1.17
9	0.00	604	17.91	-0.21	-12.66(.000)	-0.60	1.09

Item 37
----
item:37 (N9CAQ37)
Cases for this item 3372 Item-Rest Cor. 0.47 Item-Total Cor. 0.50
Item Threshold(s): 2.54 Weighted MNSQ 0.89
Item Delta(s): 2.54

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2271	67.35	-0.19	-11.42(.000)	-0.19	1.20
1	1.00	428	12.69	0.47	31.33(.000)	1.74	1.12
9	0.00	673	19.96	-0.17	-9.96(.000)	-0.45	1.10

Item 38
----
item:38 (N9CAQ38)
Cases for this item 3371 Item-Rest Cor. 0.44 Item-Total Cor. 0.47
Item Threshold(s): 2.69 Weighted MNSQ 0.92
Item Delta(s): 2.69

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2716	80.57	-0.31	-18.67(.000)	-0.20	1.20
1	1.00	386	11.45	0.44	28.52(.000)	1.74	1.15
9	0.00	269	7.98	-0.07	-4.14(.000)	-0.36	1.22

Item 39
----
item:39 (N9CAQ39)
Cases for this item 3371 Item-Rest Cor. 0.57 Item-Total Cor. 0.60
Item Threshold(s): 1.97 Weighted MNSQ 0.81
Item Delta(s): 1.97

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2028	60.16	-0.30	-18.41(.000)	-0.33	1.12
1	1.00	622	18.45	0.57	40.56(.000)	1.66	1.05
9	0.00	721	21.39	-0.18	-10.68(.000)	-0.46	1.07

Item 40
----
item:40 (N9CAQ40)
Cases for this item 3371 Item-Rest Cor. 0.53 Item-Total Cor. 0.56
Item Threshold(s): 2.58 Weighted MNSQ 0.80
Item Delta(s): 2.58

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2094	62.12	-0.25	-14.93(.000)	-0.26	1.16
1	1.00	417	12.37	0.53	36.74(.000)	1.97	0.95
9	0.00	860	25.51	-0.13	-7.42(.000)	-0.30	1.12

Item 41
----
item:41 (N9NCQ01)
Cases for this item 3370 Item-Rest Cor. 0.44 Item-Total Cor. 0.48
Item Threshold(s): -1.34 Weighted MNSQ 0.97
Item Delta(s): -1.34

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	151	4.48	-0.20	-11.96(.000)	-1.27	0.74
2	0.00	95	2.82	-0.07	-4.00(.000)	-0.62	1.19
3	0.00	77	2.28	-0.14	-7.94(.000)	-1.21	0.95
4	0.00	406	12.05	-0.19	-11.08(.000)	-0.72	0.92
5	1.00	2460	73.00	0.44	28.52(.000)	0.38	1.28
6	0.00	163	4.84	-0.26	-15.41(.000)	-1.53	0.77
7	0.00	5	0.15	-0.06	-3.53(.000)	-2.58	0.90
9	0.00	13	0.39	-0.06	-3.78(.000)	-1.33	0.99

Item 42
----
item:42 (N9NCQ02)
Cases for this item 3369 Item-Rest Cor. 0.33 Item-Total Cor. 0.38
Item Threshold(s): -0.01 Weighted MNSQ 1.21
Item Delta(s): -0.01

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	1216	36.09	-0.16	-9.63(.000)	-0.33	1.06
2	1.00	1671	49.60	0.33	20.59(.000)	0.50	1.42
3	0.00	384	11.40	-0.20	-11.95(.000)	-0.77	1.03
4	0.00	75	2.23	-0.13	-7.40(.000)	-1.10	0.95
7	0.00	3	0.09	-0.04	-2.30(.021)	-2.22	1.58
9	0.00	20	0.59	-0.06	-3.50(.000)	-1.06	1.13

Item 43
----
item:43 (N9NCQ03)
Cases for this item 3368 Item-Rest Cor. 0.50 Item-Total Cor. 0.54
Item Threshold(s): -0.40 Weighted MNSQ 0.97
Item Delta(s): -0.40

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1364	40.50	-0.46	-29.91(.000)	-0.77	1.05
1	1.00	1912	56.77	0.50	33.59(.000)	0.62	1.23
9	0.00	92	2.73	-0.14	-8.38(.000)	-1.08	0.90

Item 44
----
item:44 (N9NCQ04)
Cases for this item 3368 Item-Rest Cor. 0.47 Item-Total Cor. 0.51
Item Threshold(s): -1.01 Weighted MNSQ 0.97
Item Delta(s): -1.01

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	348	10.33	-0.15	-9.05(.000)	-0.63	0.94
2	0.00	399	11.85	-0.31	-19.01(.000)	-1.13	0.83
3	1.00	2277	67.61	0.47	31.14(.000)	0.46	1.28
4	0.00	226	6.71	-0.17	-9.94(.000)	-0.86	0.98
5	0.00	91	2.70	-0.14	-8.21(.000)	-1.13	0.93
7	0.00	3	0.09	-0.05	-2.97(.003)	-2.61	1.36
9	0.00	24	0.71	-0.09	-5.06(.000)	-1.46	1.07

Item 45
----
item:45 (N9NCQ05)
Cases for this item 3364 Item-Rest Cor. 0.51 Item-Total Cor. 0.55
Item Threshold(s): 0.38 Weighted MNSQ 0.98
Item Delta(s): 0.38

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1778	52.85	-0.44	-28.48(.000)	-0.57	1.09
1	1.00	1429	42.48	0.51	34.68(.000)	0.83	1.23
9	0.00	157	4.67	-0.16	-9.37(.000)	-0.91	1.01

Item 46
----
item:46 (N9NCQ06)
Cases for this item 3357 Item-Rest Cor. 0.43 Item-Total Cor. 0.46
Item Threshold(s): 0.79 Weighted MNSQ 1.08
Item Delta(s): 0.79

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
1	0.00	405	12.06	-0.23	-13.98(.000)	-0.81	0.92
2	0.00	1202	35.81	-0.31	-18.61(.000)	-0.55	1.04
3	1.00	1188	35.39	0.43	27.36(.000)	0.83	1.35
4	0.00	536	15.97	0.07	3.83(.000)	0.14	1.18
7	0.00	3	0.09	-0.05	-3.03(.002)	-2.66	1.28
9	0.00	23	0.69	-0.05	-2.65(.008)	-0.80	1.16

Item 47
----
item:47 (N9NCQ07)
Cases for this item 3347 Item-Rest Cor. 0.46 Item-Total Cor. 0.49
Item Threshold(s): 1.67 Weighted MNSQ 0.97
Item Delta(s): 1.67

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2013	60.14	-0.26	-15.47(.000)	-0.29	1.16
1	1.00	745	22.26	0.46	29.87(.000)	1.23	1.33
9	0.00	589	17.60	-0.17	-9.92(.000)	-0.47	1.02

Item 48
----
item:48 (N9NCQ08)
Cases for this item 3195 Item-Rest Cor. 0.44 Item-Total Cor. 0.47
Item Threshold(s): 2.35 Weighted MNSQ 0.96
Item Delta(s): 2.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2654	83.07	-0.42	-26.21(.000)	-0.21	1.20
1	1.00	477	14.93	0.44	27.82(.000)	1.55	1.19
9	0.00	64	2.00	0.00	0.17(.867)	0.04	0.88

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 0.39% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	3385
Mean	22.34
Standard Deviation	10.41
Variance	108.42
Skewness	0.33
Kurtosis	-0.76
Standard error of mean	0.18
Standard error of measurement	2.78
Coefficient Alpha	0.93

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B.17. Year 3, 5, 7, 9 Writing

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================================================================================
NAPLAN 2017 Writing - Item Calibration Calibration Sample  Fri Jun 23 11:50 2017
GENERALISED ITEM ANALYSIS
Group: All Students
================================================================================
Item 1
------
criteria:1 (WQ01)
Cases for this item   16301   Item-Rest Cor.  0.90   Item-Total Cor.  0.92
Item Threshold(s):   -10.34 -5.95 -1.58  2.64  5.83  8.92   Weighted MNSQ   0.75
Item Delta(s):       -10.33 -5.95 -1.57  2.66  5.84  8.88
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00       85       0.52   -0.22   -28.99(.000) -9.92     1.96
   1       1.00      696       4.27   -0.40   -56.24(.000) -6.25     1.72
   2       2.00     4188      25.69   -0.51   -75.35(.000) -2.74     1.49
   3       3.00     6952      42.65    0.01     1.74(.083)  0.45     1.47
   4       4.00     3208      19.68    0.45    64.33(.000)  3.48     1.37
   5       5.00      987       6.05    0.44    63.22(.000)  6.21     1.33
   6       6.00      185       1.13    0.27    35.11(.000)  8.65     1.33
================================================================================

Item 2
------
criteria:2 (WQ02)
Cases for this item   16301   Item-Rest Cor.  0.84   Item-Total Cor.  0.87
Item Threshold(s):    -6.39 -1.82  2.20  6.95   Weighted MNSQ   0.95
Item Delta(s):        -6.38 -1.81  2.19  6.94
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      626       3.84   -0.36   -49.00(.000) -5.98     2.90
   1       1.00     3968      24.34   -0.52   -78.74(.000) -2.98     1.83
   2       2.00     6719      41.22   -0.05    -6.08(.000)  0.20     1.61
   3       3.00     4292      26.33    0.52    78.60(.000)  3.42     1.73
   4       4.00      696       4.27    0.43    60.56(.000)  7.08     1.63
================================================================================

Item 3
------
criteria:3 (WQ03)
Cases for this item   16301   Item-Rest Cor.  0.84   Item-Total Cor.  0.87
Item Threshold(s):    -8.87 -5.55 -1.29  4.41  8.83   Weighted MNSQ   0.92
Item Delta(s):        -8.83 -5.57 -1.30  4.42  8.82
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      165       1.01   -0.29   -38.23(.000) -9.46     1.99
   1       1.00      789       4.84   -0.34   -46.17(.000) -5.09     2.12
   2       2.00     4507      27.65   -0.49   -70.86(.000) -2.46     1.67
   3       3.00     8509      52.20    0.21    26.80(.000)  1.10     1.80
   4       4.00     2113      12.96    0.55    83.13(.000)  5.11     1.62
   5       5.00      218       1.34    0.29    38.11(.000)  8.51     1.21
================================================================================

Item 4
------
criteria:4 (WQ04)
Cases for this item   16301   Item-Rest Cor.  0.84   Item-Total Cor.  0.87
Item Threshold(s):    -6.30 -1.76  2.65  7.16   Weighted MNSQ   0.96
Item Delta(s):        -6.29 -1.76  2.64  7.15
--------------------------------------------------------------------------------
 Label    Score     Count   % of tot  Pt Bis     t  (p)   PV1Avg:1 PV1 SD:1
--------------------------------------------------------------------------------
   0       0.00      653       4.01   -0.37   -50.09(.000) -5.97     2.88
   1       1.00     4048      24.83   -0.52   -77.15(.000) -2.89     1.84
   2       2.00     7240      44.41   -0.01    -1.84(.066)  0.35     1.66
   3       3.00     3746      22.98    0.53    80.03(.000)  3.72     1.68
   4       4.00      614       3.77    0.41    58.03(.000)  7.30     1.59
================================================================================

Item 5
------
criteria:5 (WQ05)
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Cases for this item 16301 Item-Rest Cor. 0.81 Item-Total Cor. 0.84
Item Threshold(s): -9.09 -6.44 1.36 5.09 8.72 Weighted MNSQ 0.97
Item Delta(s): -9.01 -6.51 1.38 5.10 8.69

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	143	0.88	-0.28	-37.20(.000)	-9.77	1.83
1	1.00	490	3.01	-0.33	-44.02(.000)	-6.03	1.57
2	2.00	9252	56.76	-0.51	-75.00(.000)	-1.24	2.10
3	3.00	4726	28.99	0.36	49.99(.000)	2.38	1.74
4	4.00	1466	8.99	0.47	68.16(.000)	5.51	1.60
5	5.00	224	1.37	0.28	37.13(.000)	8.39	1.38

Item 6
---
criteria:6 (WQ06)
Cases for this item 16301 Item-Rest Cor. 0.81 Item-Total Cor. 0.84
Item Threshold(s): -8.93 -4.56 2.67 7.98 Weighted MNSQ 0.91
Item Delta(s): -8.91 -4.58 2.67 7.97

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	170	1.04	-0.29	-39.05(.000)	-9.39	2.00
1	1.00	1440	8.83	-0.44	-61.98(.000)	-4.70	1.69
2	2.00	10319	63.30	-0.30	-40.35(.000)	-0.43	2.08
3	3.00	3980	24.42	0.57	88.73(.000)	3.80	1.83
4	4.00	392	2.40	0.35	47.82(.000)	7.80	1.58

Item 7
---
criteria:7 (WQ07)
Cases for this item 16301 Item-Rest Cor. 0.79 Item-Total Cor. 0.83
Item Threshold(s): -2.91 0.88 6.28 Weighted MNSQ 1.05
Item Delta(s): -2.88 0.86 6.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3122	19.15	-0.58	-91.86(.000)	-4.00	2.29
1	1.00	6043	37.07	-0.22	-28.62(.000)	-0.64	1.78
2	2.00	6135	37.64	0.47	67.81(.000)	2.52	1.95
3	3.00	1001	6.14	0.45	64.46(.000)	6.29	1.99

Item 8
---
criteria:8 (WQ08)
Cases for this item 16301 Item-Rest Cor. 0.84 Item-Total Cor. 0.88
Item Threshold(s): -8.33 -5.08 -0.27 3.44 6.80 10.49 Weighted MNSQ 1.06
Item Delta(s): -8.29 -5.11 -0.26 3.45 6.79 10.46

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	213	1.31	-0.31	-42.10(.000)	-8.87	2.24
1	1.00	1013	6.21	-0.37	-50.84(.000)	-4.86	1.73
2	2.00	5852	35.90	-0.44	-61.70(.000)	-1.74	1.85
3	3.00	5917	36.30	0.16	21.13(.000)	1.16	1.68
4	4.00	2591	15.89	0.46	66.08(.000)	4.03	1.63
5	5.00	657	4.03	0.40	54.91(.000)	6.86	1.55
6	6.00	58	0.36	0.16	20.23(.000)	9.32	1.33

Item 9
---
criteria:9 (WQ09)
Cases for this item 16301 Item-Rest Cor. 0.75 Item-Total Cor. 0.79
Item Threshold(s): -7.70 -3.86 0.81 5.33 9.19 Weighted MNSQ 1.45
Item Delta(s): -7.68 -3.87 0.81 5.34 9.17

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	303	1.86	-0.31	-42.07(.000)	-7.70	2.71
1	1.00	1854	11.37	-0.42	-58.99(.000)	-3.95	1.91
2	2.00	6852	42.03	-0.26	-34.02(.000)	-0.75	2.13
3	3.00	5746	35.25	0.36	49.19(.000)	2.12	2.16
4	4.00	1383	8.48	0.40	55.71(.000)	4.95	2.24

5	5.00	163	1.00	0.19	25.31(.000)	7.18	2.46

Item 10

criteria:10 (WQ10)
Cases for this item 16301 Item-Rest Cor. 0.82 Item-Total Cor. 0.87
Item Threshold(s): -9.33 -5.97 -2.40 0.80 4.33 8.37 Weighted MNSQ 1.23
Item Delta(s): -9.30 -5.98 -2.39 0.78 4.32 8.36

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	133	0.82	-0.27	-35.44(.000)	-9.66	2.04
1	1.00	613	3.76	-0.35	-47.28(.000)	-5.95	1.52
2	2.00	2992	18.35	-0.42	-59.83(.000)	-3.00	1.59
3	3.00	5275	32.36	-0.15	-18.91(.000)	-0.40	1.75
4	4.00	4958	30.42	0.27	35.93(.000)	1.91	1.85
5	5.00	2040	12.51	0.49	72.44(.000)	4.83	1.94
6	6.00	290	1.78	0.27	35.10(.000)	7.14	1.98

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 0.00% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	16301
Mean	24.16
Standard Deviation	7.73
Variance	59.68
Skewness	0.05
Kurtosis	0.32
Standard error of mean	0.06
Standard error of measurement	1.57
Coefficient Alpha	0.96

APPENDIX C. ITEM CALIBRATION RESULTS

C.1. Year 3 Reading Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
r3q01	-2.675	0.058	92	0.42	0.84	0.92	1.08	-3.9
r3q02	-2.374	0.053	90	0.44	0.83	0.93	1.07	-5.0
r3q03	-2.372	0.053	90	0.44	0.83	0.93	1.07	-4.9
r3q04	-2.457	0.054	90	0.44	0.83	0.93	1.07	-4.8
r3q05	-0.852	0.038	70	0.31	1.03	0.97	1.03	2.1
r3q06	-1.135	0.039	75	0.39	0.95	0.96	1.04	-2.8
r3q07	-0.464	0.036	63	0.42	0.95	0.97	1.03	-3.5
r3q08	-1.675	0.044	83	0.41	0.89	0.95	1.05	-4.5
r3q09	-1.331	0.041	78	0.48	0.85	0.96	1.04	-7.5
r3q10	-0.274	0.036	59	0.30	1.06	0.98	1.02	5.1
r3q11	0.001	0.035	54	0.36	1.01	0.98	1.02	1.1
r3q12	0.298	0.035	47	0.29	1.07	0.98	1.02	5.6
r3q13	-0.711	0.037	68	0.49	0.88	0.97	1.03	-8.4
r3q14	0.427	0.036	45	0.31	1.05	0.98	1.02	4.1
r3q15	0.575	0.036	42	0.39	0.97	0.98	1.02	-2.1
r3q16	-1.004	0.039	73	0.46	0.90	0.97	1.03	-5.8
r3q17	-1.098	0.039	74	0.43	0.92	0.96	1.04	-4.5
r3q18	-1.495	0.043	81	0.41	0.92	0.96	1.04	-3.8
r3q19	0.182	0.035	50	0.33	1.03	0.98	1.02	2.4
r3q20	0.976	0.037	34	0.32	1.01	0.97	1.03	0.8
r3q21	1.577	0.040	24	0.20	1.07	0.96	1.04	3.6
r3q22	0.813	0.037	37	0.33	1.03	0.97	1.03	2.0
r3q23	1.140	0.038	31	0.28	1.04	0.97	1.03	2.6
r3q24	1.155	0.038	31	0.25	1.07	0.97	1.03	4.3
r3q25	0.802	0.037	38	0.29	1.05	0.97	1.03	4.0
r3q26	0.285	0.036	48	0.40	0.98	0.98	1.02	-1.9
r3q27	-0.151	0.036	57	0.34	1.02	0.98	1.02	2.0
r3q28	0.728	0.037	39	0.28	1.07	0.97	1.03	5.4
r3q29	1.213	0.038	30	0.26	1.05	0.97	1.03	3.4
r3q30	-0.282	0.037	60	0.38	0.98	0.97	1.03	-1.2
r3q31	1.267	0.039	29	0.34	0.98	0.97	1.03	-1.3
r3q32	1.285	0.039	29	0.11	1.18	0.97	1.03	10.3
r3q33	1.559	0.041	24	0.32	1.01	0.96	1.04	0.4
r3q34	1.590	0.041	24	0.26	1.04	0.96	1.04	1.8
r3q35	1.476	0.041	26	0.24	1.07	0.96	1.04	3.7
r3q36	2.127	0.047	16	0.28	0.99	0.95	1.05	-0.2
r3q37	0.878	0.038	36	0.34	1.02	0.97	1.03	1.1

C.2. Year 5 Reading Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
r5q01	-3.347	0.101	98	0.28	0.91	0.83	1.17	-1.0
r5q02	-3.010	0.087	97	0.32	0.90	0.86	1.14	-1.4
r5q03	-1.859	0.057	91	0.36	0.90	0.92	1.08	-2.6
r5q04	-3.083	0.090	97	0.29	0.90	0.85	1.15	-1.3
r5q05	-2.764	0.079	96	0.31	0.90	0.87	1.13	-1.7
r5q06	-1.058	0.046	84	0.46	0.87	0.95	1.05	-5.4
r5q07	0.562	0.037	58	0.48	0.94	0.97	1.03	-4.7
r5q08	0.128	0.038	66	0.53	0.87	0.97	1.03	-9.0
r5q09	-1.667	0.054	90	0.41	0.88	0.93	1.07	-3.6
r5q10	-1.622	0.053	90	0.44	0.86	0.93	1.07	-4.2
r5q11	-1.831	0.057	91	0.36	0.91	0.92	1.08	-2.4
r5q12	-0.142	0.039	71	0.34	1.04	0.97	1.03	2.6
r5q13	0.168	0.038	66	0.44	0.96	0.97	1.03	-2.4
r5q14	0.546	0.037	58	0.41	1.01	0.97	1.03	0.6
r5q15	-0.379	0.040	75	0.43	0.94	0.96	1.04	-3.2
r5q16	2.085	0.039	29	0.28	1.06	0.97	1.03	3.7
r5q17	-0.331	0.040	74	0.46	0.93	0.96	1.04	-4.1
r5q18	-0.261	0.040	73	0.37	1.02	0.97	1.03	1.3
r5q19	0.999	0.037	50	0.48	0.93	0.97	1.03	-5.3
r5q20	-0.550	0.042	78	0.38	0.97	0.96	1.04	-1.7
r5q21	0.688	0.037	56	0.44	0.97	0.97	1.03	-2.0
r5q22	0.911	0.037	51	0.46	0.94	0.97	1.03	-4.4
r5q23	-0.249	0.040	73	0.32	1.06	0.97	1.03	3.1
r5q24	1.006	0.037	49	0.53	0.88	0.97	1.03	-10.0
r5q25	1.405	0.037	42	0.28	1.11	0.97	1.03	7.8
r5q26	1.316	0.037	43	0.38	1.03	0.97	1.03	2.0
r5q27	0.284	0.038	64	0.40	1.01	0.97	1.03	0.8
r5q28	1.788	0.038	34	0.10	1.27	0.97	1.03	16.9
r5q29	2.123	0.039	29	0.23	1.12	0.97	1.03	7.1
r5q30	1.318	0.037	43	0.32	1.08	0.97	1.03	5.9
r5q31	1.242	0.037	45	0.38	1.02	0.97	1.03	1.8
r5q32	1.943	0.039	32	0.21	1.16	0.97	1.03	9.6
r5q33	0.389	0.037	62	0.52	0.90	0.97	1.03	-7.7
r5q34	0.869	0.037	52	0.42	0.99	0.97	1.03	-0.7
r5q35	-0.267	0.040	73	0.45	0.94	0.96	1.04	-3.3
r5q36	1.934	0.039	32	0.15	1.22	0.97	1.03	13.0
r5q37	0.716	0.037	56	0.35	1.06	0.97	1.03	4.6

C.3. Year 7 Reading Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
r7q01	-2.418	0.074	94	0.29	0.93	0.89	1.11	-1.3
r7q02	-2.727	0.083	95	0.35	0.88	0.87	1.13	-1.9
r7q03	-2.301	0.071	93	0.31	0.93	0.90	1.10	-1.4
r7q04	-0.513	0.045	73	0.44	0.94	0.96	1.04	-3.0
r7q05	-0.061	0.043	66	0.40	0.99	0.97	1.03	-0.6
r7q06	-1.854	0.061	90	0.31	0.99	0.92	1.08	-0.3
r7q07	-3.185	0.099	97	0.27	0.93	0.84	1.16	-0.8
r7q08	-2.510	0.076	94	0.30	0.92	0.89	1.11	-1.3
r7q09	-1.120	0.051	82	0.39	0.94	0.95	1.05	-2.0
r7q10	-0.824	0.048	78	0.42	0.93	0.95	1.05	-2.8
r7q11	-0.249	0.044	69	0.39	1.00	0.96	1.04	0.2
r7q12	-0.856	0.048	79	0.36	0.99	0.95	1.05	-0.3
r7q13	-0.259	0.044	69	0.45	0.95	0.96	1.04	-2.7
r7q14	-1.205	0.052	83	0.34	0.98	0.94	1.06	-0.8
r7q15	1.240	0.042	40	0.39	0.99	0.97	1.03	-0.7
r7q16	-1.246	0.052	84	0.40	0.94	0.94	1.06	-2.2
r7q17	-1.135	0.051	83	0.34	0.99	0.95	1.05	-0.4
r7q18	-1.318	0.053	85	0.40	0.92	0.94	1.06	-2.5
r7q19	-1.011	0.050	81	0.45	0.90	0.95	1.05	-4.0
r7q20	-0.027	0.043	65	0.48	0.92	0.97	1.03	-5.0
r7q21	0.329	0.042	58	0.45	0.95	0.97	1.03	-3.3
r7q22	-0.316	0.044	70	0.40	0.99	0.96	1.04	-0.5
r7q23	0.406	0.042	57	0.42	0.99	0.97	1.03	-0.6
r7q24	-0.851	0.048	79	0.45	0.92	0.95	1.05	-3.6
r7q25	0.818	0.041	48	0.32	1.06	0.97	1.03	4.3
r7q26	1.098	0.042	43	0.37	1.00	0.97	1.03	0.3
r7q27	0.433	0.042	56	0.38	1.03	0.97	1.03	2.0
r7q28	0.143	0.042	62	0.41	0.99	0.97	1.03	-0.7
r7q29	1.042	0.042	44	0.34	1.05	0.97	1.03	3.2
r7q30	0.145	0.042	62	0.40	1.00	0.97	1.03	0.3
r7q31	0.290	0.042	59	0.26	1.14	0.97	1.03	8.8
r7q32	-0.030	0.043	65	0.44	0.96	0.97	1.03	-2.6
r7q33	0.304	0.042	59	0.43	0.97	0.97	1.03	-1.7
r7q34	2.902	0.055	14	0.34	0.95	0.94	1.06	-1.7
r7q35	1.328	0.042	38	0.14	1.25	0.97	1.03	15.3
r7q36	-0.204	0.044	69	0.30	1.07	0.96	1.04	4.1
r7q37	0.892	0.041	47	0.33	1.07	0.97	1.03	4.6
r7q38	1.970	0.045	27	0.41	0.93	0.96	1.04	-3.8
r7q39	3.481	0.065	9	0.24	1.01	0.91	1.09	0.1

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
r7q40	1.201	0.042	41	0.50	0.89	0.97	1.03	-7.6
r7q41	2.914	0.055	14	0.27	0.99	0.94	1.06	-0.3
r7q42	1.367	0.042	38	0.22	1.15	0.97	1.03	9.4
r7q43	0.922	0.042	47	0.25	1.14	0.97	1.03	9.6
r7q44	1.048	0.042	44	0.44	0.94	0.97	1.03	-3.9
r7q45	-0.150	0.044	68	0.47	0.93	0.97	1.03	-4.3
r7q46	0.671	0.042	52	0.37	1.03	0.97	1.03	2.3
r7q47	0.529	0.042	55	0.31	1.09	0.97	1.03	6.2
r7q48	0.897	0.042	47	0.30	1.10	0.97	1.03	6.5

C.4. Year 9 Reading Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
r9q01	-4.353	0.176	99	0.20	1.00	0.67	1.33	0.1
r9q02	-2.700	0.086	95	0.31	0.92	0.86	1.14	-1.2
r9q03	-3.139	0.103	97	0.33	0.92	0.83	1.17	-0.9
r9q04	-1.979	0.067	91	0.42	0.87	0.91	1.09	-2.8
r9q05	-2.497	0.080	94	0.32	0.93	0.88	1.12	-1.2
r9q06	-1.279	0.054	85	0.43	0.91	0.94	1.06	-2.8
r9q07	-2.683	0.086	95	0.34	0.92	0.86	1.14	-1.2
r9q08	-2.053	0.068	92	0.38	0.90	0.90	1.10	-2.1
r9q09	-2.269	0.073	93	0.43	0.86	0.89	1.11	-2.7
r9q10	0.821	0.041	49	0.38	1.00	0.97	1.03	-0.1
r9q11	-0.361	0.045	72	0.28	1.06	0.96	1.04	3.0
r9q12	-0.881	0.049	80	0.39	0.95	0.95	1.05	-1.8
r9q13	-0.439	0.046	73	0.33	1.03	0.96	1.04	1.4
r9q14	-1.314	0.055	85	0.40	0.94	0.94	1.06	-1.9
r9q15	0.529	0.041	55	0.36	1.02	0.97	1.03	1.4
r9q16	0.905	0.041	47	0.26	1.10	0.97	1.03	7.5
r9q17	-0.156	0.044	69	0.46	0.92	0.96	1.04	-4.4
r9q18	-0.130	0.044	68	0.31	1.06	0.96	1.04	3.2
r9q19	0.174	0.042	62	0.49	0.90	0.97	1.03	-6.2
r9q20	-0.016	0.043	66	0.62	0.78	0.97	1.03	-13.5
r9q21	0.274	0.042	60	0.39	1.00	0.97	1.03	-0.1
r9q22	1.270	0.042	40	0.29	1.06	0.97	1.03	4.1
r9q23	1.613	0.043	33	0.11	1.20	0.97	1.03	11.7
r9q24	-0.224	0.044	70	0.38	1.00	0.96	1.04	0.2
r9q25	0.047	0.043	65	0.27	1.10	0.97	1.03	5.8
r9q26	-0.559	0.047	75	0.48	0.91	0.96	1.04	-4.3
r9q27	0.042	0.043	65	0.39	0.99	0.97	1.03	-0.6
r9q28	1.033	0.041	45	0.18	1.18	0.97	1.03	12.3
r9q29	0.670	0.041	52	0.26	1.11	0.97	1.03	7.9
r9q30	0.976	0.041	46	0.16	1.19	0.97	1.03	13.3
r9q31	-0.621	0.047	76	0.37	0.98	0.95	1.05	-0.8
r9q32	0.328	0.042	59	0.36	1.02	0.97	1.03	1.2
r9q33	1.114	0.042	43	0.48	0.90	0.97	1.03	-7.5
r9q34	2.521	0.050	18	0.32	0.96	0.95	1.05	-1.4
r9q35	0.035	0.043	65	0.57	0.83	0.97	1.03	-10.4
r9q36	1.495	0.043	36	0.42	0.94	0.97	1.03	-4.3
r9q37	0.188	0.042	62	0.33	1.04	0.97	1.03	2.7
r9q38	2.111	0.046	25	0.21	1.05	0.96	1.04	2.4
r9q39	0.602	0.041	54	0.34	1.04	0.97	1.03	2.9

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
r9q40	0.838	0.041	49	0.27	1.10	0.97	1.03	6.9
r9q41	-0.054	0.043	67	0.41	0.98	0.97	1.03	-1.3
r9q42	2.040	0.046	26	0.24	1.05	0.96	1.04	2.6
r9q43	2.703	0.052	16	0.11	1.10	0.94	1.06	3.4
r9q44	0.386	0.042	58	0.31	1.07	0.97	1.03	4.3
r9q45	0.408	0.042	58	0.46	0.93	0.97	1.03	-4.8
r9q46	0.846	0.041	49	0.38	0.99	0.97	1.03	-0.7
r9q47	0.752	0.041	51	0.52	0.87	0.97	1.03	-10.2
r9q48	0.826	0.041	49	0.34	1.03	0.97	1.03	2.5
r9q49	2.164	0.047	24	0.34	0.97	0.96	1.04	-1.3

C.5. Year 3 Spelling Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
s3q01	-3.363	0.064	83	0.51	1.00	0.94	1.06	0.0
s3q02	-3.827	0.069	86	0.46	1.03	0.93	1.07	0.8
s3q03	-2.218	0.058	72	0.61	0.94	0.95	1.05	-2.4
s3q04	-1.405	0.055	63	0.61	1.04	0.96	1.04	2.0
s3q05	-2.667	0.060	77	0.55	1.00	0.95	1.05	-0.1
s3q06	0.040	0.054	44	0.61	1.08	0.96	1.04	4.0
s3q07	-0.384	0.054	49	0.62	1.07	0.96	1.04	3.6
s3q08	-0.920	0.054	57	0.62	1.05	0.96	1.04	2.2
s3q09	0.814	0.056	34	0.65	0.90	0.96	1.04	-4.7
s3q10	-0.442	0.054	50	0.61	1.08	0.96	1.04	3.6
s3q11	1.587	0.058	25	0.53	1.10	0.95	1.05	4.2
s3q12	-1.999	0.057	71	0.60	0.98	0.95	1.05	-0.7
s3q13	-1.993	0.057	71	0.64	0.86	0.95	1.05	-6.2
s3q14	-0.837	0.055	57	0.63	1.01	0.96	1.04	0.7
s3q15	-1.393	0.056	64	0.60	1.04	0.96	1.04	1.6
s3q16	-0.078	0.054	47	0.65	0.97	0.96	1.04	-1.3
s3q17	-0.018	0.055	46	0.62	1.03	0.96	1.04	1.7
s3q18	0.035	0.055	46	0.64	0.99	0.96	1.04	-0.4
s3q19	2.043	0.061	21	0.56	0.91	0.95	1.05	-3.5
s3q20	2.428	0.064	18	0.54	0.90	0.94	1.06	-3.7
s3q21	2.727	0.066	15	0.43	1.11	0.94	1.06	3.5
s3q22	2.282	0.063	19	0.56	0.87	0.95	1.05	-4.9
s3q23	2.728	0.066	16	0.45	1.07	0.94	1.06	2.1
s3q24	3.541	0.076	10	0.42	0.98	0.92	1.08	-0.6
s3q25	3.319	0.073	12	0.44	0.95	0.93	1.07	-1.3

C.6. Year 5 Spelling Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
s5q01	-3.500	0.068	89	0.45	0.92	0.93	1.07	-2.1
s5q02	-1.588	0.053	72	0.59	0.96	0.96	1.04	-1.8
s5q03	-3.887	0.074	92	0.41	0.89	0.92	1.08	-2.8
s5q04	-2.712	0.060	84	0.41	1.14	0.94	1.06	4.6
s5q05	-1.284	0.051	69	0.60	0.97	0.96	1.04	-1.4
s5q06	-1.176	0.051	67	0.66	0.83	0.96	1.04	-8.4
s5q07	-0.812	0.050	62	0.53	1.15	0.96	1.04	7.4
s5q08	-0.429	0.049	57	0.59	1.04	0.96	1.04	2.0
s5q09	1.235	0.050	33	0.59	0.95	0.96	1.04	-2.4
s5q10	0.015	0.049	51	0.61	1.00	0.96	1.04	-0.2
s5q11	1.362	0.051	31	0.52	1.05	0.96	1.04	2.4
s5q12	2.625	0.058	17	0.47	0.96	0.95	1.05	-1.4
s5q13	-2.608	0.059	83	0.54	0.87	0.94	1.06	-4.4
s5q14	-1.117	0.051	67	0.55	1.08	0.96	1.04	3.8
s5q15	-0.060	0.049	52	0.66	0.90	0.96	1.04	-5.7
s5q16	0.279	0.049	47	0.61	0.99	0.96	1.04	-0.7
s5q17	0.603	0.049	42	0.53	1.12	0.96	1.04	6.0
s5q18	0.873	0.050	38	0.55	1.07	0.96	1.04	3.5
s5q19	-0.082	0.049	53	0.67	0.87	0.96	1.04	-7.4
s5q20	0.947	0.050	38	0.61	0.93	0.96	1.04	-3.8
s5q21	1.494	0.051	30	0.55	0.98	0.96	1.04	-0.9
s5q22	1.301	0.051	33	0.57	0.99	0.96	1.04	-0.4
s5q23	1.958	0.054	25	0.54	0.95	0.96	1.04	-2.2
s5q24	3.434	0.066	11	0.34	1.08	0.93	1.07	2.1
s5q25	3.129	0.063	13	0.25	1.30	0.94	1.06	8.7

C.7. Year 7 Spelling Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
s7q01	-3.534	0.075	90	0.42	0.89	0.92	1.08	-2.7
s7q02	-3.995	0.083	92	0.39	0.87	0.90	1.10	-2.8
s7q03	-0.743	0.052	58	0.59	0.94	0.96	1.04	-2.8
s7q04	-1.489	0.055	69	0.60	0.87	0.95	1.05	-5.6
s7q05	-1.154	0.054	65	0.54	1.02	0.96	1.04	0.9
s7q06	-1.374	0.054	68	0.49	1.08	0.95	1.05	3.6
s7q07	0.101	0.052	45	0.56	0.99	0.96	1.04	-0.4
s7q08	-0.060	0.052	47	0.57	0.99	0.96	1.04	-0.6
s7q09	-1.051	0.053	63	0.54	1.02	0.96	1.04	0.8
s7q10	0.703	0.053	35	0.49	1.07	0.96	1.04	3.2
s7q11	1.100	0.054	29	0.54	0.93	0.96	1.04	-3.1
s7q12	1.923	0.060	19	0.50	0.90	0.95	1.05	-3.7
s7q13	3.388	0.080	7	0.27	1.06	0.90	1.10	1.2
s7q14	-4.420	0.093	94	0.32	0.93	0.89	1.11	-1.2
s7q15	-1.394	0.054	68	0.58	0.92	0.95	1.05	-3.5
s7q16	-0.987	0.053	62	0.49	1.11	0.96	1.04	5.1
s7q17	-0.242	0.052	51	0.61	0.91	0.96	1.04	-4.9
s7q18	0.106	0.052	45	0.55	1.01	0.96	1.04	0.7
s7q19	0.648	0.053	37	0.52	1.01	0.96	1.04	0.4
s7q20	0.263	0.052	43	0.54	1.01	0.96	1.04	0.6
s7q21	1.695	0.058	22	0.32	1.21	0.95	1.05	7.9
s7q22	1.895	0.060	20	0.43	1.01	0.95	1.05	0.4
s7q23	2.644	0.068	12	0.38	1.00	0.93	1.07	0.0
s7q24	2.123	0.062	17	0.37	1.06	0.94	1.06	2.2
s7q25	3.854	0.092	5	0.27	1.01	0.88	1.12	0.1

C.8. Year 9 Spelling Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
s9q01	-4.001	0.081	92	0.40	0.84	0.91	1.09	-3.4
s9q02	-2.216	0.059	76	0.51	0.95	0.95	1.05	-1.8
s9q03	-1.164	0.054	62	0.56	0.97	0.96	1.04	-1.5
s9q04	-1.676	0.056	70	0.53	0.98	0.95	1.05	-0.9
s9q05	-1.555	0.055	68	0.47	1.06	0.96	1.04	2.5
s9q06	-1.014	0.053	60	0.56	0.96	0.96	1.04	-1.7
s9q07	-1.996	0.057	74	0.50	0.98	0.95	1.05	-0.6
s9q08	-0.485	0.053	51	0.50	1.08	0.96	1.04	4.1
s9q09	-0.739	0.053	55	0.55	0.99	0.96	1.04	-0.7
s9q10	0.685	0.055	33	0.57	0.92	0.96	1.04	-3.8
s9q11	0.935	0.056	29	0.37	1.21	0.96	1.04	8.7
s9q12	1.380	0.058	23	0.48	0.98	0.95	1.05	-0.9
s9q13	-1.984	0.057	74	0.39	1.19	0.95	1.05	6.8
s9q14	-1.367	0.055	66	0.48	1.07	0.96	1.04	3.3
s9q15	-1.353	0.055	66	0.58	0.90	0.96	1.04	-4.5
s9q16	-0.399	0.053	51	0.52	1.04	0.96	1.04	2.2
s9q17	0.308	0.054	39	0.59	0.89	0.96	1.04	-5.6
s9q18	0.868	0.056	31	0.44	1.09	0.96	1.04	3.8
s9q19	1.264	0.058	25	0.46	1.04	0.95	1.05	1.5
s9q20	2.180	0.066	15	0.40	1.00	0.93	1.07	0.0
s9q21	1.734	0.061	20	0.55	0.84	0.94	1.06	-5.9
s9q22	2.768	0.075	10	0.40	0.95	0.92	1.08	-1.2
s9q23	2.158	0.066	15	0.47	0.88	0.93	1.07	-3.7
s9q24	2.805	0.075	10	0.41	0.90	0.92	1.08	-2.4
s9q25	2.863	0.077	10	0.32	1.03	0.91	1.09	0.7

C.9. Year 3 Grammar and Punctuation Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
g3q26	-2.594	0.057	92	0.39	0.89	0.92	1.08	-2.7
g3q27	-1.637	0.043	83	0.39	0.91	0.95	1.05	-3.7
g3q28	-1.326	0.040	78	0.43	0.90	0.96	1.04	-5.2
g3q29	-1.379	0.041	79	0.47	0.87	0.96	1.04	-6.5
g3q30	-1.178	0.039	76	0.31	0.98	0.96	1.04	-1.2
g3q31	-1.310	0.040	78	0.34	0.96	0.96	1.04	-2.2
g3q32	-0.358	0.035	61	0.36	0.97	0.98	1.02	-2.9
g3q33	-0.575	0.036	65	0.30	1.01	0.97	1.03	0.8
g3q34	-0.983	0.038	73	0.38	0.94	0.97	1.03	-3.5
g3q35	-0.087	0.034	55	0.40	0.93	0.98	1.02	-6.1
g3q36	0.143	0.034	50	0.31	1.00	0.98	1.02	0.4
g3q37	-0.882	0.037	71	0.40	0.92	0.97	1.03	-5.0
g3q38	0.189	0.034	50	0.33	0.99	0.98	1.02	-0.9
g3q39	-0.434	0.035	63	0.33	0.99	0.97	1.03	-0.8
g3q40	0.108	0.035	51	0.20	1.08	0.98	1.02	7.2
g3q41	0.822	0.036	36	0.24	1.04	0.98	1.02	3.1
g3q42	0.370	0.035	46	0.42	0.92	0.98	1.02	-7.2
g3q43	0.052	0.035	53	0.47	0.89	0.98	1.02	-10.4
g3q44	1.278	0.038	28	0.10	1.11	0.97	1.03	6.6
g3q45	1.087	0.037	31	0.11	1.11	0.97	1.03	7.4
g3q46	1.016	0.037	33	0.06	1.16	0.97	1.03	10.6
g3q47	1.857	0.043	19	-0.03	1.17	0.95	1.05	6.8
g3q48	1.522	0.040	24	0.14	1.06	0.96	1.04	3.3
g3q49	1.162	0.038	30	0.13	1.09	0.97	1.03	6.0
g3q50	3.136	0.065	7	0.15	1.01	0.90	1.10	0.2

C.10. Year 5 Grammar and Punctuation Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
g5q26	-1.902	0.048	87	0.26	0.97	0.94	1.06	-0.8
g5q27	-2.689	0.063	94	0.25	0.95	0.90	1.10	-1.1
g5q28	-1.814	0.047	87	0.27	0.97	0.94	1.06	-1.0
g5q29	-1.398	0.042	82	0.31	0.96	0.95	1.05	-1.7
g5q30	-1.762	0.046	86	0.29	0.95	0.94	1.06	-1.8
g5q31	-2.046	0.050	89	0.33	0.92	0.93	1.07	-2.3
g5q32	0.546	0.034	45	0.23	1.06	0.98	1.02	5.8
g5q33	-0.194	0.035	61	0.41	0.93	0.98	1.02	-5.6
g5q34	-1.019	0.039	76	0.34	0.96	0.96	1.04	-2.4
g5q35	-0.108	0.034	59	0.28	1.03	0.98	1.02	2.7
g5q36	0.101	0.034	55	0.40	0.93	0.98	1.02	-6.1
g5q37	-0.370	0.035	64	0.45	0.90	0.97	1.03	-8.2
g5q38	0.158	0.034	53	0.42	0.93	0.98	1.02	-6.9
g5q39	0.696	0.034	42	0.29	1.02	0.98	1.02	2.0
g5q40	1.018	0.035	35	0.39	0.94	0.97	1.03	-5.0
g5q41	0.471	0.034	47	0.16	1.12	0.98	1.02	10.8
g5q42	0.891	0.035	38	0.29	1.01	0.98	1.02	1.0
g5q43	1.012	0.035	36	0.23	1.05	0.97	1.03	4.1
g5q44	1.123	0.036	33	0.24	1.04	0.97	1.03	3.0
g5q45	1.394	0.037	28	0.38	0.94	0.97	1.03	-3.9
g5q46	1.498	0.038	27	0.23	1.03	0.97	1.03	1.8
g5q47	0.919	0.035	38	0.07	1.17	0.98	1.02	13.2
g5q48	0.790	0.035	40	0.37	0.96	0.98	1.02	-3.2
g5q49	1.290	0.037	30	0.34	0.96	0.97	1.03	-2.4
g5q50	1.391	0.038	29	0.09	1.13	0.97	1.03	8.1

C.11. Year 7 Grammar and Punctuation Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
g7q26	-3.864	0.103	97	0.21	0.94	0.82	1.18	-0.6
g7q27	-3.224	0.080	95	0.24	0.94	0.88	1.12	-1.0
g7q28	-2.465	0.061	90	0.26	0.97	0.92	1.08	-0.8
g7q29	-1.082	0.044	73	0.28	1.04	0.96	1.04	2.2
g7q30	-1.337	0.046	77	0.42	0.91	0.96	1.04	-4.0
g7q31	-0.812	0.042	68	0.35	1.00	0.97	1.03	-0.2
g7q32	-0.879	0.043	69	0.35	0.98	0.97	1.03	-1.0
g7q33	-0.196	0.040	56	0.29	1.05	0.97	1.03	3.8
g7q34	-0.273	0.041	57	0.50	0.87	0.97	1.03	-9.4
g7q35	1.102	0.043	30	0.34	1.00	0.96	1.04	-0.2
g7q36	0.339	0.040	45	0.29	1.06	0.97	1.03	4.2
g7q37	0.006	0.040	51	0.46	0.92	0.97	1.03	-6.0
g7q38	-0.083	0.040	53	0.32	1.03	0.97	1.03	2.3
g7q39	0.072	0.040	50	0.37	0.99	0.97	1.03	-1.1
g7q40	0.667	0.041	38	0.45	0.92	0.97	1.03	-5.6
g7q41	0.452	0.041	42	0.37	0.99	0.97	1.03	-0.8
g7q42	0.449	0.041	42	0.17	1.16	0.97	1.03	10.8
g7q43	0.858	0.042	34	0.14	1.16	0.97	1.03	9.7
g7q44	0.682	0.041	38	0.32	1.03	0.97	1.03	1.7
g7q45	1.267	0.044	27	0.41	0.93	0.96	1.04	-3.5
g7q46	0.422	0.041	43	0.34	1.01	0.97	1.03	1.0
g7q47	2.098	0.053	15	0.22	1.02	0.94	1.06	0.6
g7q48	2.334	0.056	13	0.19	1.05	0.93	1.07	1.3
g7q49	0.724	0.042	37	0.43	0.94	0.97	1.03	-4.3
g7q50	2.743	0.064	9	0.24	1.00	0.91	1.09	0.0

C.12. Year 9 Grammar and Punctuation Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
g9q26	-2.678	0.074	94	0.29	0.94	0.88	1.12	-1.0
g9q27	-1.839	0.055	87	0.42	0.89	0.93	1.07	-3.1
g9q28	-1.281	0.047	80	0.30	0.97	0.95	1.05	-1.0
g9q29	-1.905	0.056	88	0.35	0.92	0.93	1.07	-2.1
g9q30	-1.031	0.045	76	0.31	0.98	0.96	1.04	-1.0
g9q31	-1.742	0.053	86	0.40	0.89	0.93	1.07	-3.2
g9q32	0.901	0.040	37	0.33	0.96	0.97	1.03	-2.6
g9q33	-0.048	0.039	58	0.19	1.07	0.98	1.02	5.6
g9q34	-0.696	0.042	71	0.31	0.98	0.96	1.04	-1.1
g9q35	-0.541	0.041	68	0.34	0.97	0.97	1.03	-1.6
g9q36	-0.187	0.040	61	0.31	0.99	0.97	1.03	-0.5
g9q37	1.082	0.041	33	0.36	0.95	0.97	1.03	-3.6
g9q38	0.056	0.039	55	0.30	1.00	0.98	1.02	-0.2
g9q39	0.310	0.039	50	0.26	1.03	0.98	1.02	2.2
g9q40	0.761	0.040	40	0.24	1.02	0.98	1.02	1.8
g9q41	0.687	0.040	42	0.14	1.09	0.98	1.02	7.1
g9q42	-0.421	0.041	65	0.40	0.93	0.97	1.03	-4.3
g9q43	0.510	0.039	46	0.16	1.09	0.98	1.02	7.3
g9q44	0.851	0.040	38	0.27	1.01	0.97	1.03	0.4
g9q45	-0.131	0.040	60	0.34	0.98	0.97	1.03	-1.8
g9q46	0.554	0.039	45	0.17	1.08	0.98	1.02	6.5
g9q47	1.808	0.047	21	0.19	1.02	0.95	1.05	0.7
g9q48	1.242	0.042	30	0.04	1.13	0.97	1.03	7.4
g9q49	3.291	0.075	6	-0.08	1.07	0.88	1.12	1.2
g9q50	0.449	0.039	47	0.39	0.94	0.98	1.02	-5.6

C.13. Year 3 Numeracy Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
n3q01	-4.081	0.093	97	0.12	1.03	0.85	1.15	0.4
n3q02	-3.073	0.064	93	0.36	0.87	0.91	1.09	-2.9
n3q03	-2.600	0.055	90	0.43	0.83	0.93	1.07	-5.1
n3q04	-0.749	0.039	66	0.53	0.87	0.97	1.03	-9.0
n3q05	-1.944	0.047	84	0.45	0.87	0.95	1.05	-5.2
n3q06	-2.469	0.053	89	0.33	0.98	0.93	1.07	-0.7
n3q07	-2.128	0.049	86	0.38	0.94	0.94	1.06	-2.0
n3q08	-2.075	0.048	85	0.37	0.94	0.95	1.05	-2.0
n3q09	0.394	0.038	44	0.50	0.91	0.97	1.03	-7.1
n3q10	-1.458	0.043	77	0.32	1.06	0.96	1.04	2.8
n3q11	-0.697	0.039	65	0.37	1.02	0.97	1.03	1.4
n3q12	0.462	0.038	42	0.35	1.08	0.97	1.03	5.8
n3q13	-0.426	0.038	60	0.38	1.05	0.97	1.03	3.3
n3q14	-0.685	0.039	65	0.44	0.97	0.97	1.03	-2.1
n3q15	-0.104	0.037	54	0.45	0.99	0.97	1.03	-1.1
n3q16	-1.058	0.040	71	0.28	1.13	0.97	1.03	7.4
n3q17	-1.436	0.042	77	0.39	0.98	0.96	1.04	-1.2
n3q18	-0.284	0.038	57	0.38	1.05	0.97	1.03	3.4
n3q19	-0.890	0.039	68	0.42	0.99	0.97	1.03	-0.5
n3q20	-0.225	0.038	56	0.56	0.84	0.97	1.03	-12.2
n3q21	0.569	0.038	41	0.33	1.08	0.97	1.03	5.6
n3q22	0.606	0.038	40	0.47	0.95	0.97	1.03	-3.5
n3q23	-0.156	0.038	55	0.32	1.11	0.97	1.03	8.2
n3q24	1.266	0.041	28	0.30	1.07	0.97	1.03	3.9
n3q25	0.424	0.038	44	0.41	1.01	0.97	1.03	0.8
n3q26	1.317	0.041	27	0.41	0.98	0.97	1.03	-0.9
n3q27	1.798	0.044	20	0.36	1.00	0.96	1.04	-0.2
n3q28	1.369	0.041	27	0.20	1.18	0.96	1.04	9.6
n3q29	1.490	0.042	25	0.49	0.89	0.96	1.04	-5.9
n3q30	0.962	0.039	34	0.32	1.07	0.97	1.03	4.4
n3q31	1.752	0.044	21	0.17	1.18	0.96	1.04	7.9
n3q32	1.137	0.040	31	0.38	0.99	0.97	1.03	-0.3
n3q33	3.105	0.062	8	0.38	0.90	0.91	1.09	-2.3
n3q34	3.501	0.071	6	0.31	0.95	0.89	1.11	-1.0
n3q35	2.400	0.051	14	0.45	0.87	0.94	1.06	-4.6
n3q36	3.988	0.086	4	0.16	1.03	0.86	1.14	0.4

C.14. Year 5 Numeracy Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
n5q01	-3.172	0.078	96	0.32	0.88	0.88	1.12	-2.0
n5q02	-3.315	0.082	96	0.27	0.93	0.87	1.13	-1.1
n5q03	-3.055	0.074	95	0.31	0.90	0.89	1.11	-1.8
n5q04	-2.560	0.063	93	0.28	0.96	0.91	1.09	-0.9
n5q05	-1.906	0.052	88	0.43	0.87	0.94	1.06	-4.2
n5q06	-2.035	0.054	89	0.29	1.03	0.93	1.07	0.8
n5q07	-2.327	0.059	91	0.39	0.88	0.92	1.08	-3.1
n5q08	-1.454	0.047	83	0.44	0.93	0.95	1.05	-2.9
n5q09	-0.922	0.043	76	0.41	1.01	0.96	1.04	0.6
n5q10	-0.737	0.042	74	0.42	1.00	0.96	1.04	0.2
n5q11	-1.064	0.044	78	0.51	0.88	0.96	1.04	-6.2
n5q12	-1.383	0.047	82	0.47	0.89	0.95	1.05	-4.7
n5q13	-0.522	0.041	70	0.32	1.13	0.97	1.03	7.5
n5q14	-0.625	0.041	72	0.48	0.94	0.97	1.03	-3.4
n5q15	0.199	0.039	57	0.54	0.91	0.97	1.03	-6.3
n5q16	-0.504	0.041	70	0.28	1.19	0.97	1.03	10.8
n5q17	-0.404	0.040	68	0.47	0.97	0.97	1.03	-1.8
n5q18	0.093	0.039	59	0.35	1.14	0.97	1.03	9.4
n5q19	-0.081	0.039	63	0.47	0.98	0.97	1.03	-1.0
n5q20	-0.397	0.040	68	0.42	1.03	0.97	1.03	2.0
n5q21	0.432	0.039	53	0.50	0.96	0.97	1.03	-2.8
n5q22	0.344	0.039	55	0.48	1.00	0.97	1.03	-0.3
n5q23	0.507	0.039	52	0.44	1.03	0.97	1.03	2.4
n5q24	0.950	0.039	43	0.56	0.89	0.97	1.03	-8.2
n5q25	0.086	0.039	60	0.30	1.20	0.97	1.03	13.0
n5q26	1.404	0.040	35	0.50	0.91	0.97	1.03	-5.7
n5q27	0.194	0.039	58	0.48	0.98	0.97	1.03	-1.6
n5q28	0.729	0.039	48	0.32	1.18	0.97	1.03	11.7
n5q29	-0.287	0.040	66	0.51	0.92	0.97	1.03	-4.8
n5q30	0.669	0.039	49	0.53	0.92	0.97	1.03	-5.4
n5q31	-0.347	0.040	67	0.48	0.95	0.97	1.03	-2.8
n5q32	0.682	0.039	49	0.39	1.09	0.97	1.03	6.1
n5q33	1.002	0.039	43	0.55	0.88	0.97	1.03	-8.4
n5q34	0.573	0.039	51	0.32	1.18	0.97	1.03	11.8
n5q35	1.856	0.042	28	0.46	0.95	0.96	1.04	-2.9
n5q36	1.716	0.041	30	0.31	1.12	0.97	1.03	6.9
n5q37	1.386	0.040	36	0.42	1.04	0.97	1.03	2.6
n5q38	2.320	0.045	21	0.46	0.90	0.96	1.04	-4.6
n5q39	2.267	0.045	22	0.20	1.17	0.96	1.04	7.4

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
n5q40	1.985	0.043	26	0.52	0.88	0.96	1.04	-6.5
n5q41	3.879	0.066	7	0.35	0.93	0.91	1.09	-1.6
n5q42	3.823	0.065	8	0.33	0.95	0.91	1.09	-1.1

C.15. Year 7 Numeracy Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
n7CAq1	-3.019	0.069	92	0.26	0.97	0.91	1.09	-0.7
n7CAq2	-2.395	0.058	87	0.33	0.97	0.93	1.07	-0.8
n7CAq3	-2.899	0.066	91	0.18	1.07	0.91	1.09	1.6
n7CAq4	-2.650	0.062	89	0.39	0.88	0.92	1.08	-3.2
n7CAq5	-1.777	0.051	80	0.33	1.05	0.95	1.05	1.9
n7CAq6	-1.438	0.048	75	0.57	0.79	0.96	1.04	-10.4
n7CAq7	-1.781	0.051	80	0.41	0.95	0.95	1.05	-1.8
n7CAq8	-1.887	0.052	81	0.40	0.96	0.95	1.05	-1.5
n7CAq9	-1.188	0.047	71	0.47	0.93	0.96	1.04	-3.9
n7CAq10	-2.174	0.055	84	0.40	0.92	0.94	1.06	-2.6
n7CAq11	-0.572	0.044	60	0.37	1.10	0.97	1.03	5.8
n7CAq12	-0.233	0.044	53	0.47	0.99	0.97	1.03	-0.9
n7CAq13	-0.967	0.045	67	0.33	1.11	0.96	1.04	5.9
n7CAq14	-1.127	0.046	70	0.48	0.93	0.96	1.04	-3.9
n7CAq15	0.019	0.044	49	0.56	0.88	0.97	1.03	-8.1
n7CAq16	0.029	0.044	48	0.28	1.21	0.97	1.03	12.7
n7CAq17	-1.730	0.050	79	0.40	0.95	0.95	1.05	-2.0
n7CAq18	-0.533	0.044	59	0.57	0.86	0.97	1.03	-9.2
n7CAq19	-0.693	0.045	62	0.26	1.21	0.97	1.03	11.9
n7CAq20	-1.483	0.048	75	0.39	1.01	0.96	1.04	0.5
n7CAq21	0.097	0.044	47	0.43	1.02	0.97	1.03	1.4
n7CAq22	0.400	0.044	41	0.61	0.82	0.97	1.03	-11.5
n7CAq23	0.269	0.044	44	0.41	1.05	0.97	1.03	2.8
n7CAq24	0.704	0.045	36	0.31	1.15	0.97	1.03	8.2
n7CAq25	0.166	0.044	46	0.43	1.03	0.97	1.03	1.7
n7CAq26	0.293	0.044	43	0.34	1.13	0.97	1.03	7.9
n7CAq27	1.191	0.047	28	0.40	0.99	0.96	1.04	-0.7
n7CAq28	0.642	0.045	37	0.47	0.98	0.97	1.03	-0.9
n7CAq29	1.046	0.047	30	0.31	1.13	0.96	1.04	6.2
n7CAq30	2.483	0.061	12	0.41	0.91	0.93	1.07	-2.5
n7CAq31	0.351	0.044	42	0.36	1.11	0.97	1.03	6.3
n7CAq32	1.995	0.054	17	0.37	1.01	0.94	1.06	0.4
n7CAq33	2.121	0.056	15	0.37	1.00	0.94	1.06	-0.1
n7CAq34	1.566	0.050	22	0.50	0.89	0.95	1.05	-4.6
n7CAq35	0.952	0.046	32	0.53	0.89	0.96	1.04	-6.0
n7CAq36	1.949	0.054	17	0.10	1.32	0.94	1.06	10.2
n7CAq37	4.427	0.117	2	0.17	1.05	0.80	1.20	0.5
n7CAq38	1.612	0.051	22	0.48	0.92	0.95	1.05	-3.3
n7CAq39	3.518	0.083	5	0.37	0.91	0.88	1.12	-1.5

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
n7CAq40	3.550	0.084	5	0.34	0.93	0.87	1.13	-1.1
n7NCq01	-2.519	0.060	88	0.41	0.88	0.93	1.07	-3.5
n7NCq02	-1.657	0.050	78	0.38	0.99	0.95	1.05	-0.5
n7NCq03	-0.771	0.045	64	0.53	0.89	0.97	1.03	-6.5
n7NCq04	0.393	0.044	42	0.53	0.91	0.97	1.03	-5.8
n7NCq05	0.172	0.044	46	0.50	0.95	0.97	1.03	-3.2
n7NCq06	1.088	0.047	29	0.36	1.06	0.96	1.04	2.9
n7NCq07	0.288	0.044	44	0.37	1.08	0.97	1.03	5.0
n7NCq08	2.172	0.057	15	0.42	0.92	0.94	1.06	-2.6

C.16. Year 9 Numeracy Item Calibration Results

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
n9CAq1	-2.810	0.063	88	0.26	1.03	0.93	1.07	0.8
n9CAq2	-1.194	0.048	67	0.42	1.04	0.96	1.04	2.4
n9CAq3	-2.424	0.057	84	0.35	0.98	0.94	1.06	-0.6
n9CAq4	-2.775	0.062	88	0.36	0.93	0.93	1.07	-2.1
n9CAq5	-1.039	0.047	64	0.49	0.97	0.96	1.04	-1.8
n9CAq6	-1.101	0.048	65	0.42	1.06	0.96	1.04	3.1
n9CAq7	-1.353	0.049	70	0.53	0.87	0.96	1.04	-7.1
n9CAq8	-1.309	0.048	69	0.38	1.08	0.96	1.04	4.0
n9CAq9	-2.249	0.055	82	0.34	1.01	0.95	1.05	0.5
n9CAq10	-0.123	0.047	48	0.55	0.92	0.97	1.03	-4.5
n9CAq11	-0.759	0.047	59	0.62	0.80	0.97	1.03	-12.6
n9CAq12	-0.856	0.047	61	0.51	0.94	0.97	1.03	-3.2
n9CAq13	-1.134	0.048	66	0.46	1.00	0.96	1.04	-0.2
n9CAq14	-0.929	0.047	62	0.50	0.95	0.97	1.03	-2.6
n9CAq15	-0.349	0.047	52	0.59	0.86	0.97	1.03	-8.4
n9CAq16	-0.362	0.047	52	0.48	1.01	0.97	1.03	0.9
n9CAq17	-1.158	0.048	66	0.36	1.11	0.96	1.04	5.7
n9CAq18	0.370	0.048	39	0.32	1.23	0.96	1.04	11.3
n9CAq19	-0.319	0.047	51	0.38	1.15	0.97	1.03	8.4
n9CAq20	-0.550	0.047	56	0.47	1.02	0.97	1.03	1.3
n9CAq21	-0.539	0.047	55	0.57	0.89	0.97	1.03	-6.7
n9CAq22	0.874	0.050	31	0.18	1.40	0.96	1.04	16.8
n9CAq23	0.396	0.048	38	0.38	1.14	0.96	1.04	7.3
n9CAq24	0.709	0.049	33	0.43	1.08	0.96	1.04	3.8
n9CAq25	-0.825	0.047	61	0.58	0.85	0.97	1.03	-8.8
n9CAq26	1.434	0.053	22	0.53	0.87	0.95	1.05	-5.3
n9CAq27	0.372	0.048	39	0.36	1.17	0.96	1.04	8.8
n9CAq28	1.624	0.055	20	0.25	1.21	0.95	1.05	7.1
n9CAq29	-0.469	0.047	54	0.52	0.95	0.97	1.03	-3.1
n9CAq30	0.666	0.049	34	0.54	0.94	0.96	1.04	-3.2
n9CAq31	0.459	0.048	37	0.32	1.22	0.96	1.04	10.9
n9CAq32	1.115	0.051	27	0.52	0.91	0.95	1.05	-3.9
n9CAq33	1.282	0.052	25	0.53	0.92	0.95	1.05	-3.2
n9CAq34	1.868	0.057	17	0.57	0.80	0.94	1.06	-7.1
n9CAq35	2.065	0.060	15	0.55	0.82	0.94	1.06	-6.0
n9CAq36	1.711	0.056	19	0.53	0.87	0.94	1.06	-5.0
n9CAq37	2.331	0.063	13	0.47	0.89	0.93	1.07	-3.1
n9CAq38	2.478	0.065	11	0.44	0.92	0.92	1.08	-2.2
n9CAq39	1.762	0.056	18	0.57	0.81	0.94	1.06	-7.1

Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
n9CAq40	2.368	0.064	12	0.53	0.80	0.93	1.07	-5.7
n9NCq01	-1.555	0.050	73	0.44	0.97	0.96	1.04	-1.5
n9NCq02	-0.222	0.047	50	0.33	1.21	0.97	1.03	11.5
n9NCq03	-0.611	0.047	57	0.50	0.97	0.97	1.03	-2.1
n9NCq04	-1.221	0.048	68	0.47	0.97	0.96	1.04	-1.5
n9NCq05	0.171	0.047	42	0.51	0.98	0.96	1.04	-1.2
n9NCq06	0.581	0.048	35	0.43	1.08	0.96	1.04	3.8
n9NCq07	1.460	0.054	22	0.46	0.97	0.95	1.05	-1.0
n9NCq08	2.138	0.061	15	0.44	0.96	0.93	1.07	-1.3

C.17. Year 3, 5, 7, 9 Writing Item Calibration Results

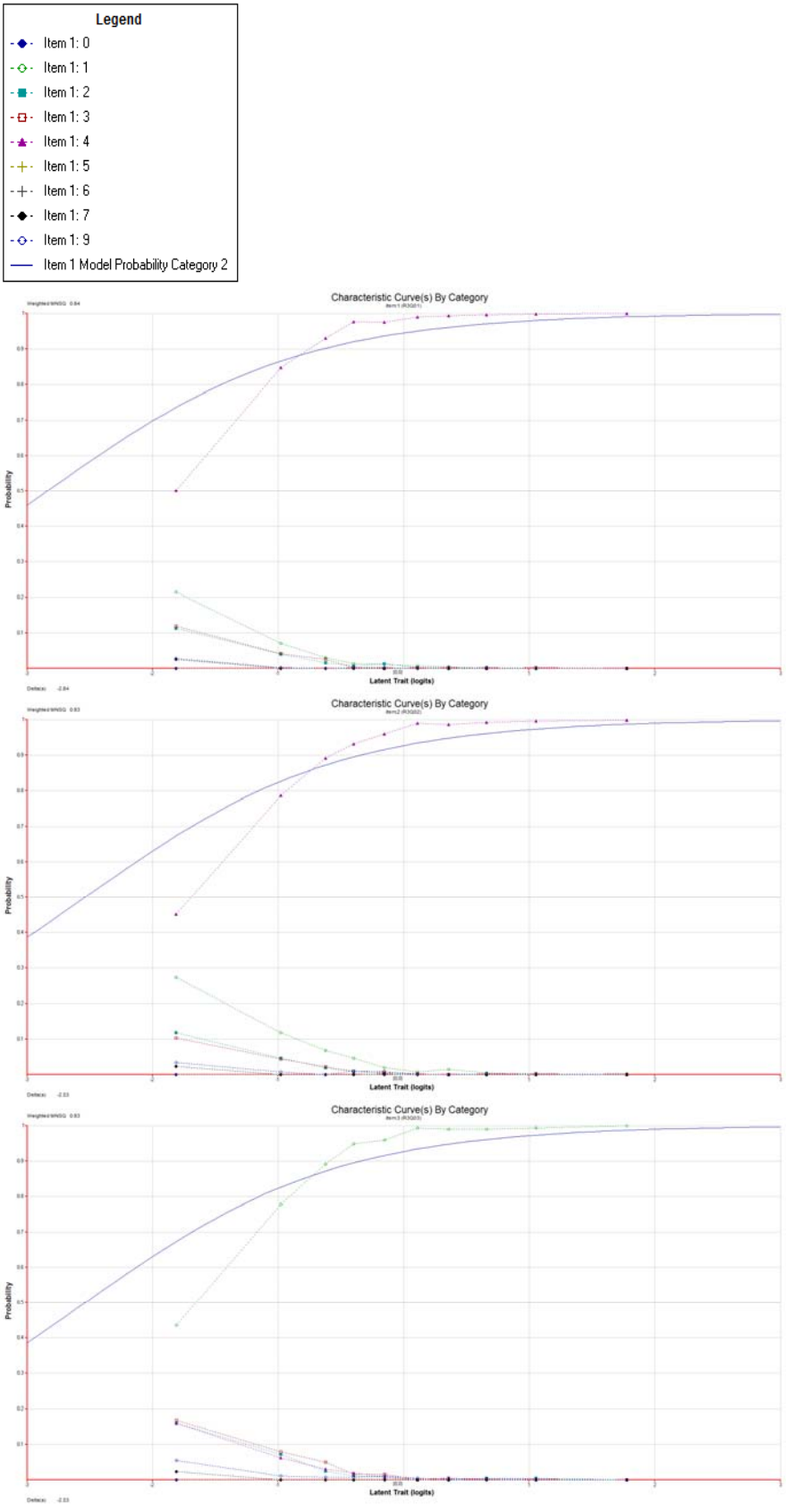
Item Label	Delta (Centred)	Error	Facility	Discrimination (Item-Rest Corr.)	Weighted			
					MNSQ	CI_L	CI_H	T
WQ01	-0.275	0.016	49.9	0.90	0.75	0.98	1.02	-24.4
WQ02	0.040	0.016	50.7	0.84	0.95	0.98	1.02	-4.1
WQ03	-0.689	0.018	55.1	0.84	0.92	0.98	1.02	-6.6
WQ04	0.240	0.017	49.4	0.84	0.96	0.98	1.02	-4.0
WQ05	-0.268	0.018	49.3	0.81	0.97	0.98	1.02	-2.1
WQ06	-0.907	0.020	54.6	0.81	0.91	0.98	1.02	-7.0
WQ07	1.220	0.017	43.6	0.79	1.05	0.98	1.02	4.3
WQ08	0.977	0.016	45.5	0.84	1.06	0.98	1.02	5.0
WQ09	0.560	0.017	48.0	0.75	1.45	0.98	1.02	35.7
WQ10	-0.897	0.015	55.4	0.82	1.23	0.98	1.02	19.7

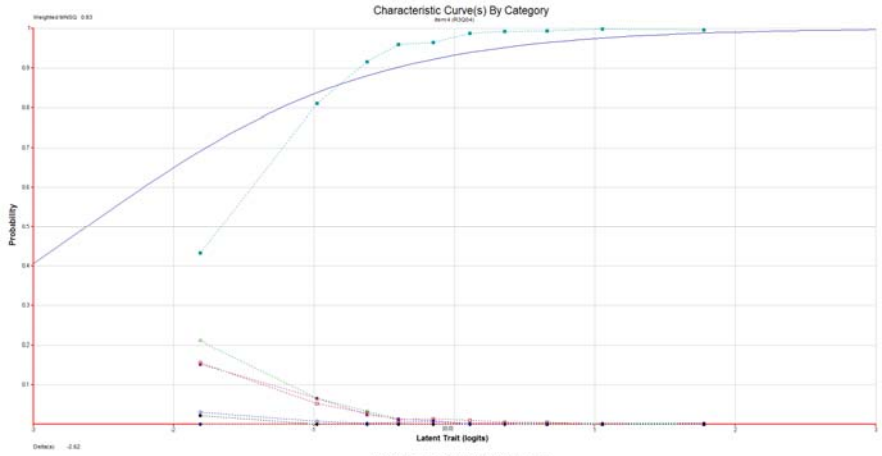
Item Label	Step	Tau	Error
WQ01	0		
WQ01	1	-10.247	0.081
WQ01	2	-5.873	0.045
WQ01	3	-1.496	0.026
WQ01	4	2.742	0.027
WQ01	5	5.916	0.042
WQ01	6	8.957	
WQ02	0		
WQ02	1	-6.613	0.039
WQ02	2	-2.047	0.024
WQ02	3	1.955	0.024
WQ02	4	6.704	
WQ03	0		
WQ03	1	-8.340	0.071
WQ03	2	-5.082	0.042
WQ03	3	-0.803	0.025
WQ03	4	4.912	0.031
WQ03	5	9.313	
WQ04	0		
WQ04	1	-6.731	0.040
WQ04	2	-2.193	0.024
WQ04	3	2.208	0.025
WQ04	4	6.716	
WQ05	0		
WQ05	1	-8.944	0.073
WQ05	2	-6.438	0.047
WQ05	3	1.451	0.024
WQ05	4	5.169	0.036
WQ05	5	8.762	

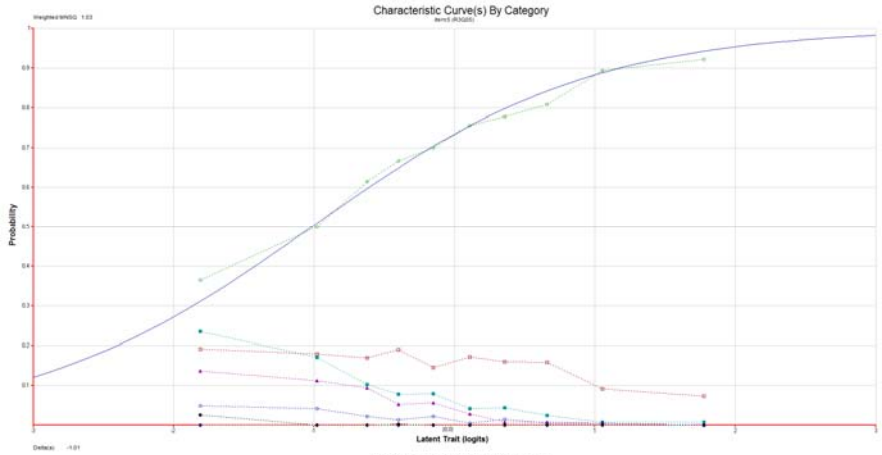
Item Label	Step	Tau	Error
WQ06	0		
WQ06	1	-8.202	0.058
WQ06	2	-3.865	0.032
WQ06	3	3.385	0.025
WQ06	4	8.682	
WQ07	0		
WQ07	1	-4.300	0.025
WQ07	2	-0.558	0.022
WQ07	3	4.858	
WQ08	0		
WQ08	1	-9.460	0.088
WQ08	2	-6.287	0.041
WQ08	3	-1.430	0.025
WQ08	4	2.273	0.030
WQ08	5	5.615	0.052
WQ08	6	9.289	
WQ09	0		
WQ09	1	-8.433	0.065
WQ09	2	-4.629	0.032
WQ09	3	0.058	0.024
WQ09	4	4.588	0.037
WQ09	5	8.416	
WQ10	0		
WQ10	1	-8.600	0.067
WQ10	2	-5.276	0.044
WQ10	3	-1.685	0.027
WQ10	4	1.485	0.024
WQ10	5	5.020	0.032
WQ10	6	9.056	

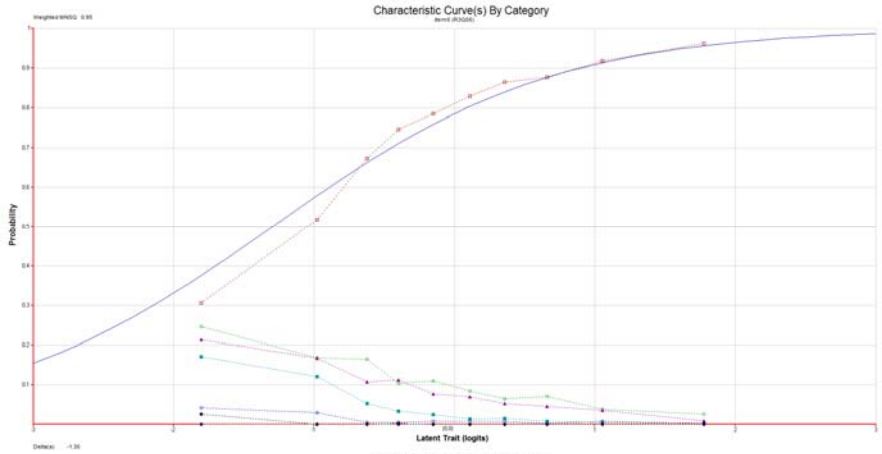
APPENDIX D. ICC PLOTS

D.1. Year 3 Reading




Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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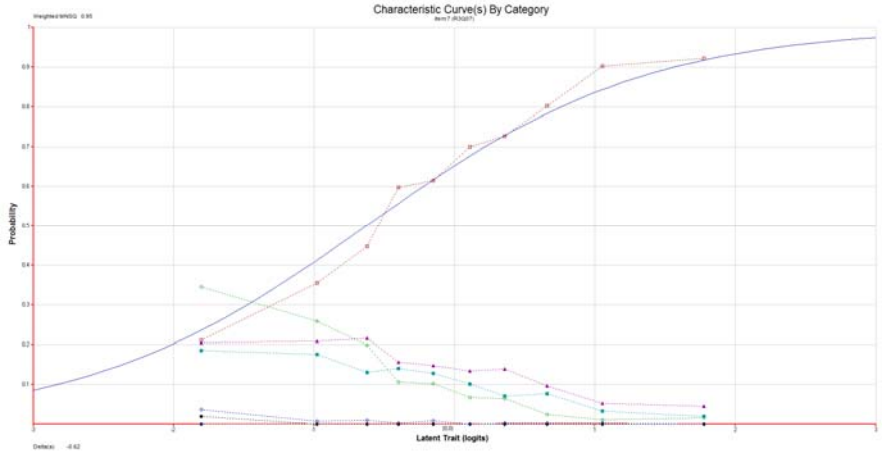
Probability
Latent Trait (logits)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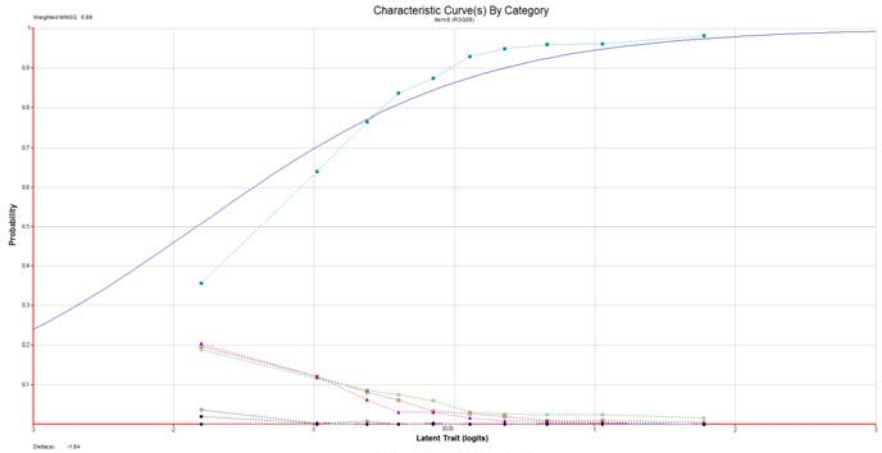
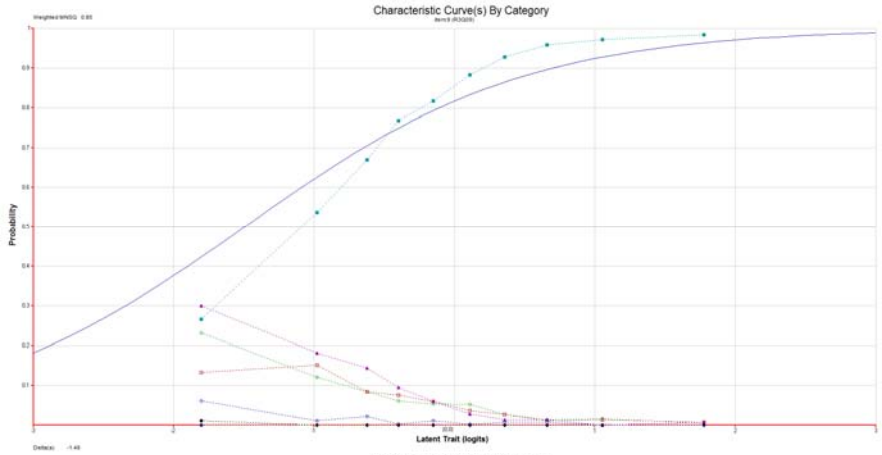
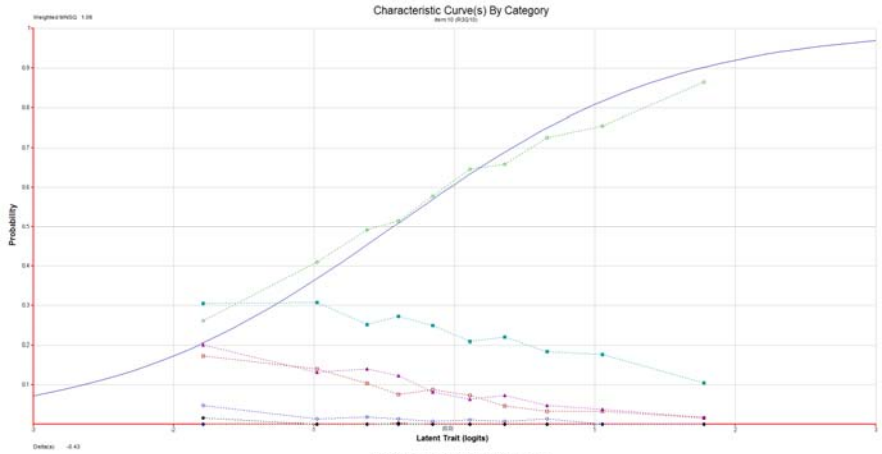
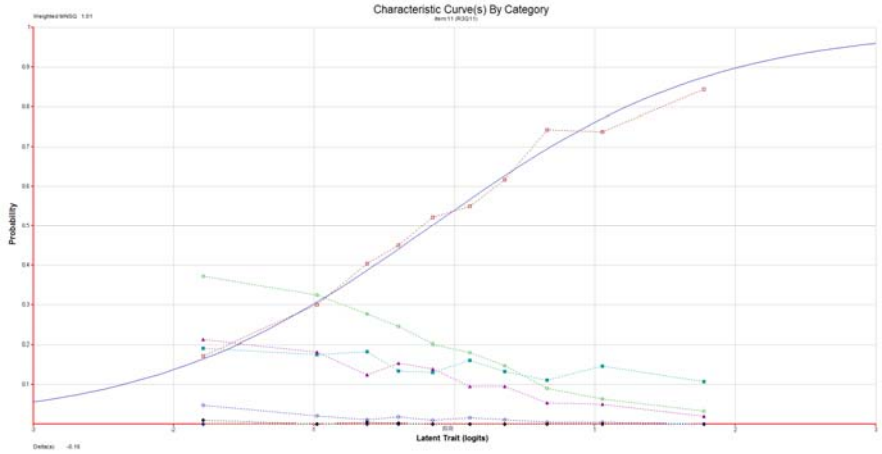
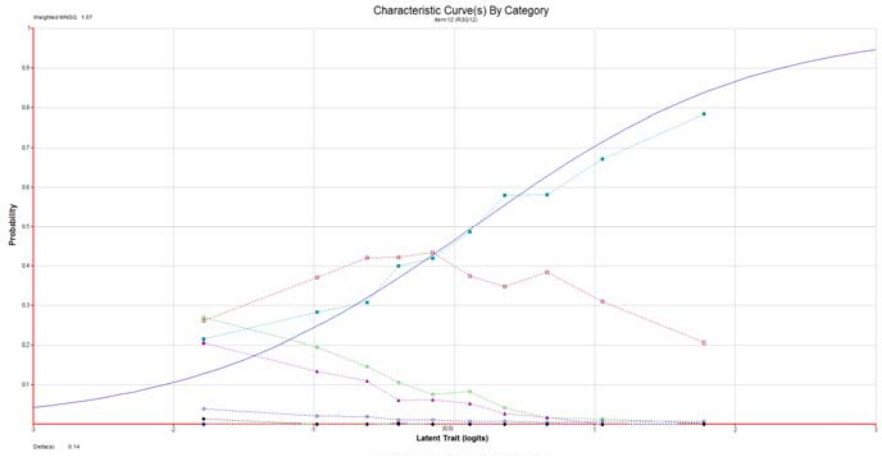
Probability
Latent Trait (logits)

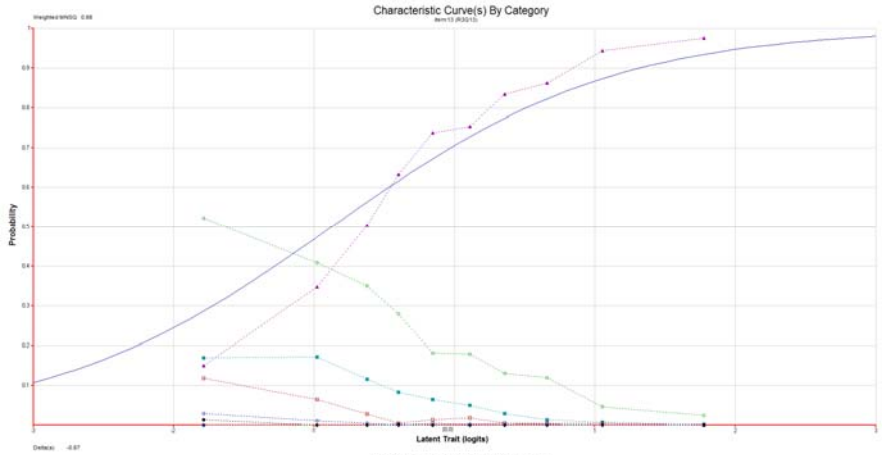

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

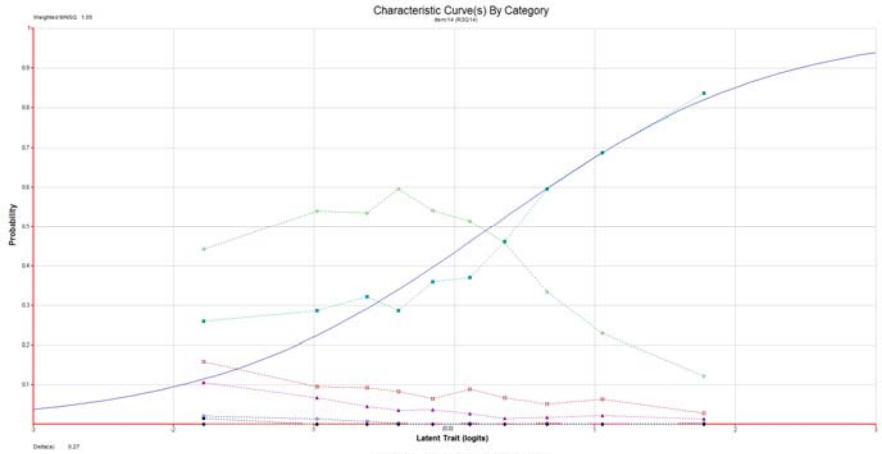

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

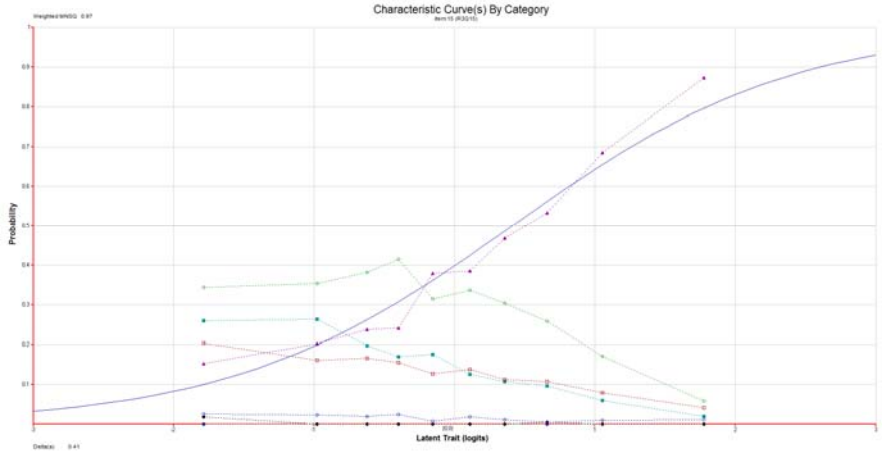

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

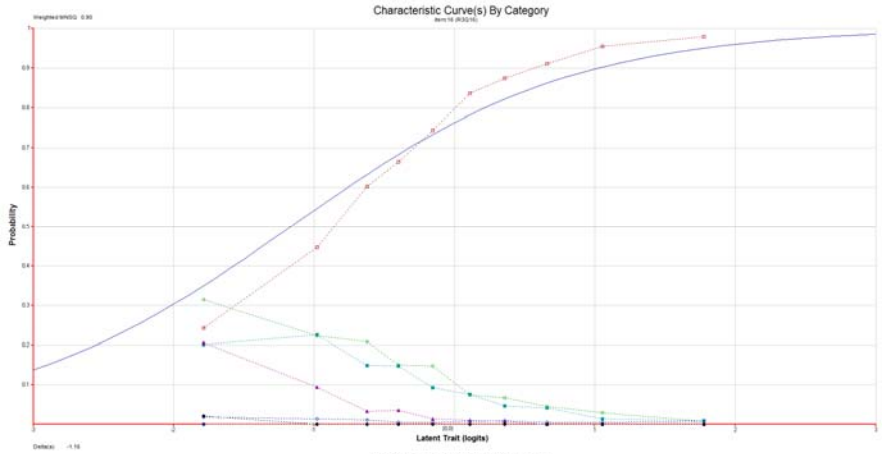

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

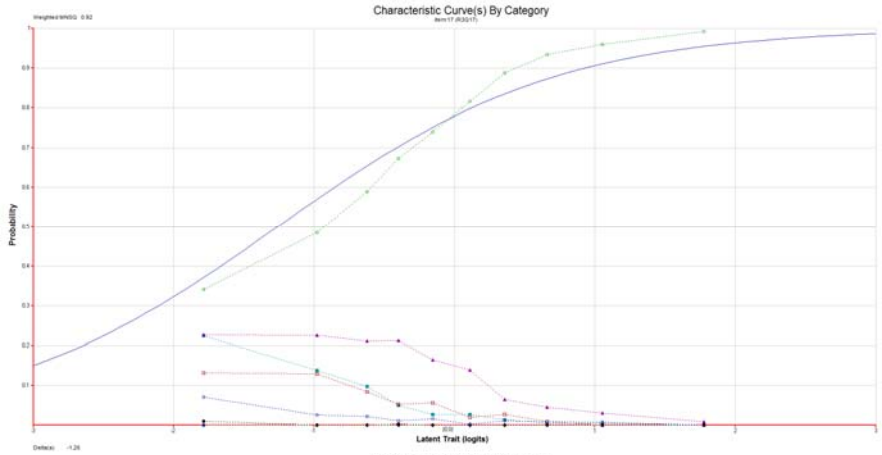

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

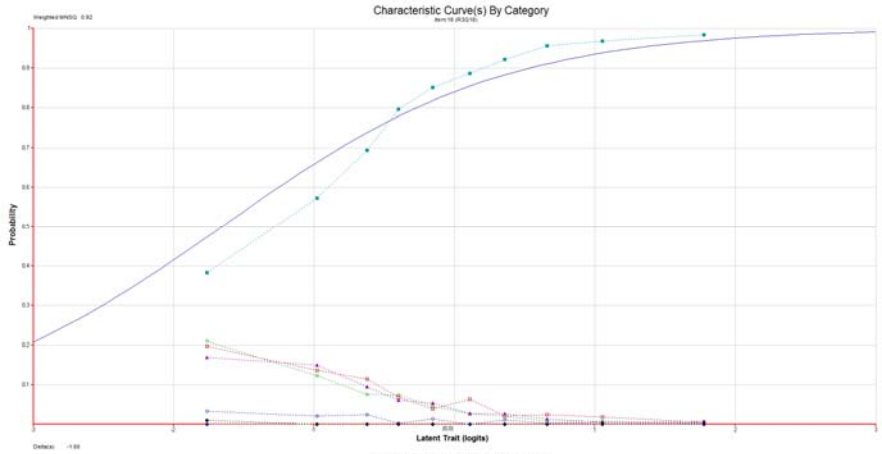

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

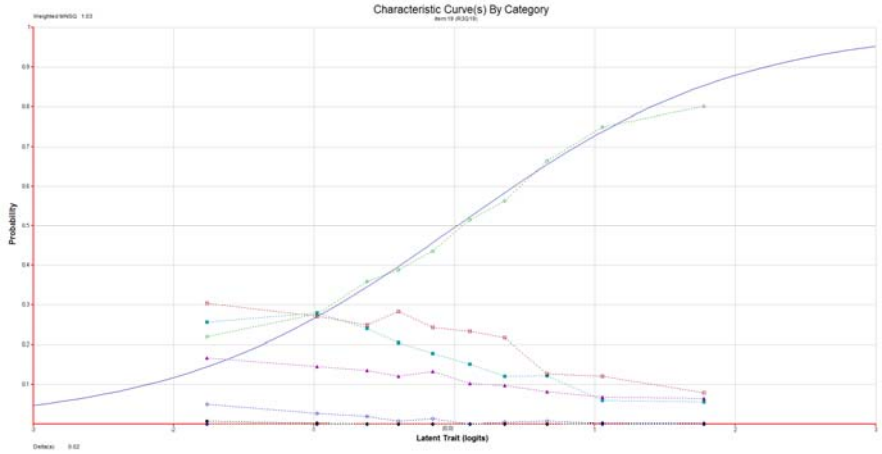

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

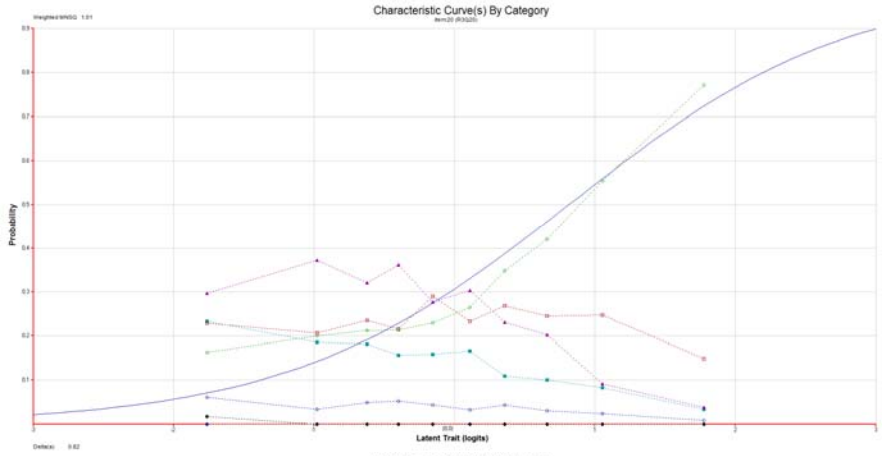

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

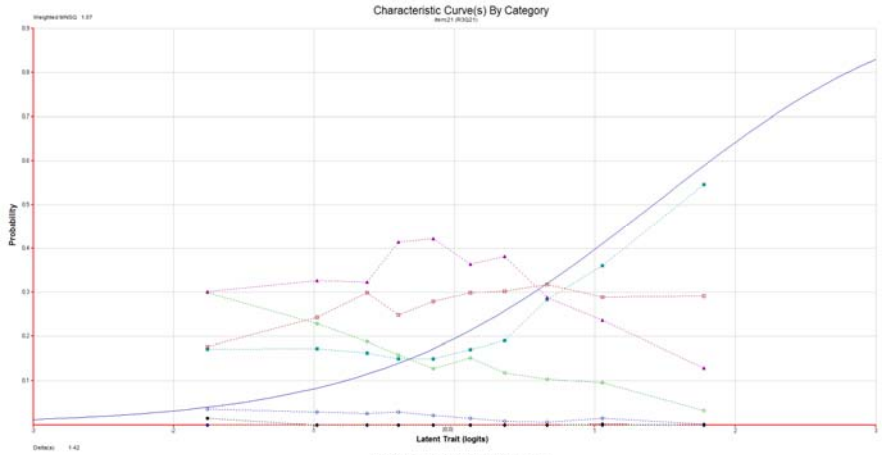

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

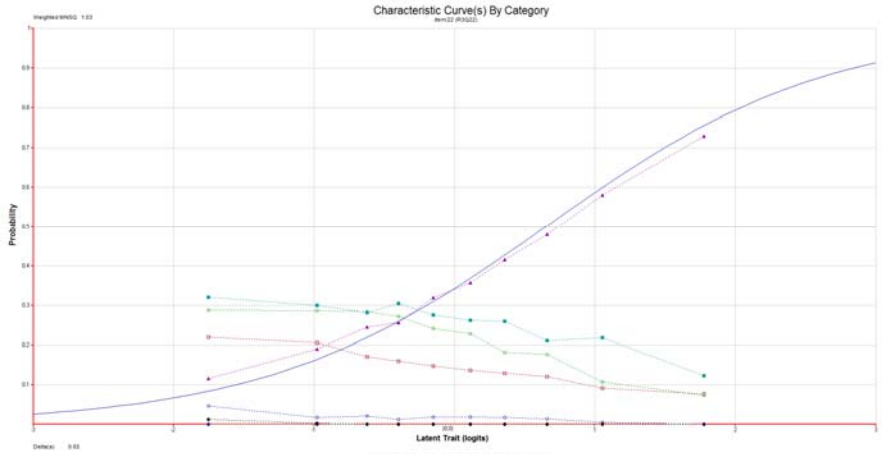

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
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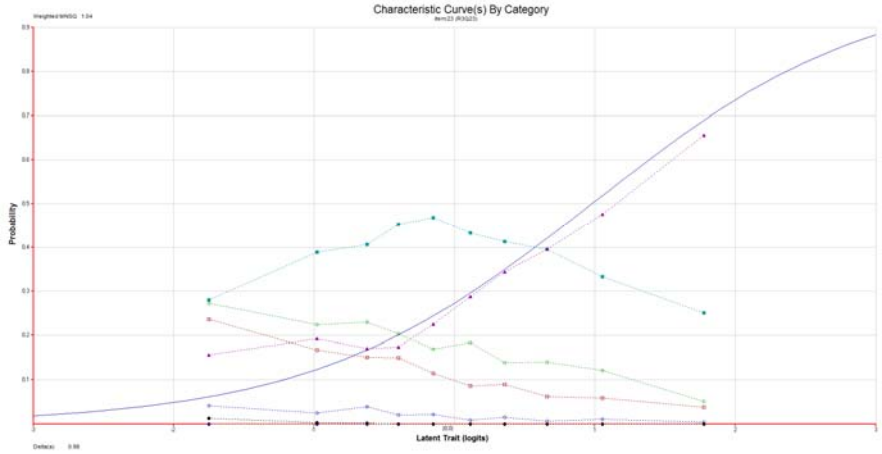
Characteristic Curve(s) By Category
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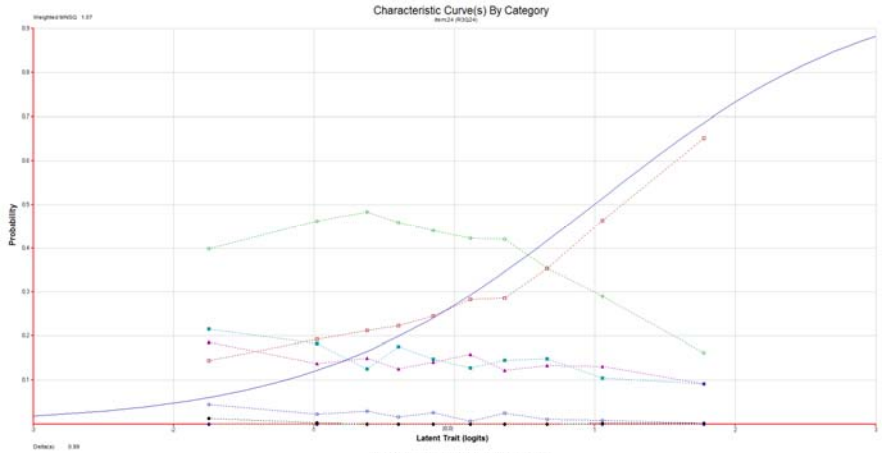
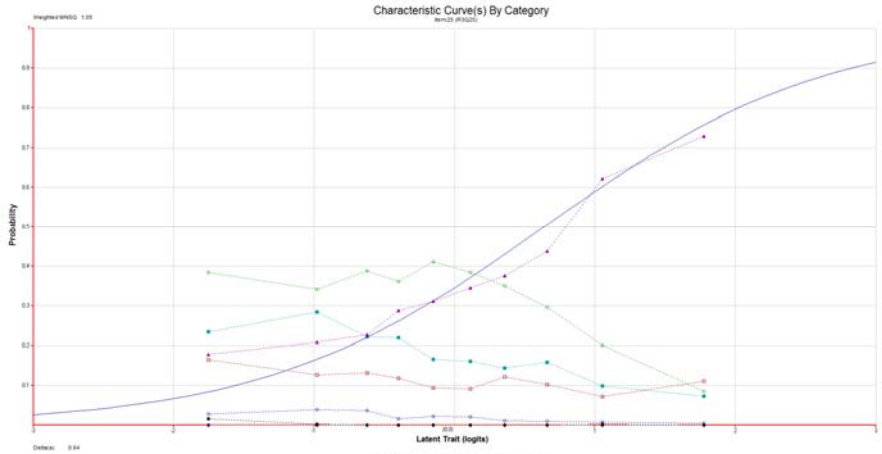
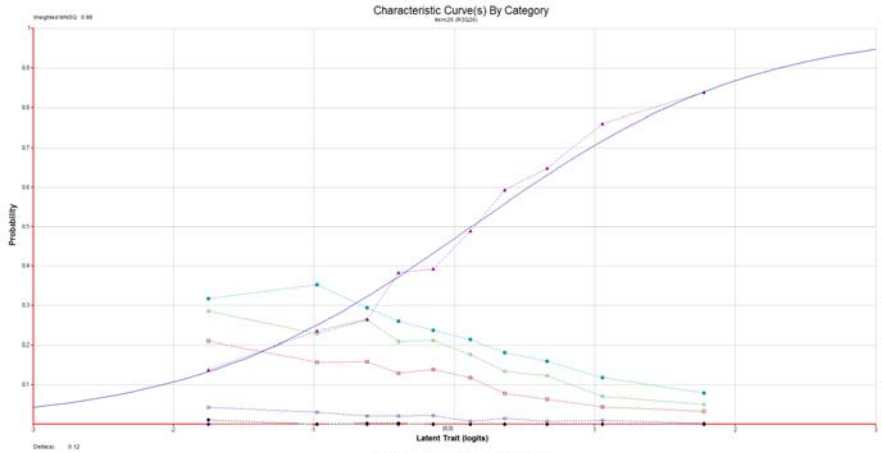

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
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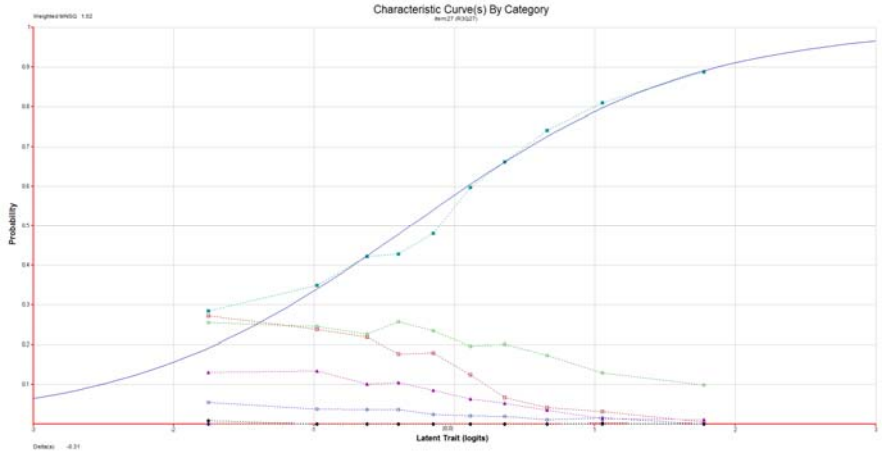
Characteristic Curve(s) By Category
Probability
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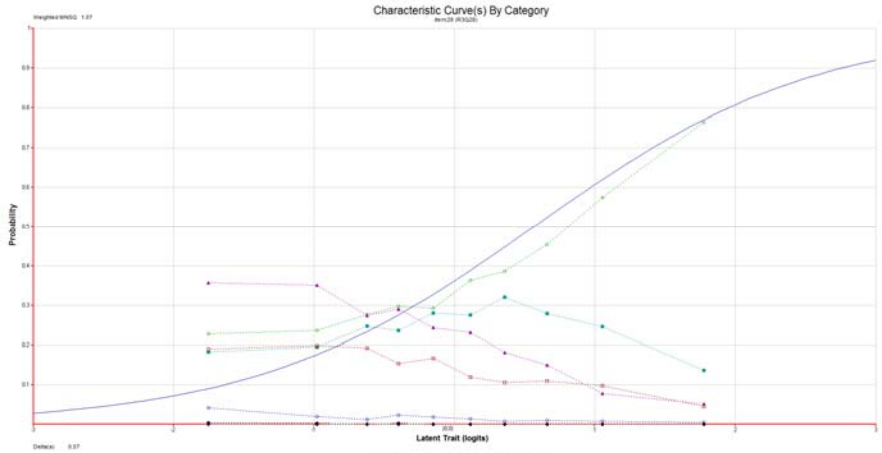
Characteristic Curve(s) By Category
Probability
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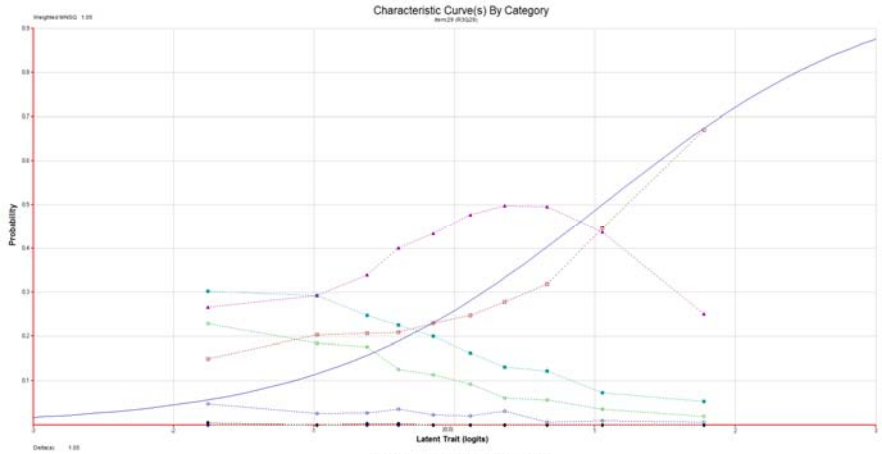
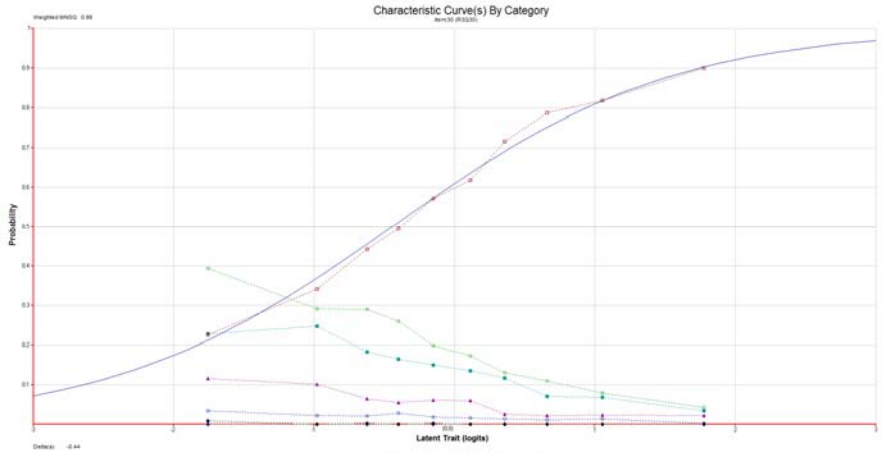
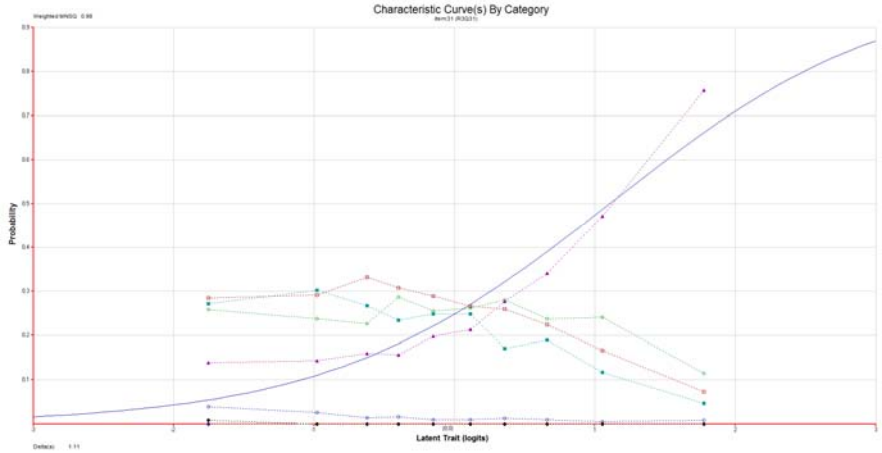
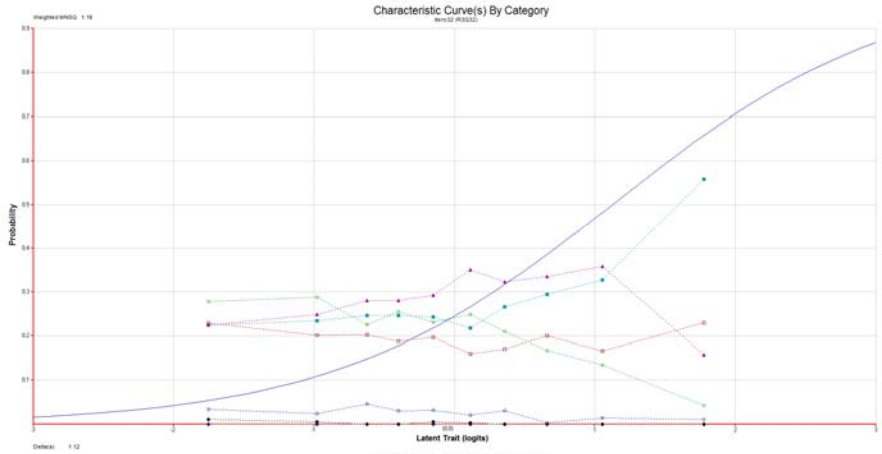

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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Probability
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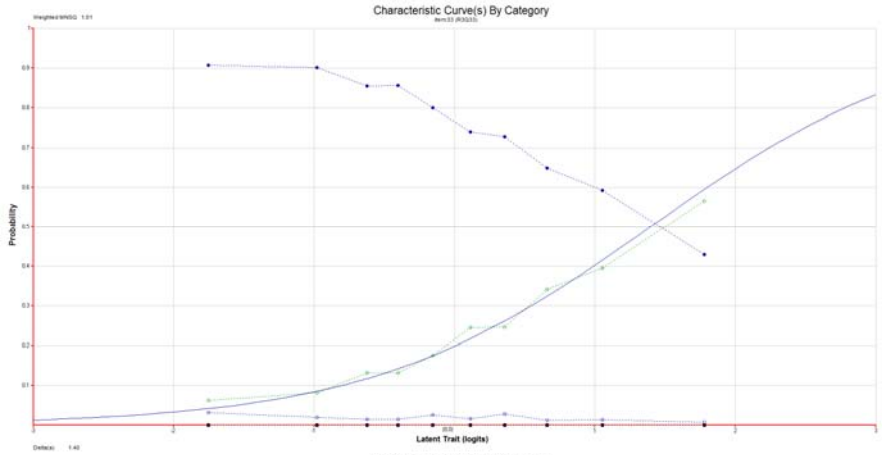
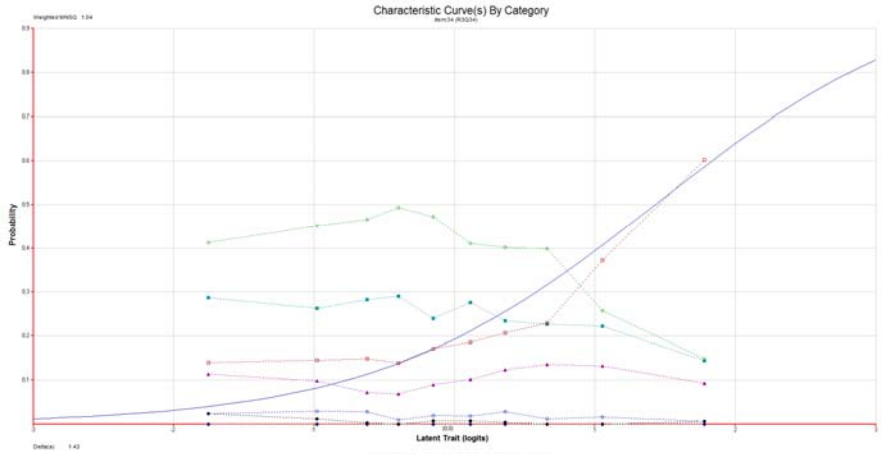
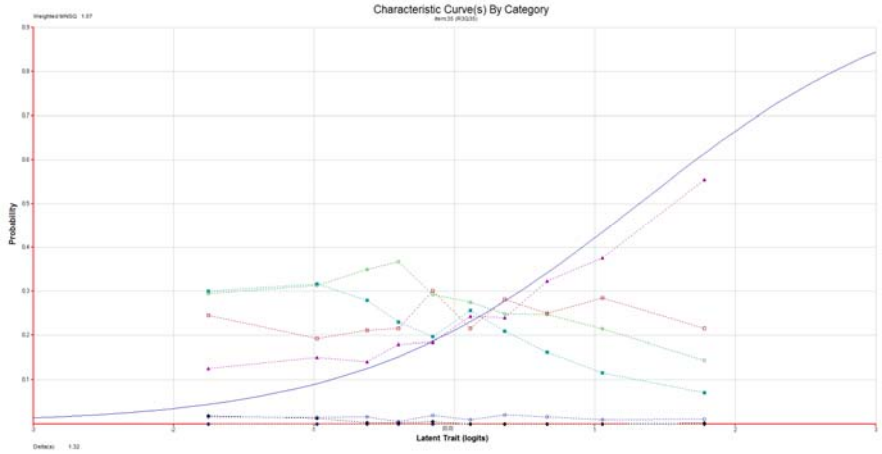
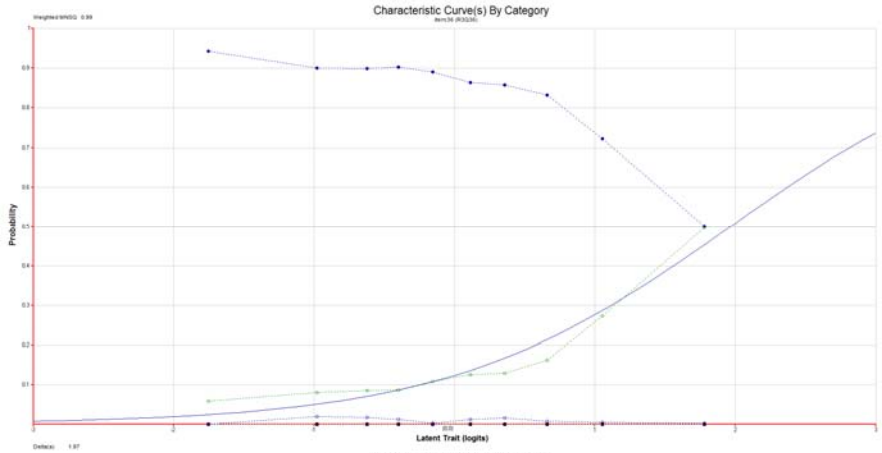
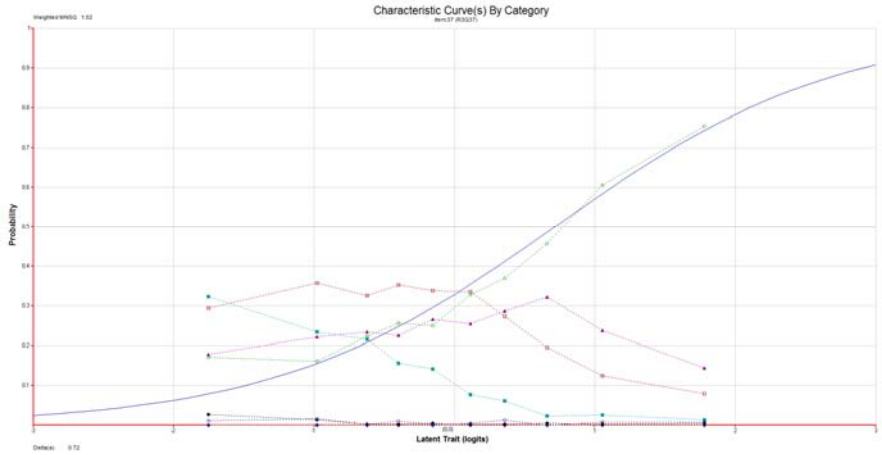

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

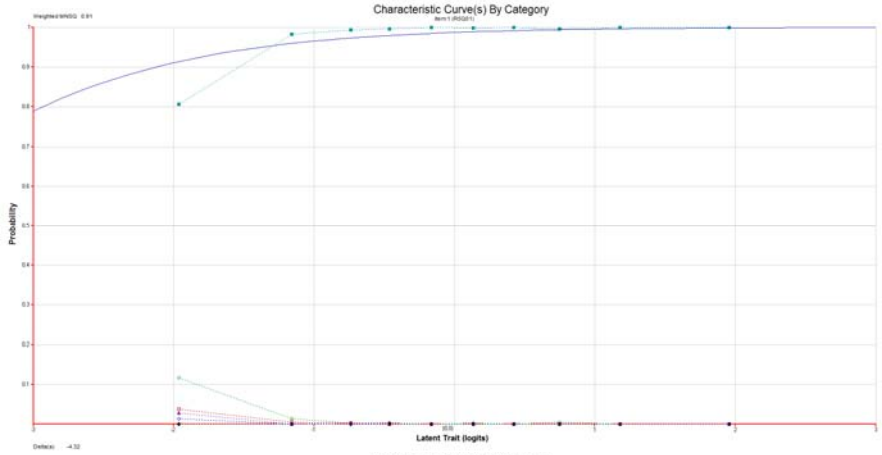

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

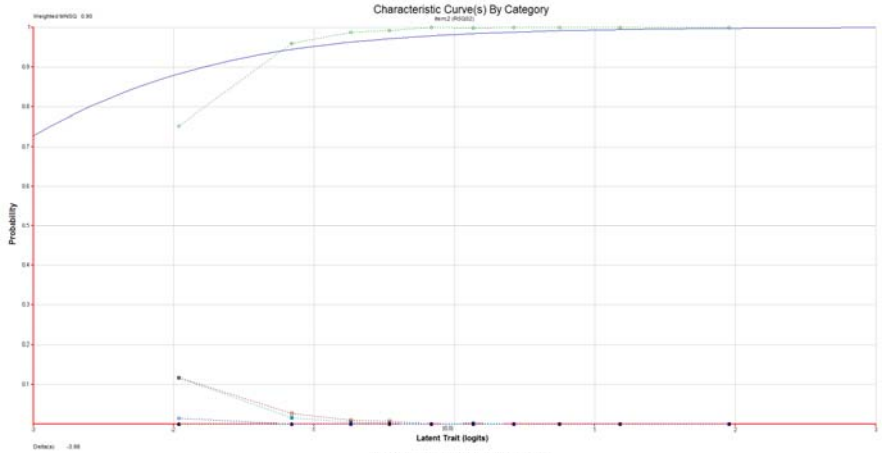

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

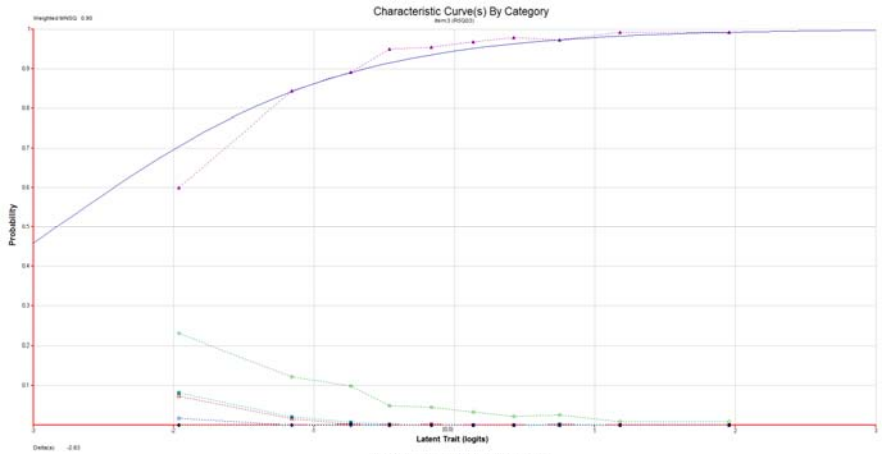

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

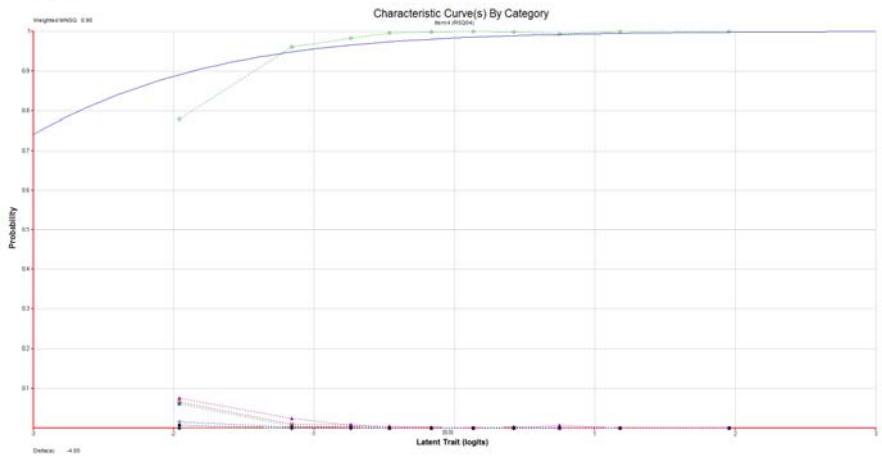

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

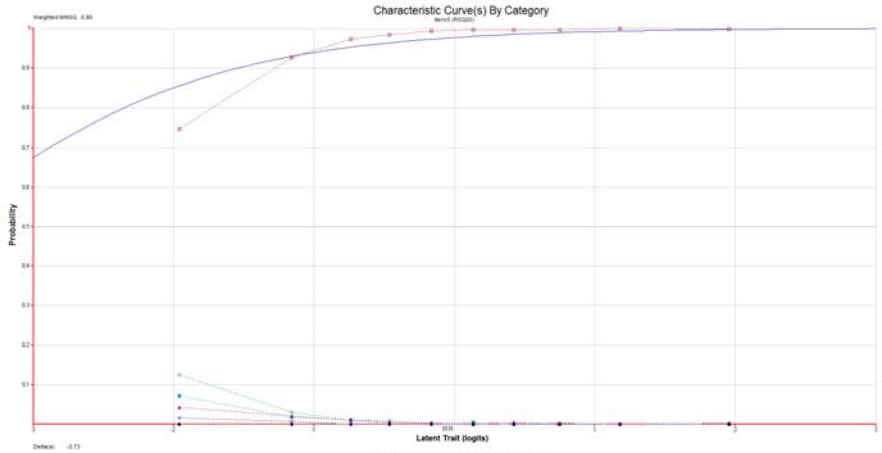
D.2. Year 5 Reading

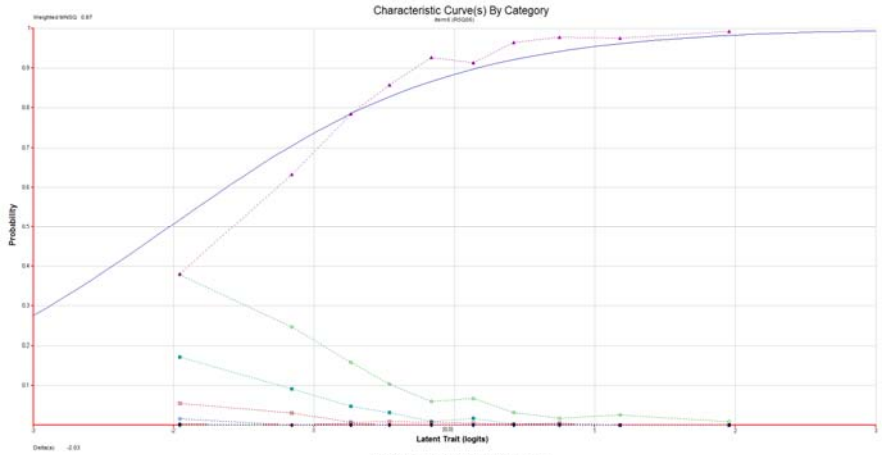


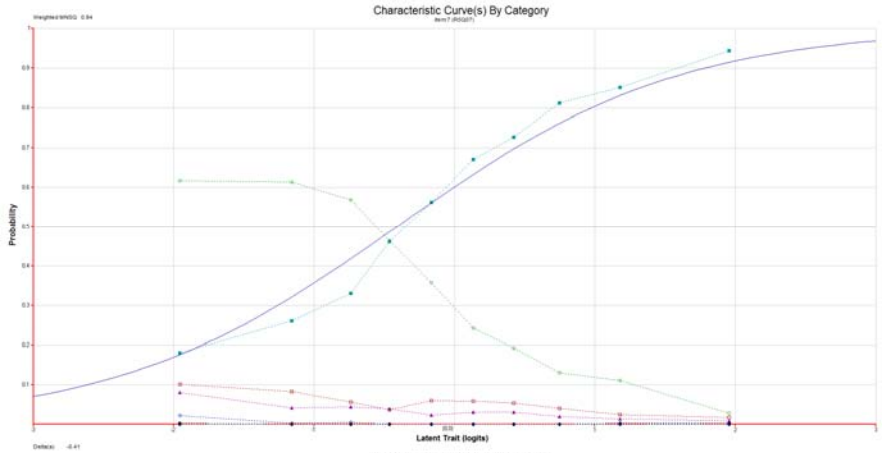


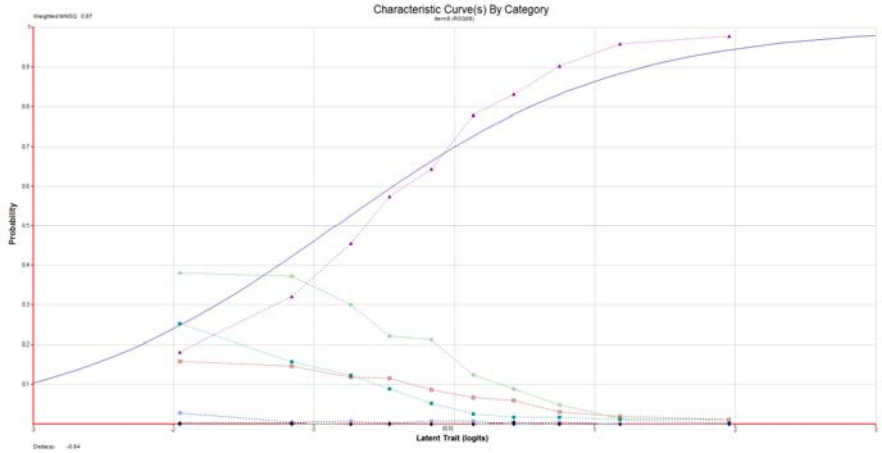


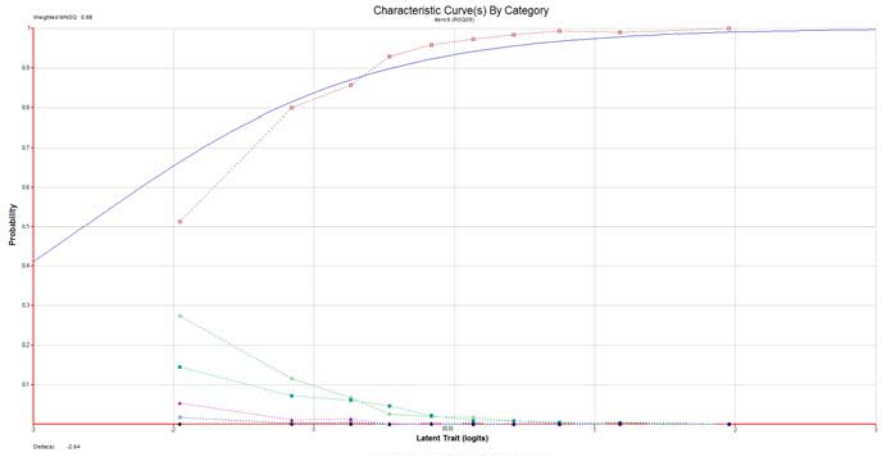


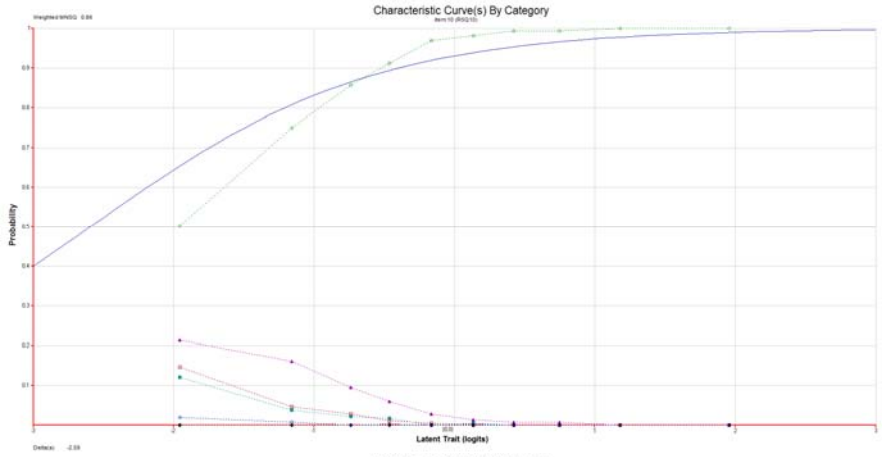

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

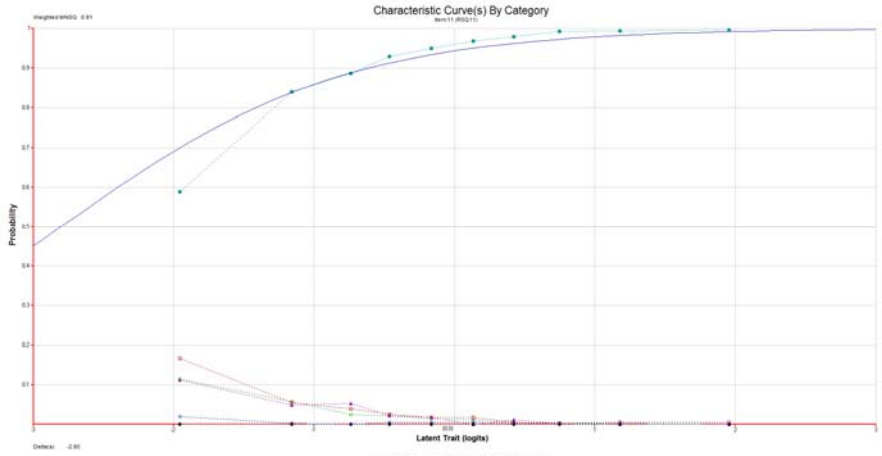

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

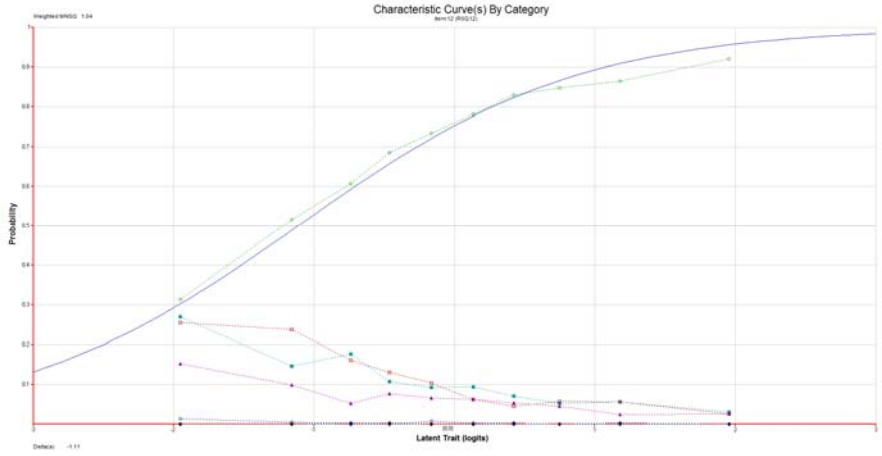

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

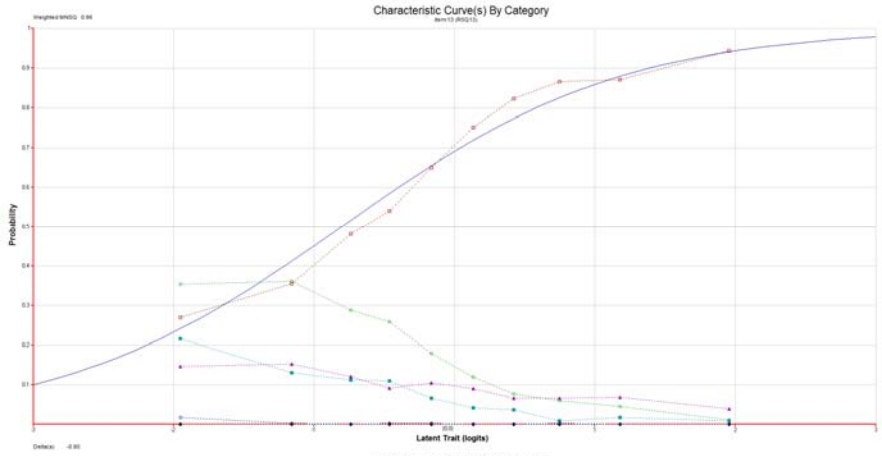

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

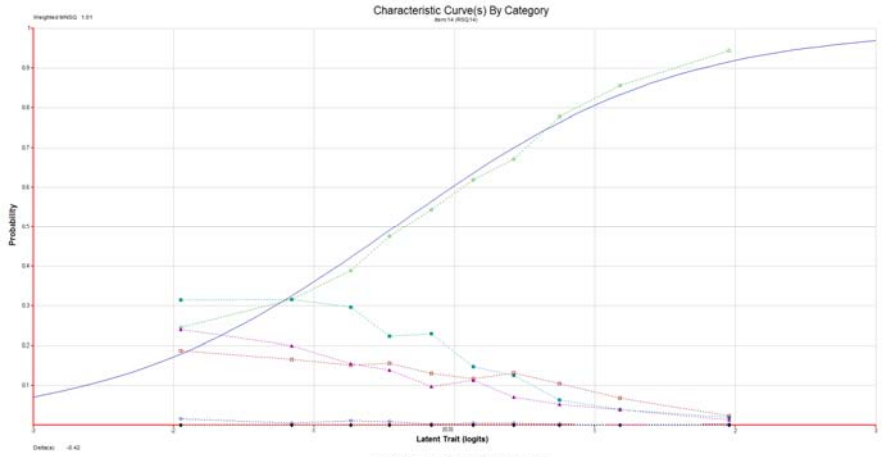

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

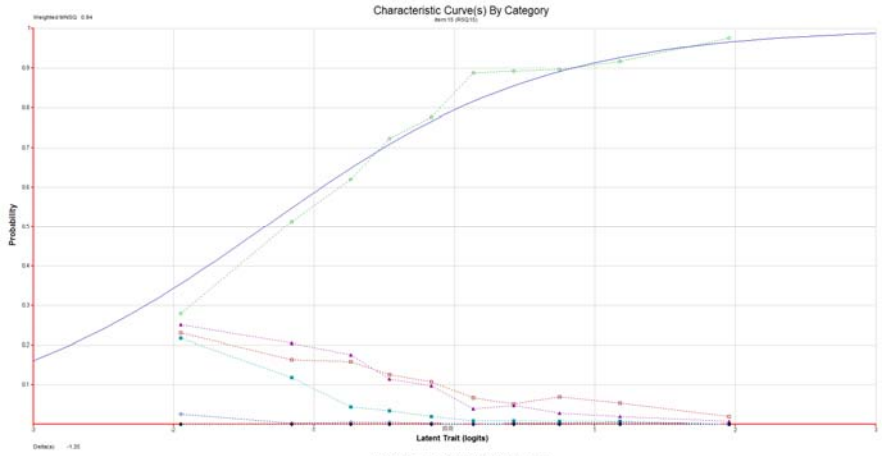

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

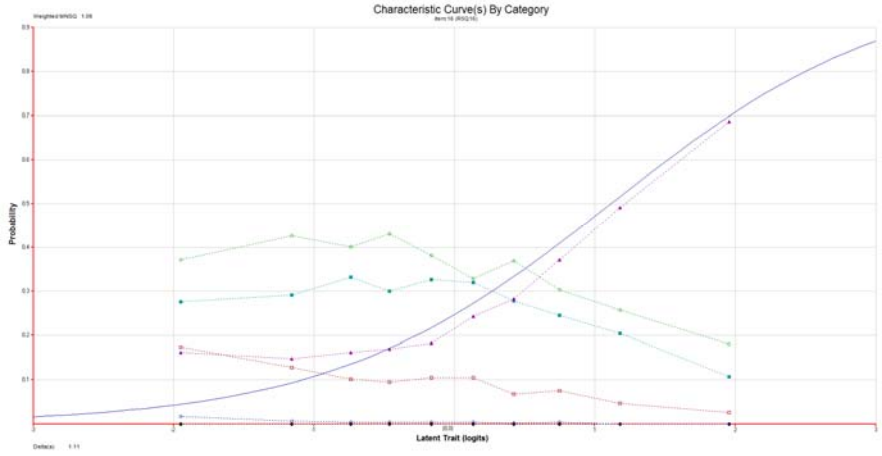

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

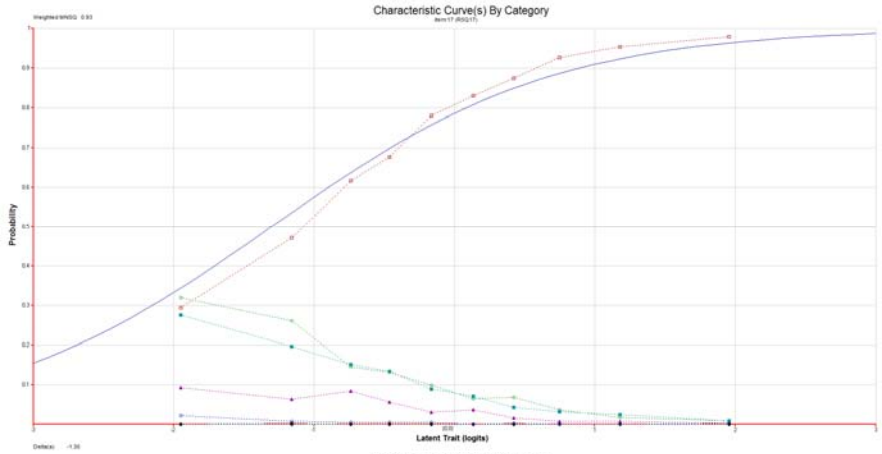

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

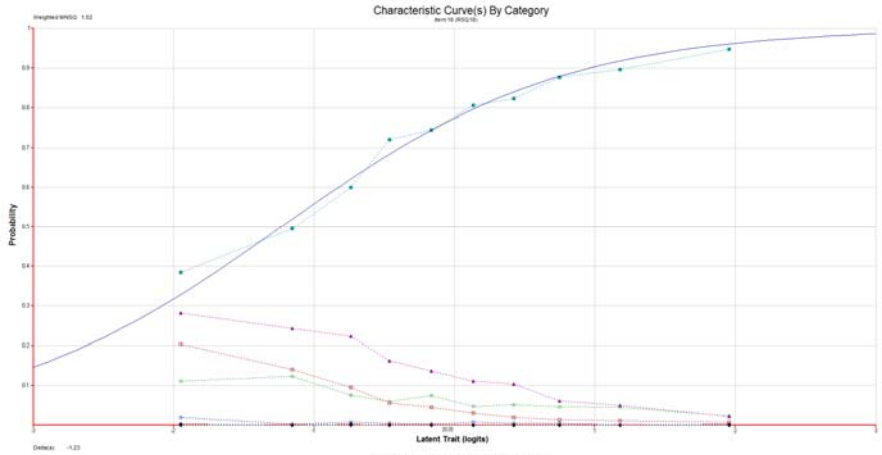

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

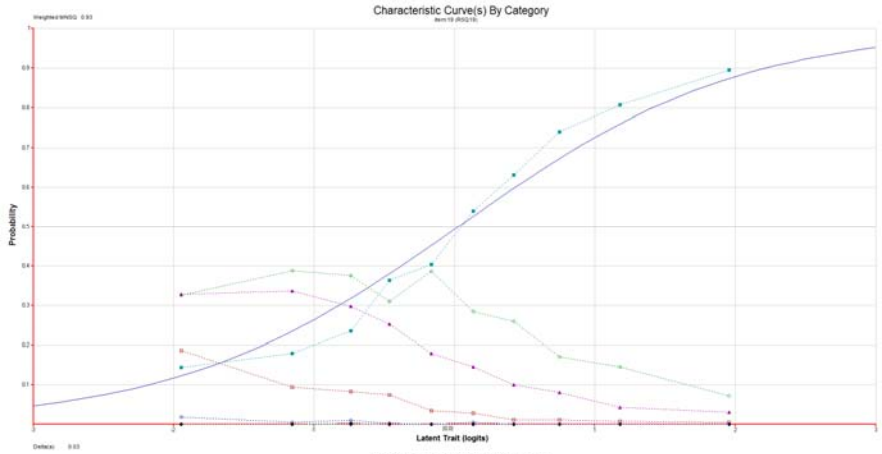

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

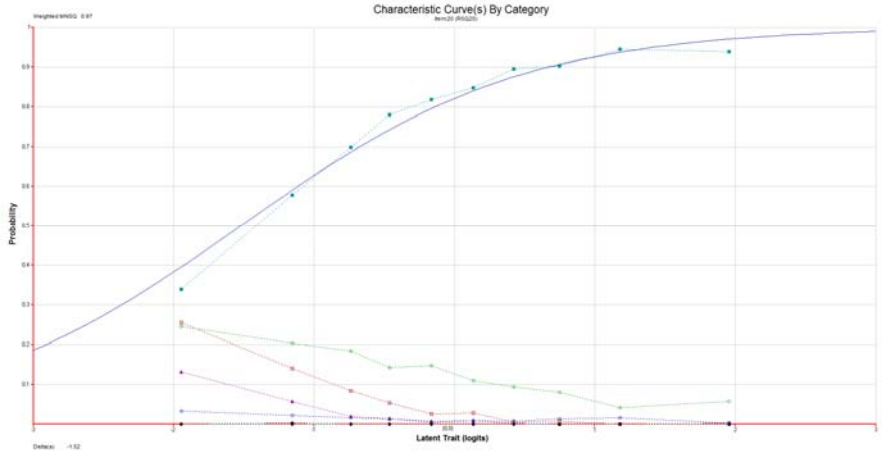

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

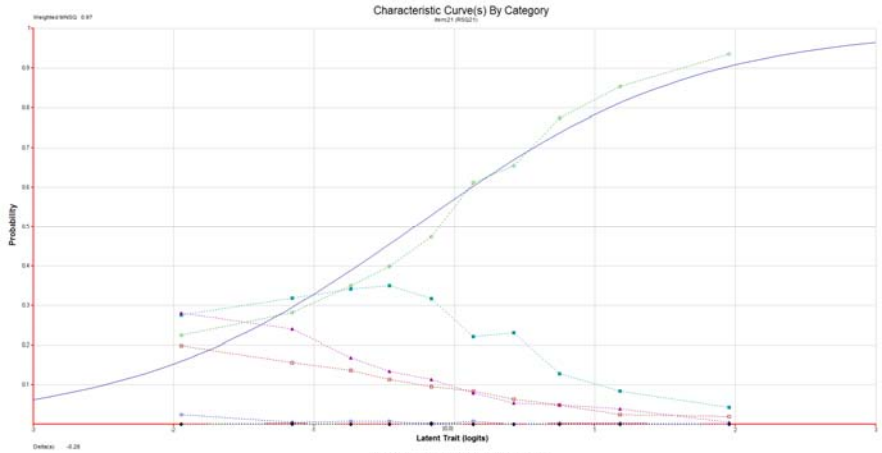

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

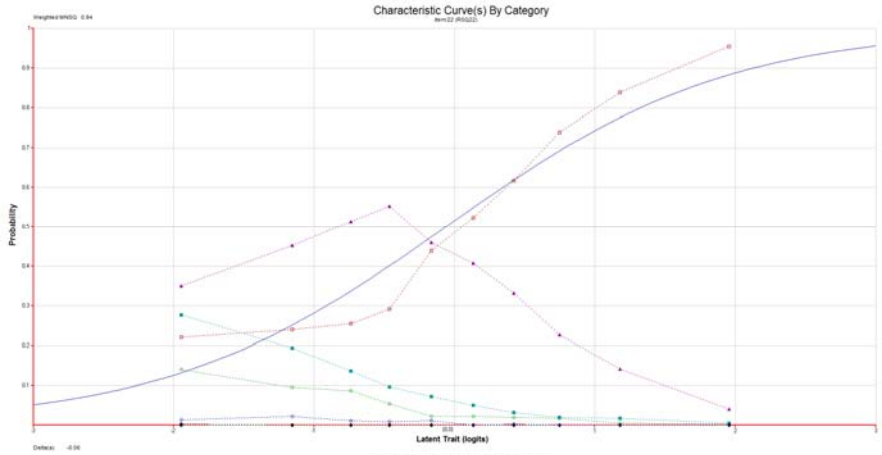

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

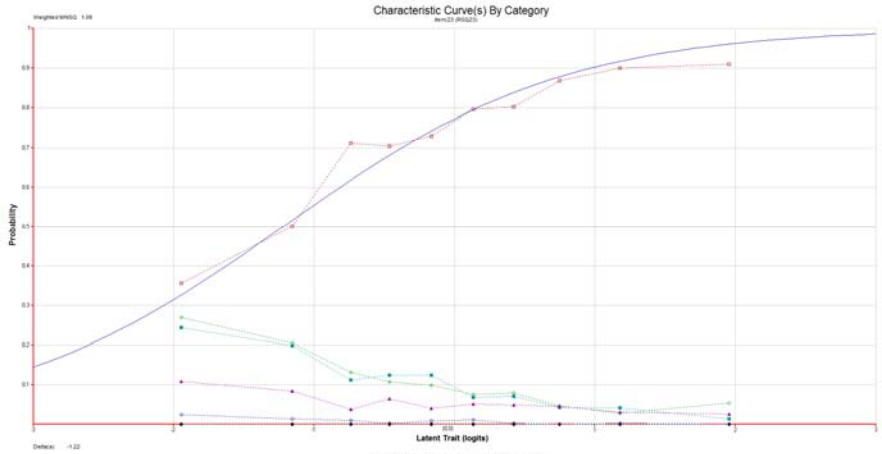

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

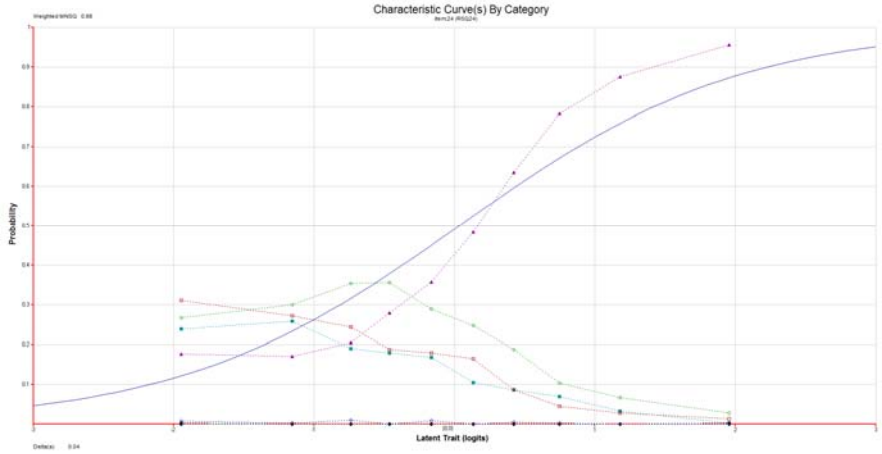

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

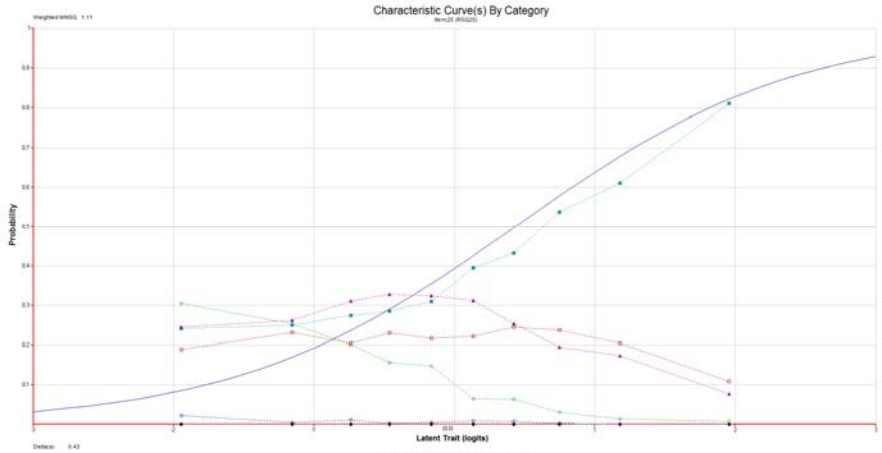

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

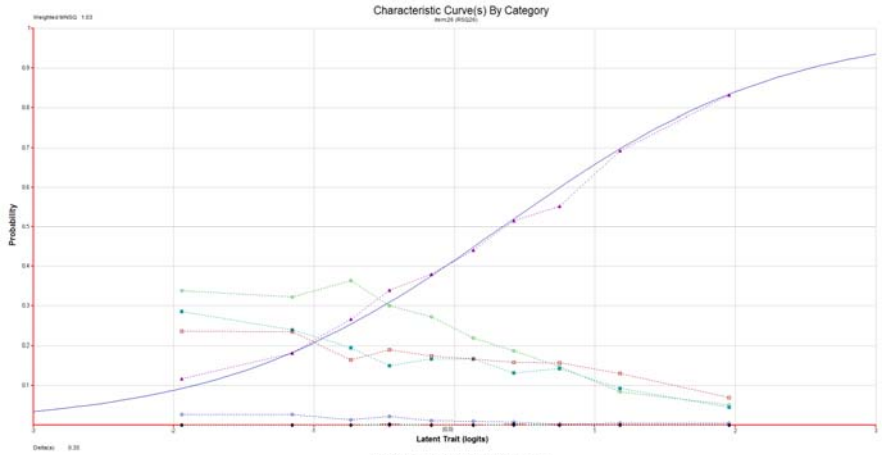

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

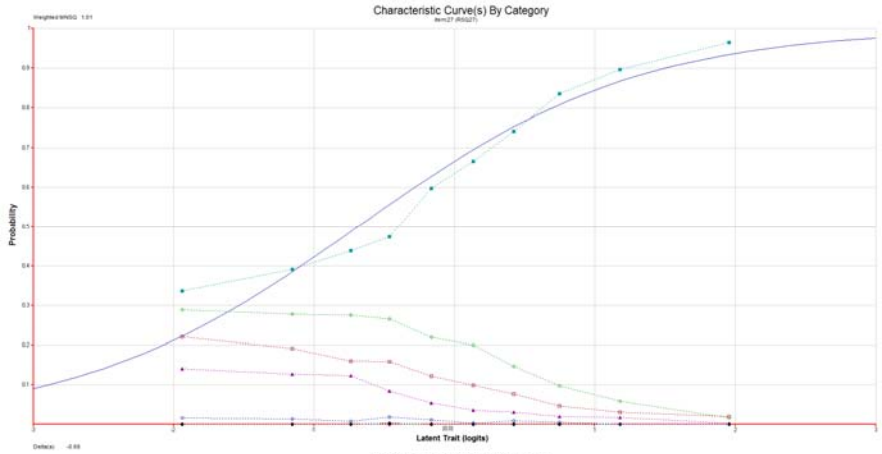

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

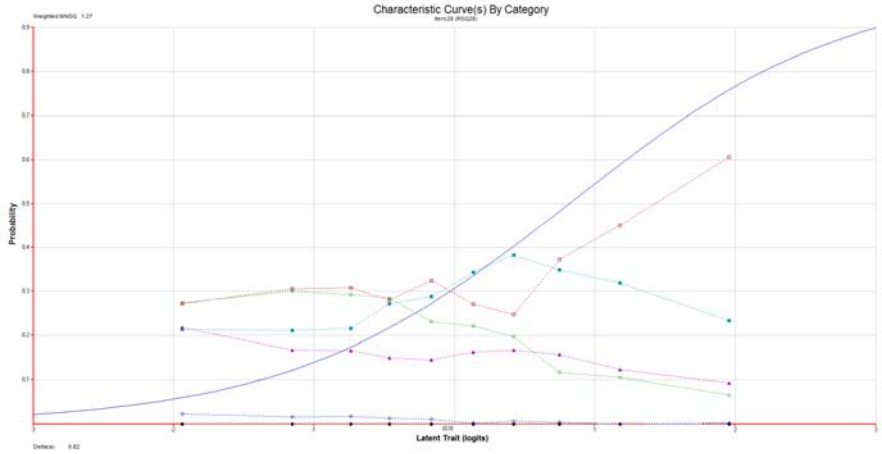

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

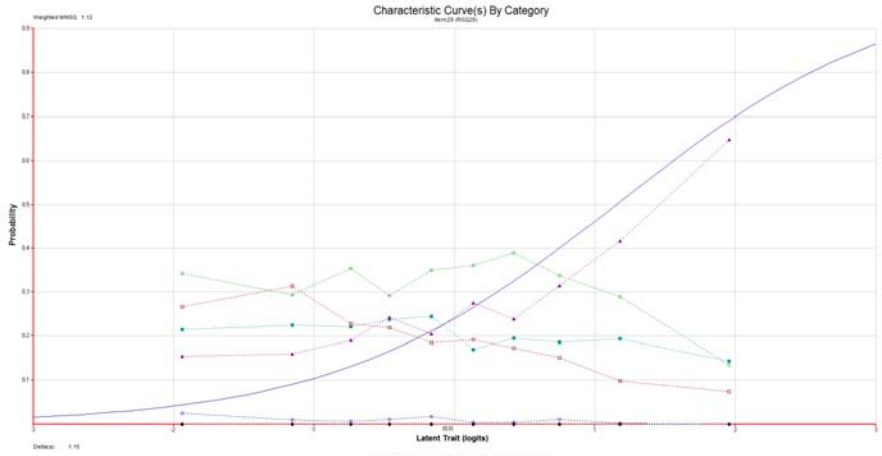

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

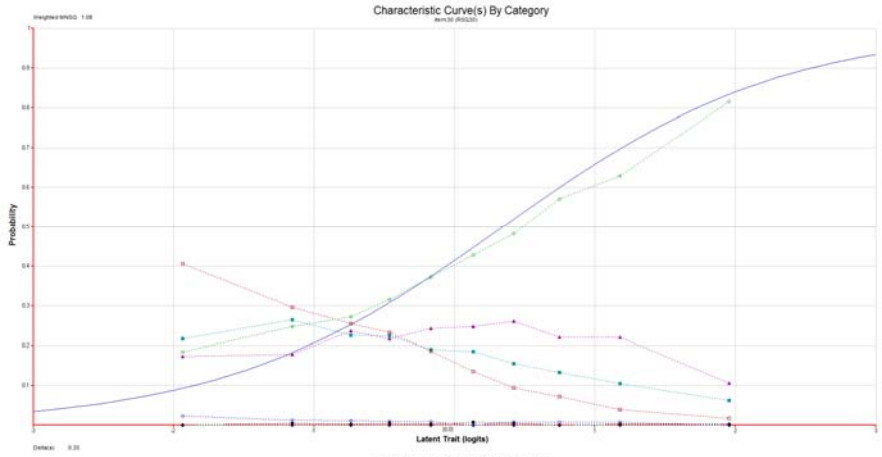

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

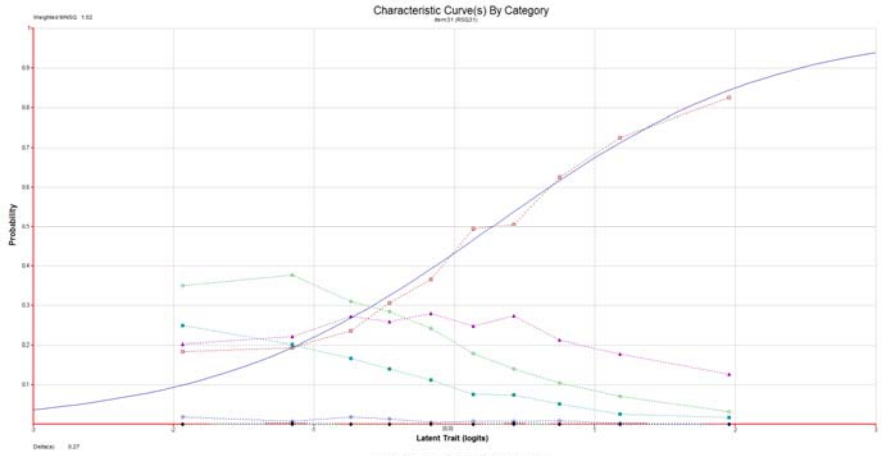

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

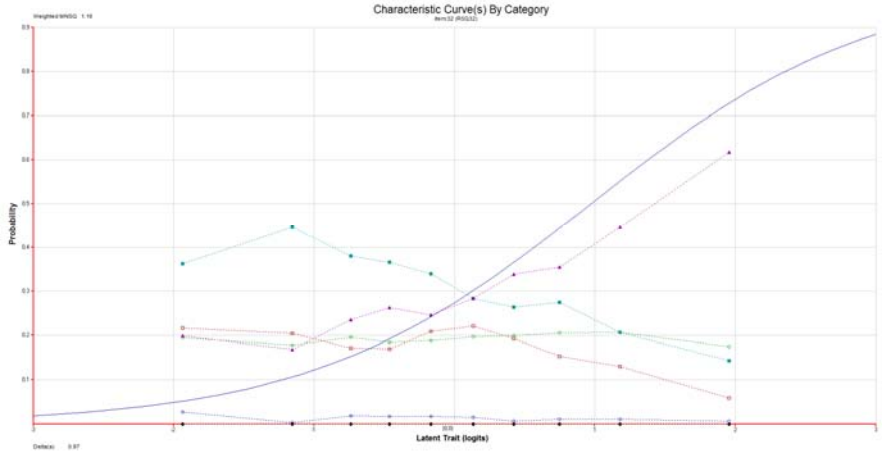

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

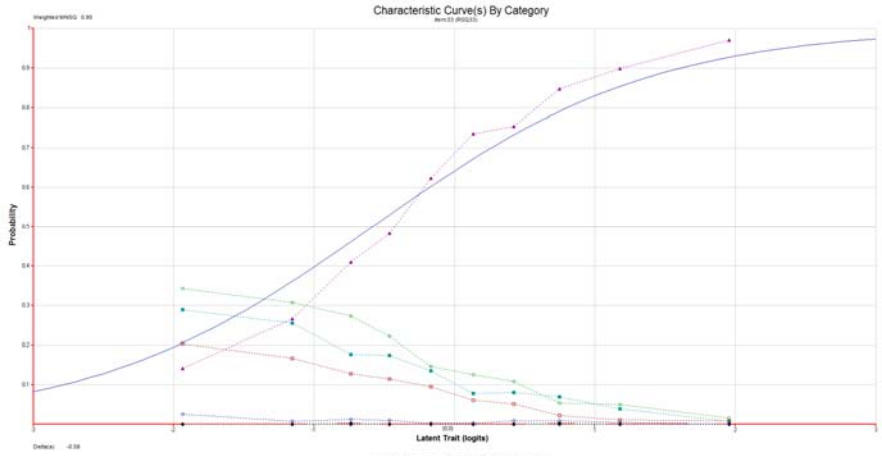

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

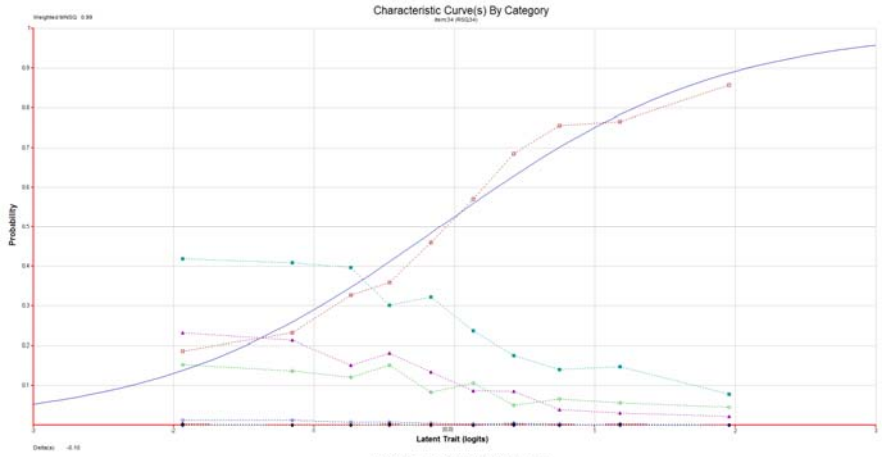

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

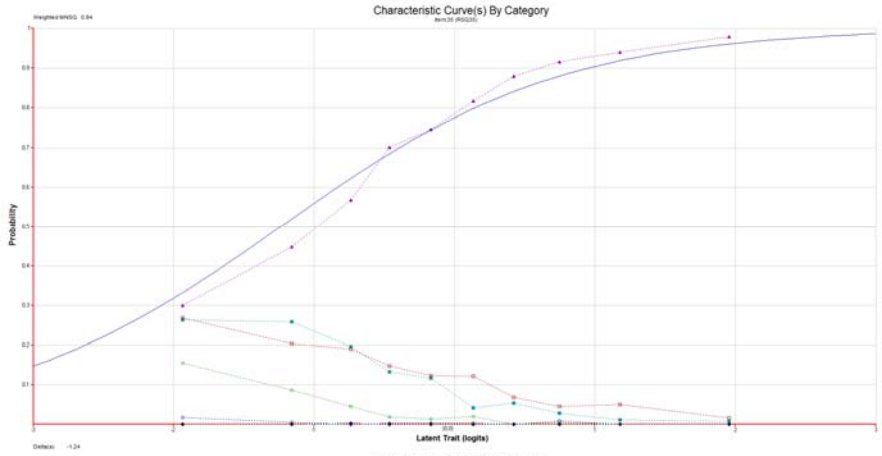

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

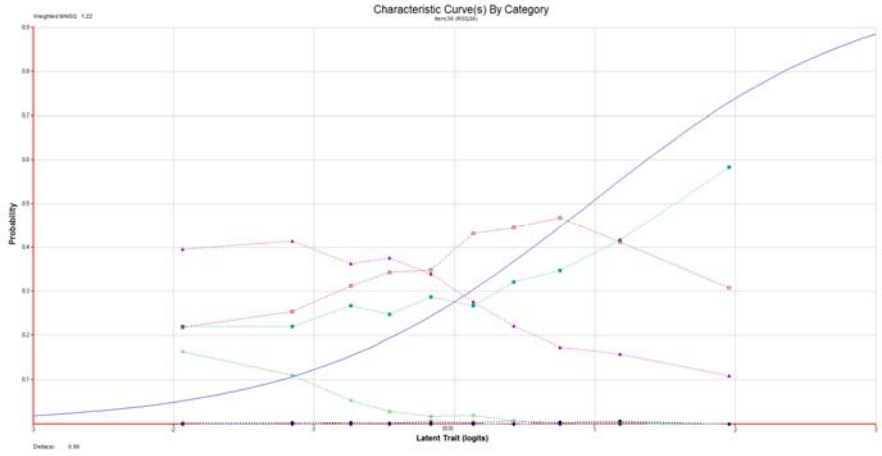

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

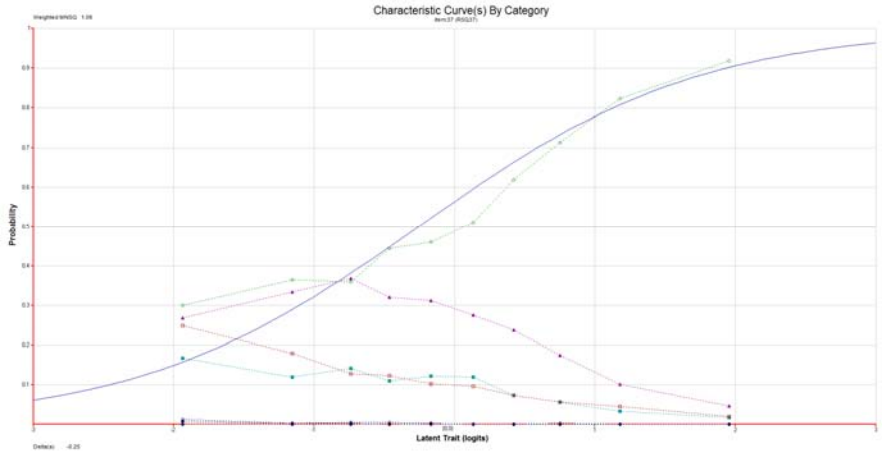

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

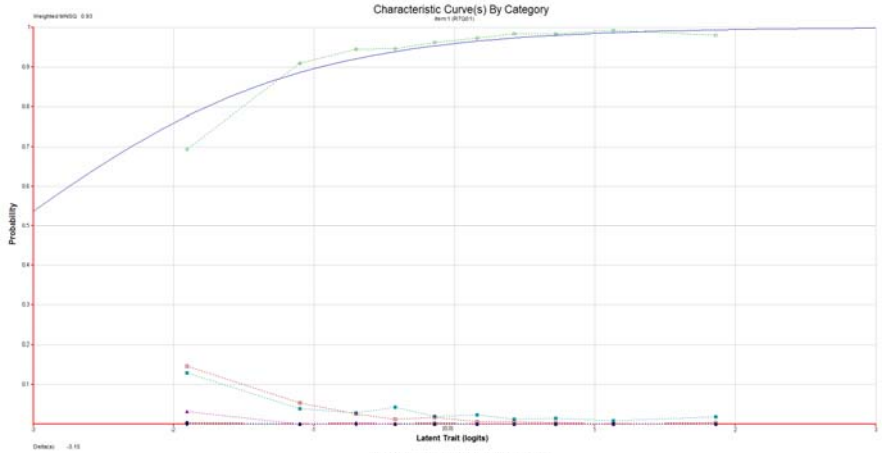

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

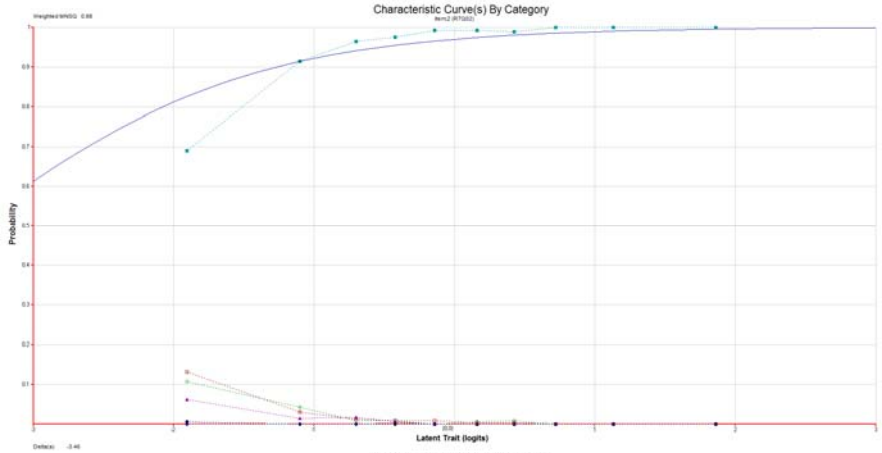

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

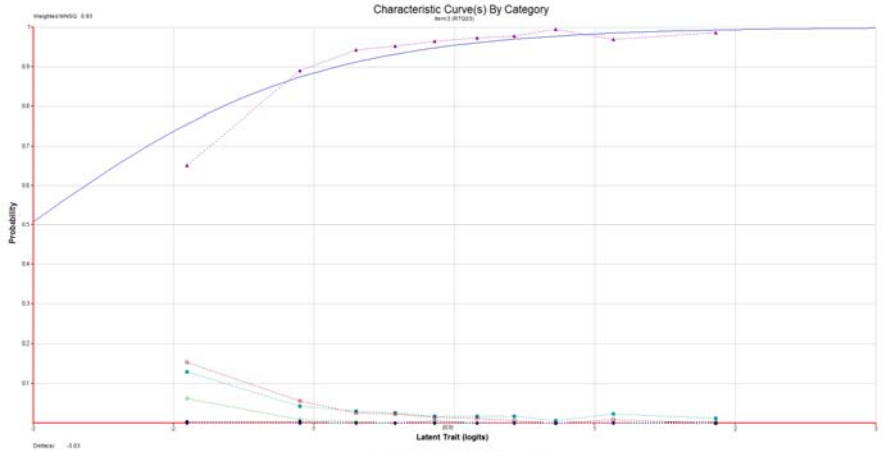

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

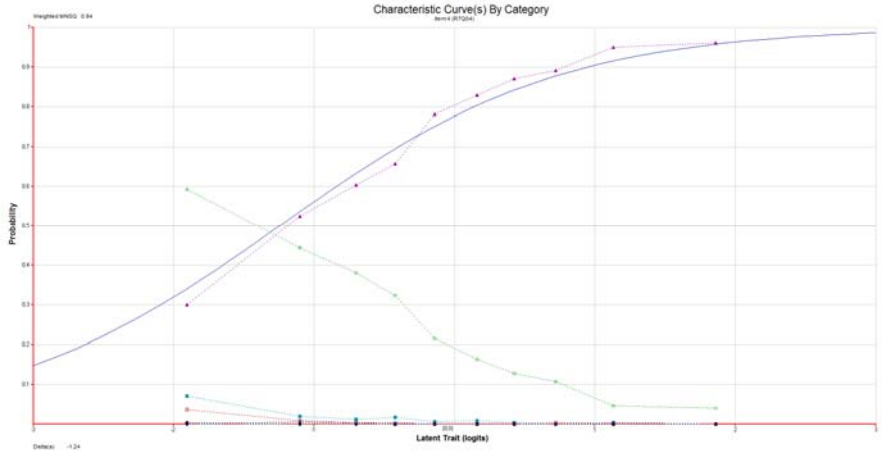

Characteristic Curve(s) By Category
Item:37 (RSGS37)
Weighted MNSQ 1.06
Probability
Latent Trait (logits)
Delta(s) -0.25

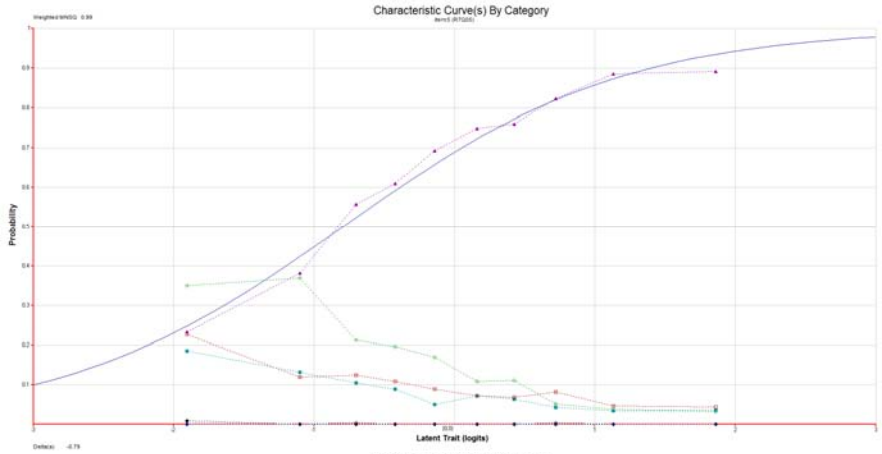
D.3. Year 7 Reading

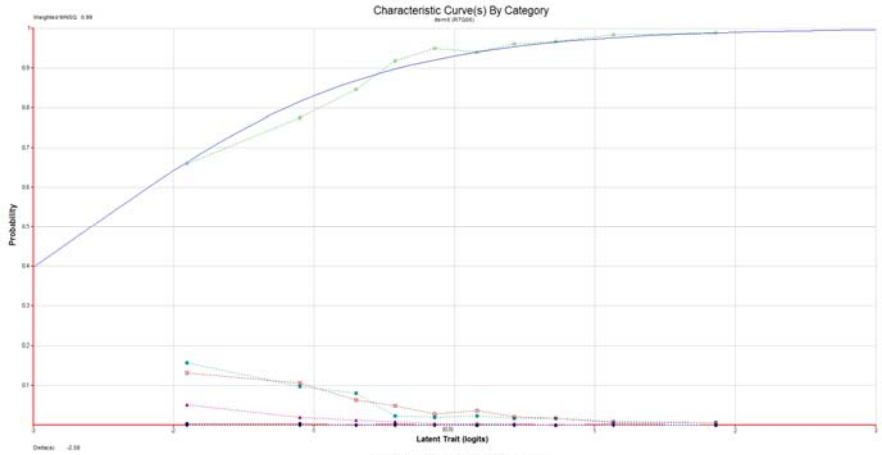


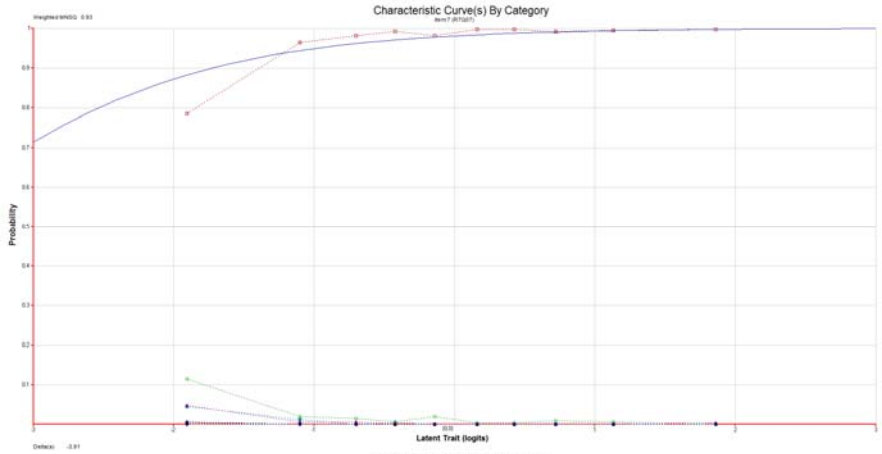


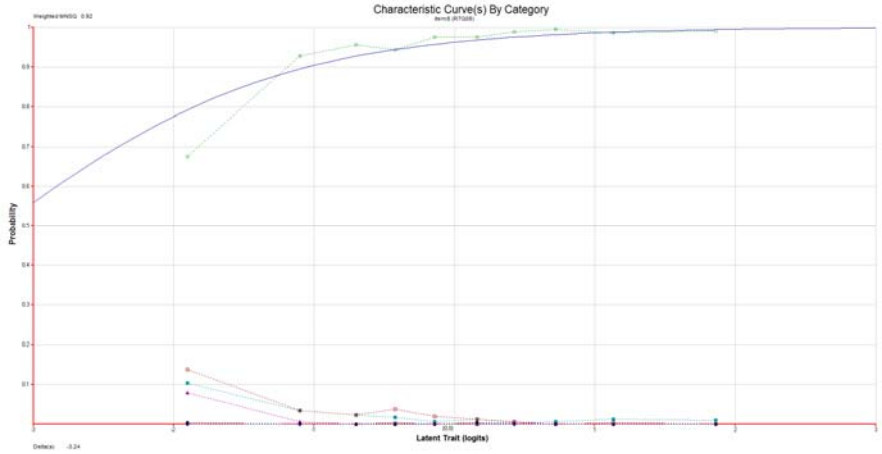


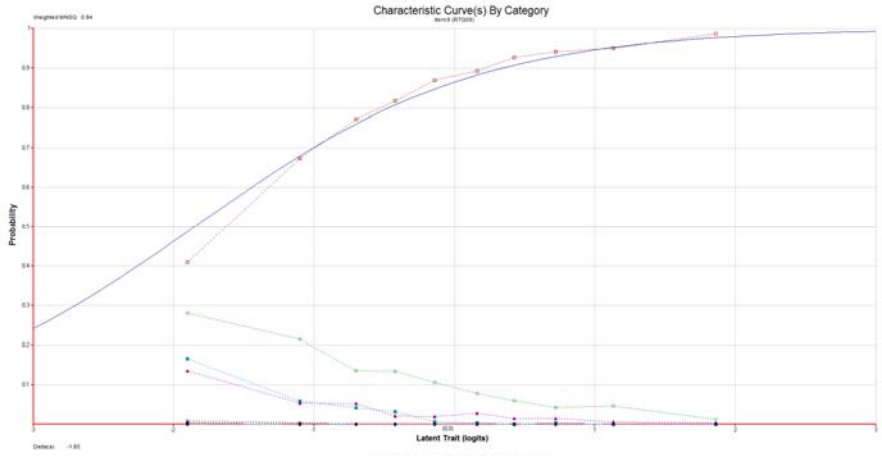


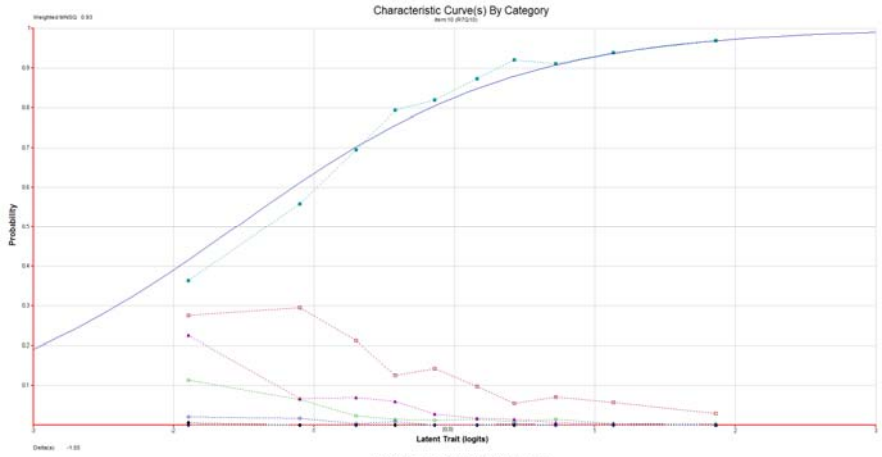

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

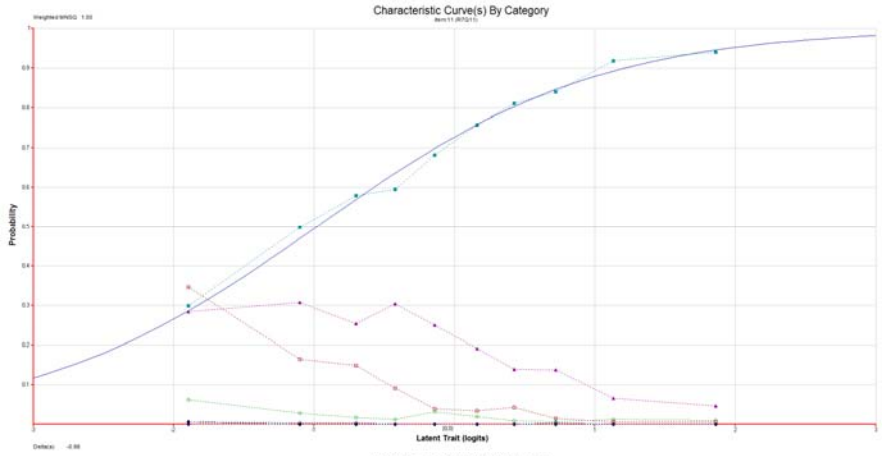

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

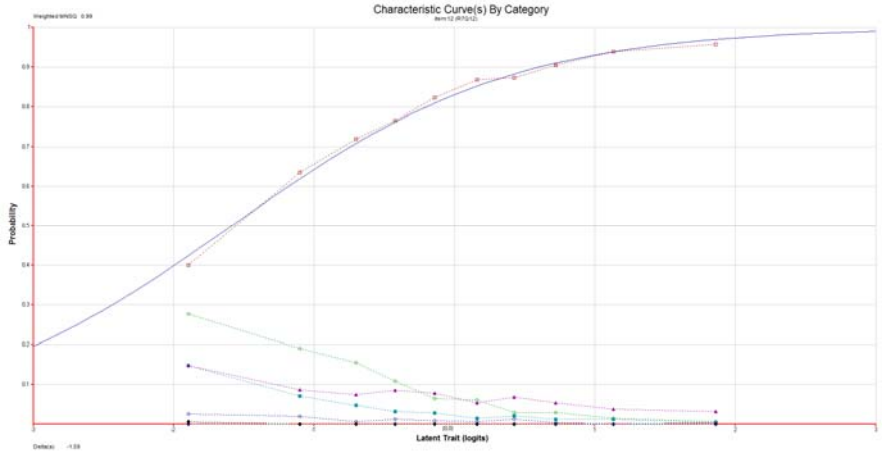

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

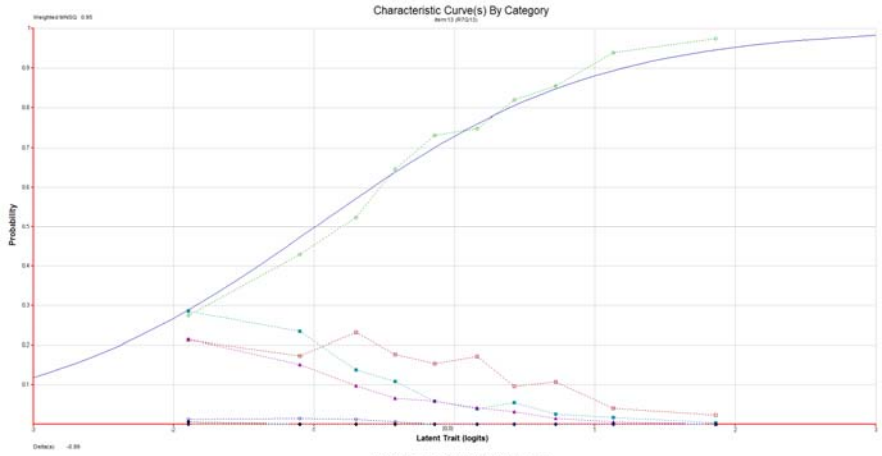

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

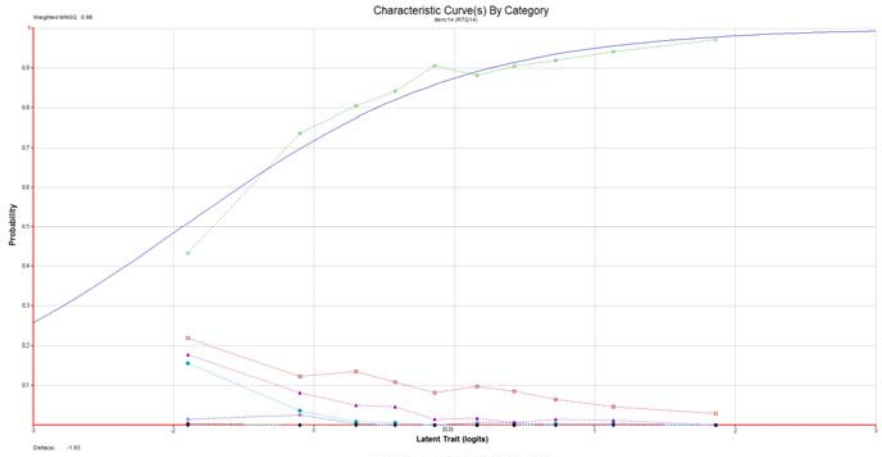

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

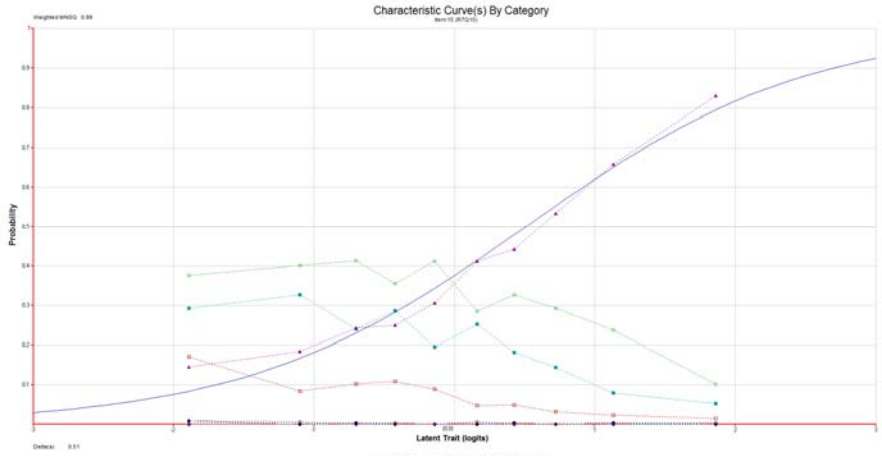

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

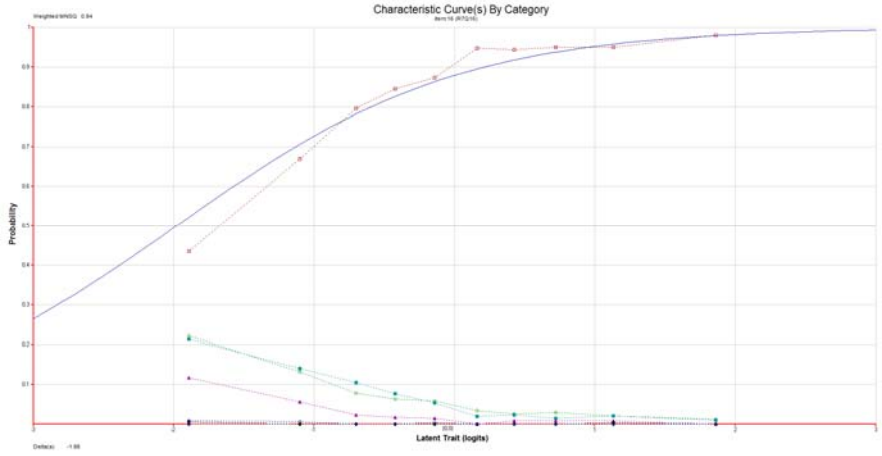

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

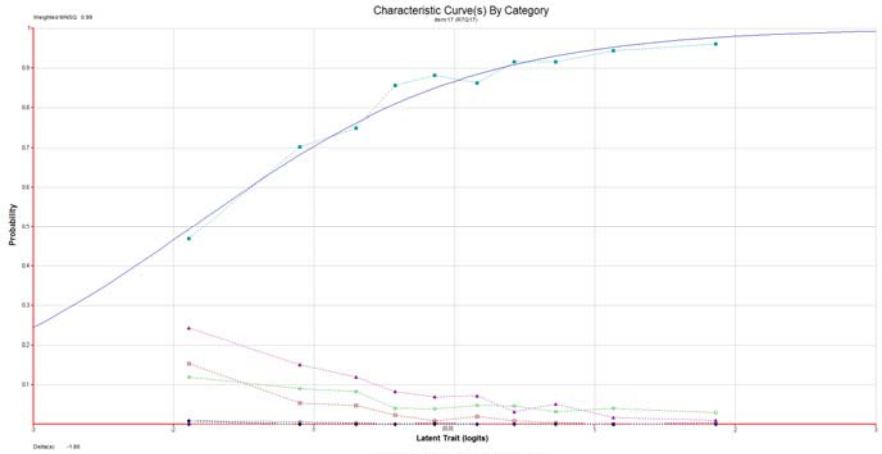

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

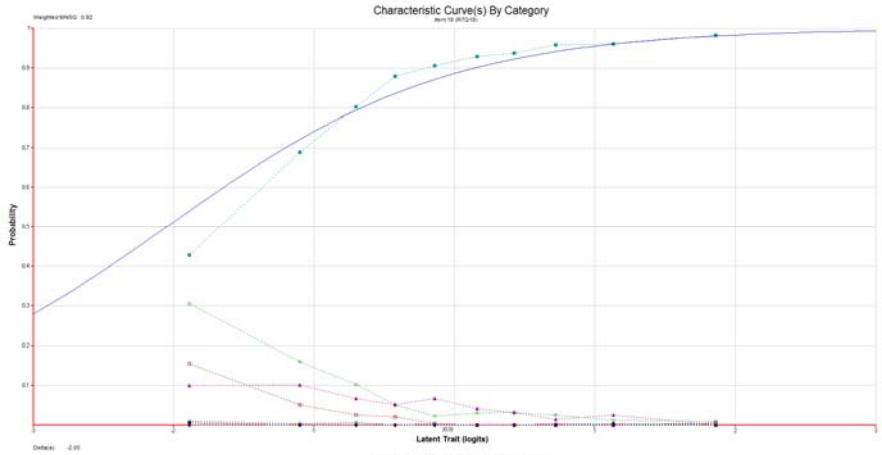

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

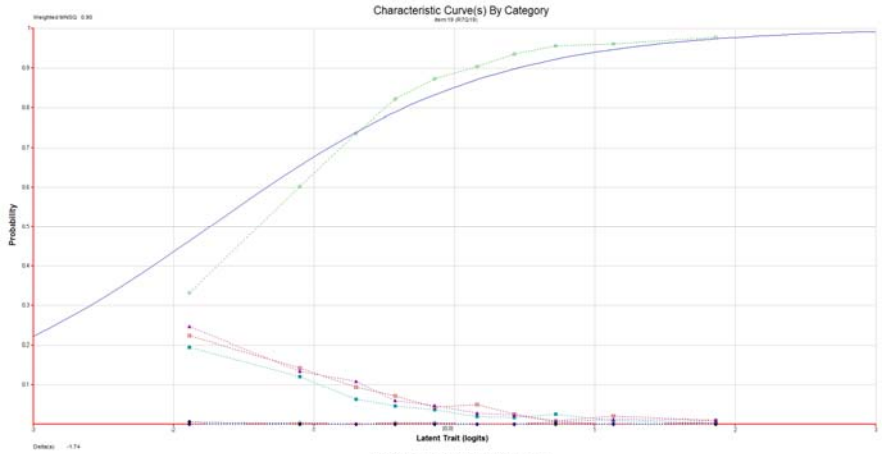

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

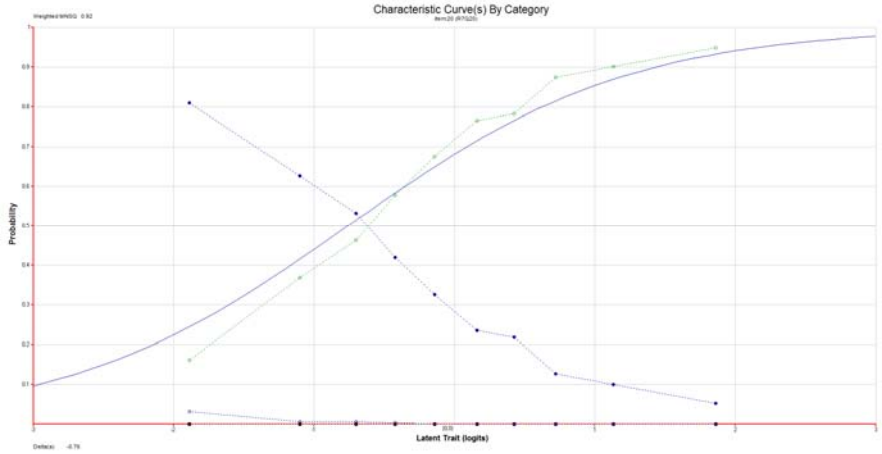

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

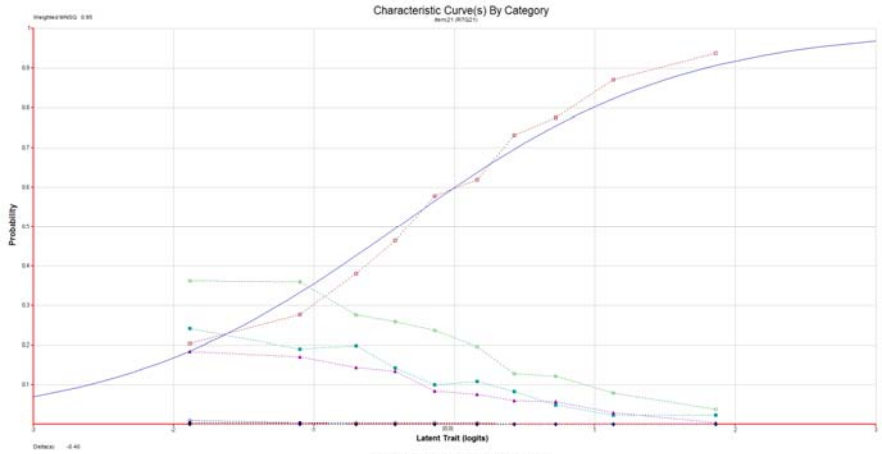

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

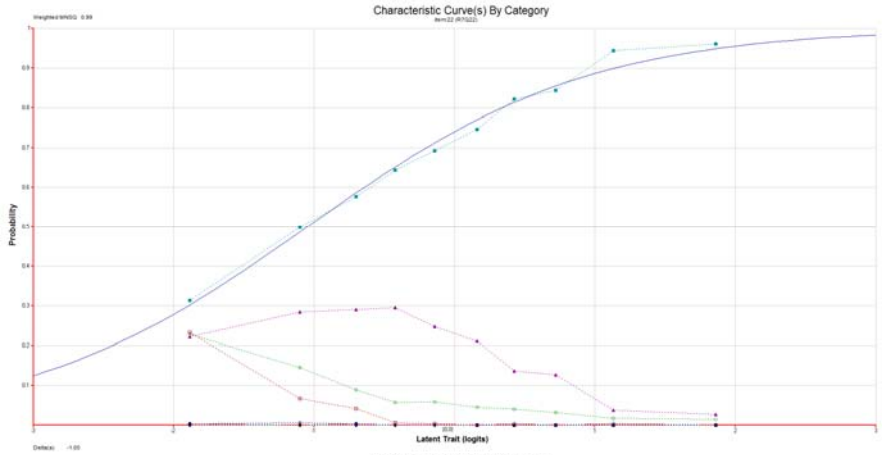

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

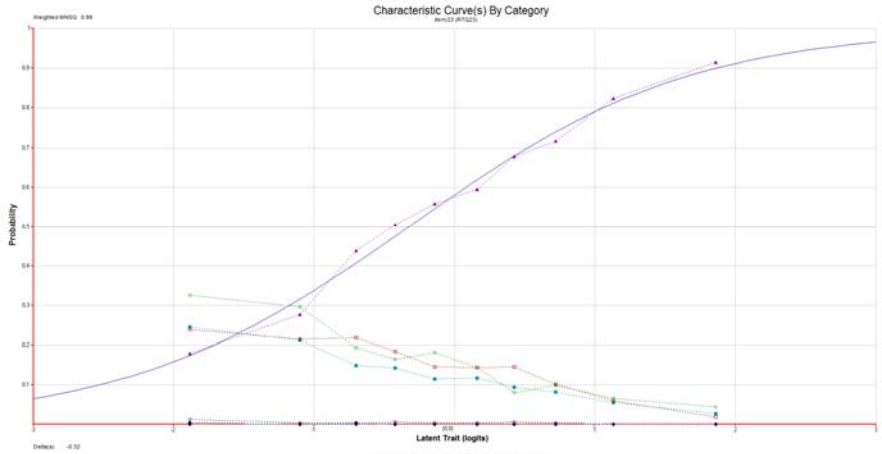

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

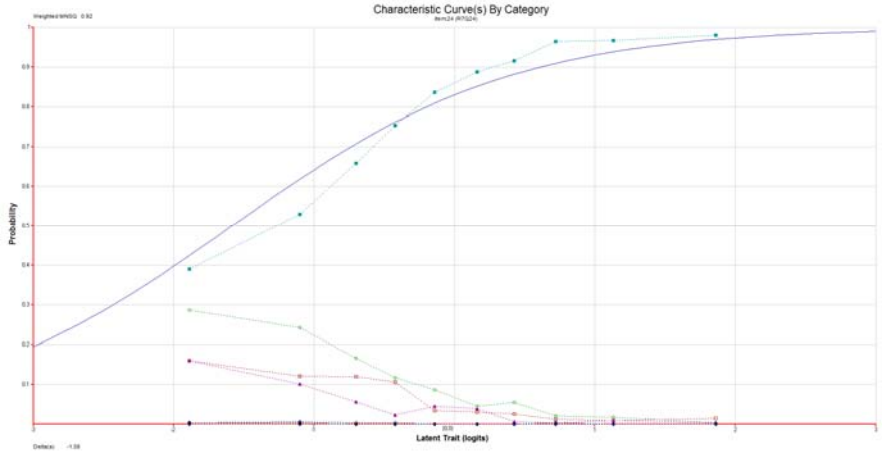

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

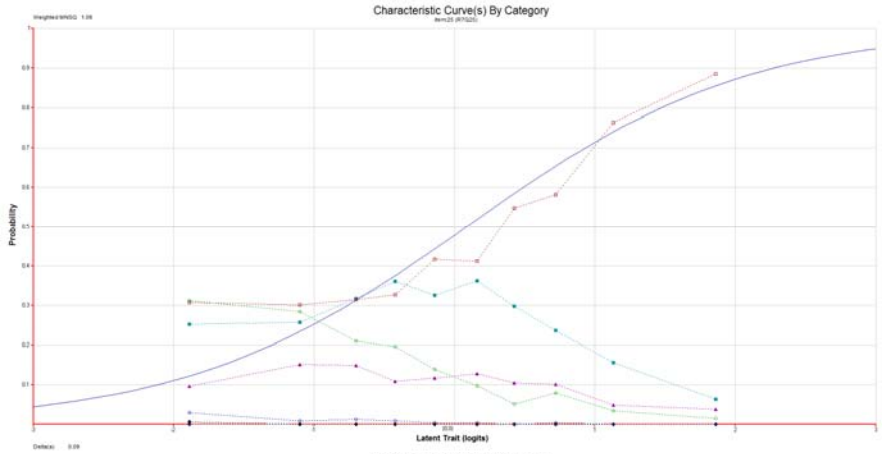

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

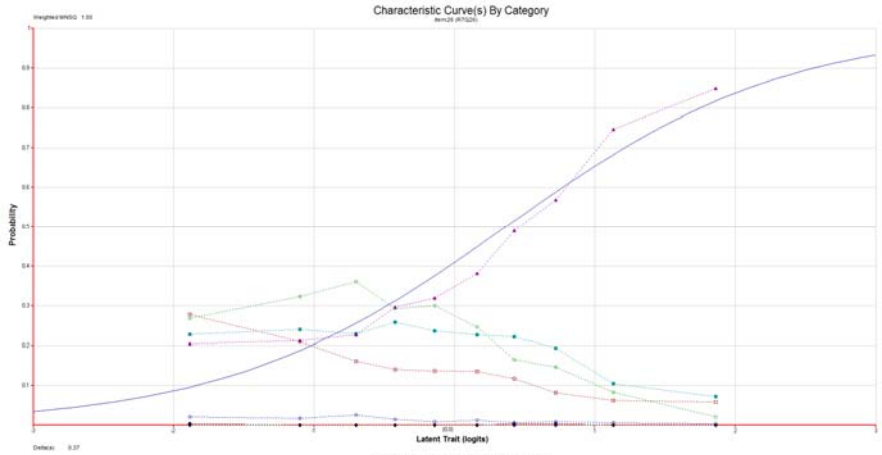

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

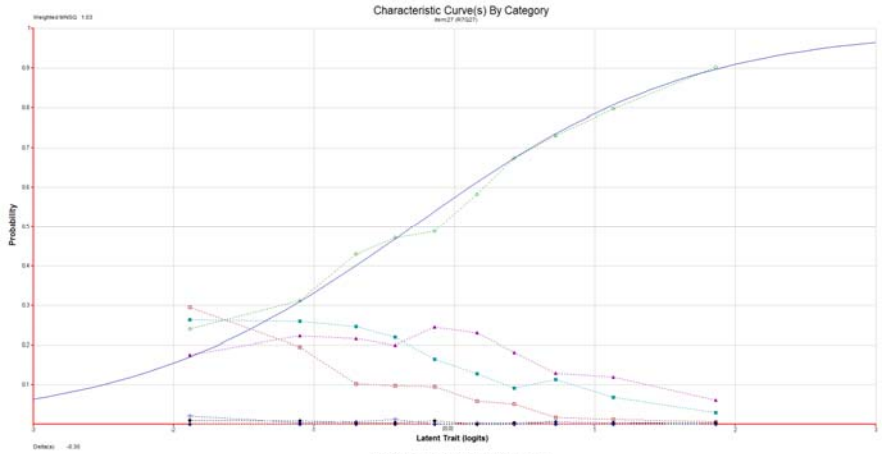

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

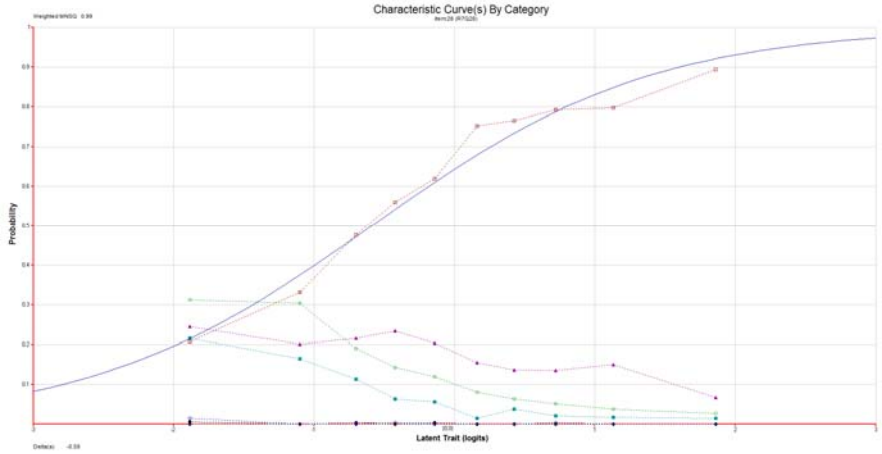

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

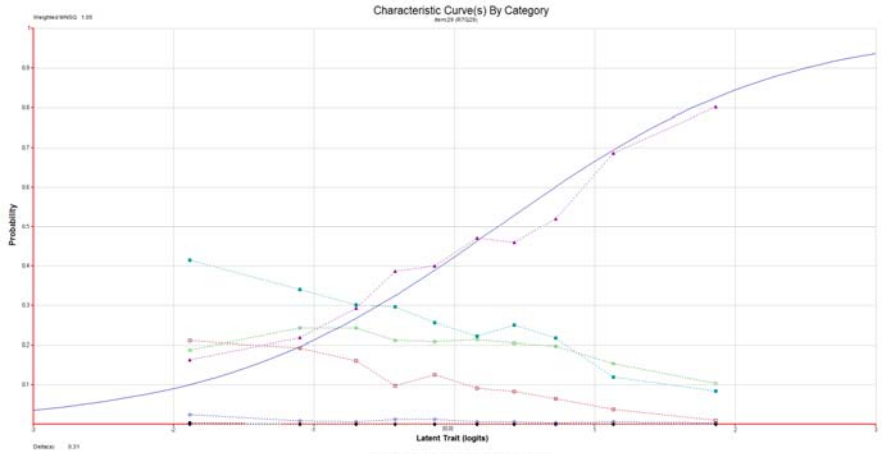

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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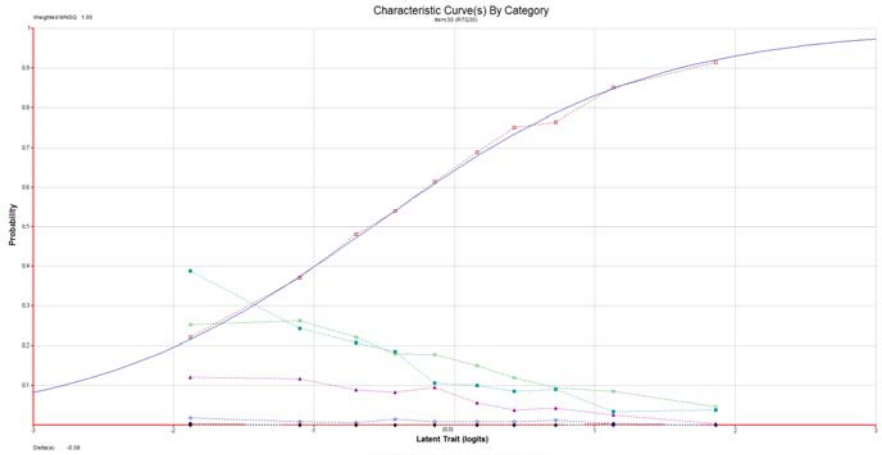
Probability
Latent Trait (logits)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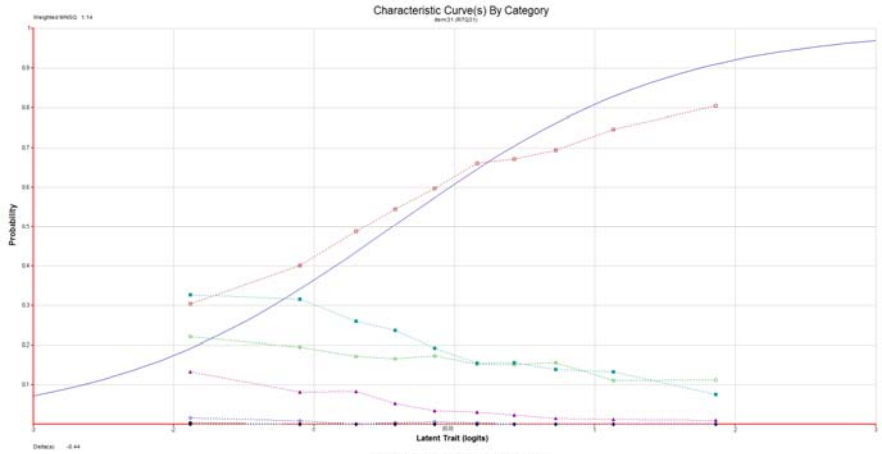
Latent Trait (logits)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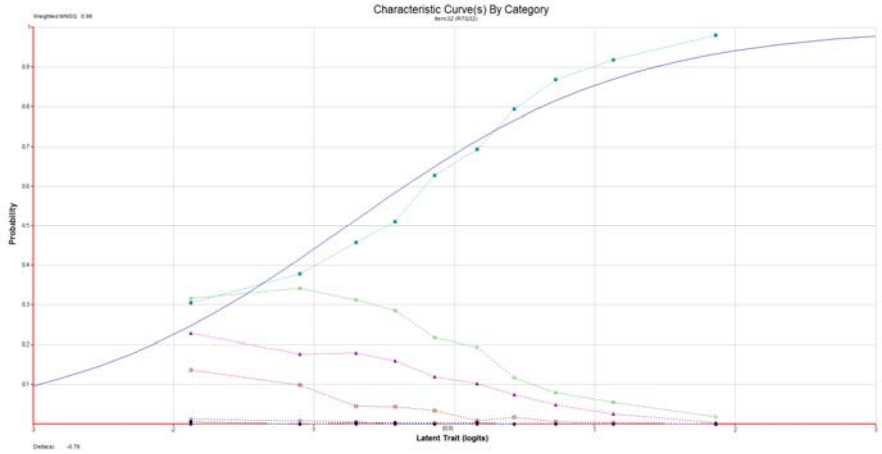
Probability
Latent Trait (logits)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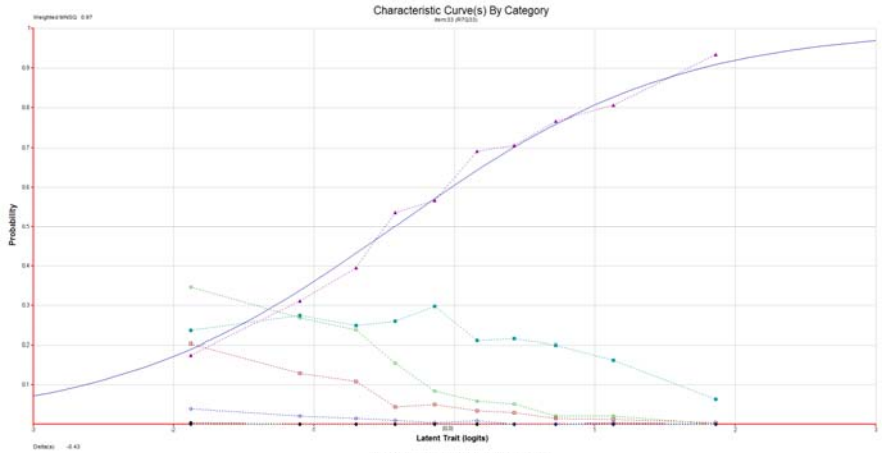
Probability
Latent Trait (logits)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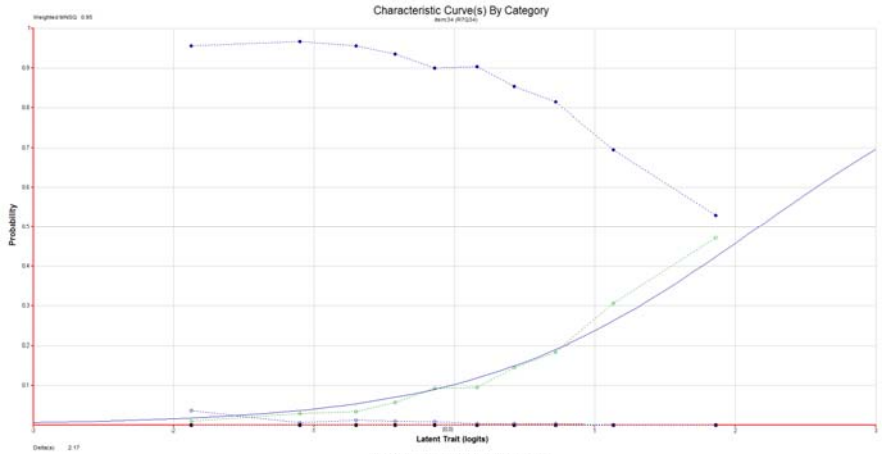
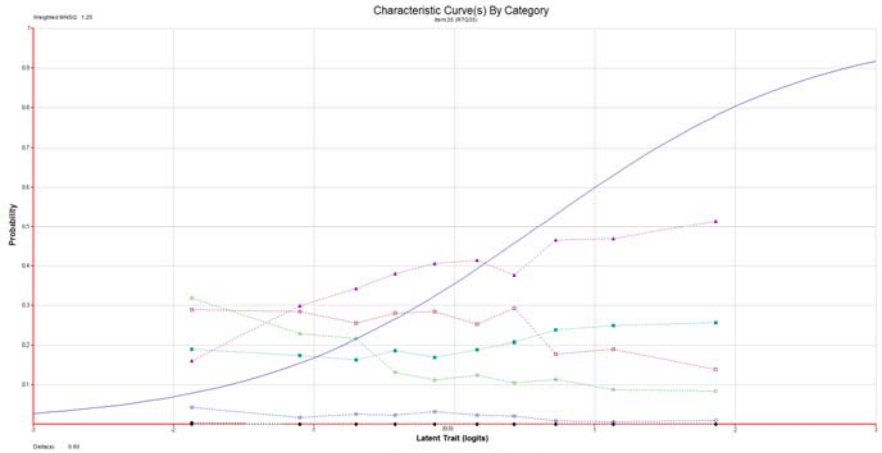
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
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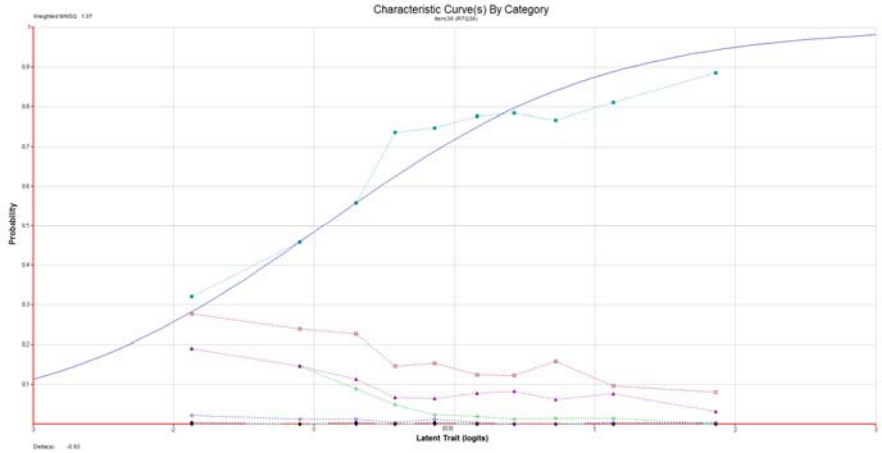
Characteristic Curve(s) By Category
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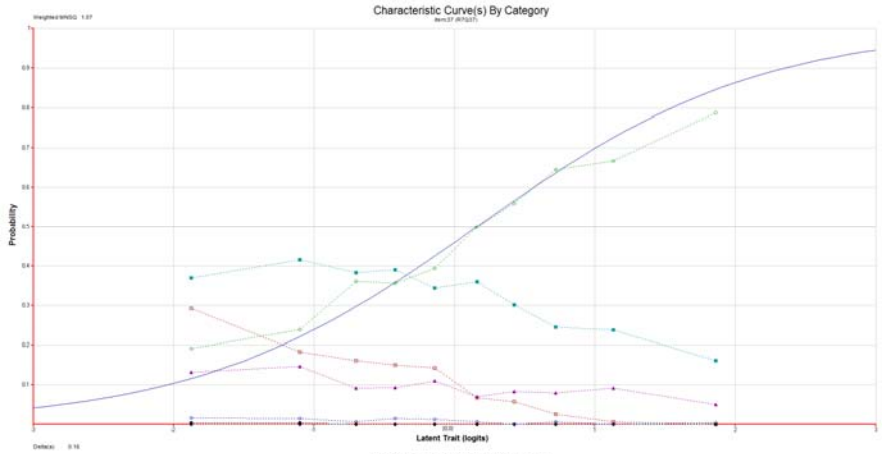
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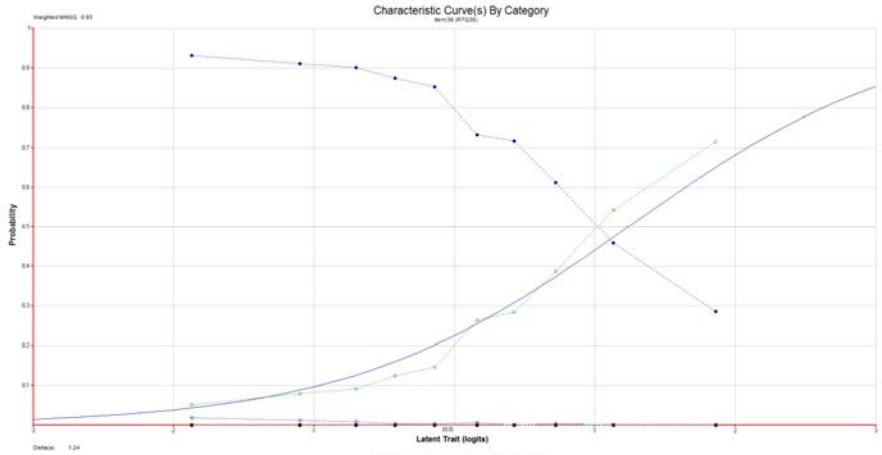
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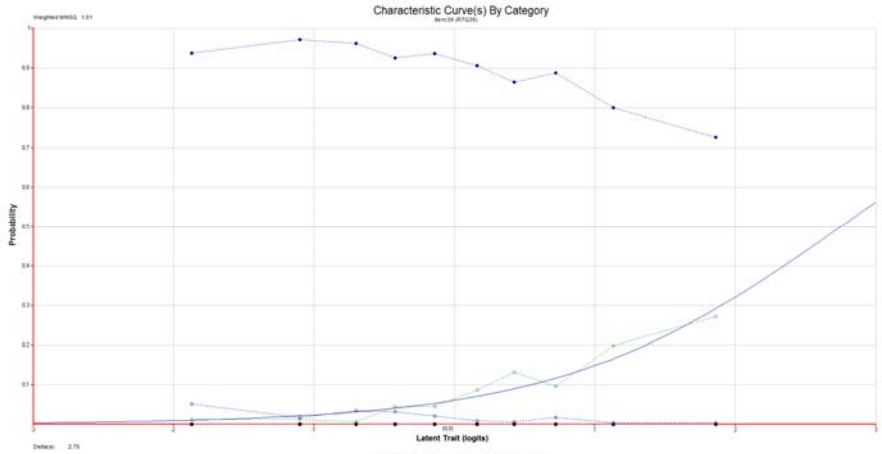
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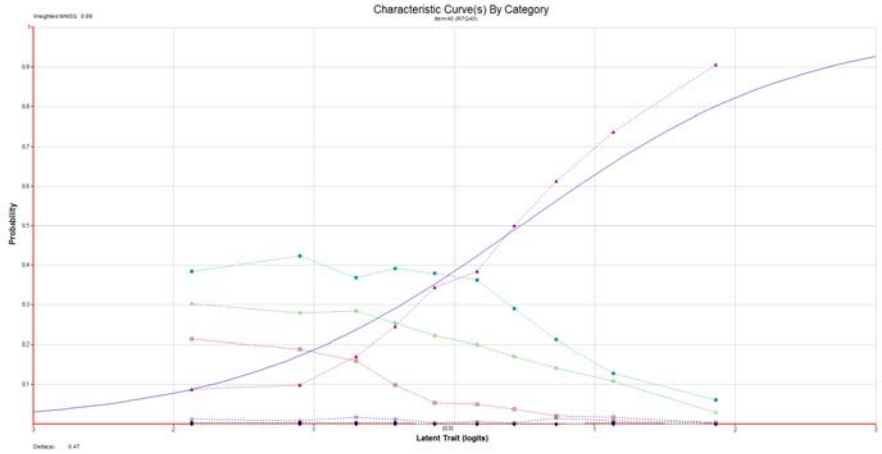
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Probability
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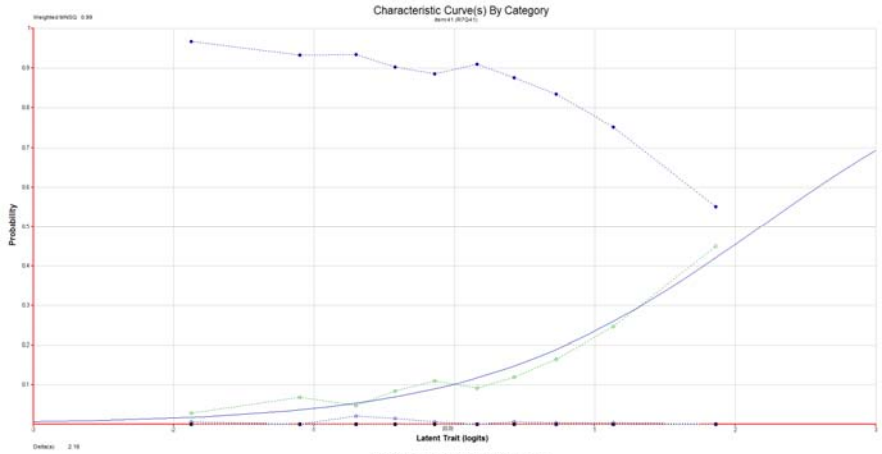
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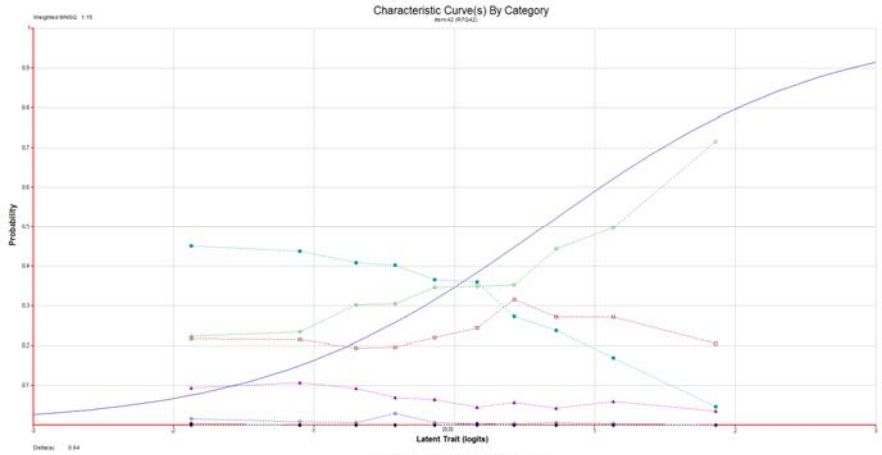
Probability
Latent Trait (logits)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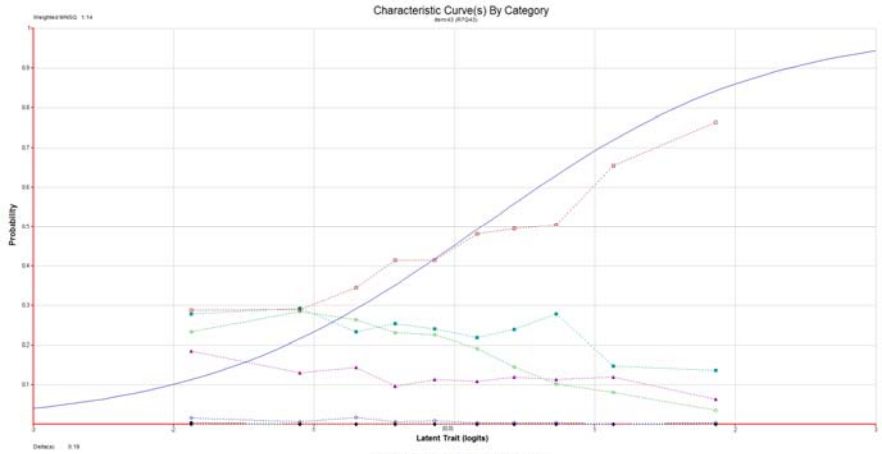
Latent Trait (logits)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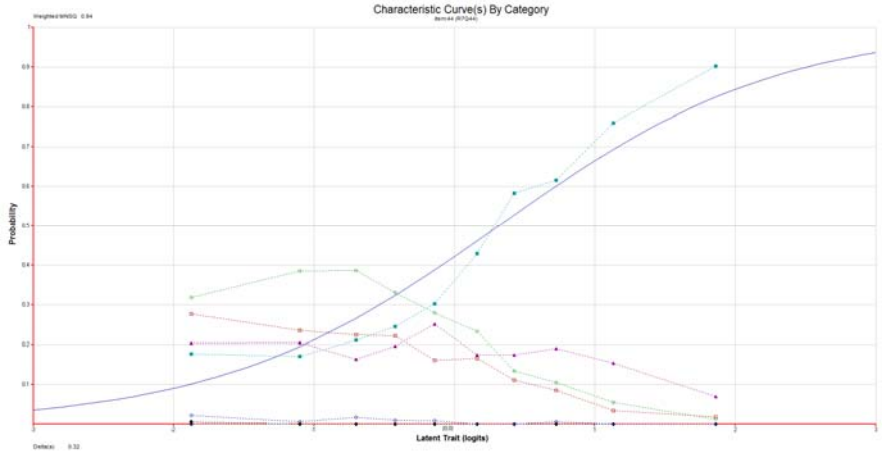
Probability
Latent Trait (logits)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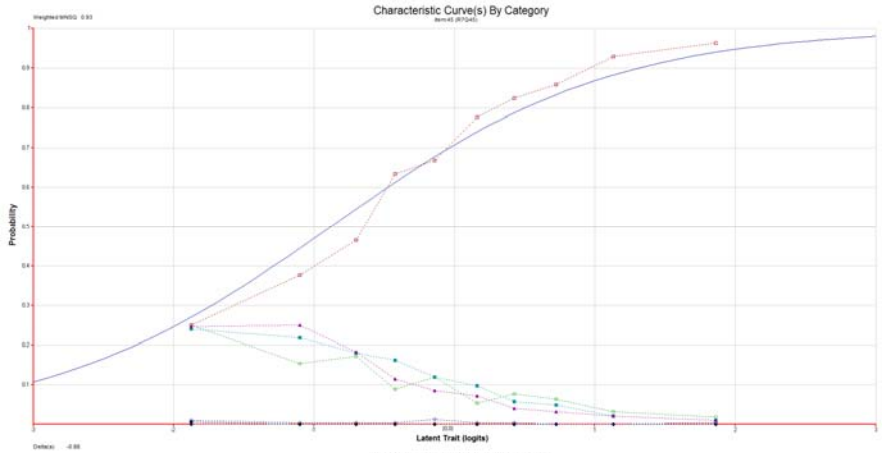
Probability
Latent Trait (logits)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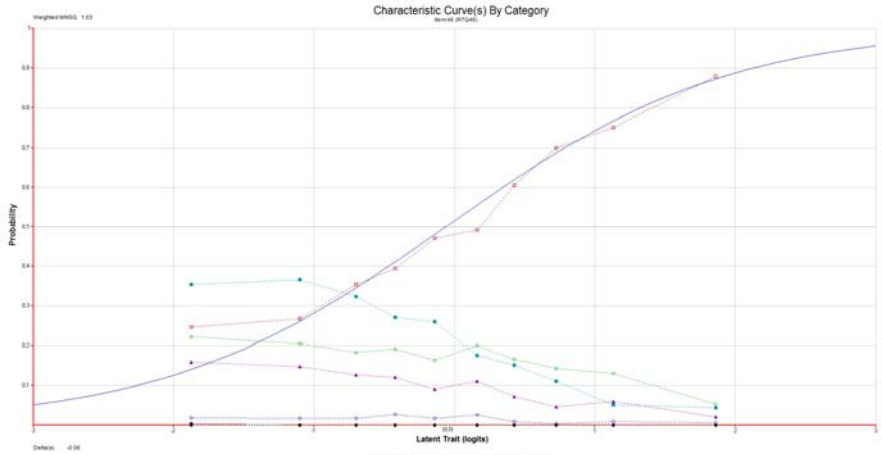
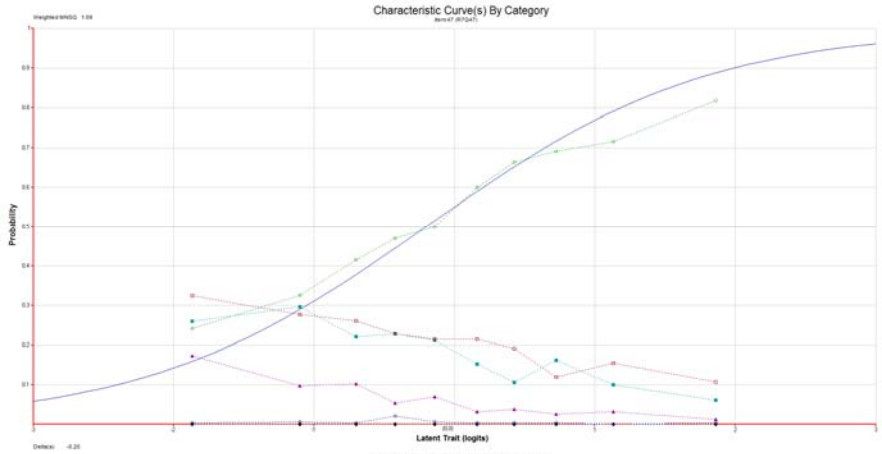
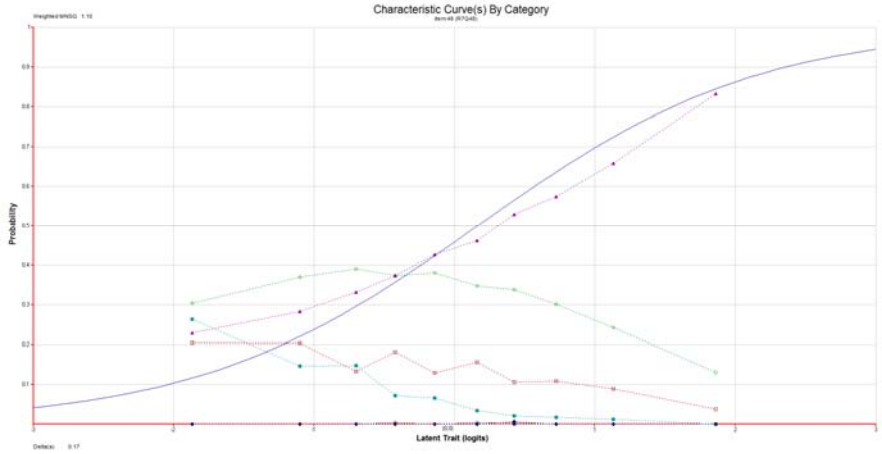
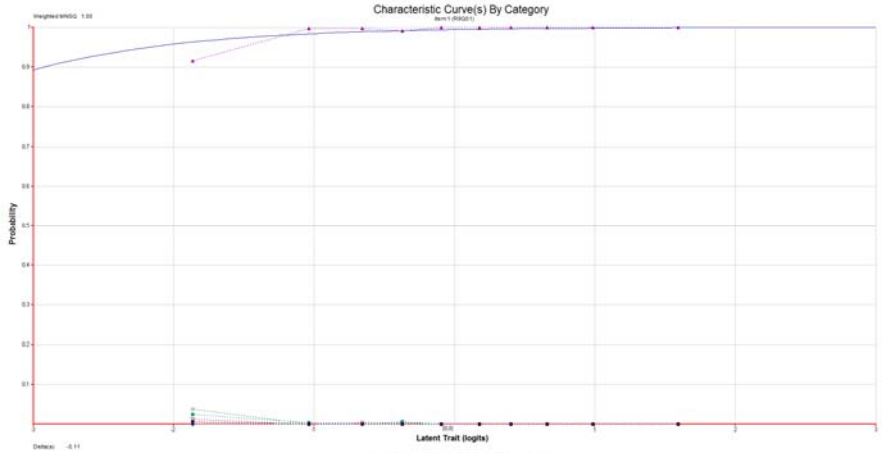
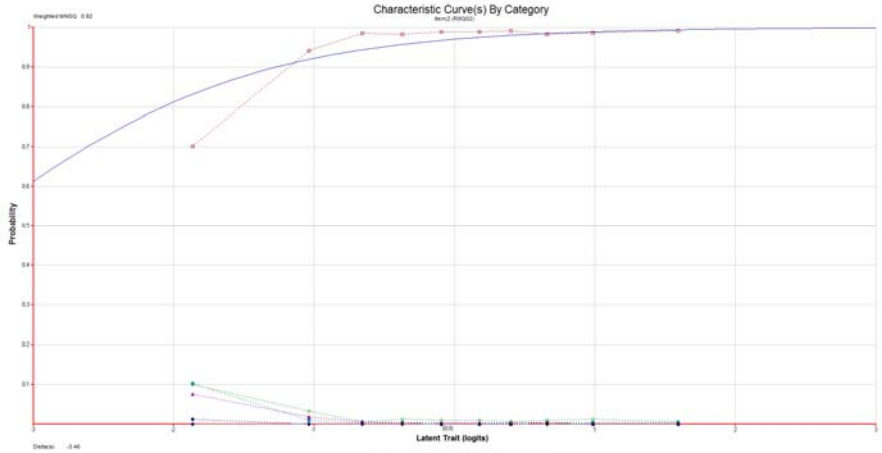

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

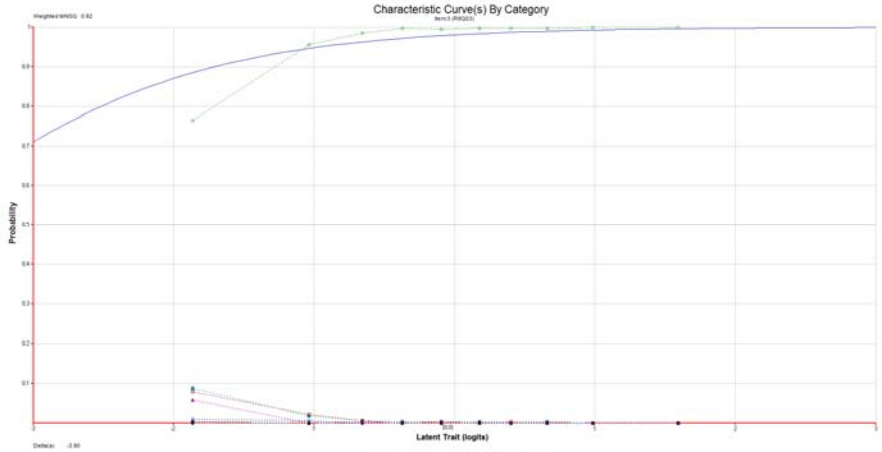

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

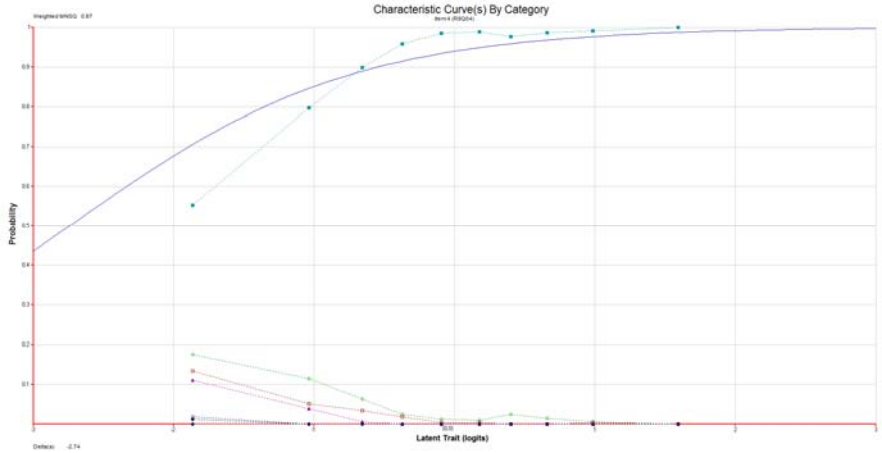

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

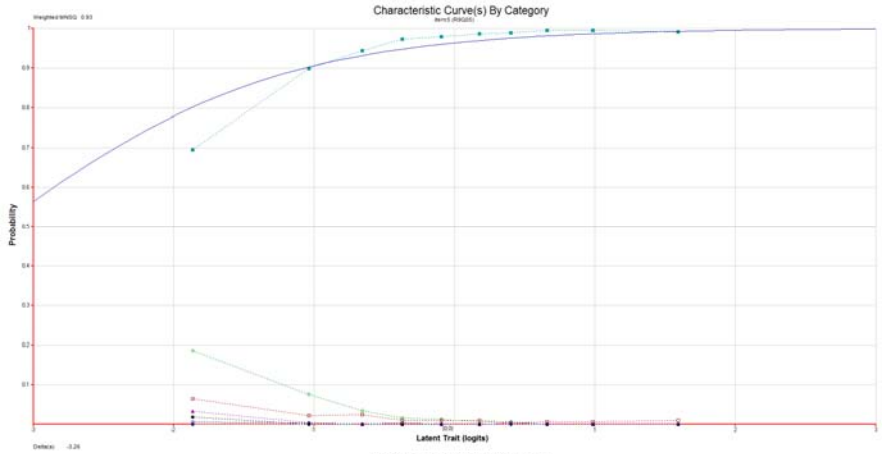
D.4. Year 9 Reading

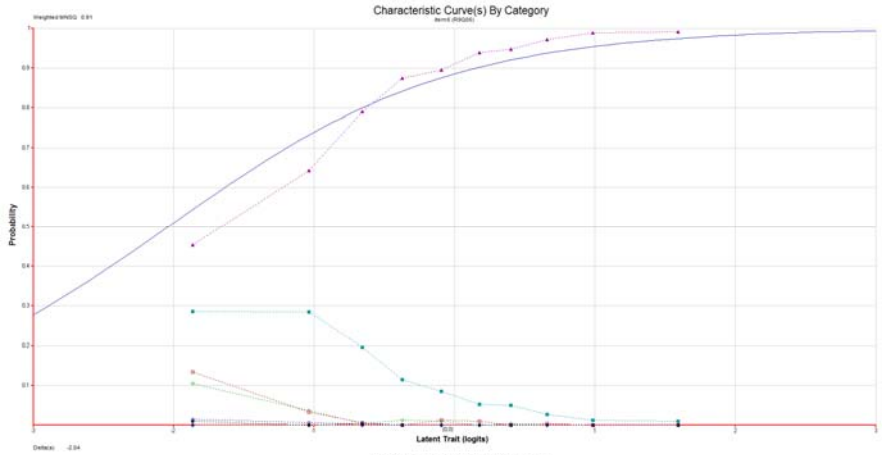


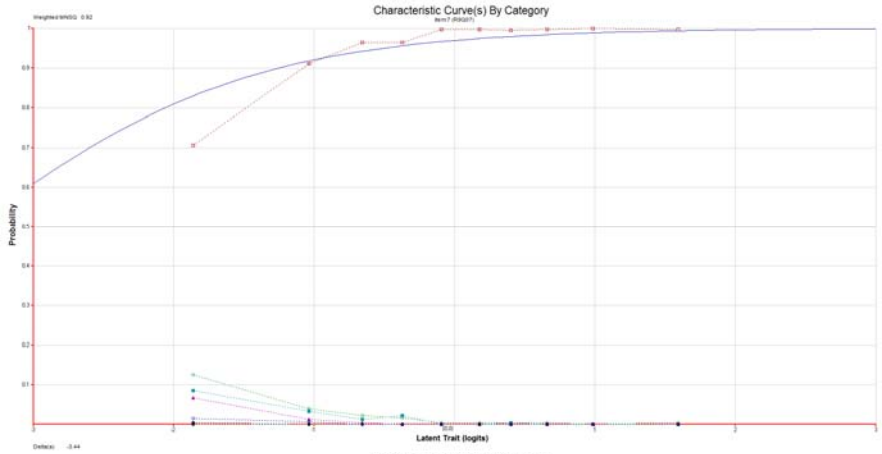







Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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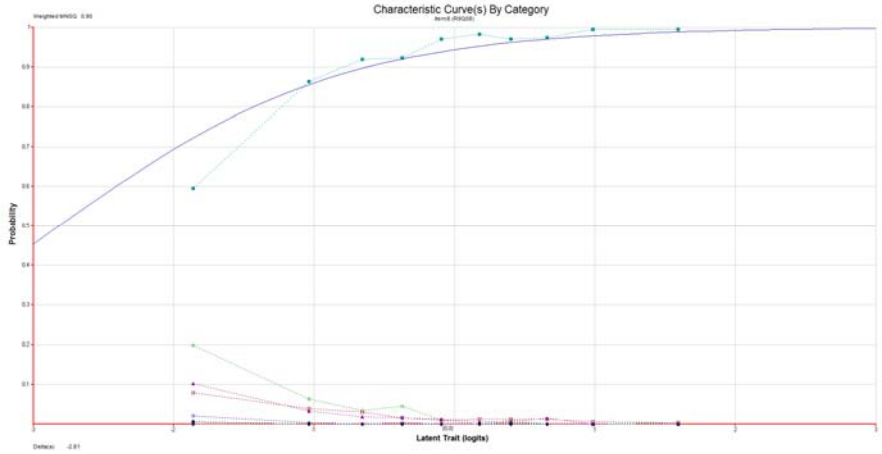
Probability
Latent Trait (logits)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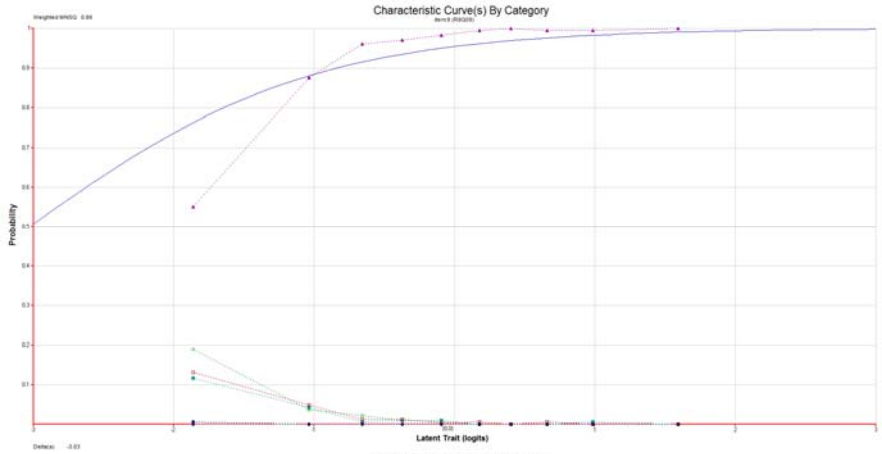
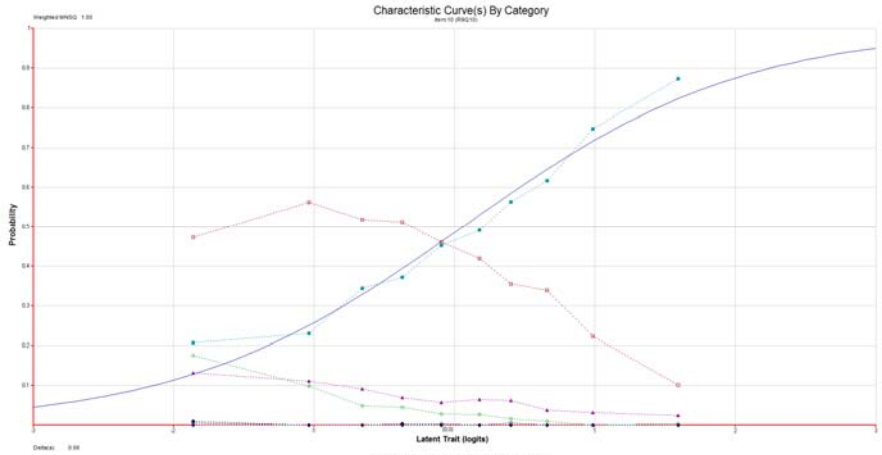
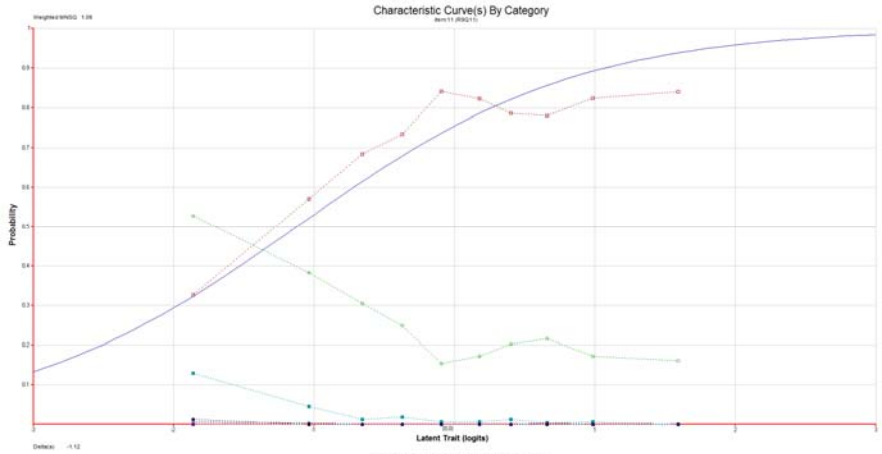
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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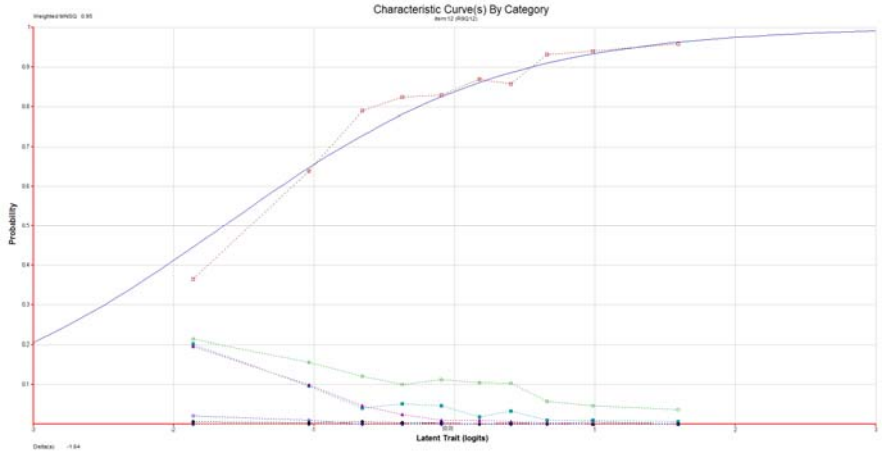
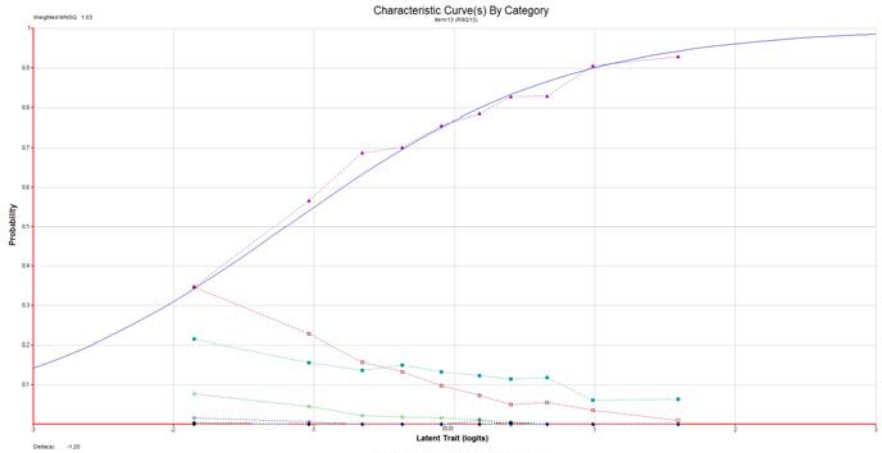
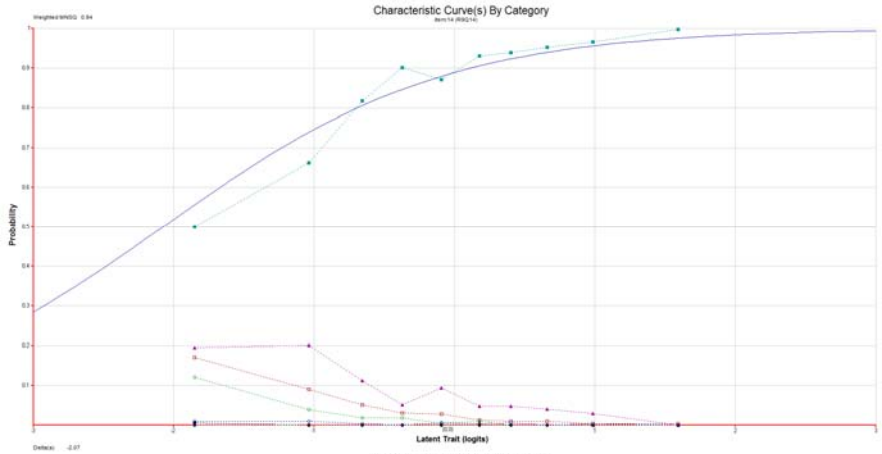
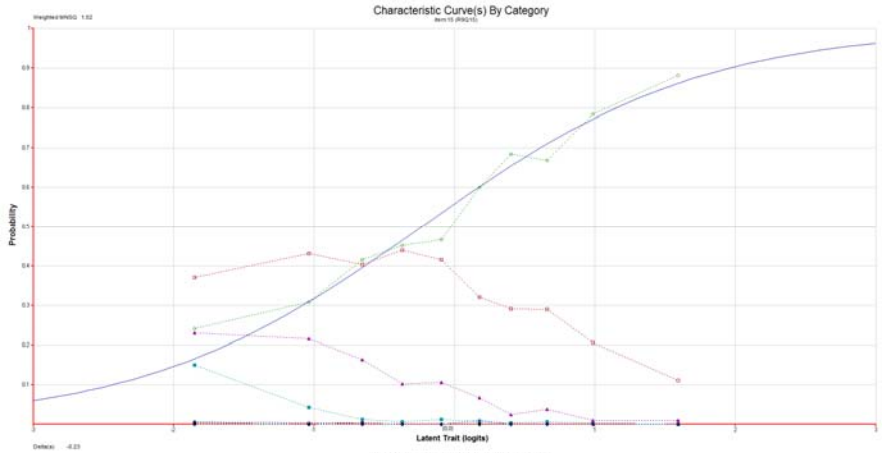
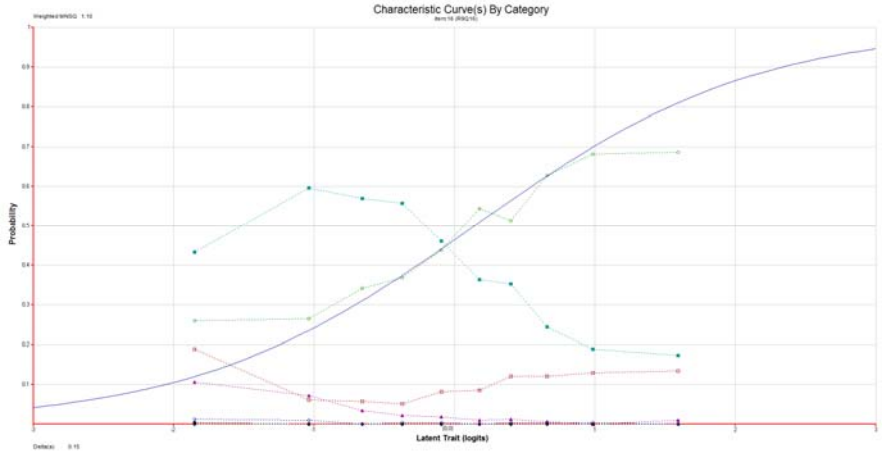
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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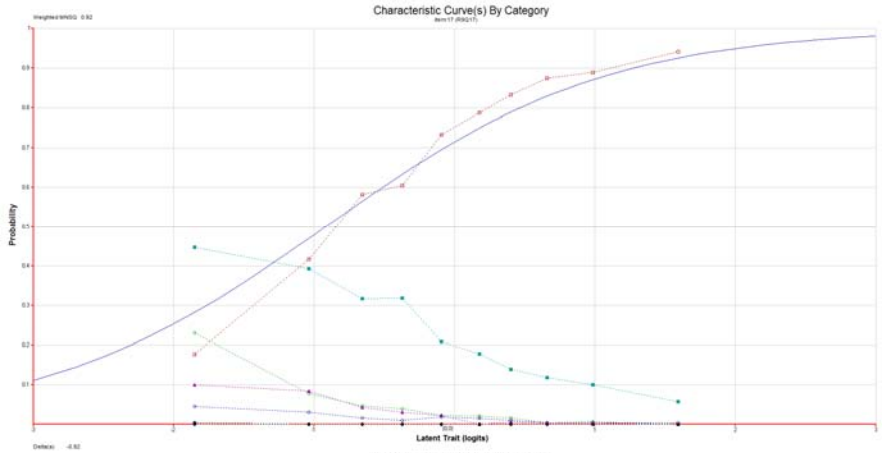
Latent Trait (logits)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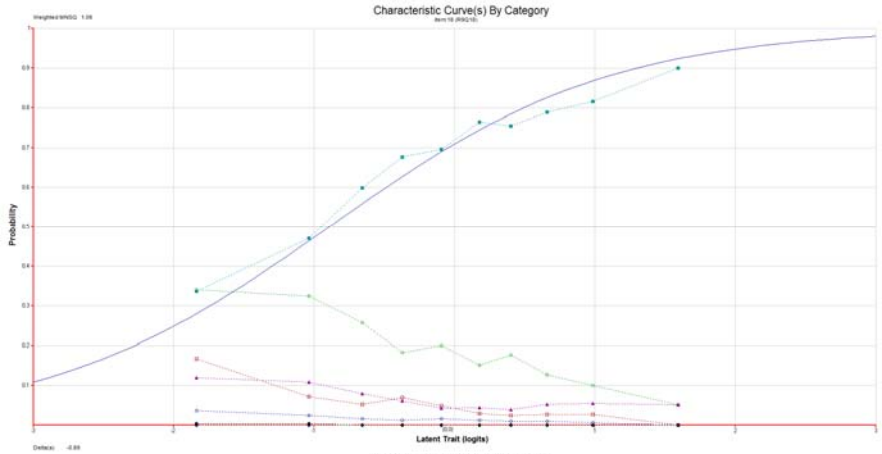
Probability
Latent Trait (logits)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Probability
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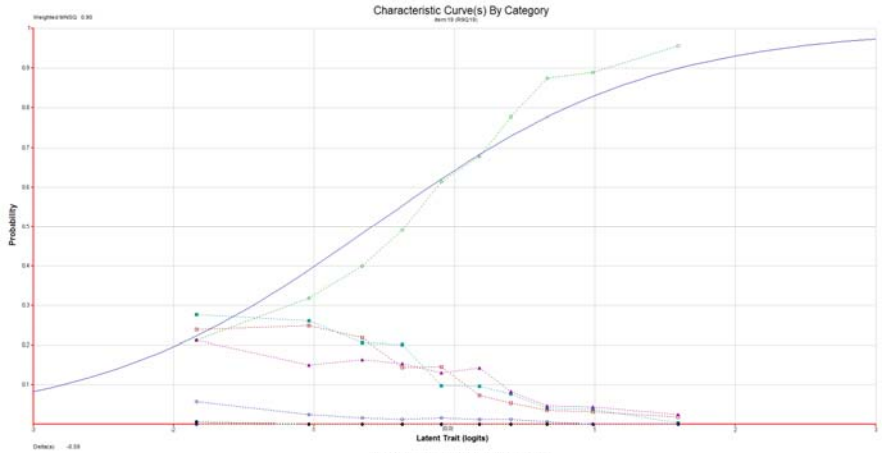
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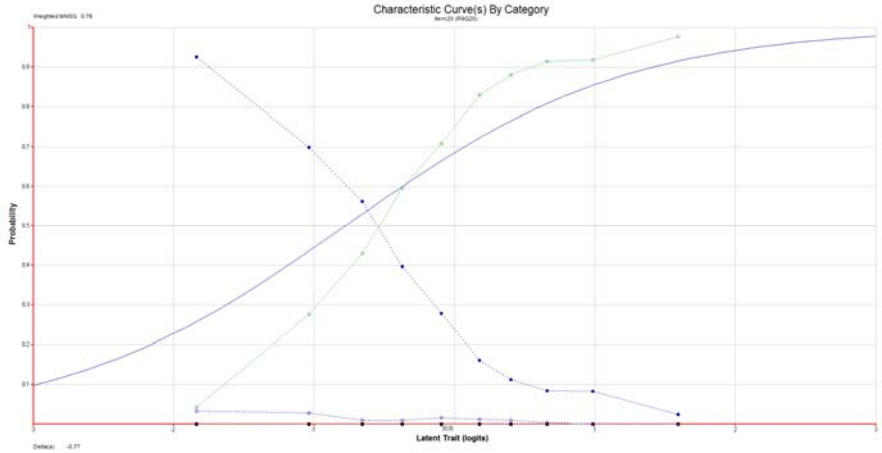
Characteristic Curve(s) By Category
Probability
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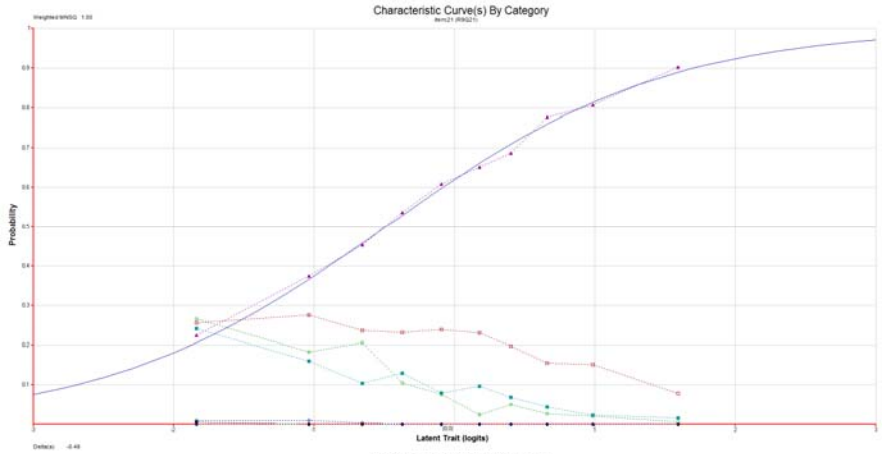
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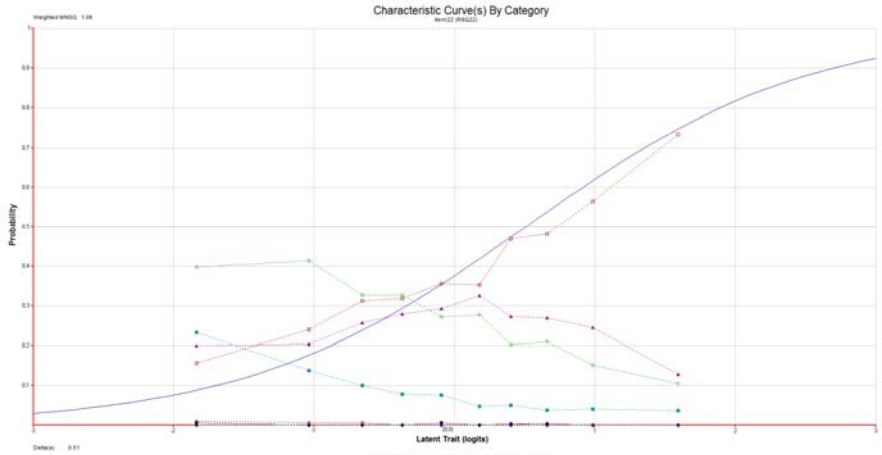
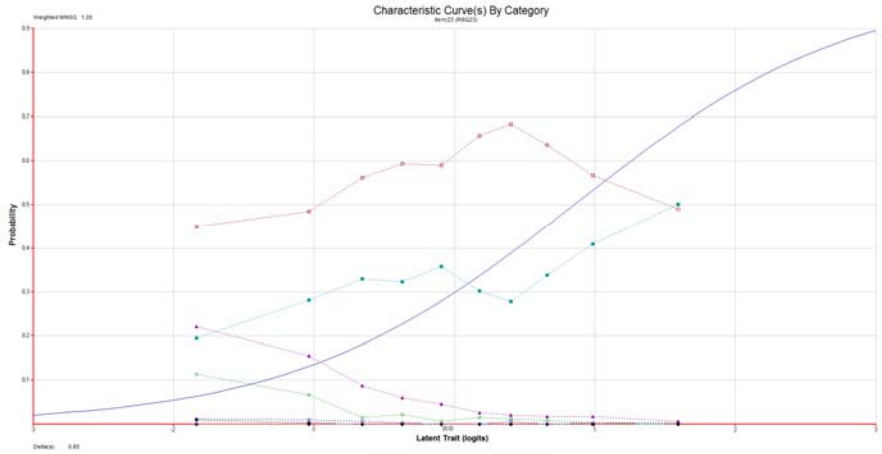
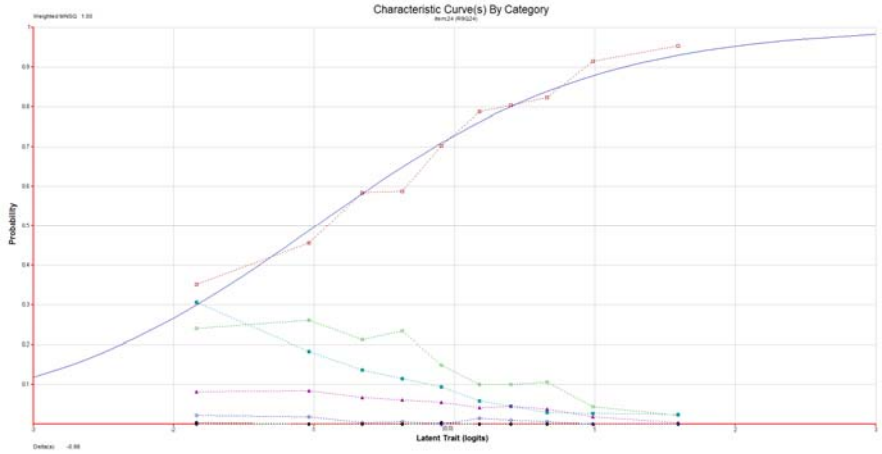
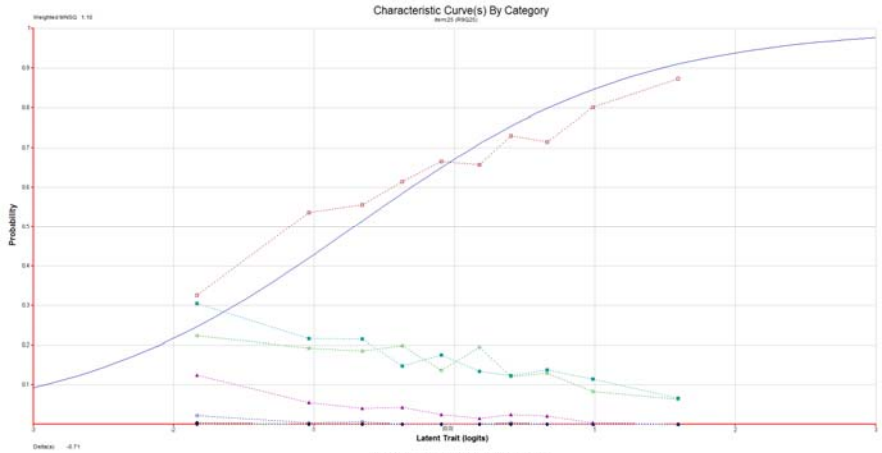

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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Probability
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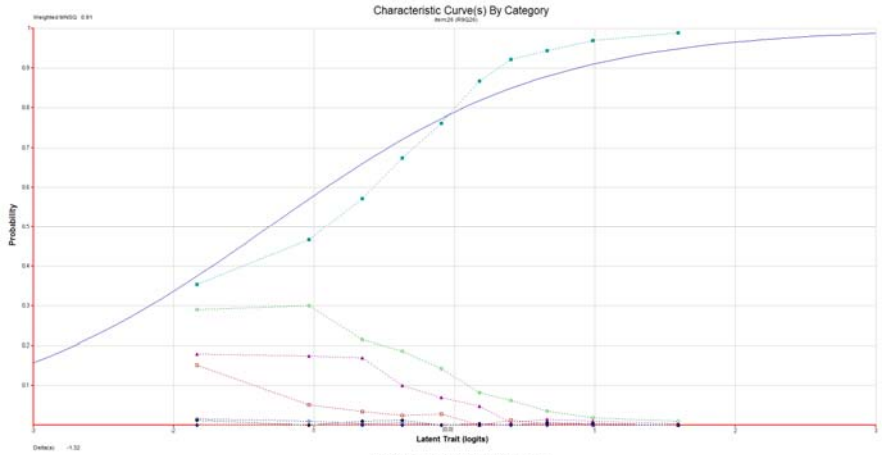
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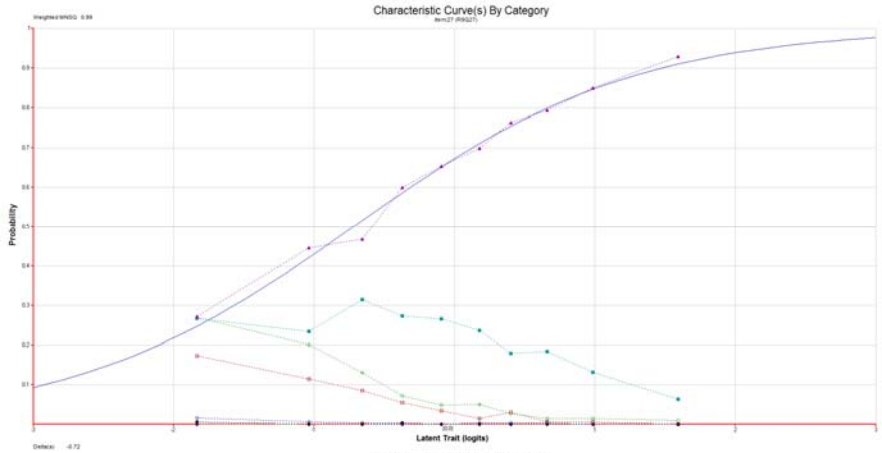
Characteristic Curve(s) By Category
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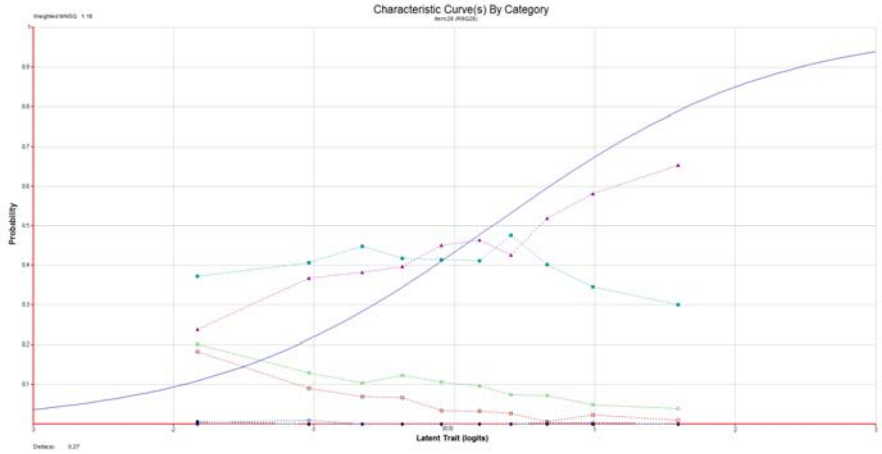
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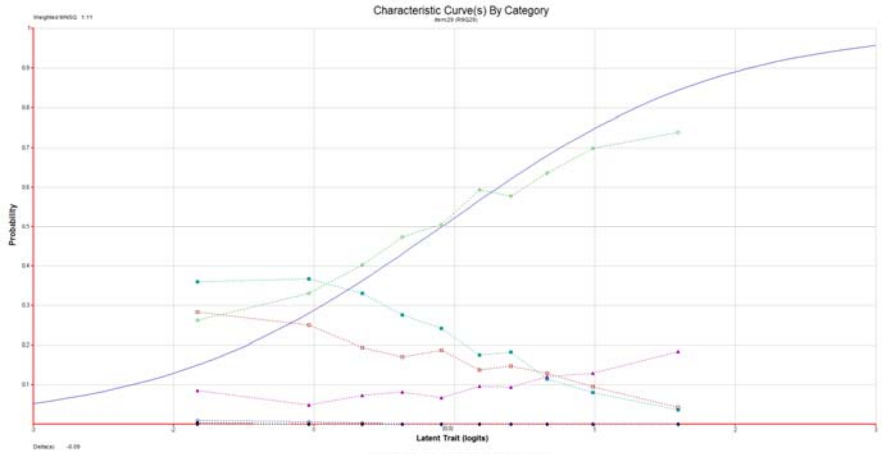
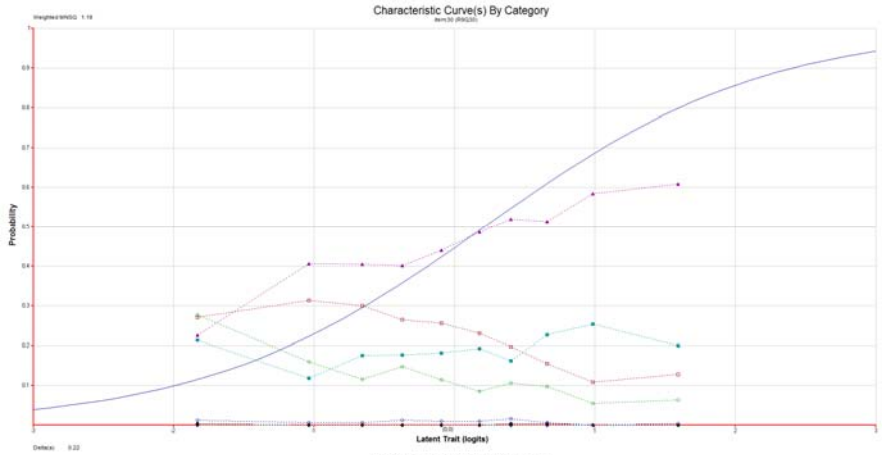
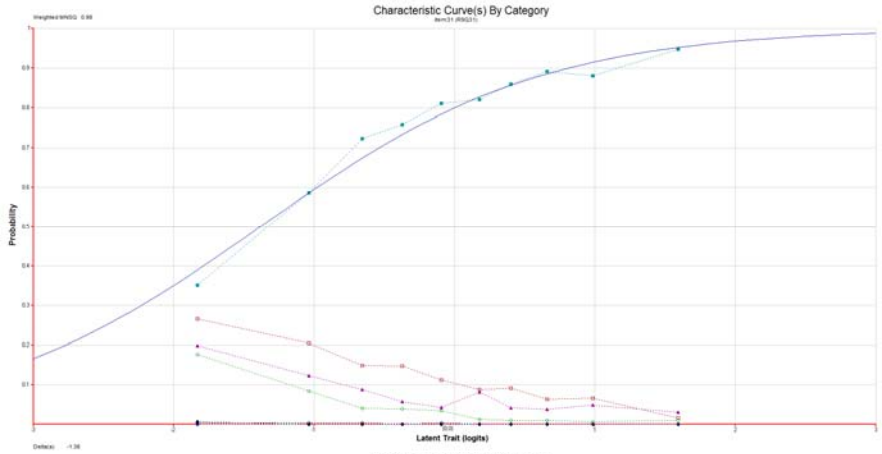
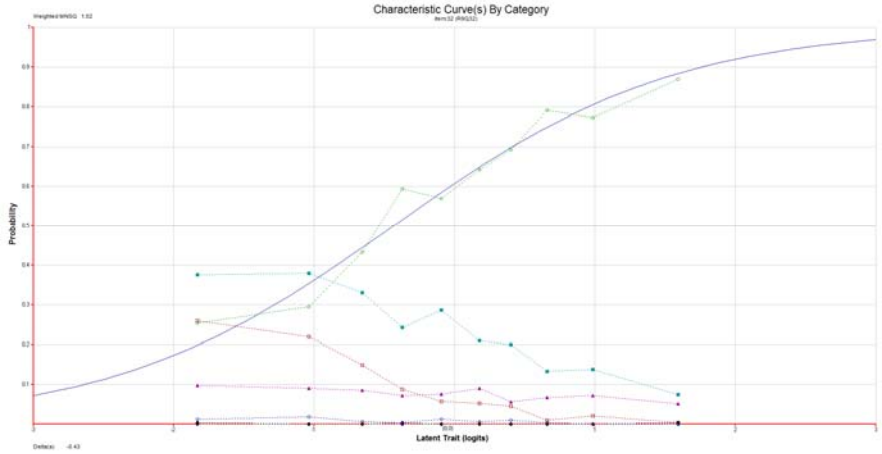
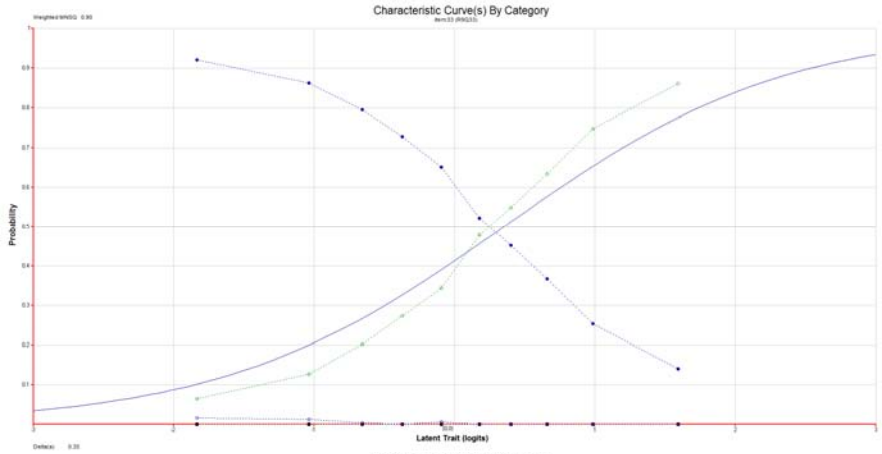

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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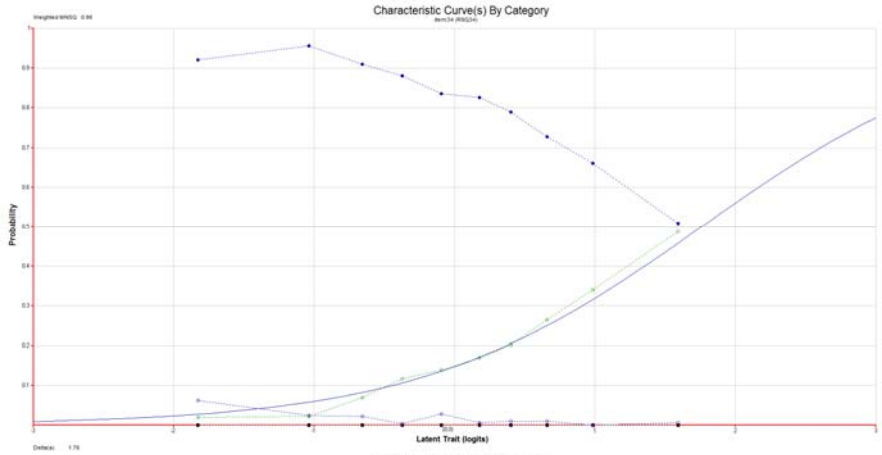
Probability
Latent Trait (logits)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Probability
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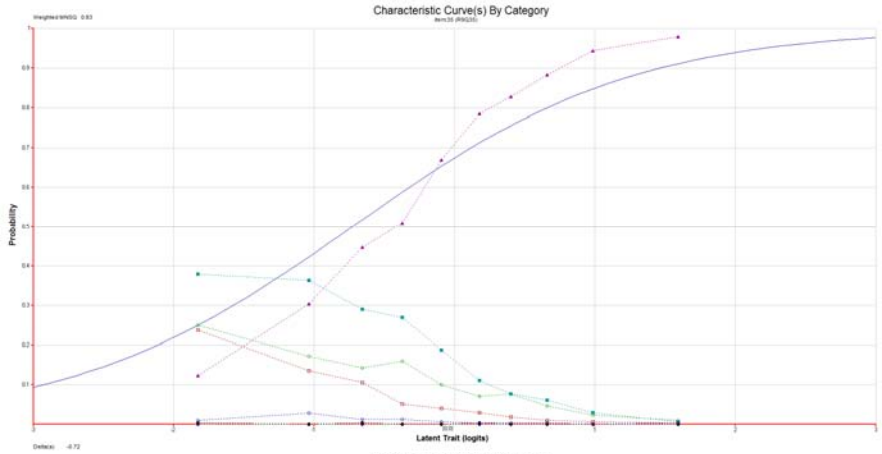
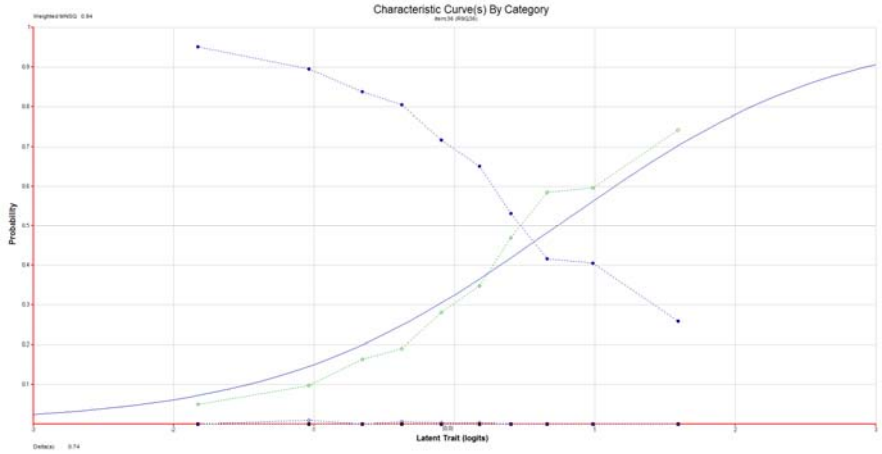

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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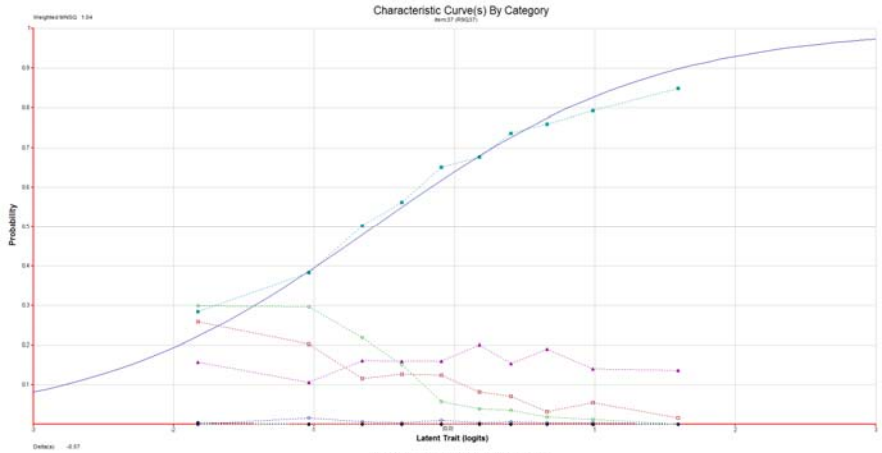
Probability
Latent Trait (logits)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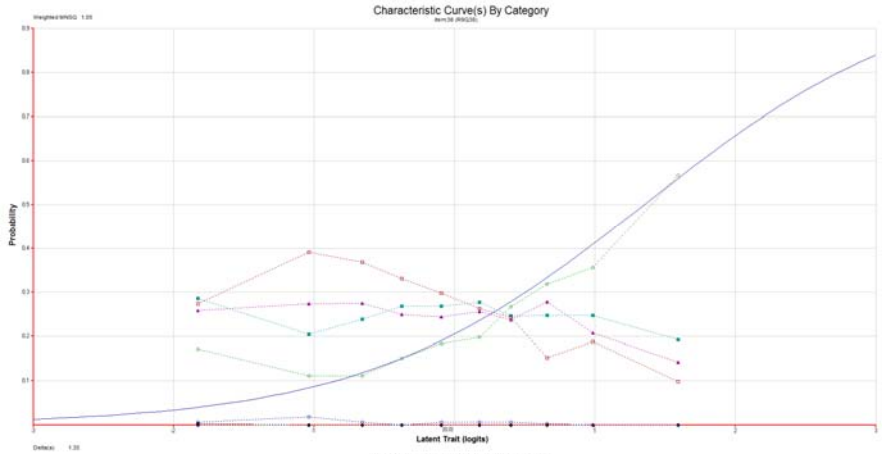
Probability
Latent Trait (logits)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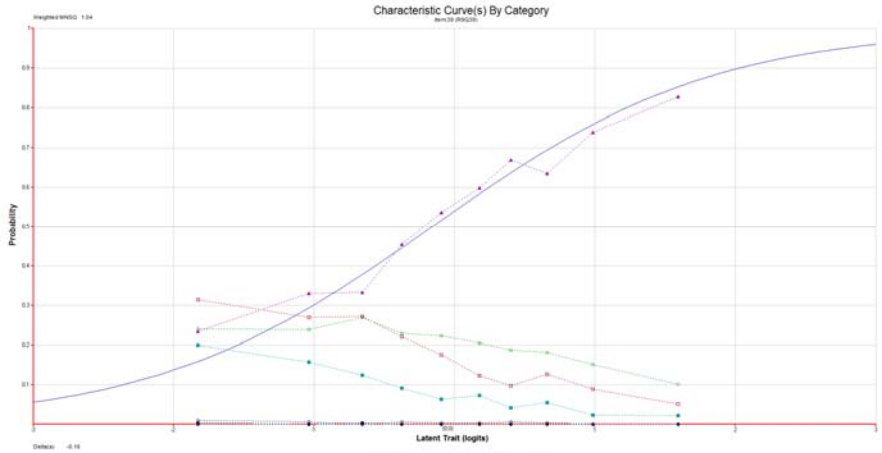
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Probability
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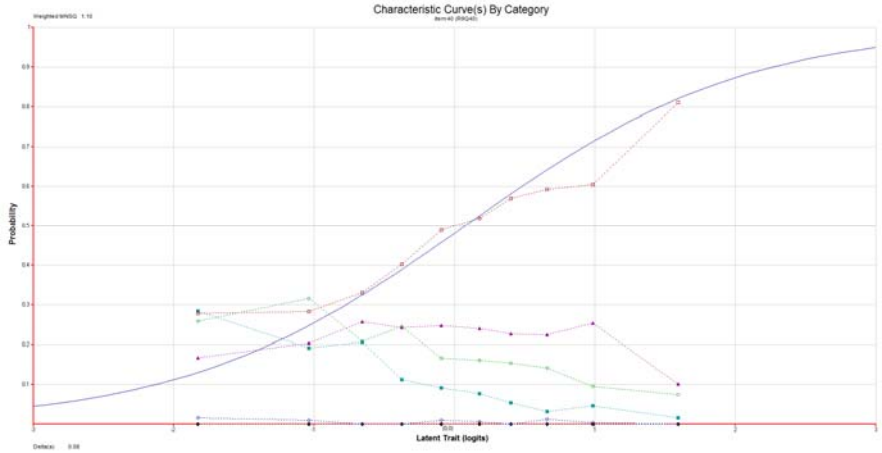
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Probability
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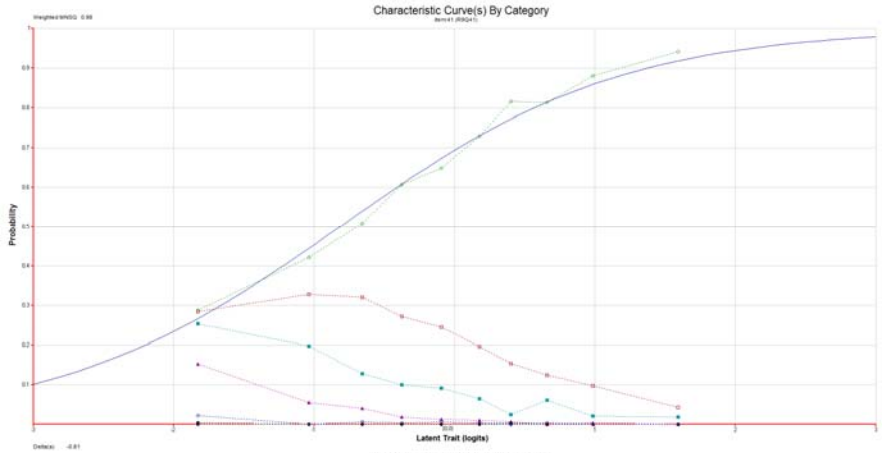
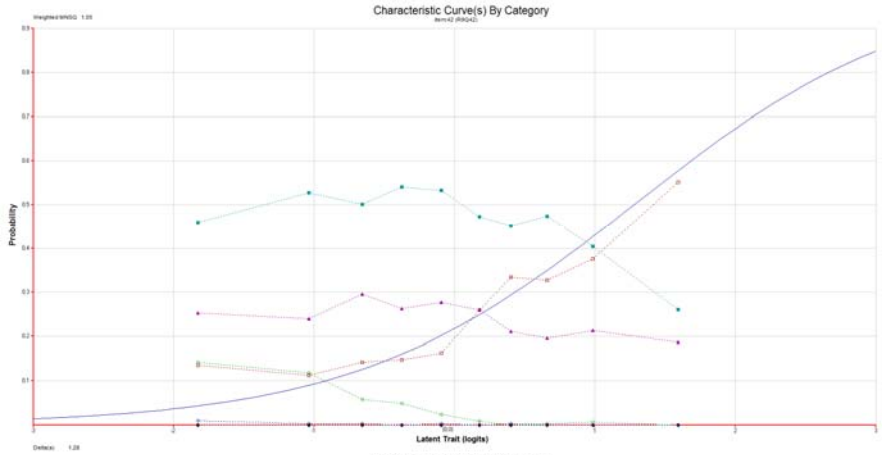
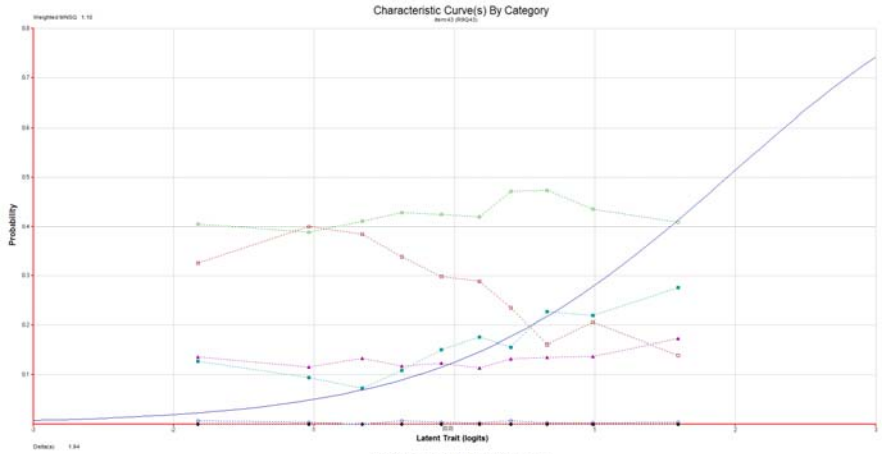
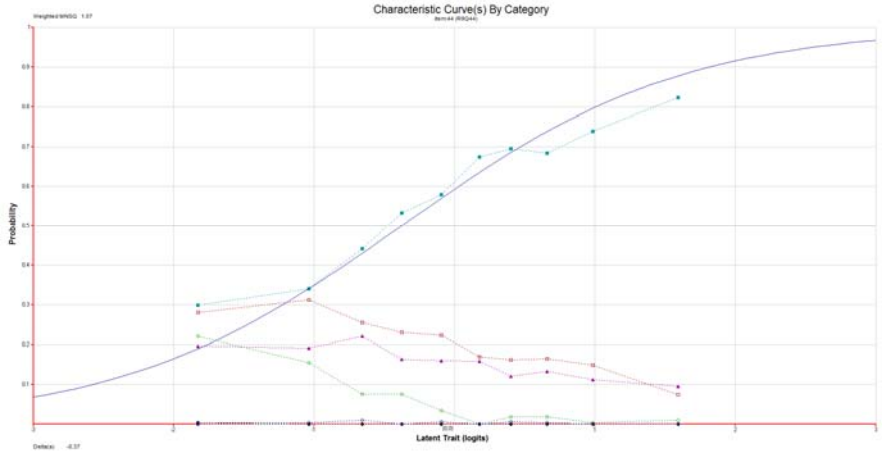
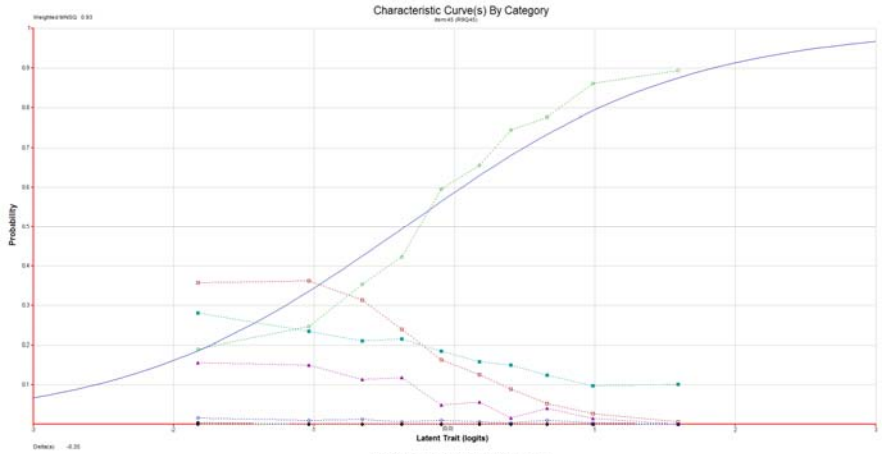

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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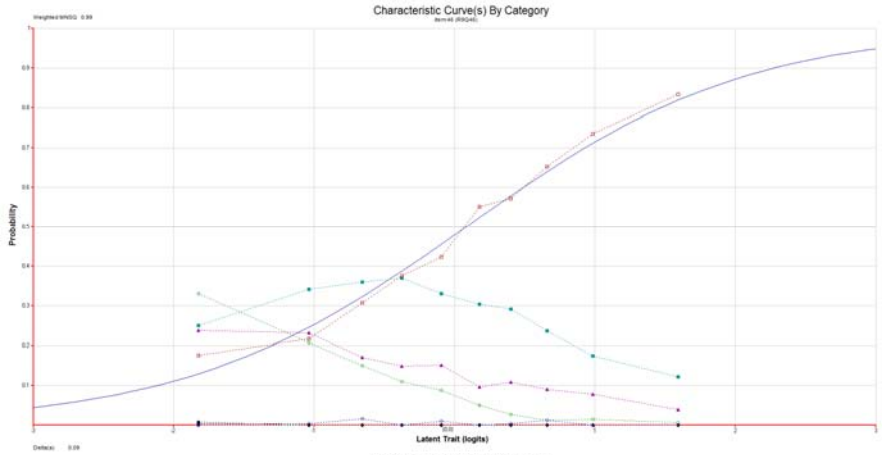
Probability
Latent Trait (logits)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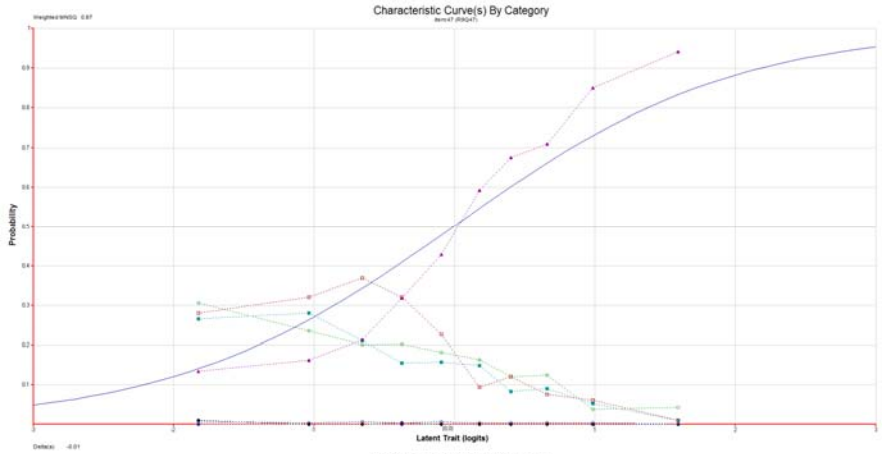
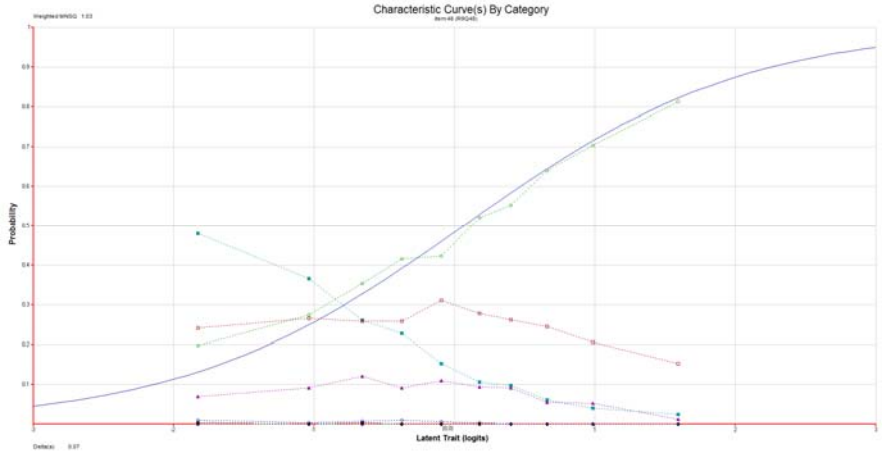
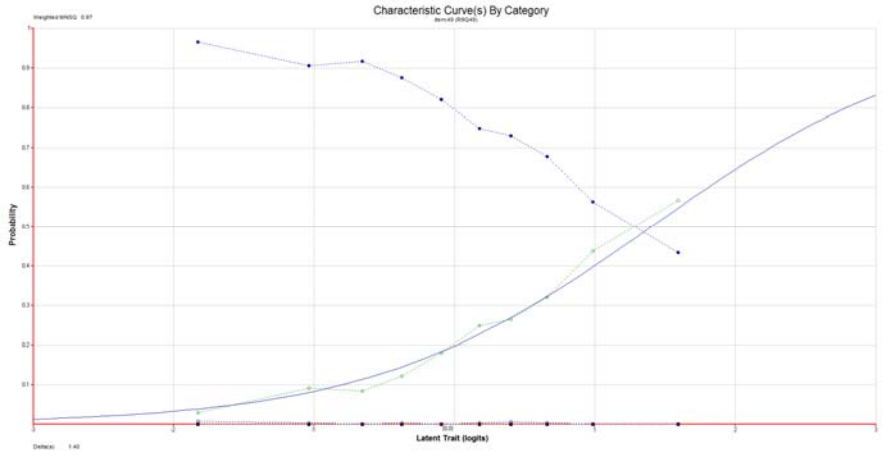
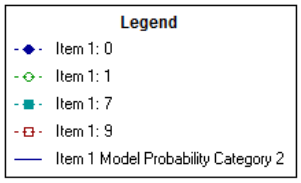
Probability
Latent Trait (logits)

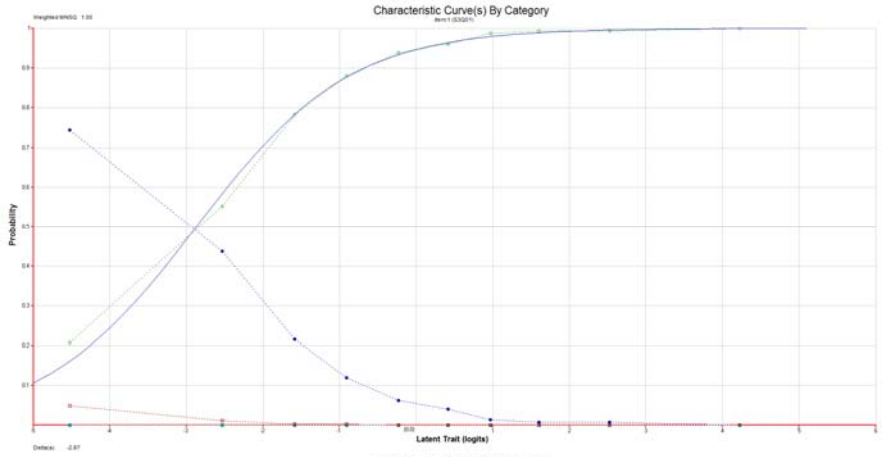

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

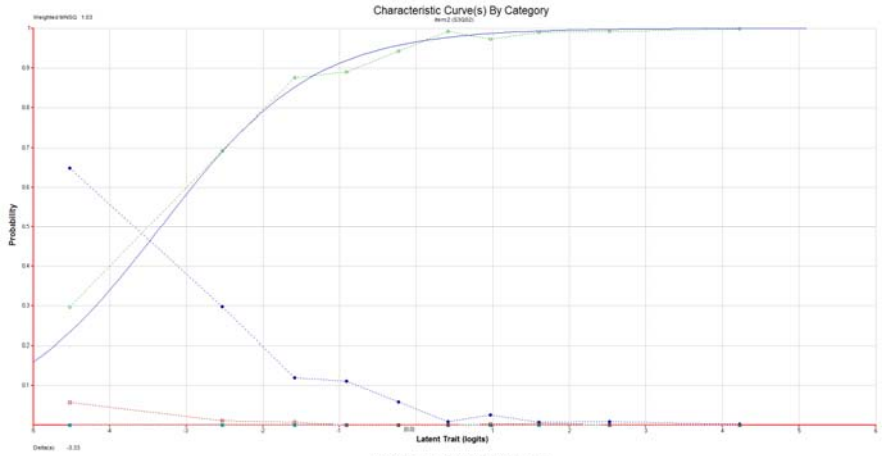

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

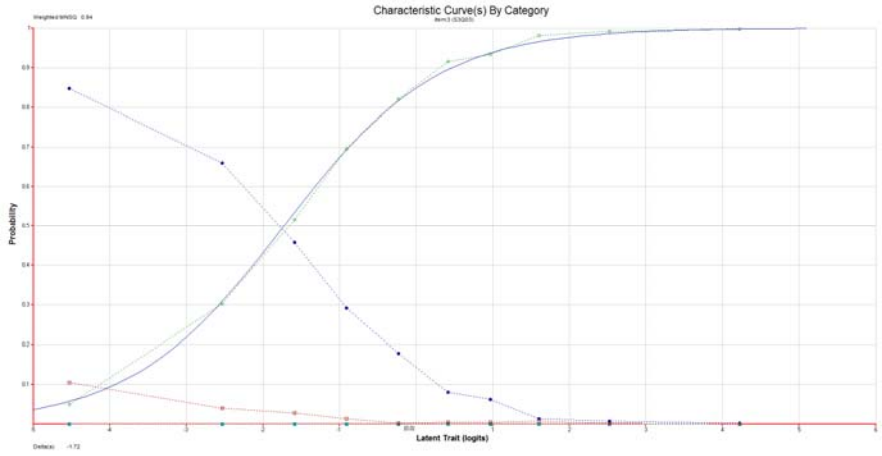

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

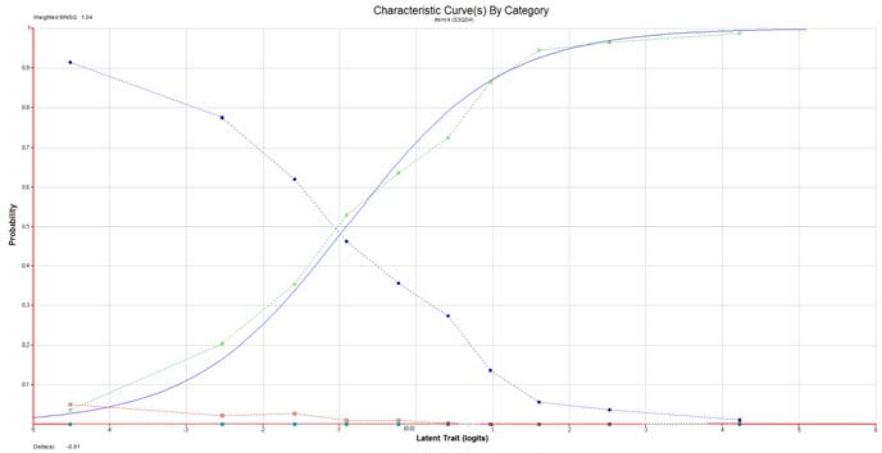
D.5. Year 3 Spelling

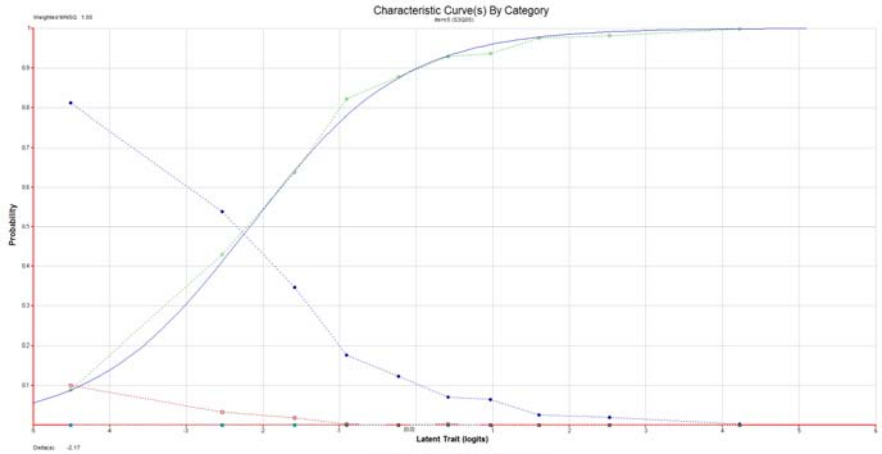


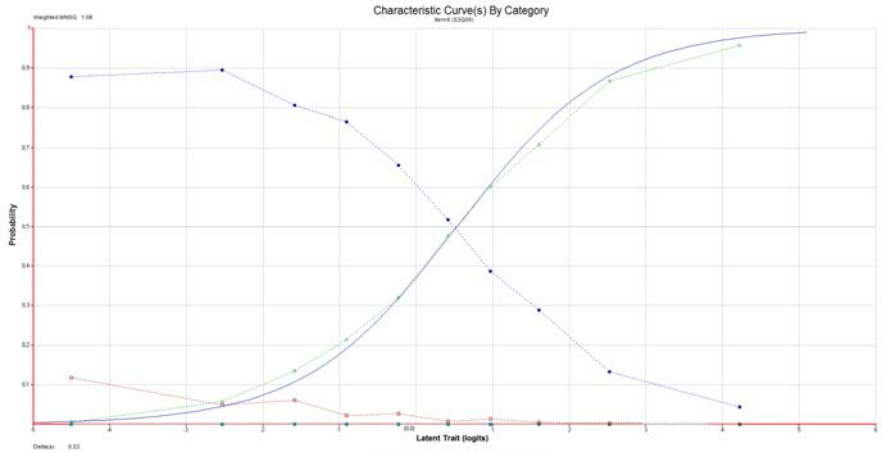


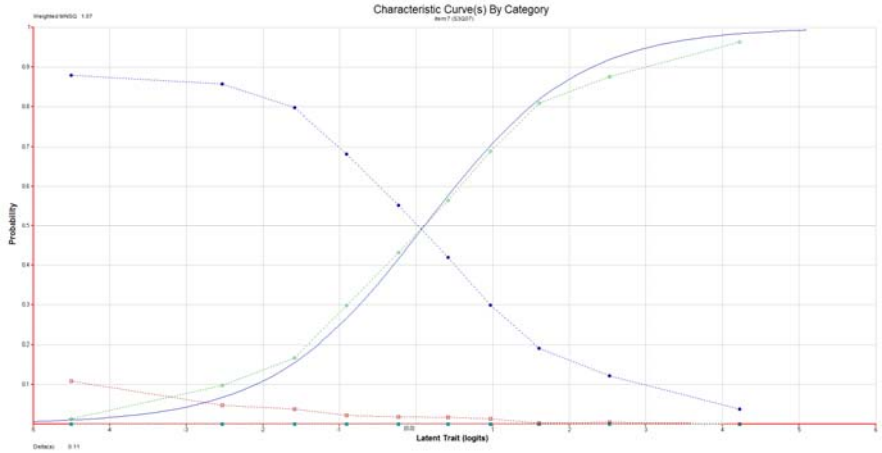


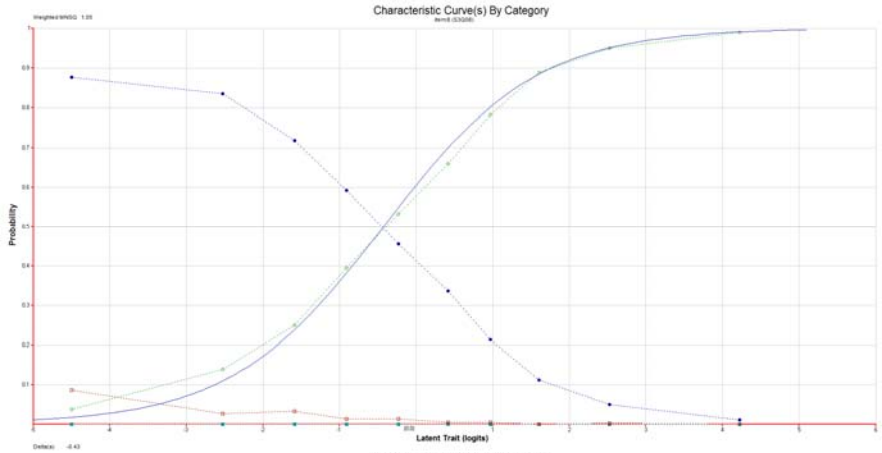


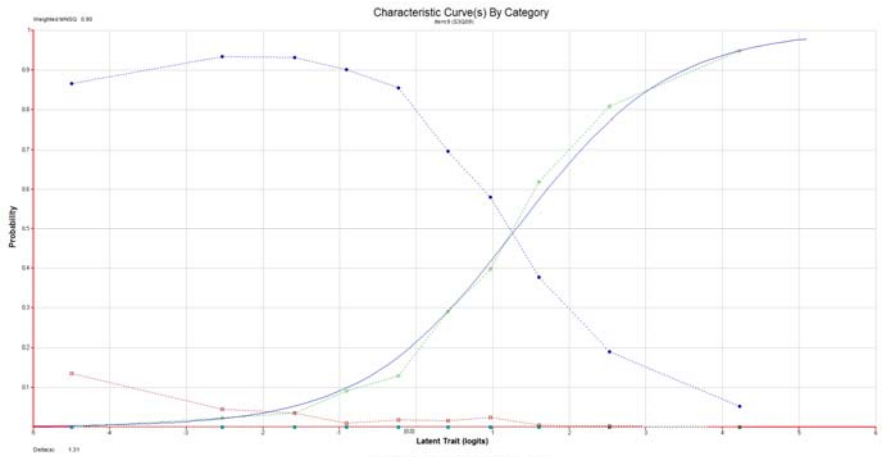

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

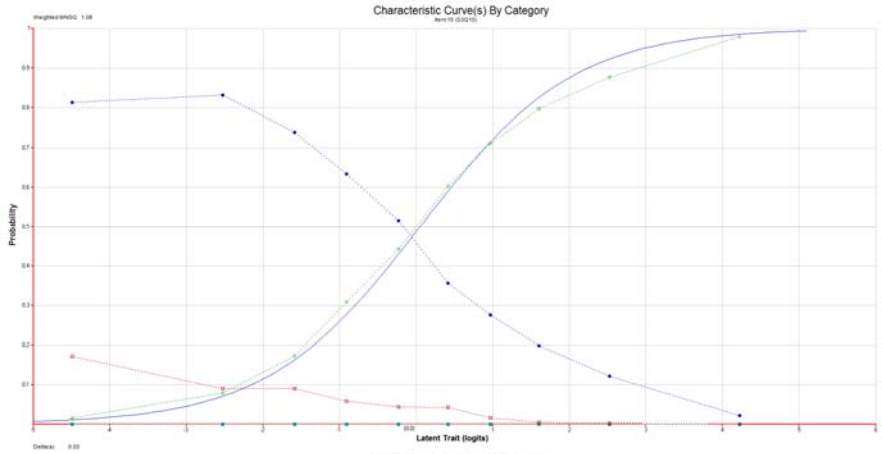

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

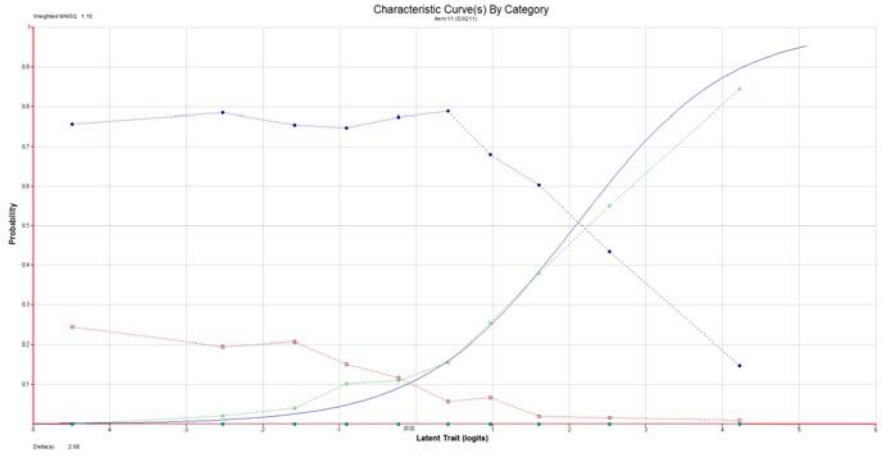

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

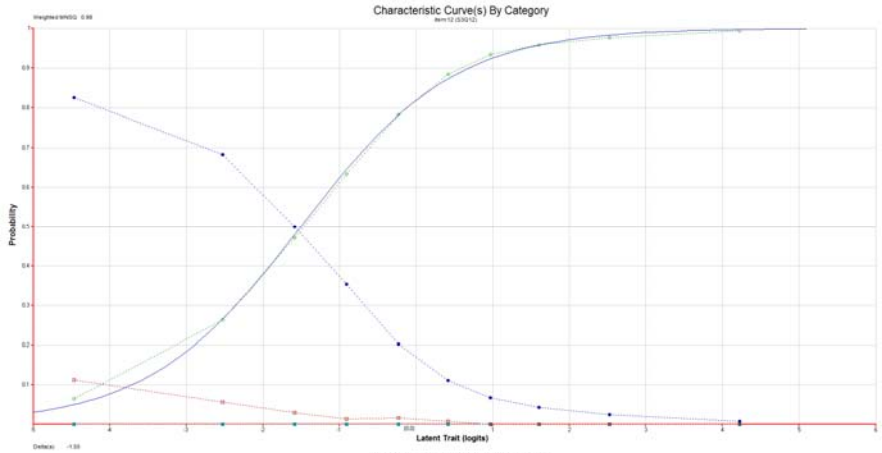

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

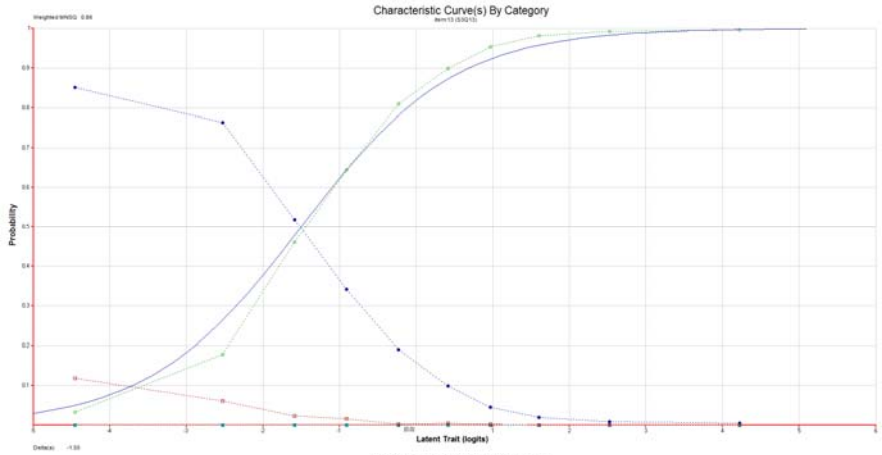

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

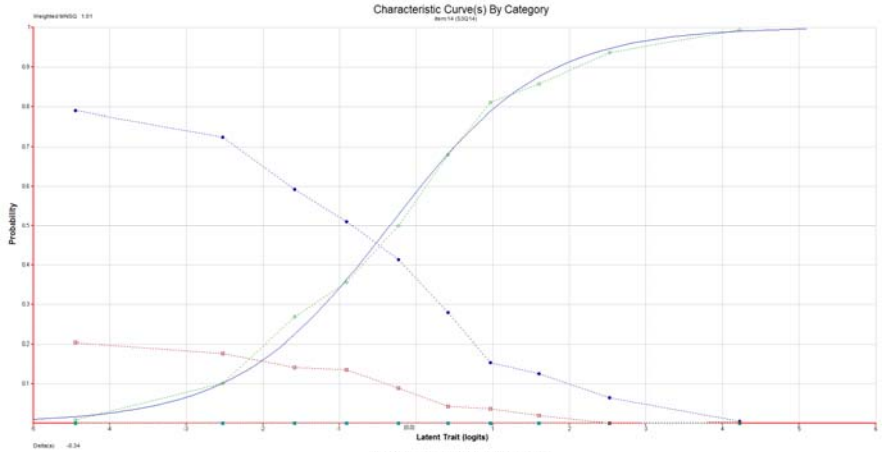

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

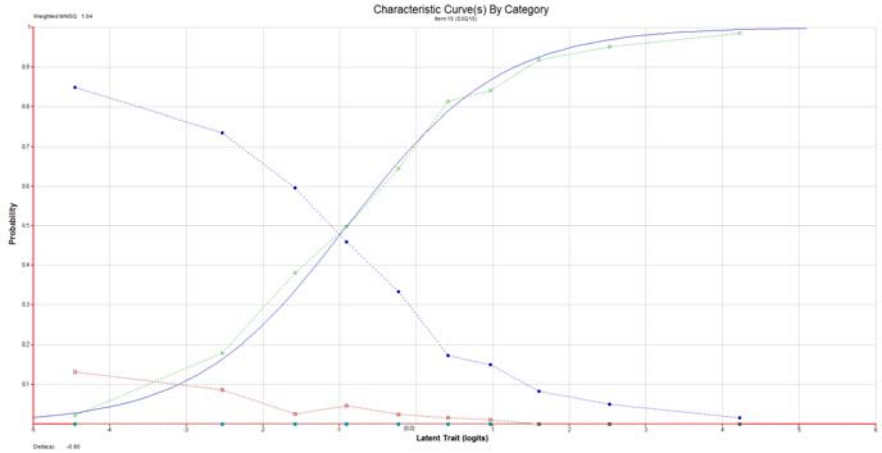

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

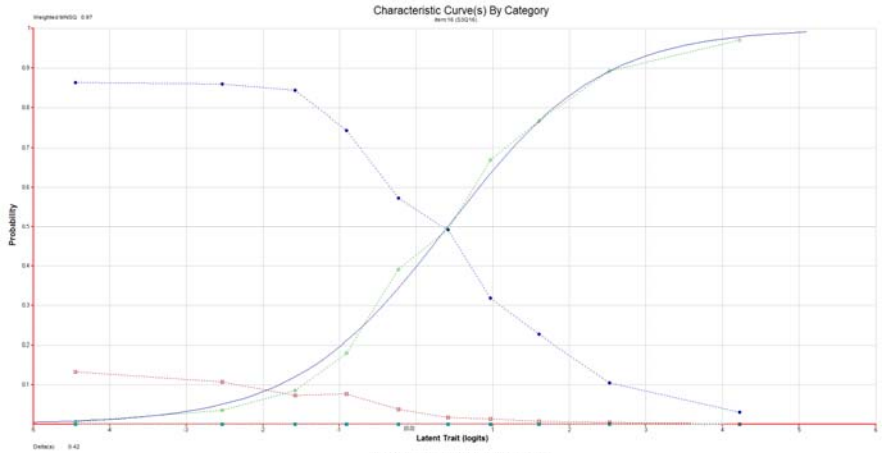

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

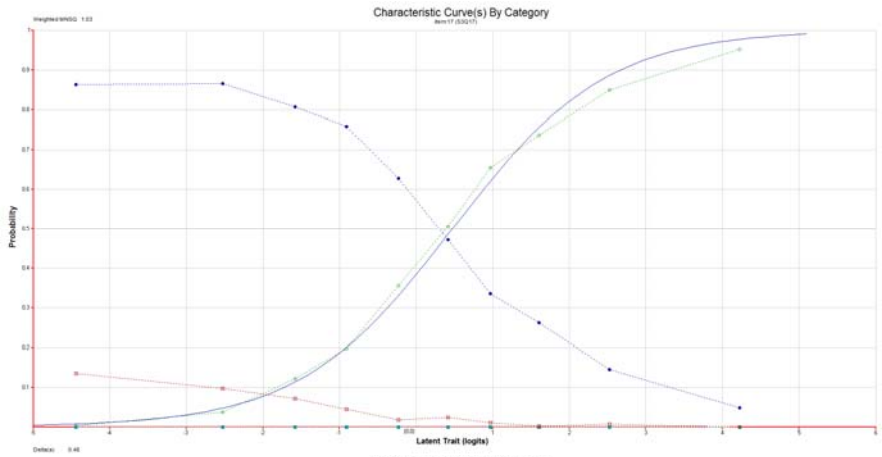

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
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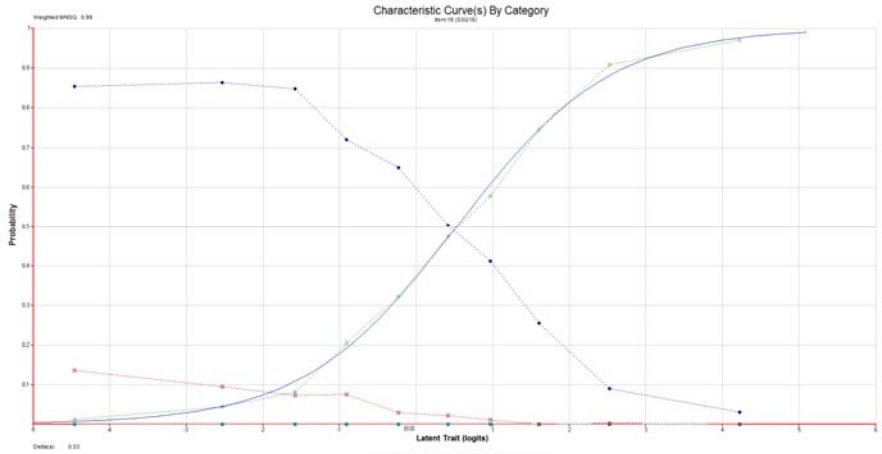
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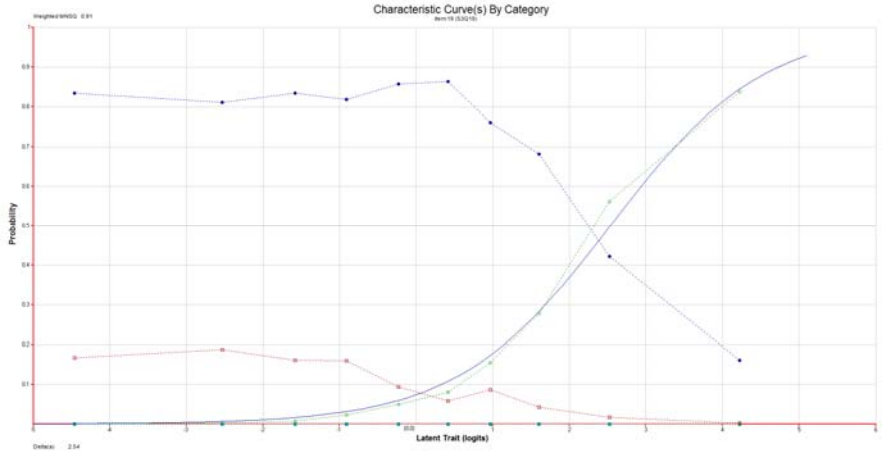
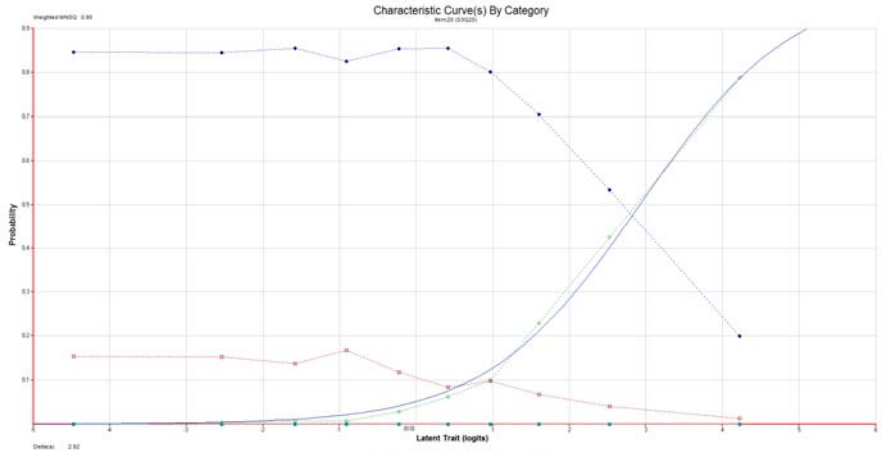
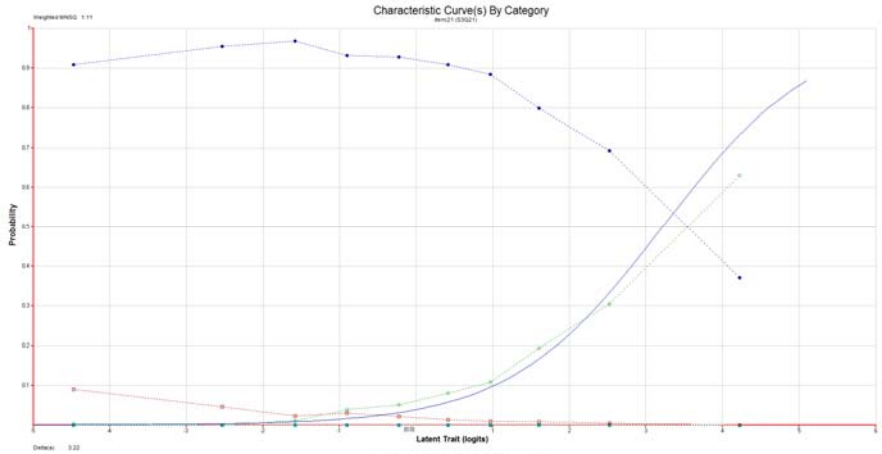
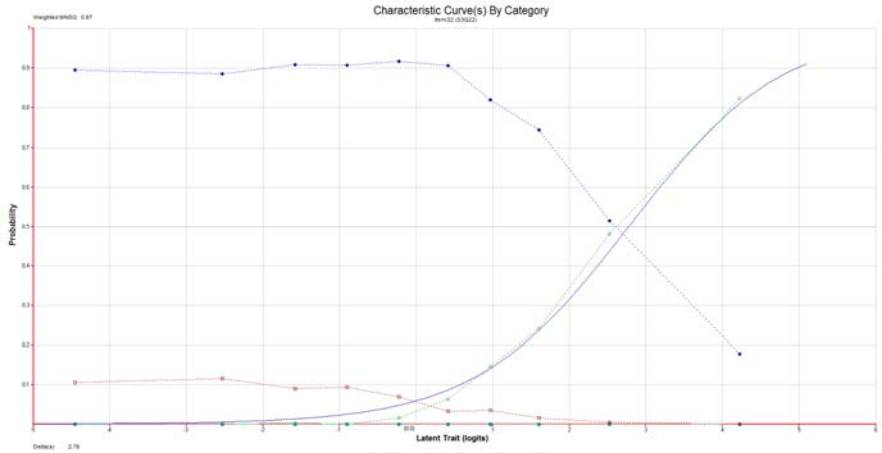
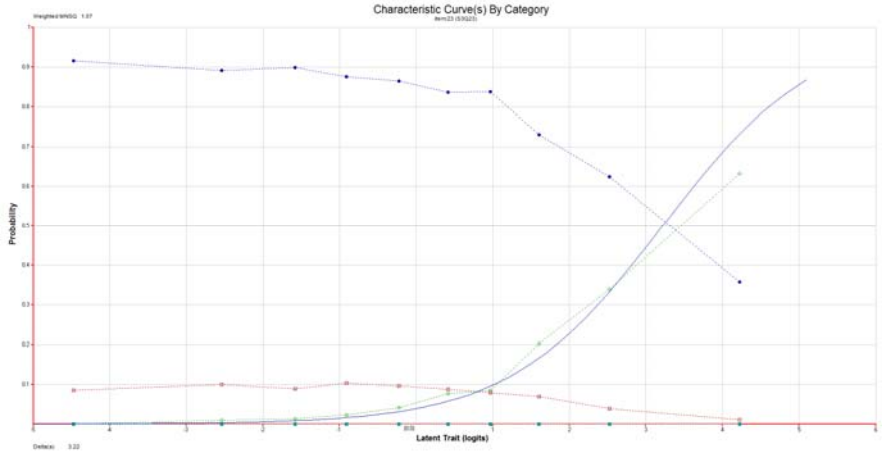
Probability
Latent Trait (logits)

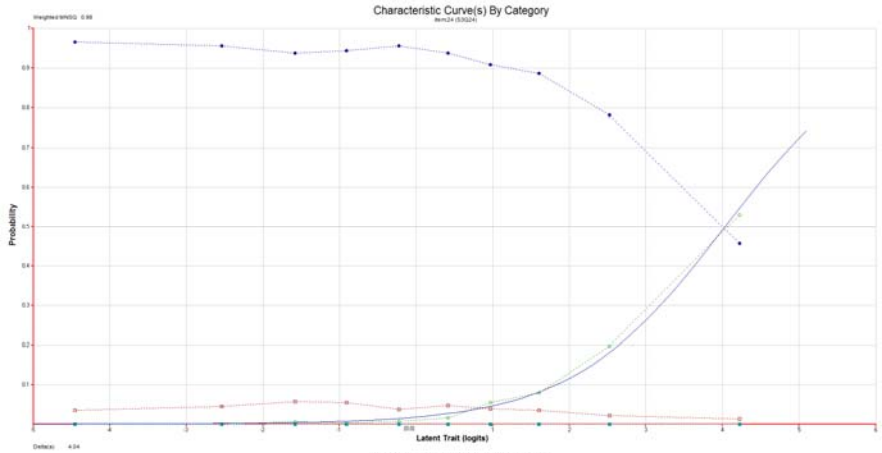

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

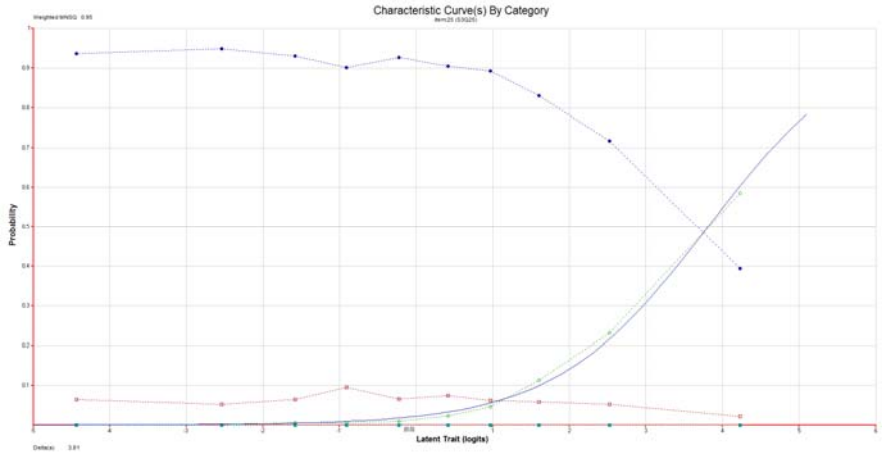

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

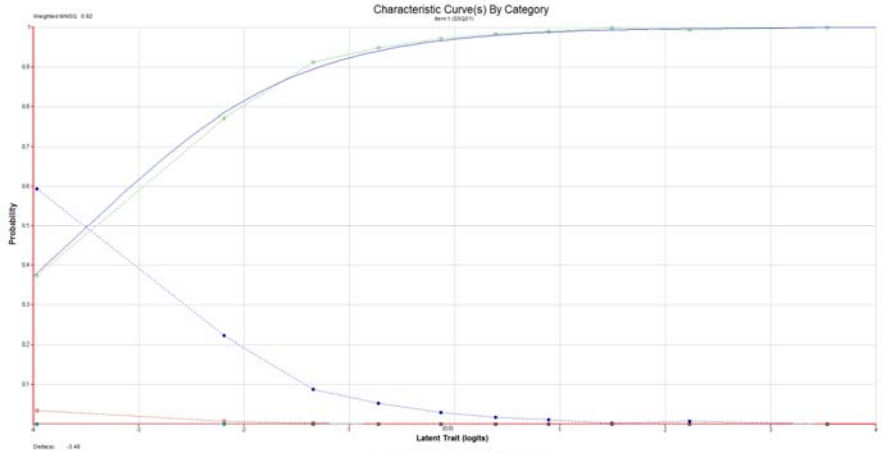

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

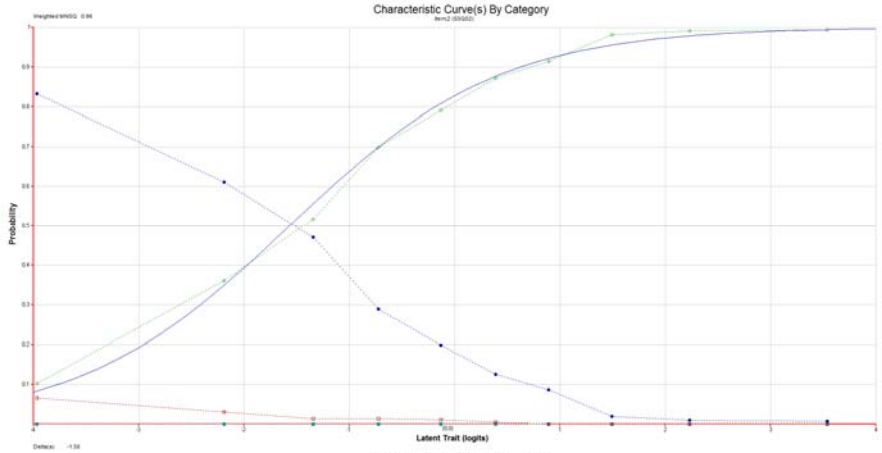

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

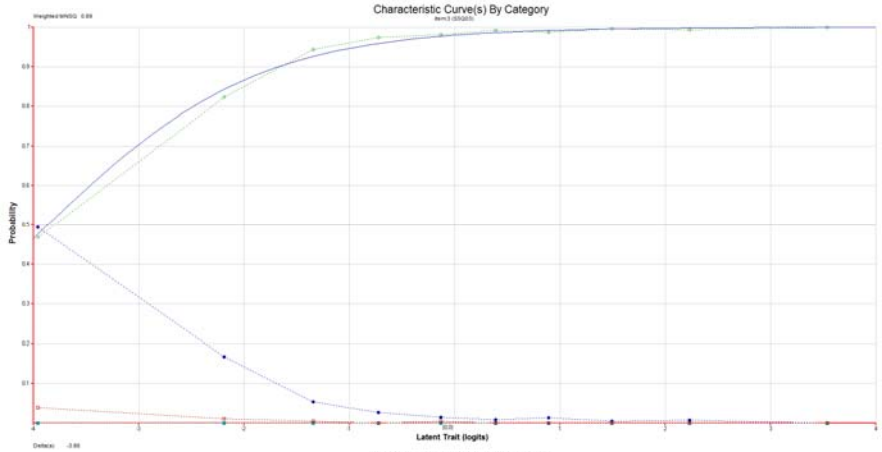

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

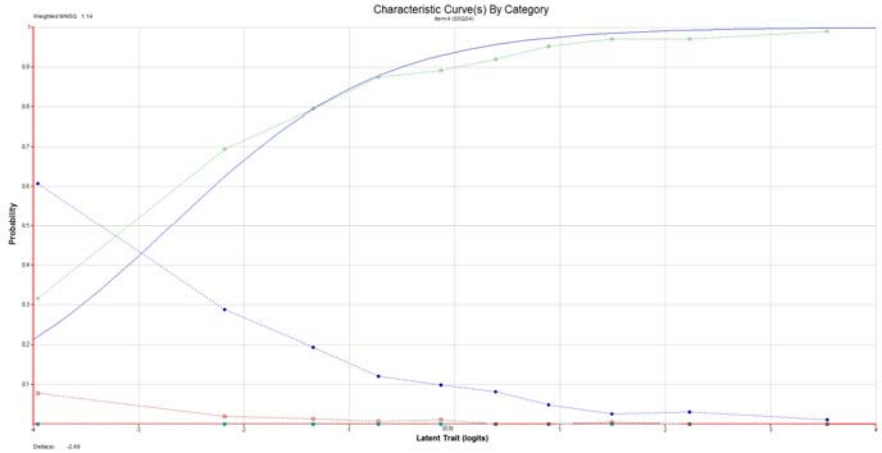

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

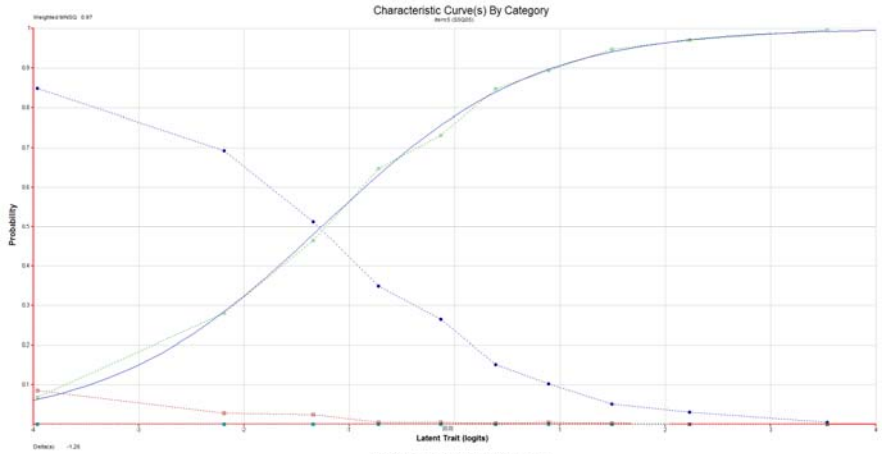
D.6. Year 5 Spelling

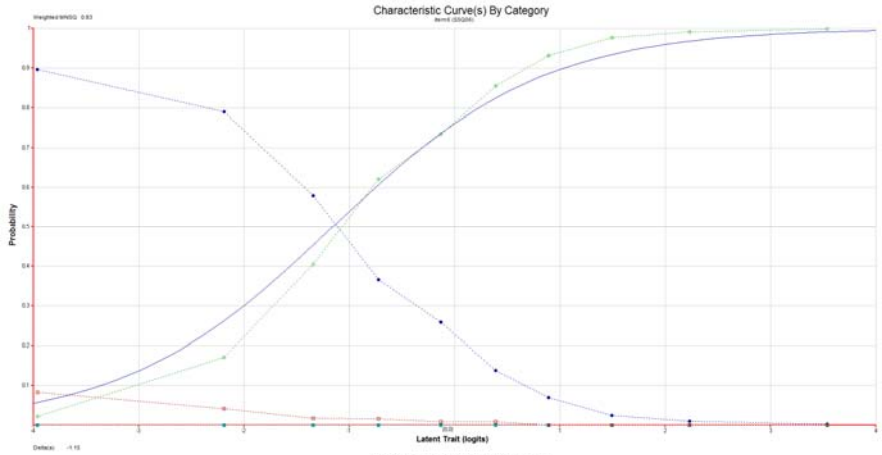


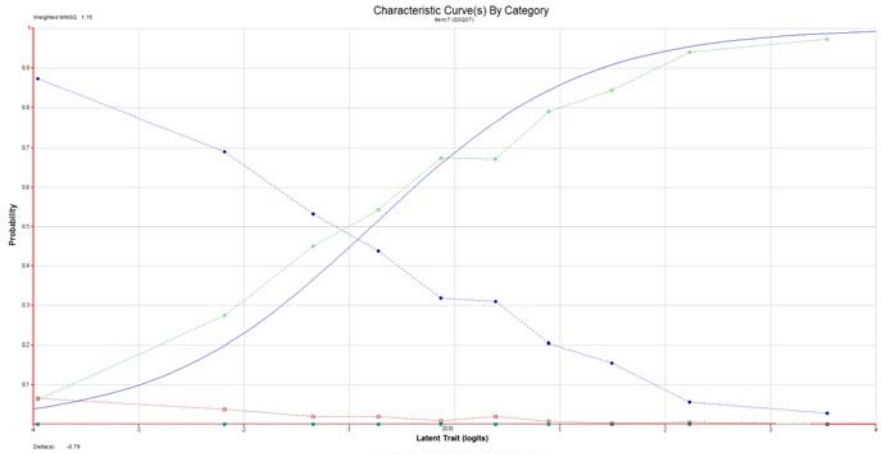


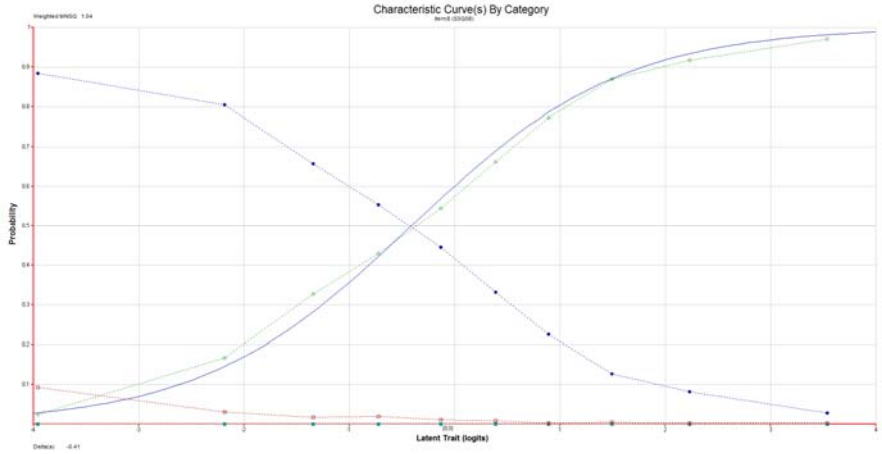


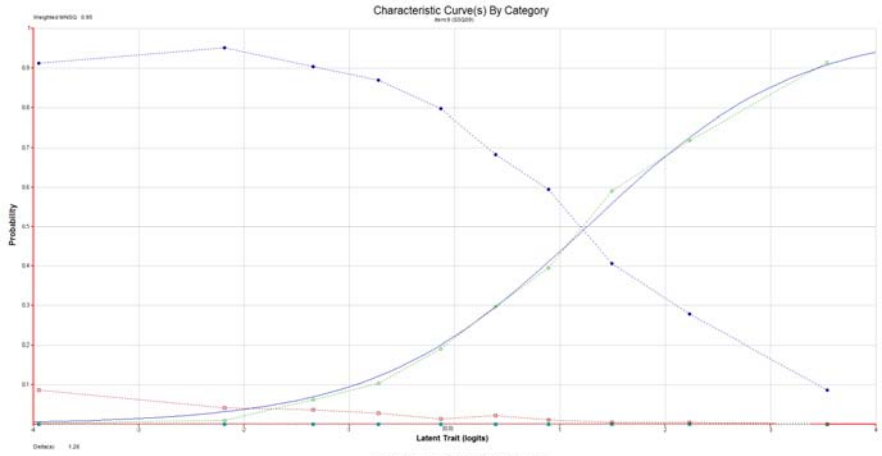


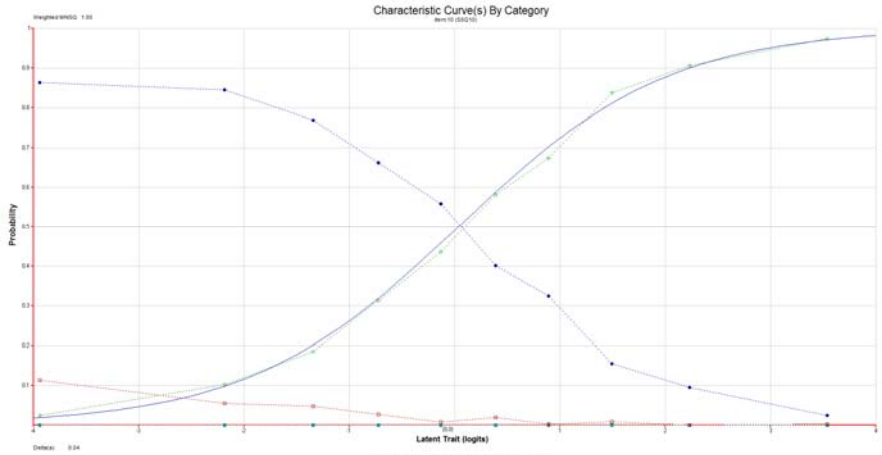

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

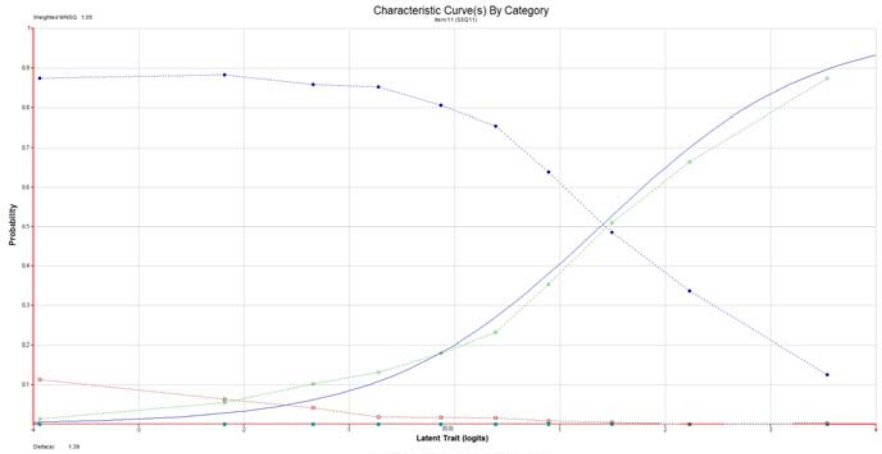

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

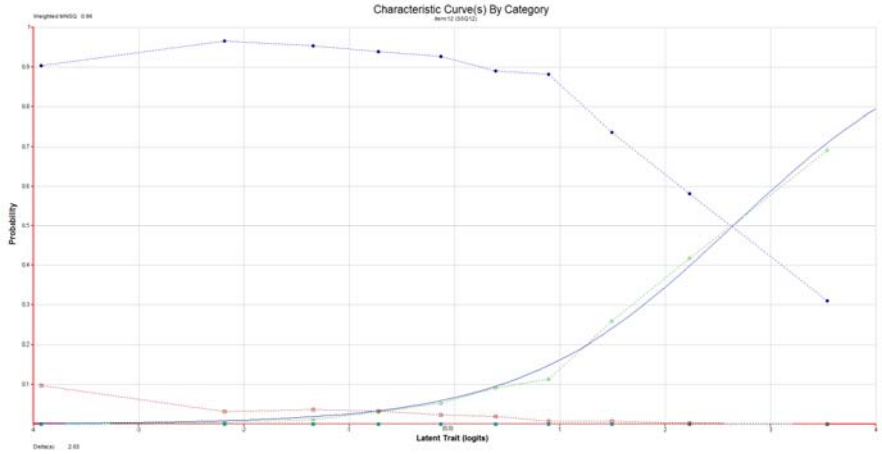

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

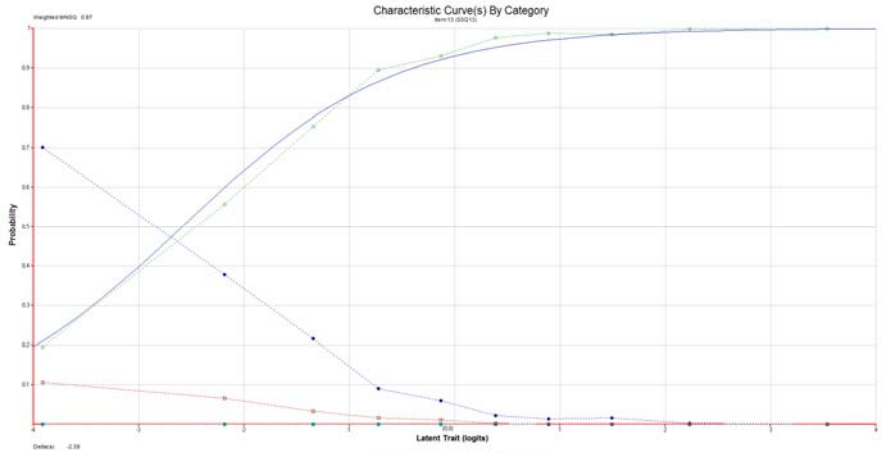

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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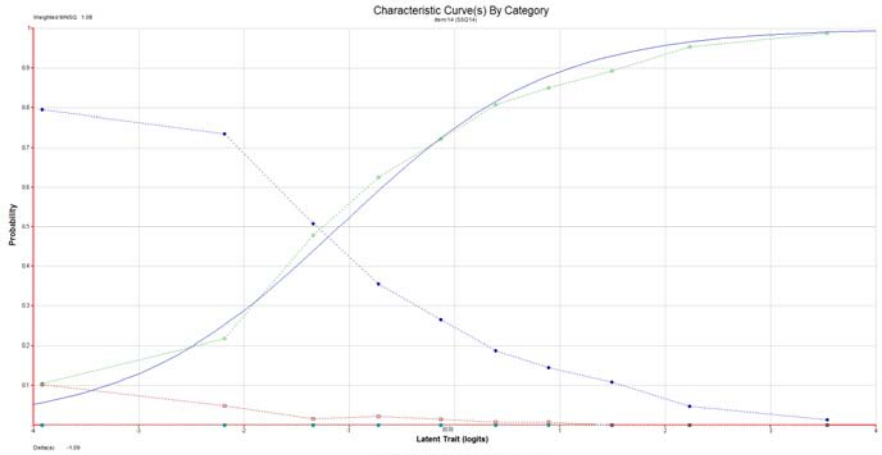
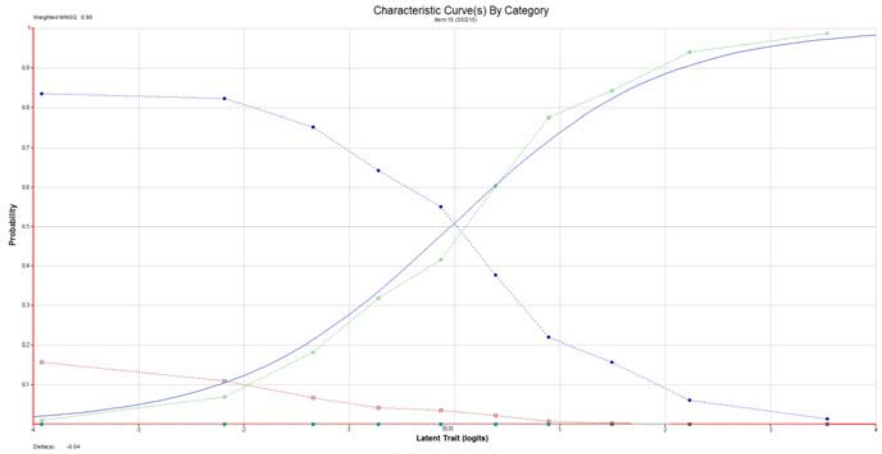
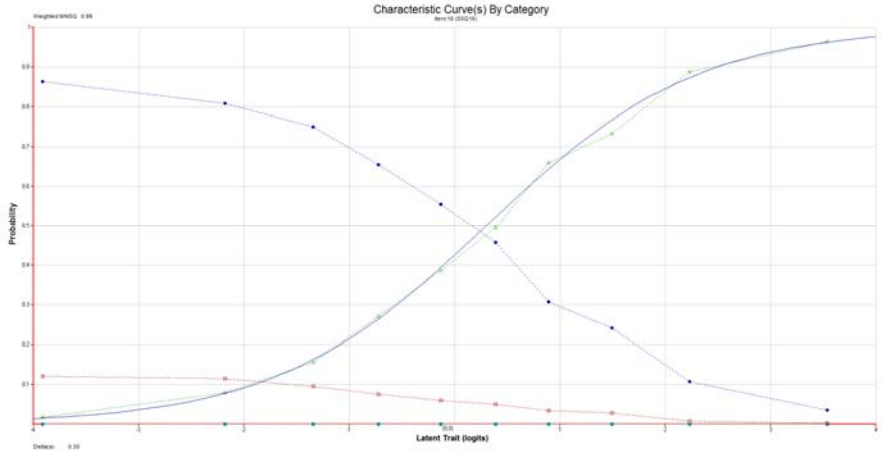
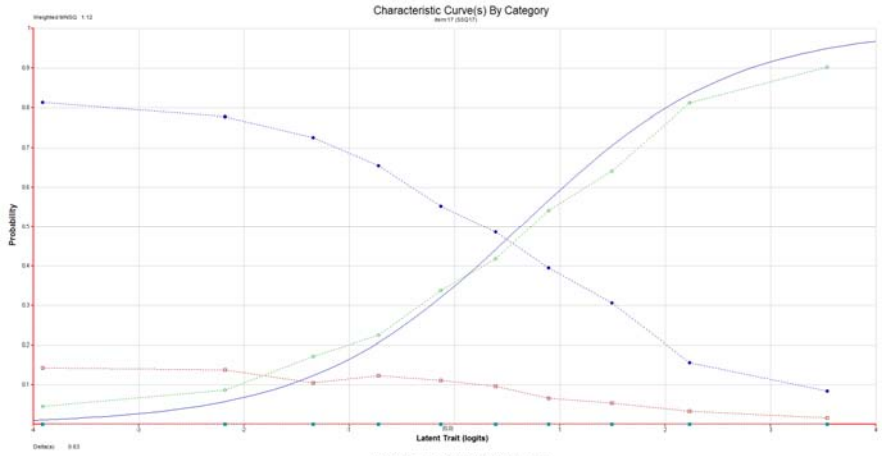
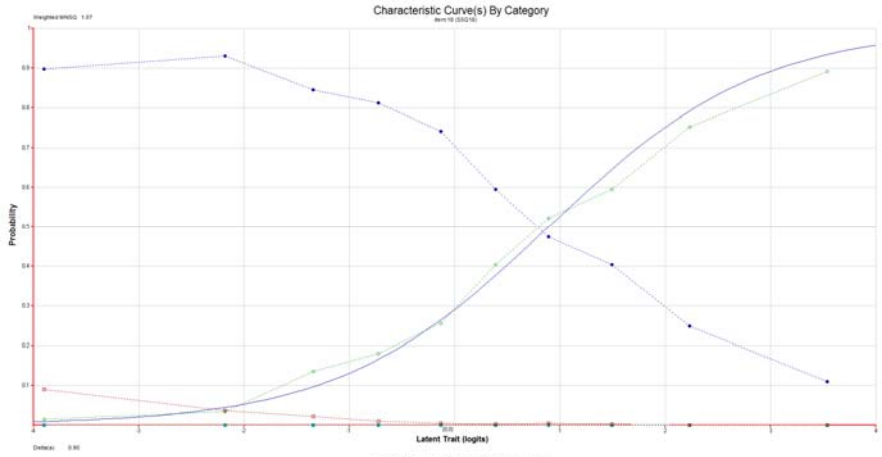
Probability
Latent Trait (logits)

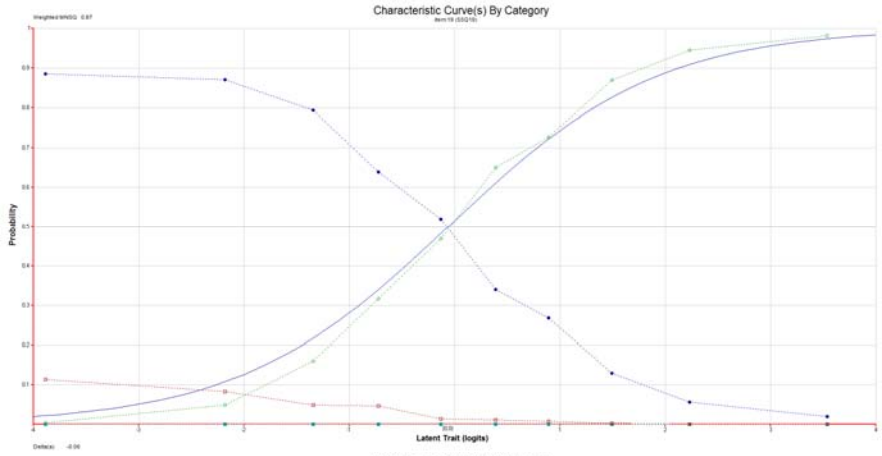

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

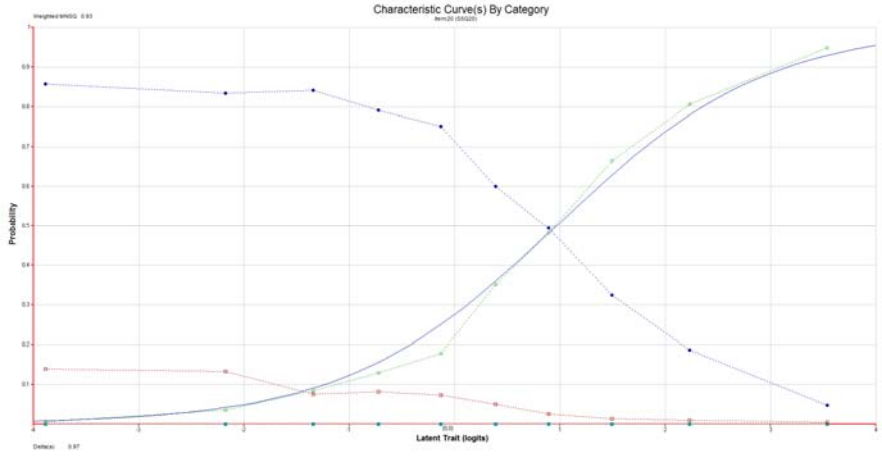

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

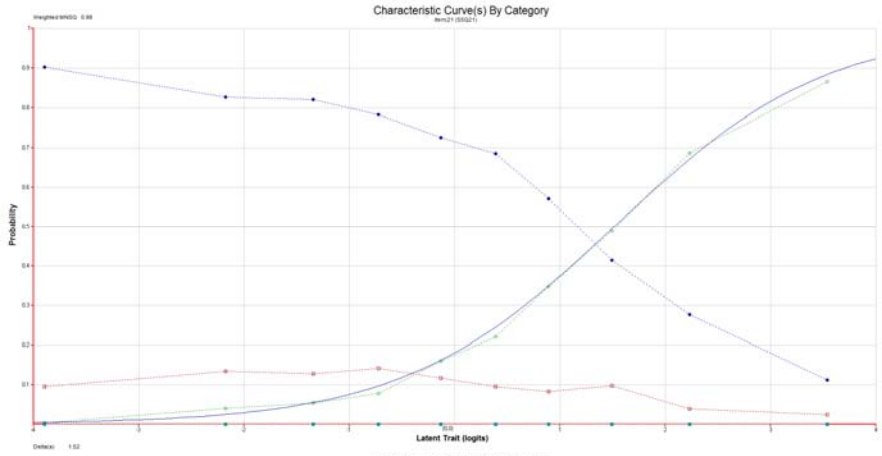

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

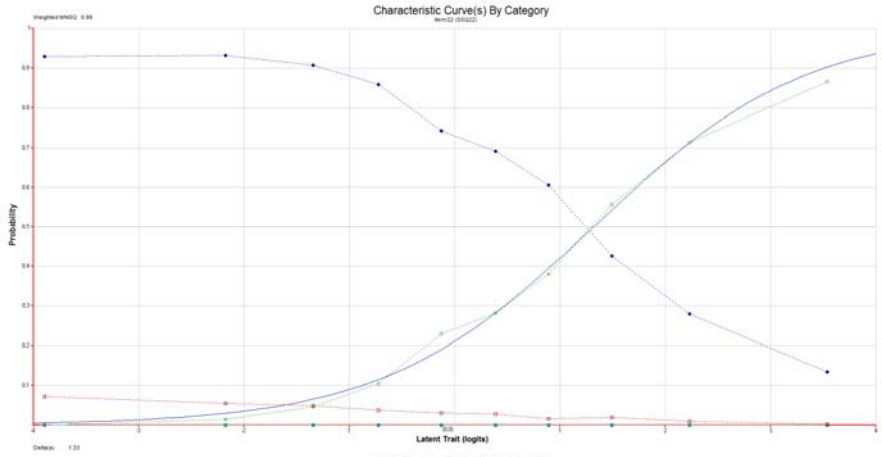

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

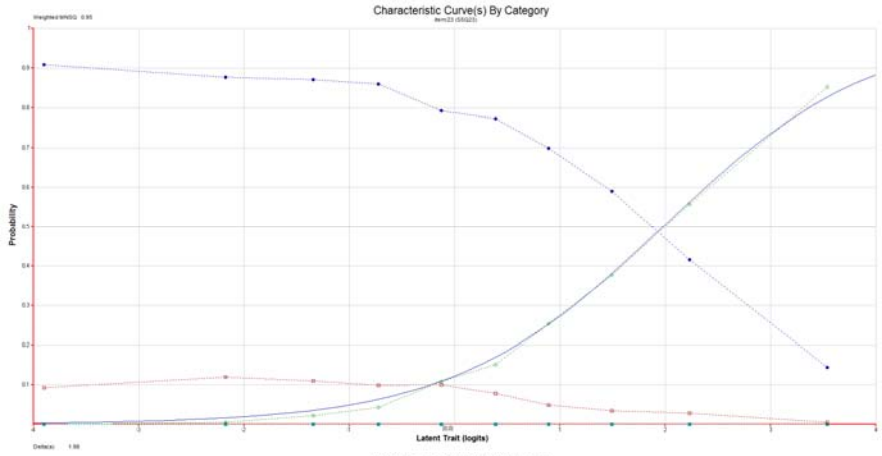

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

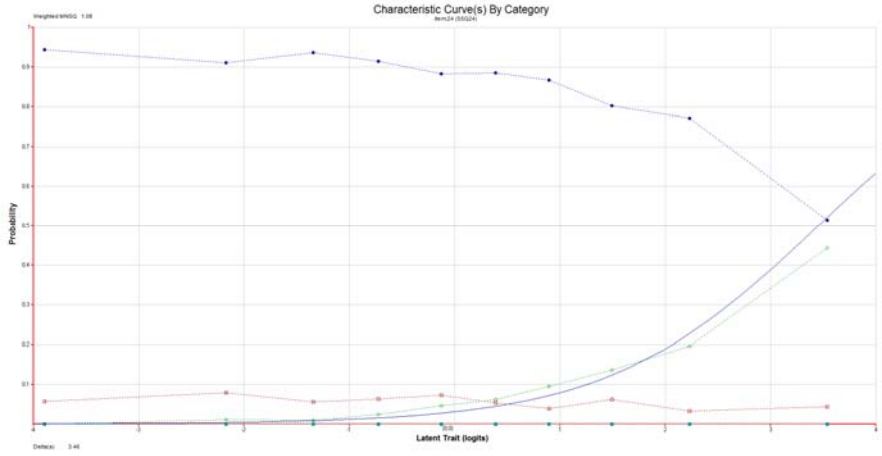

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

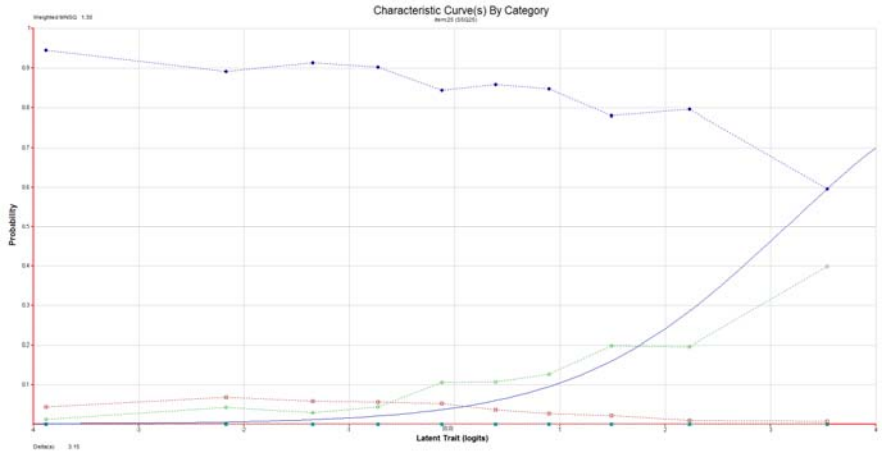

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

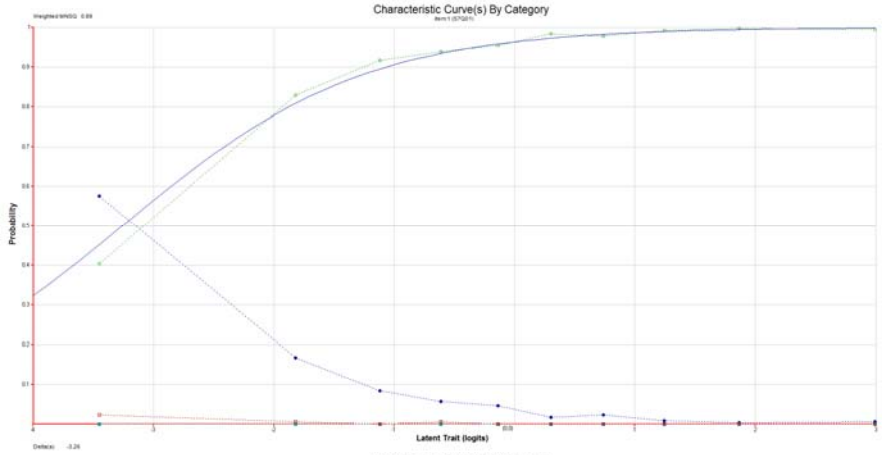

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

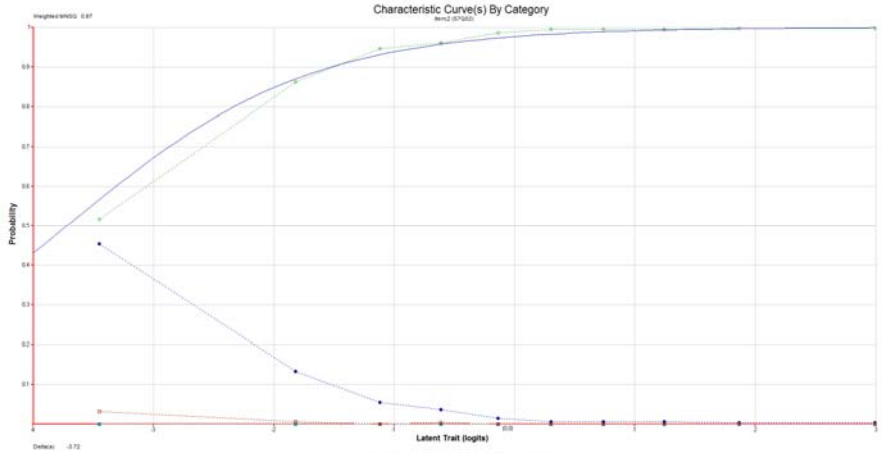

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

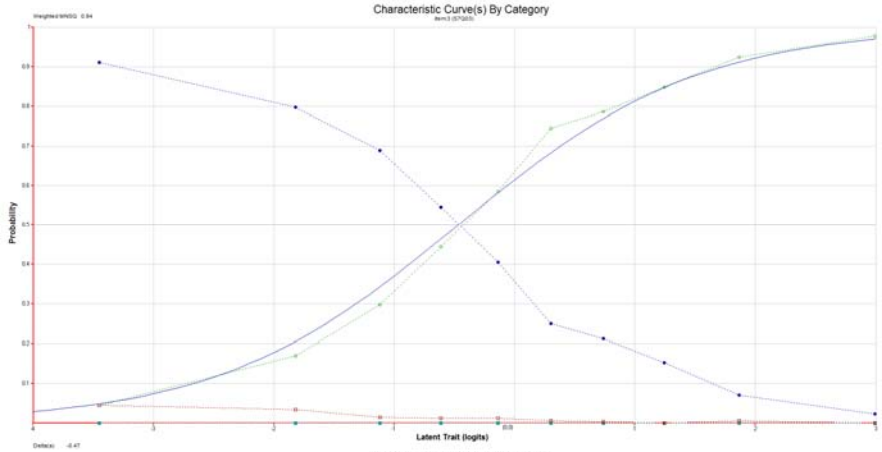

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

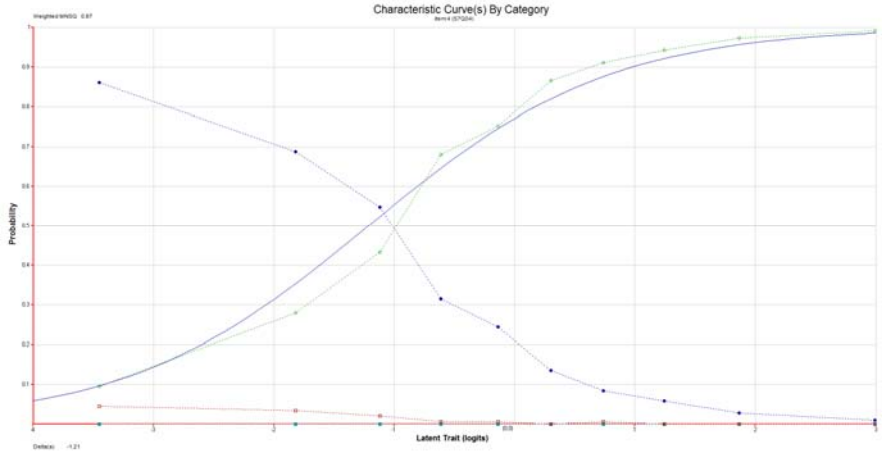

Characteristic Curve(s) By Category
Item25 (SSQ25)
Weighted MNSQ 1.30
Probability
Latent Trait (logits)
Delta(s) 3.15

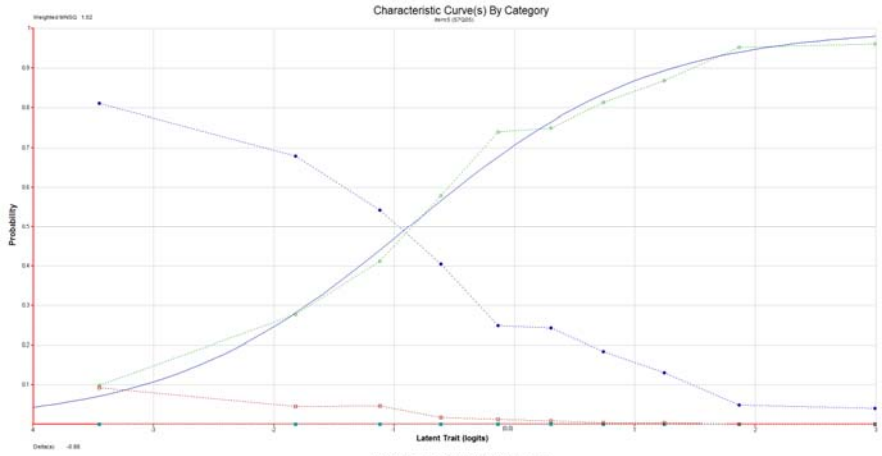
D.7. Year 7 Spelling

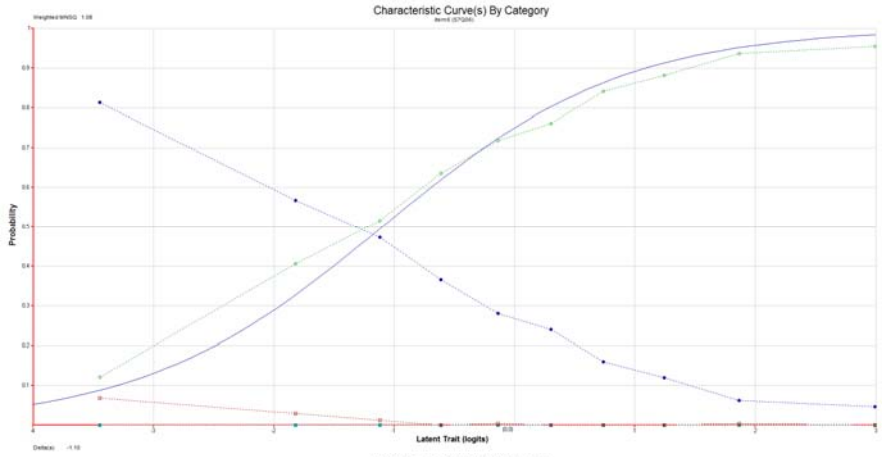


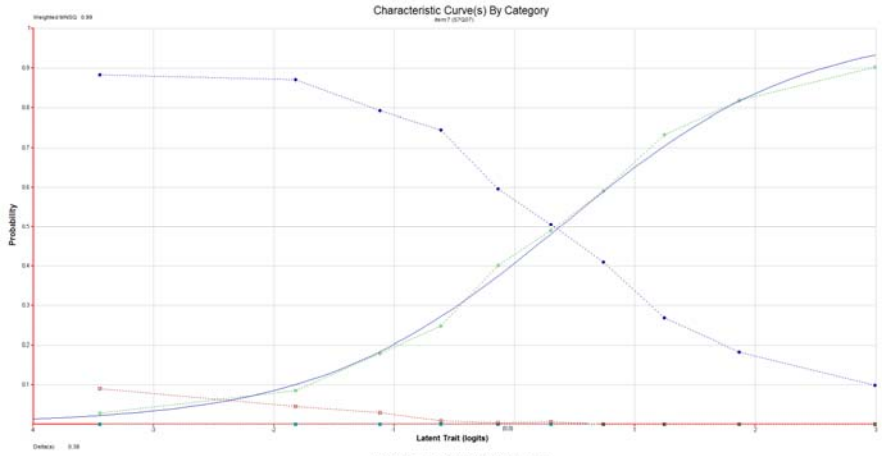


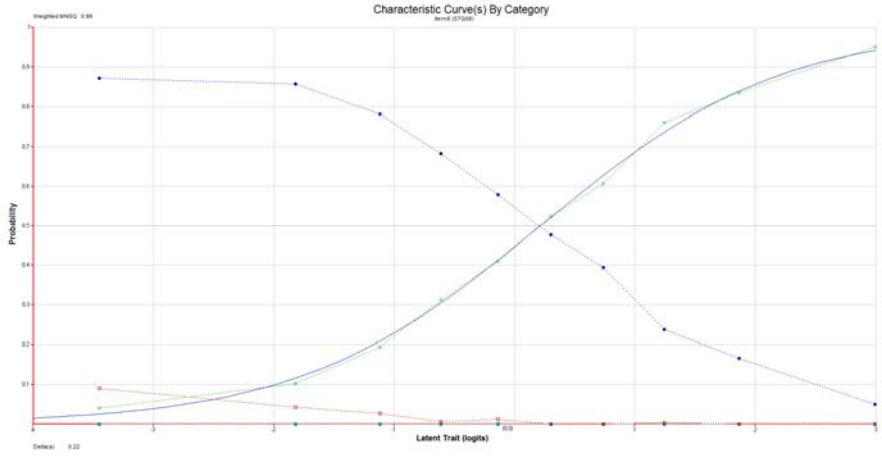


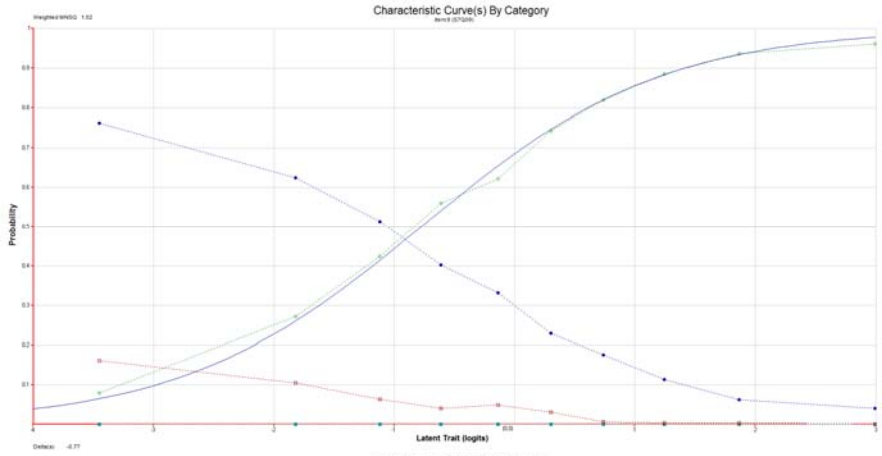


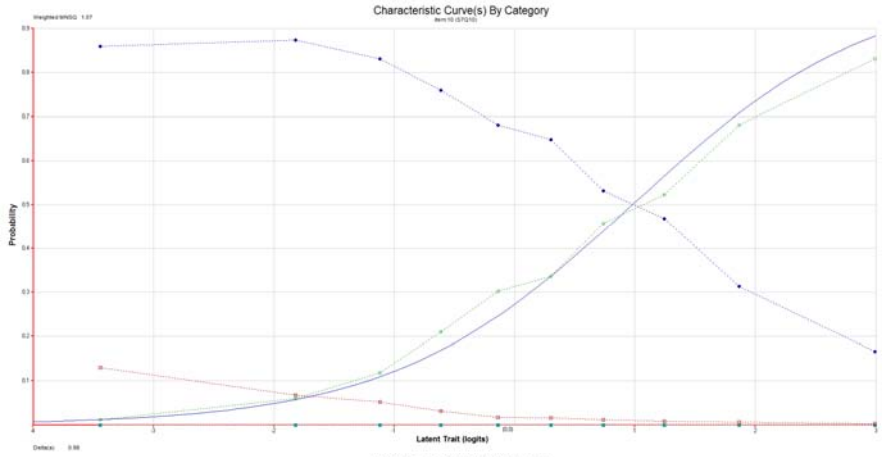

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

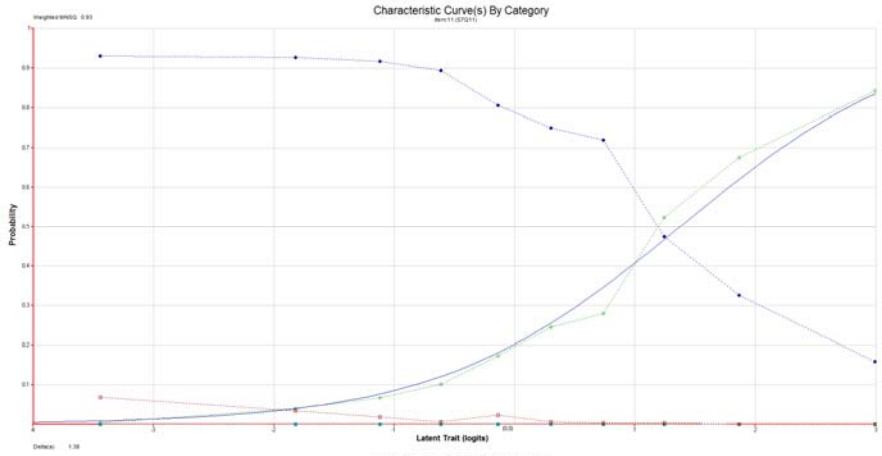

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

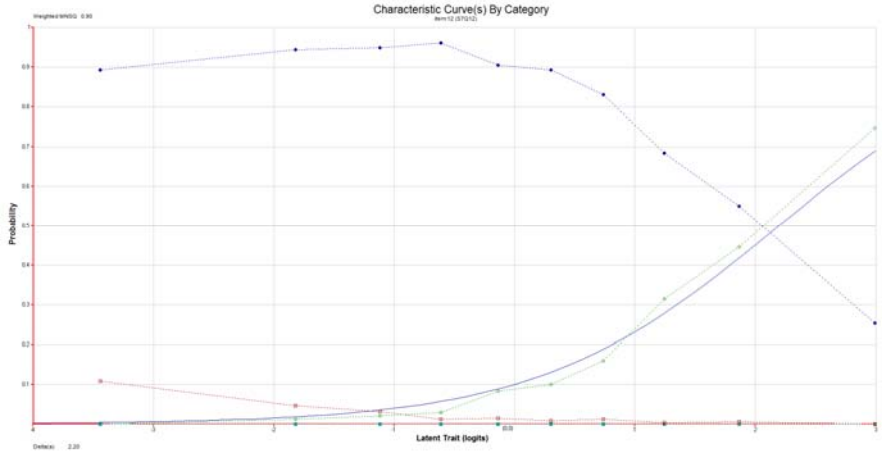

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

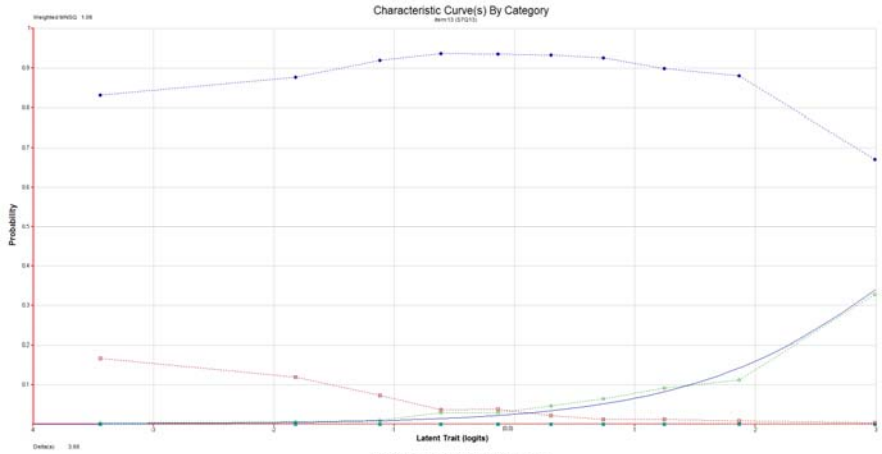

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

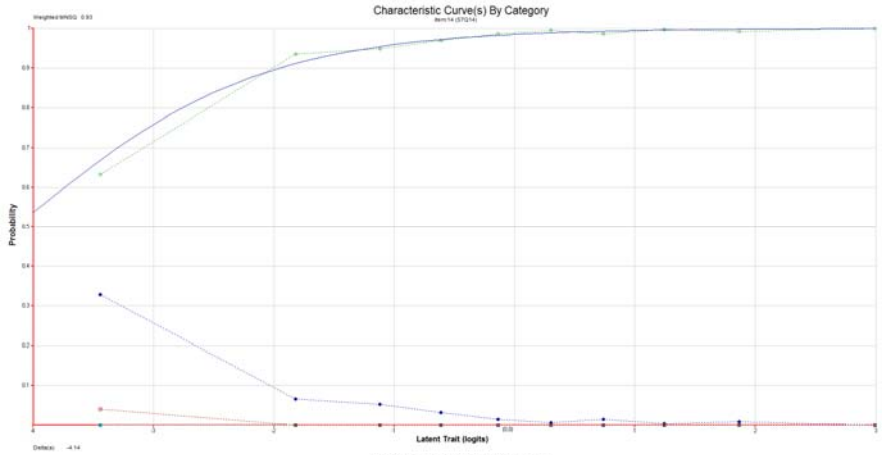

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

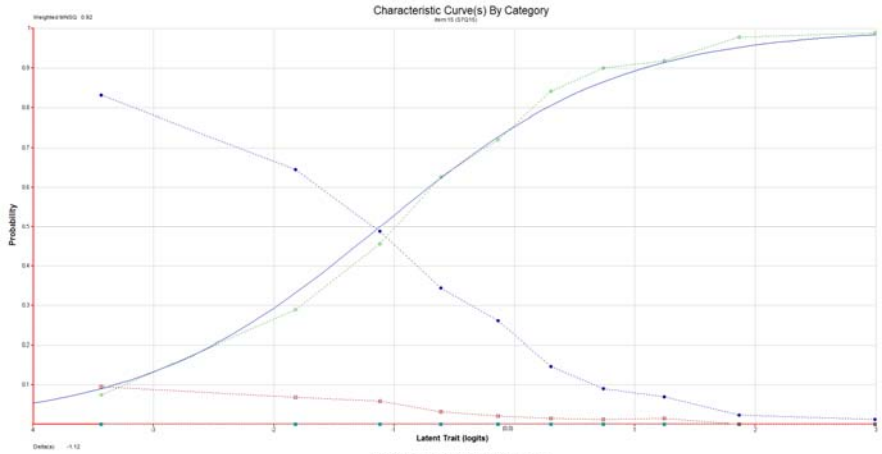

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

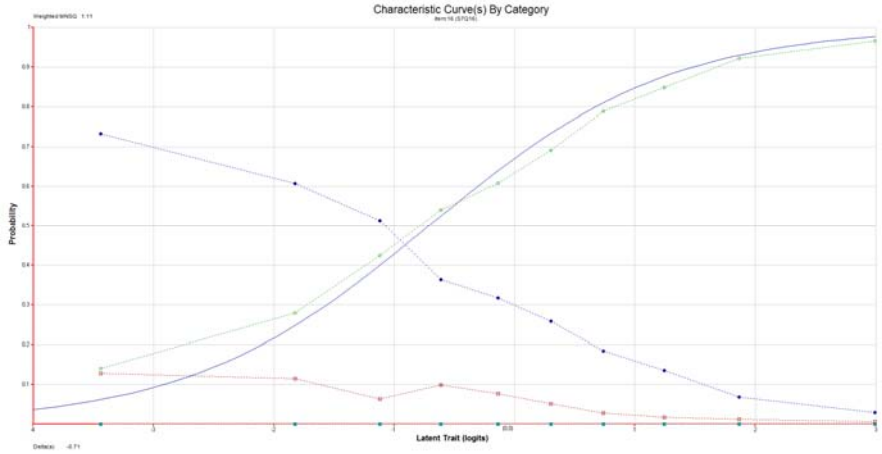

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

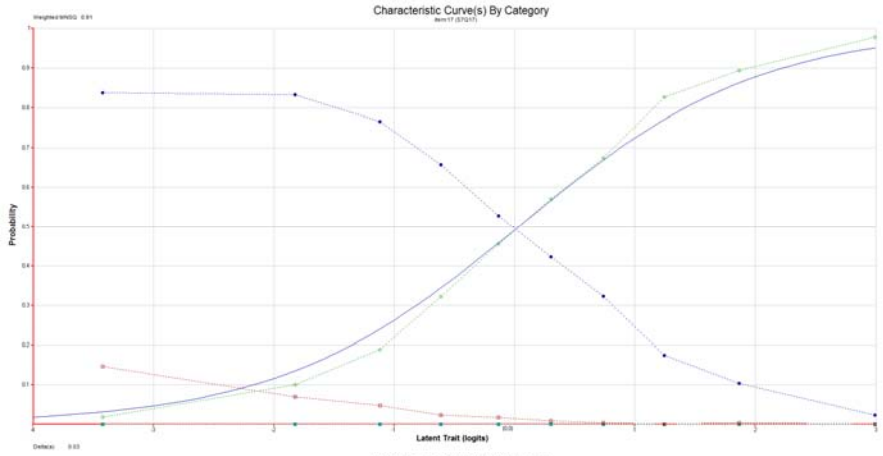

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

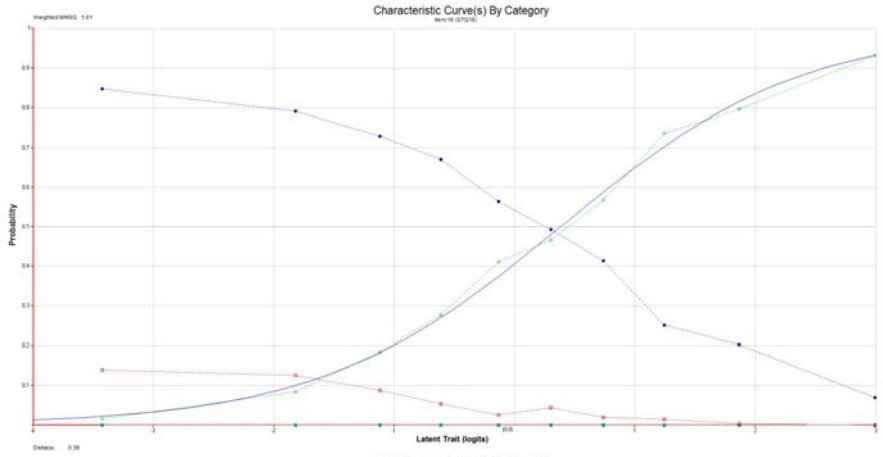

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

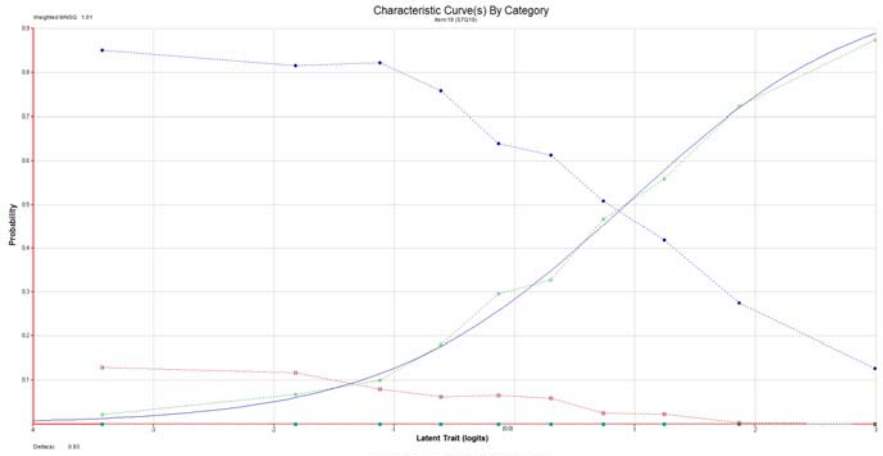

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

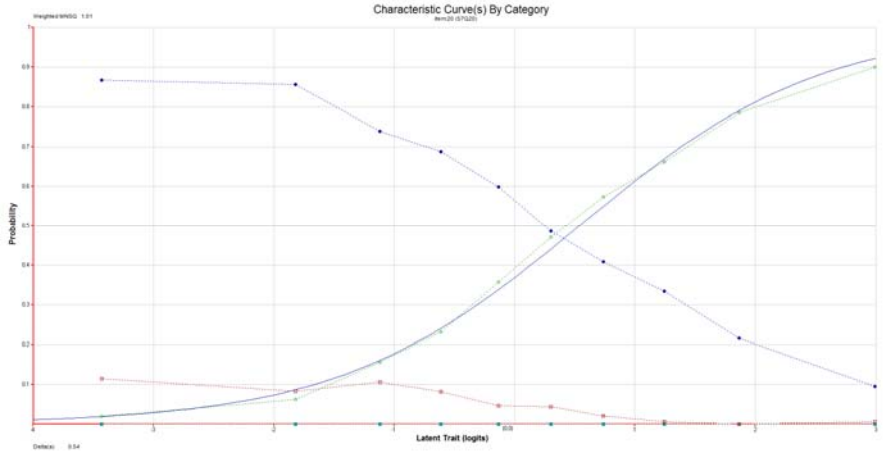

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

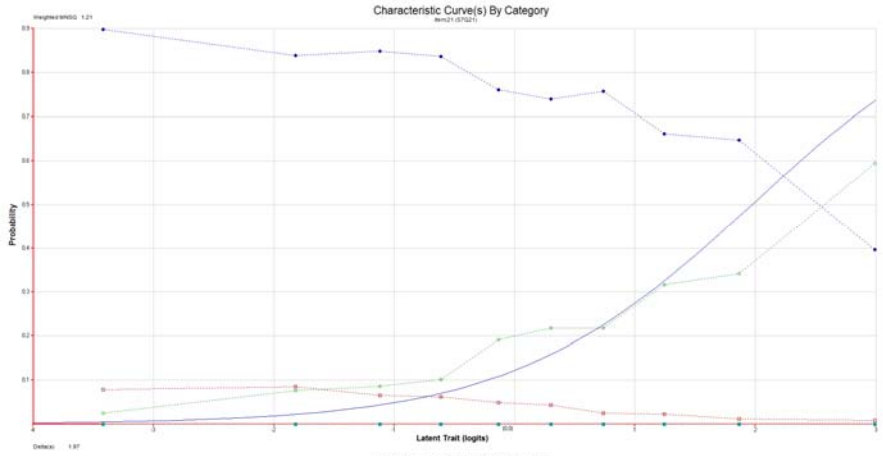

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

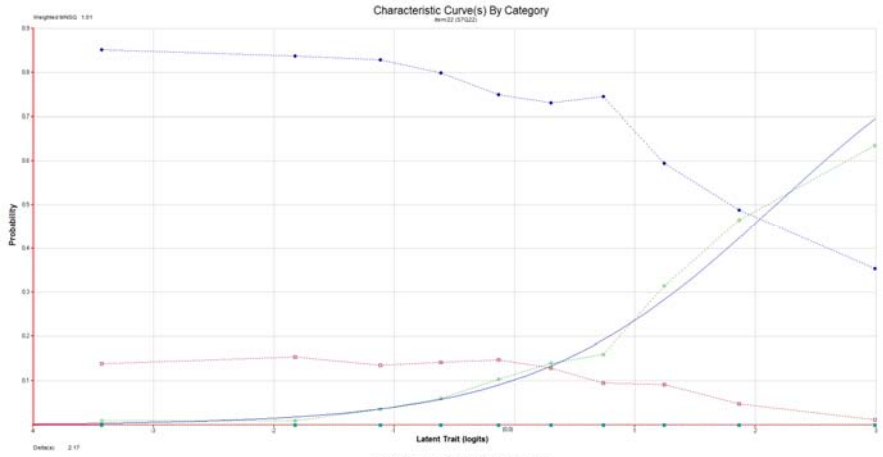

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

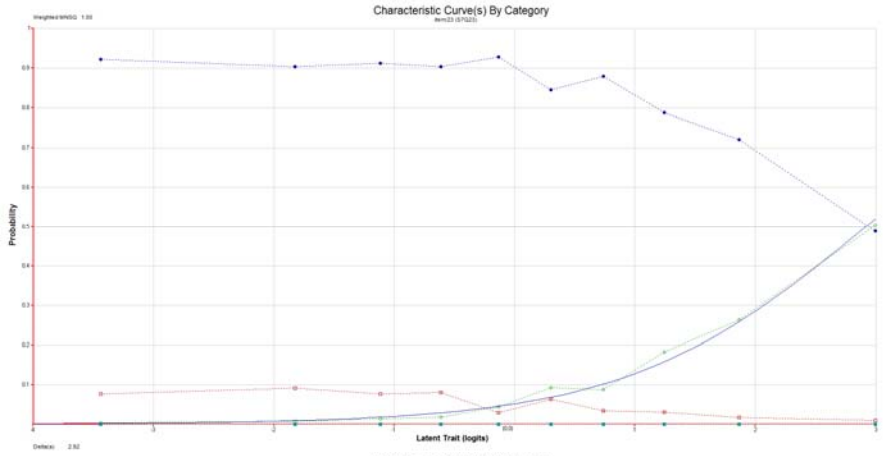

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

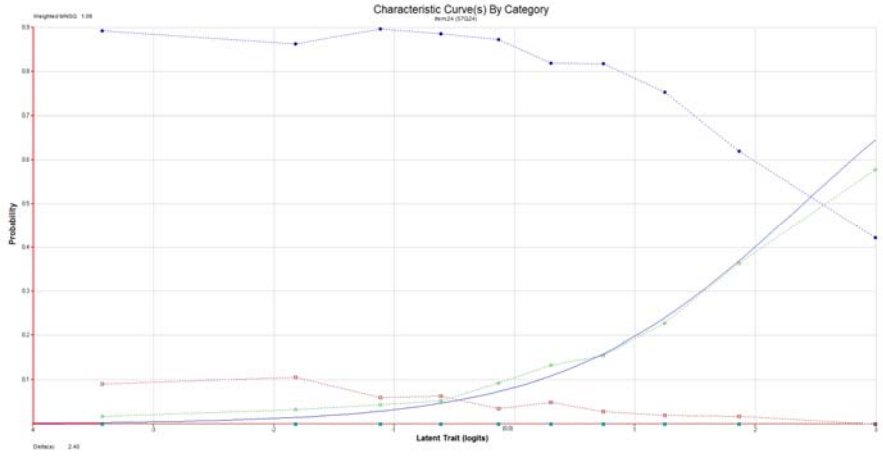

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

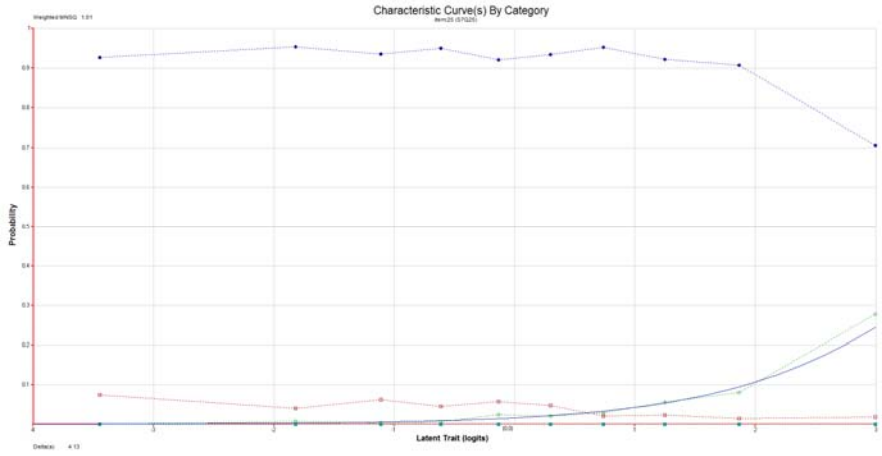

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

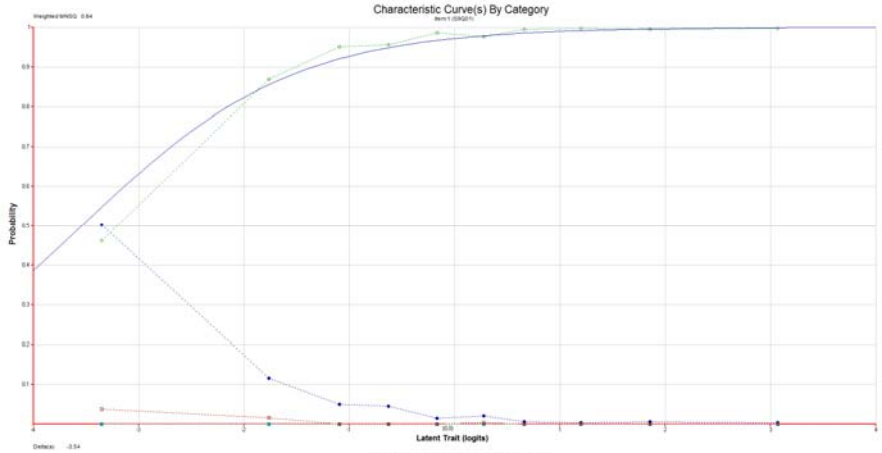

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

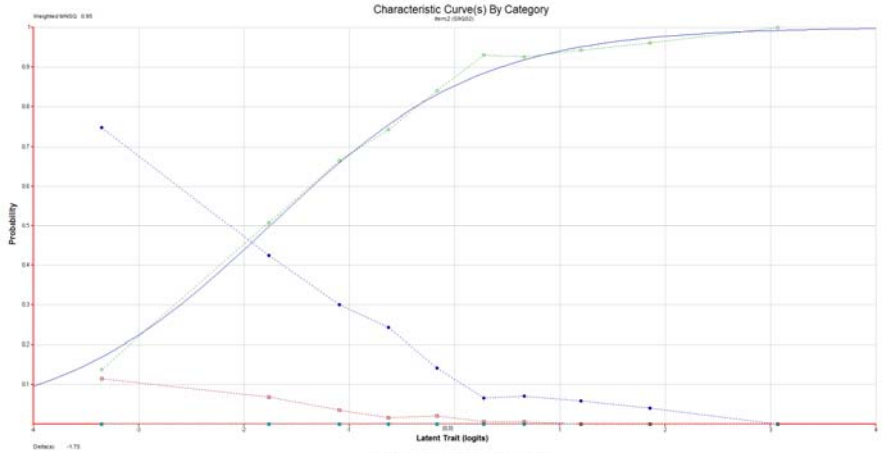

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

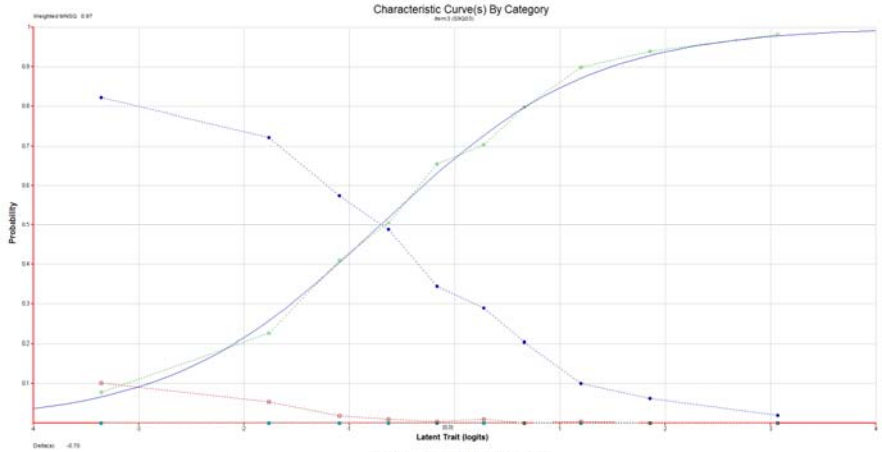

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

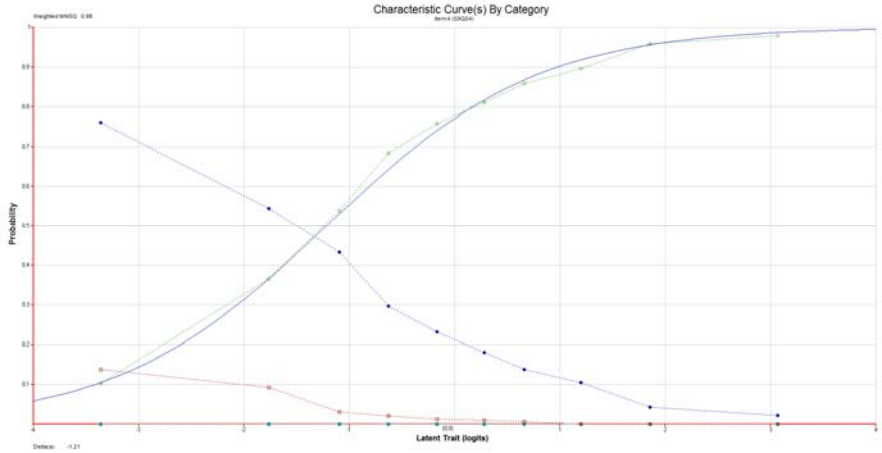

Characteristic Curve(s) By Category
Item25 (57025)
Weighted MNSQ 1.01
Probability
Latent Trait (logits)
Delta(s) 4.13

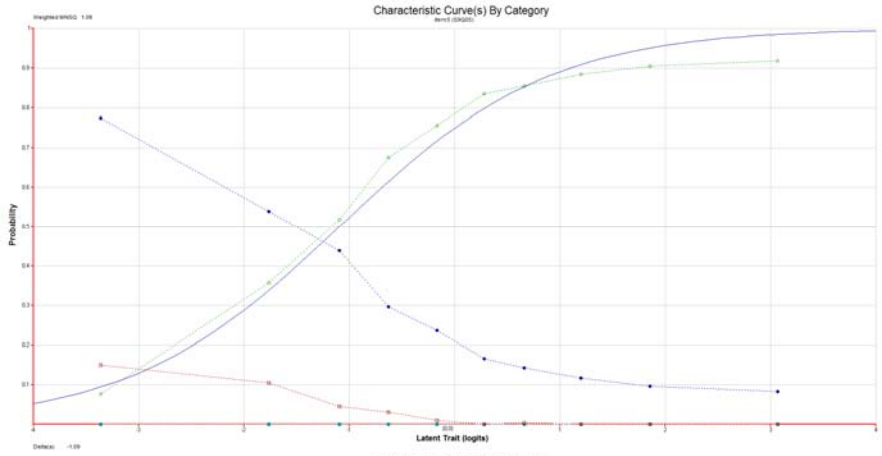
D.8. Year 9 Spelling

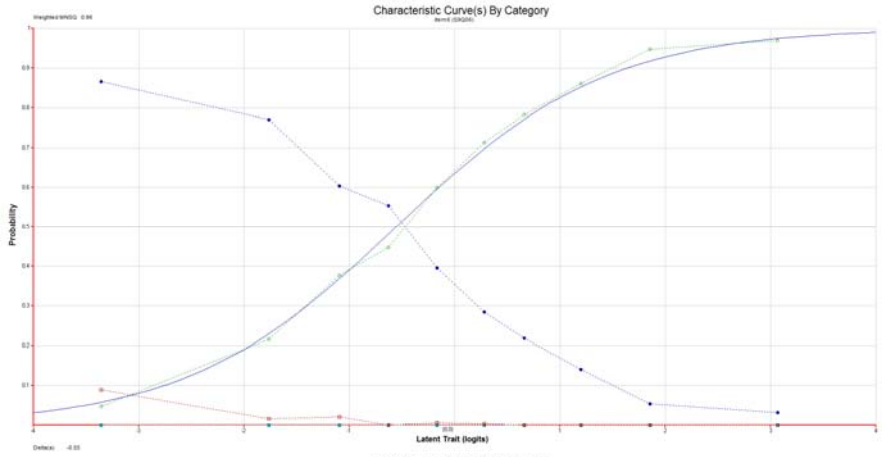


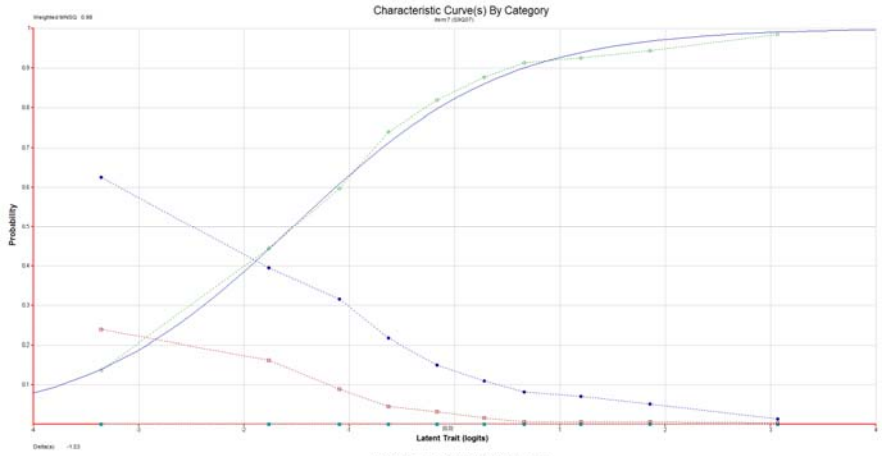


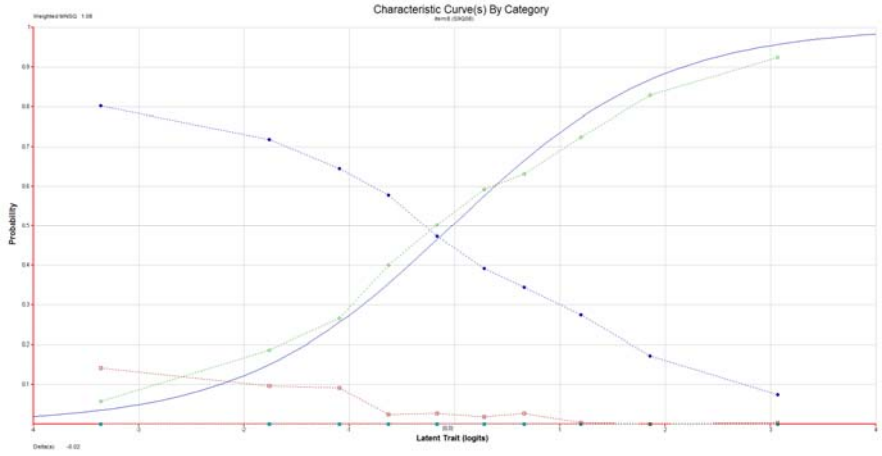


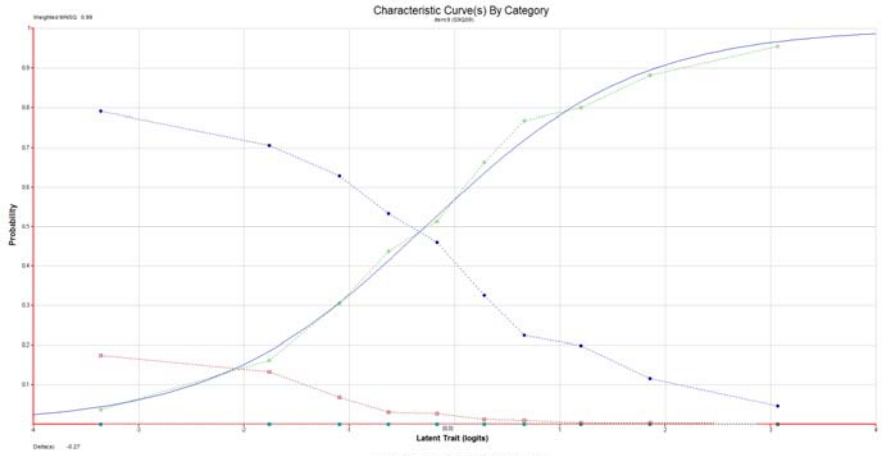


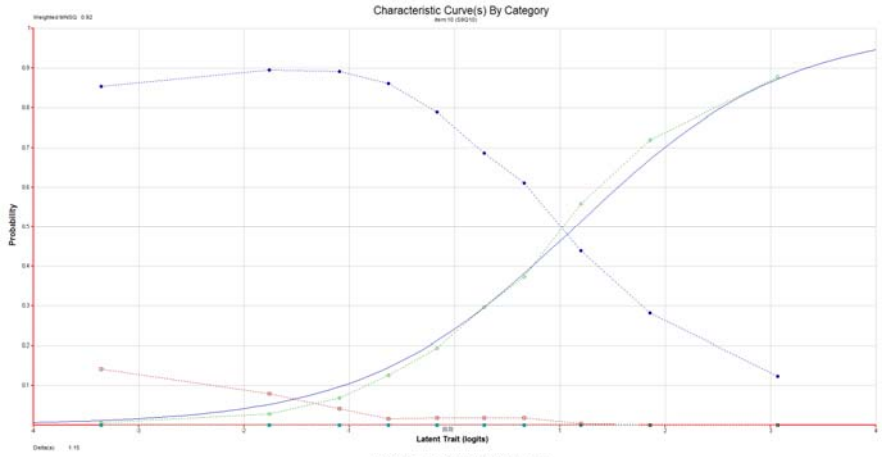

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

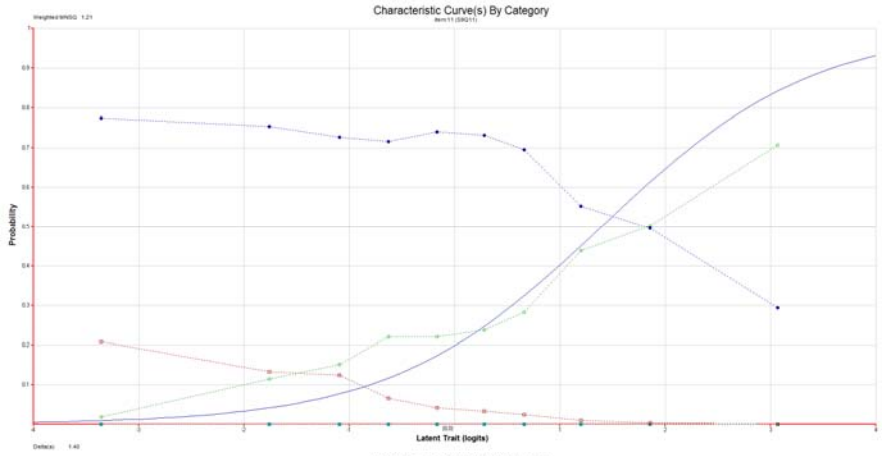

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

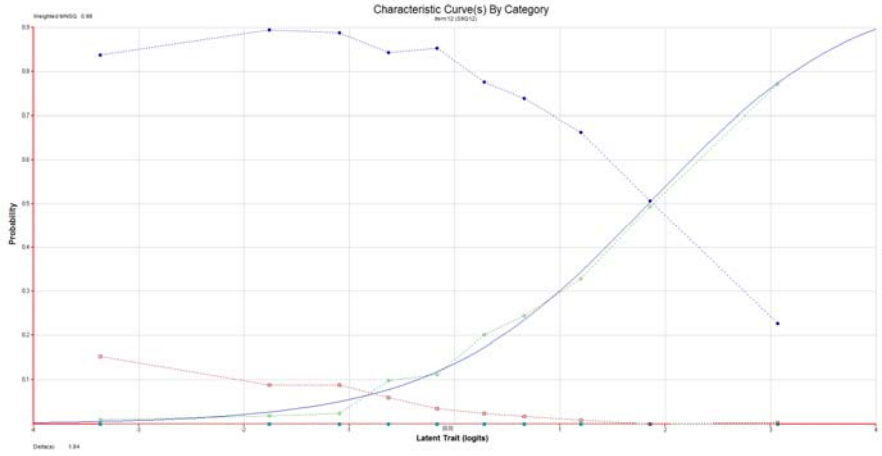

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

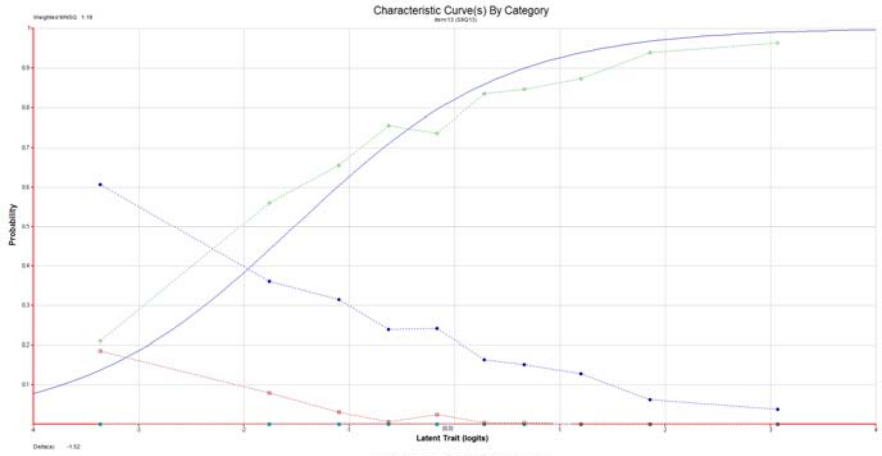

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

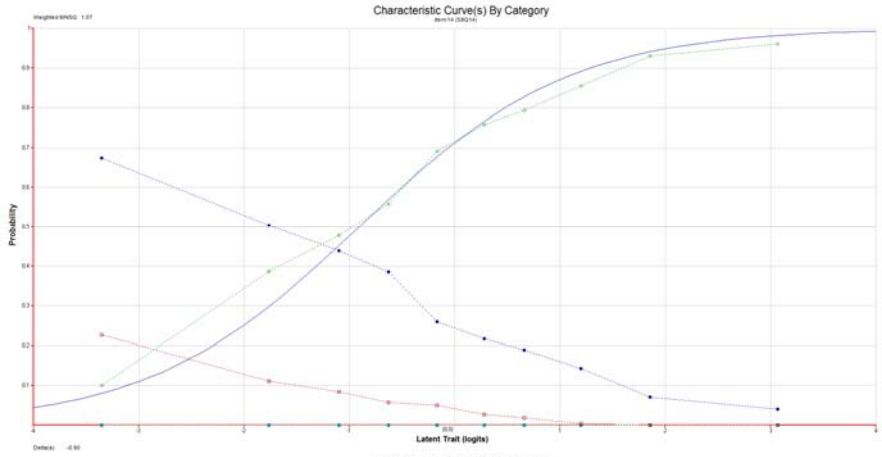

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

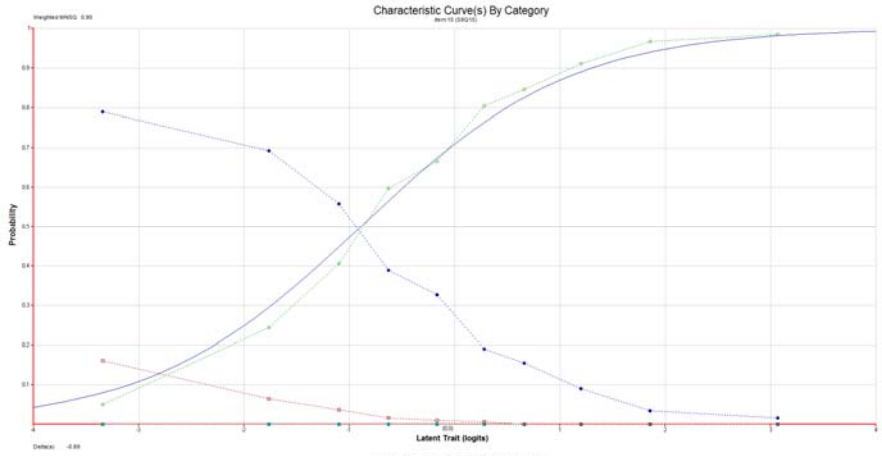

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

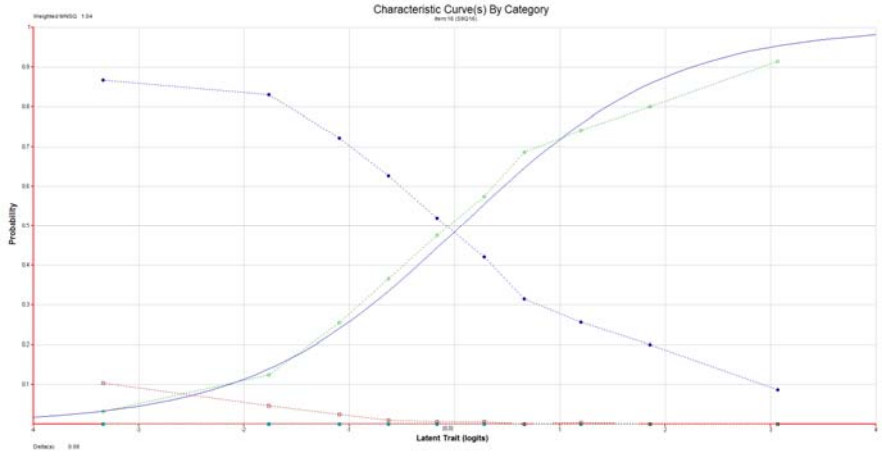

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

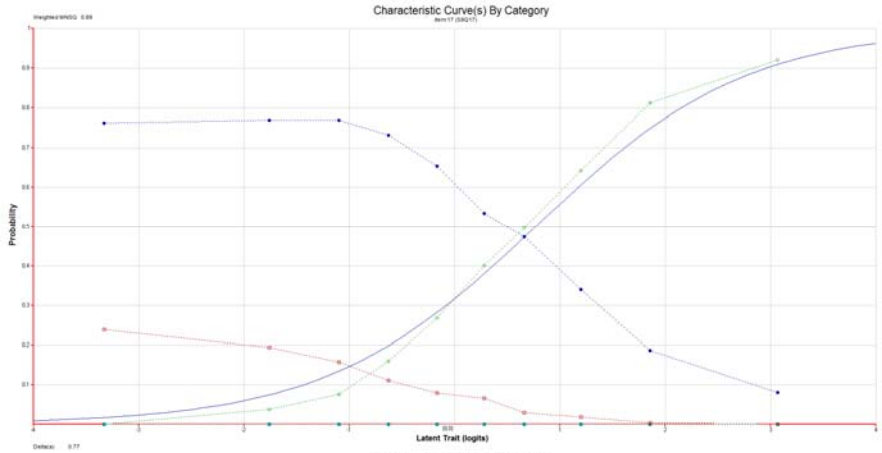

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

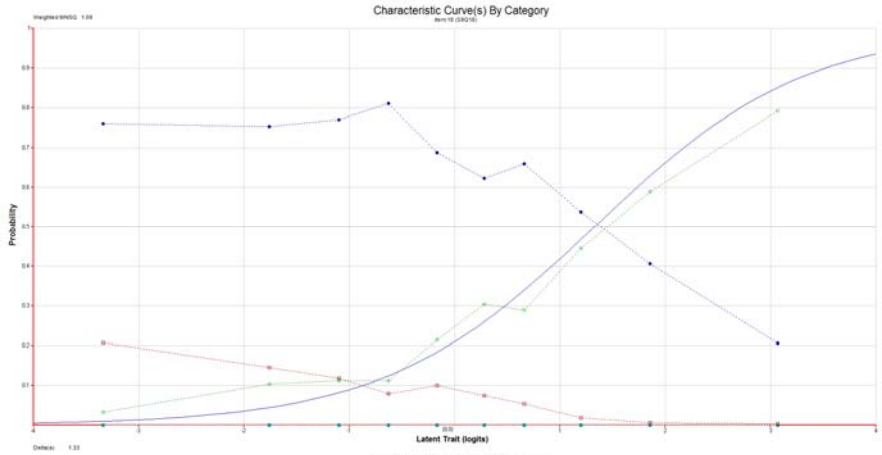

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

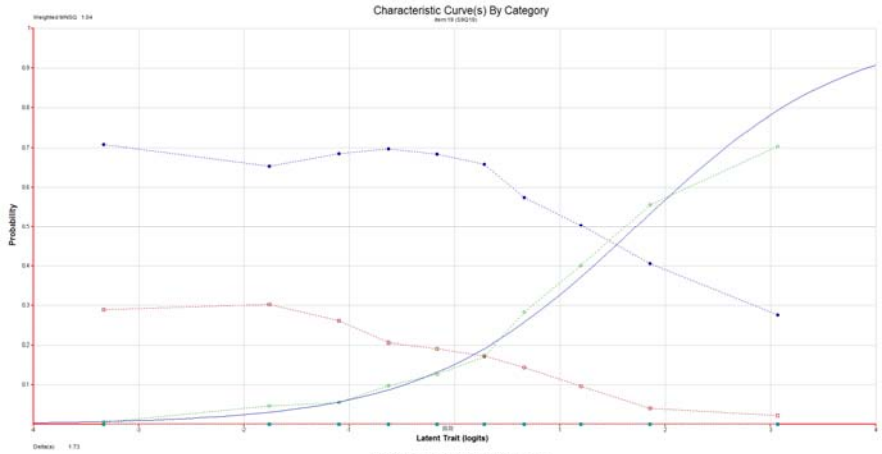

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

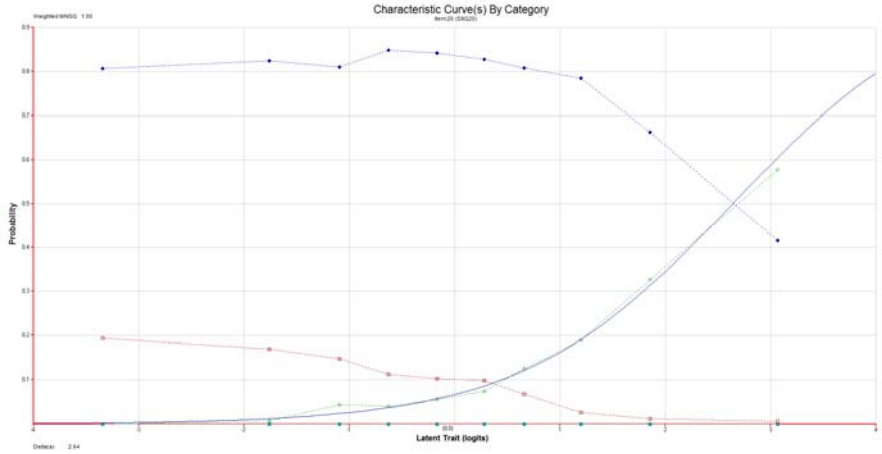

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

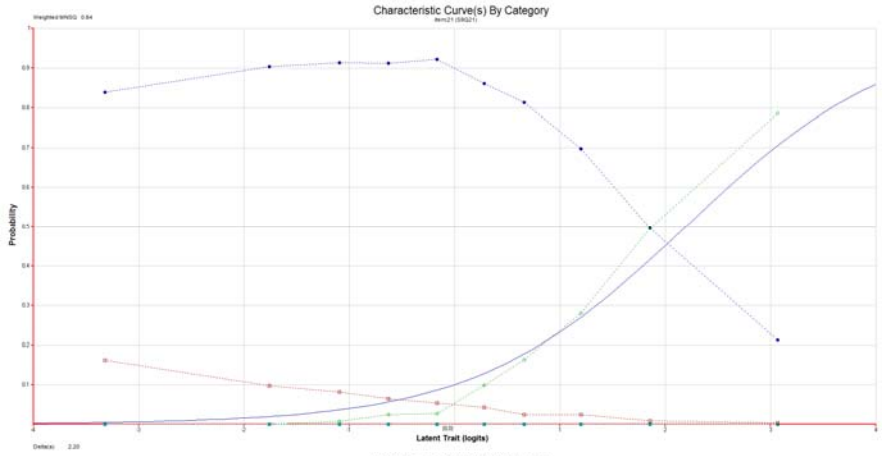

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

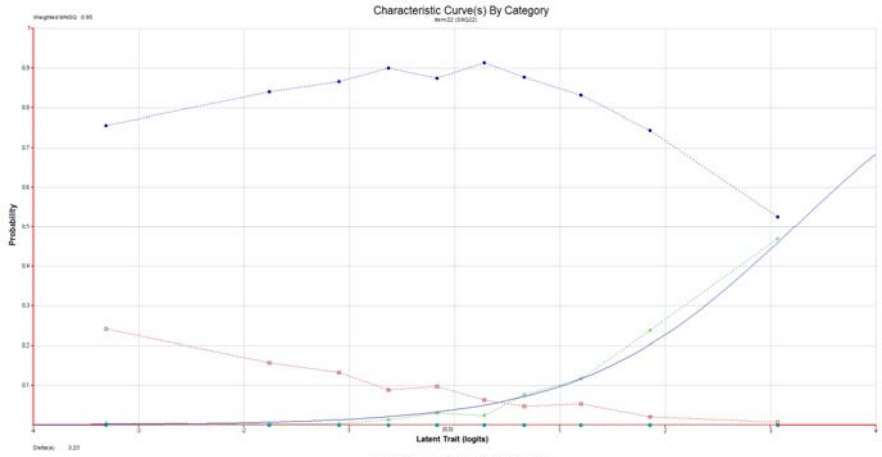

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

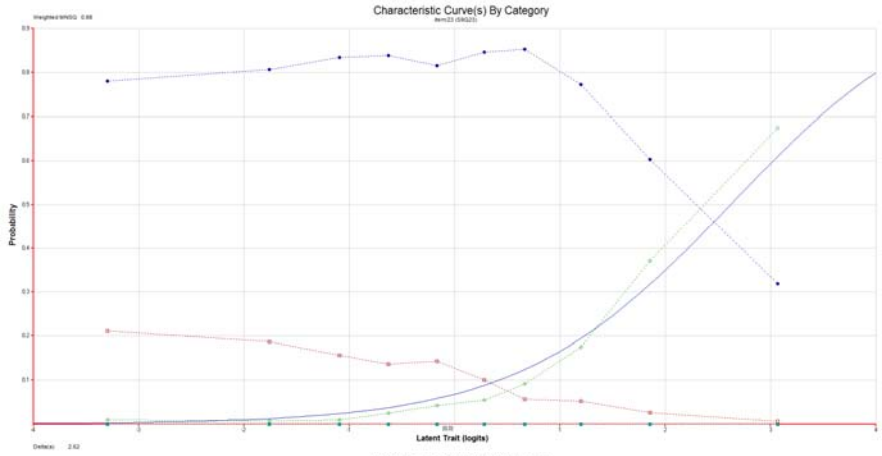

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

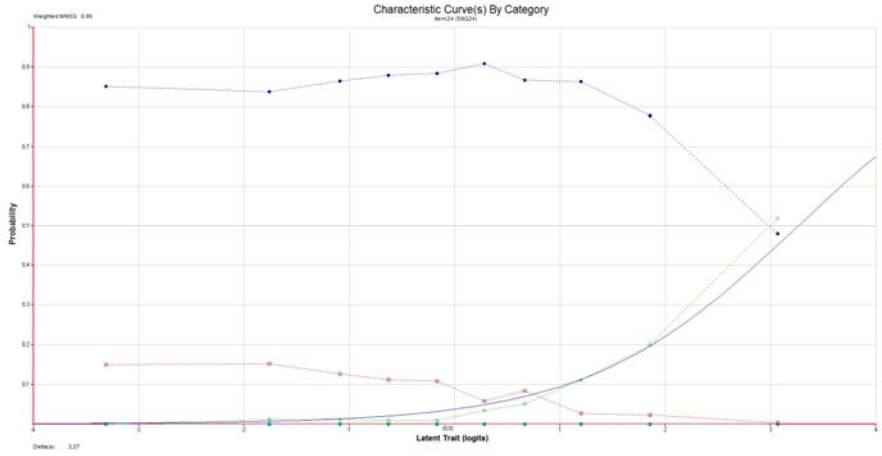

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

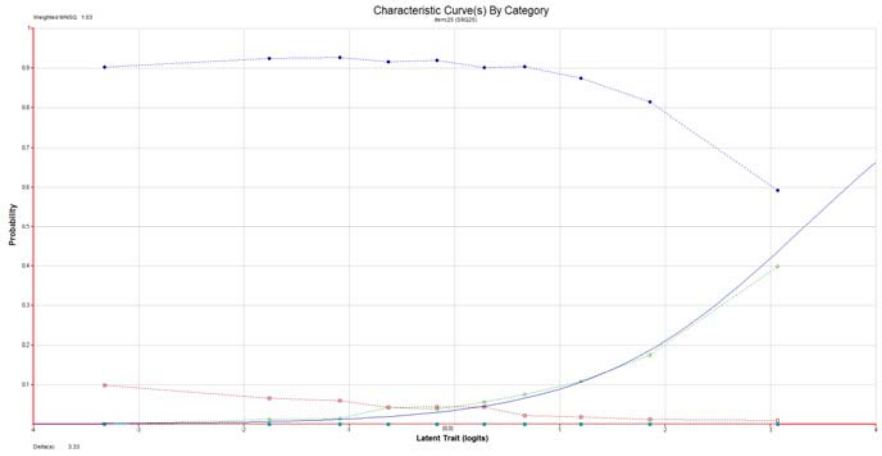

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

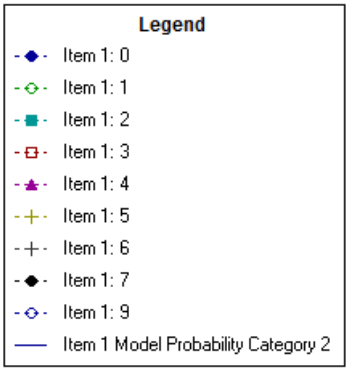

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

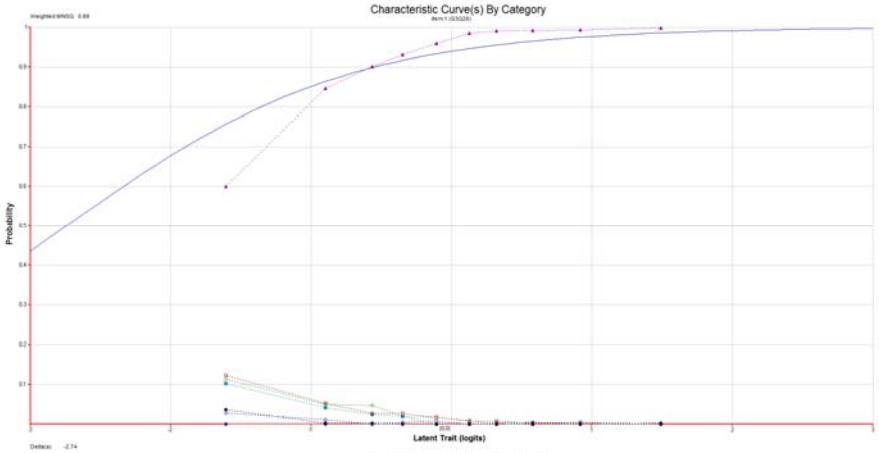

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

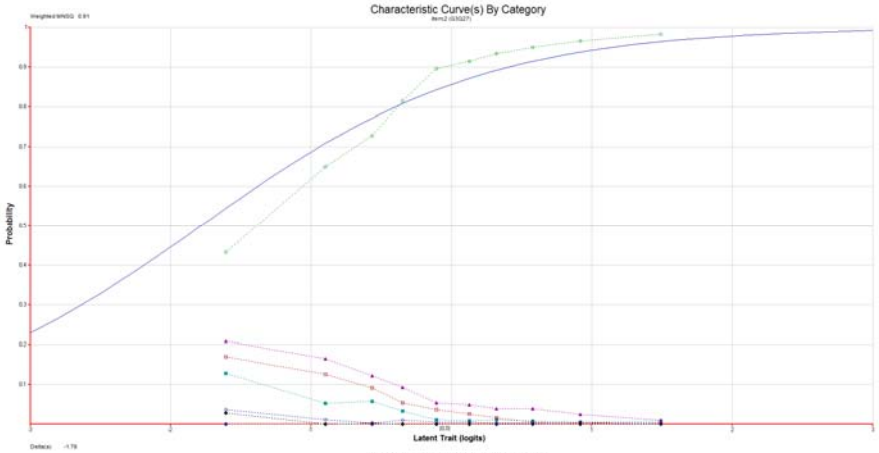

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

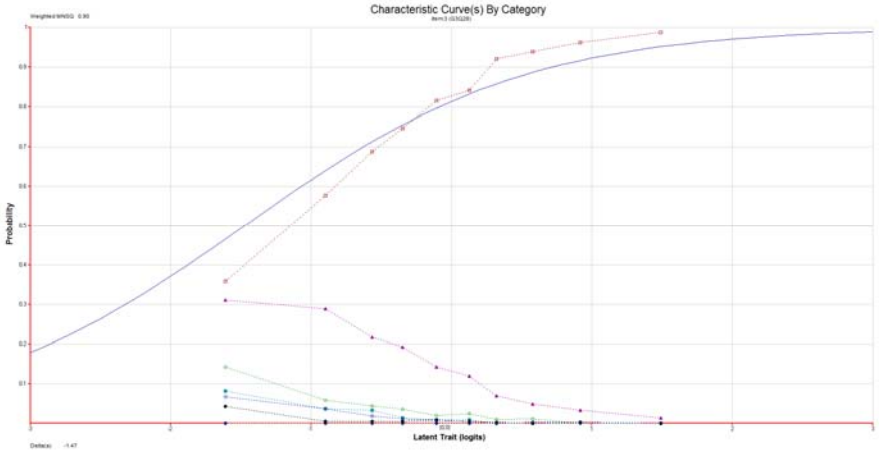

Characteristic Curve(s) By Category
Item25 (SKG25)
Weighted MNSQ 1.03
Probability
Latent Trait (logits)
Delta(s) 3.33

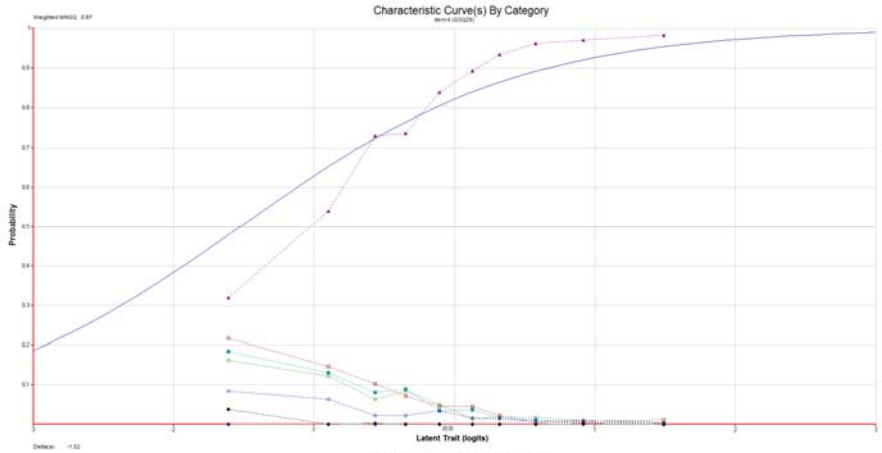
D.9. Year 3 Grammar and Punctuation

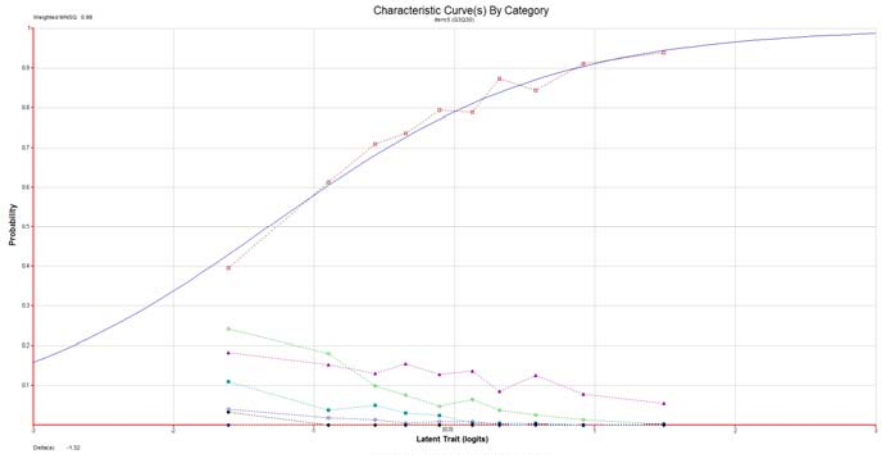


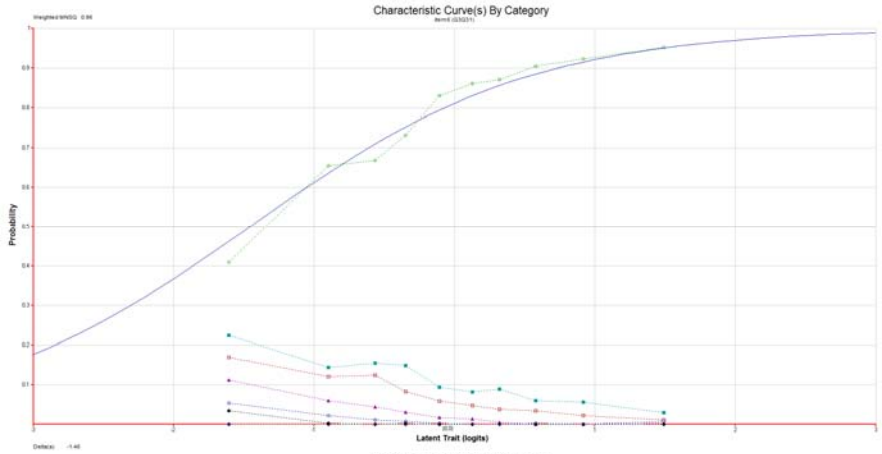


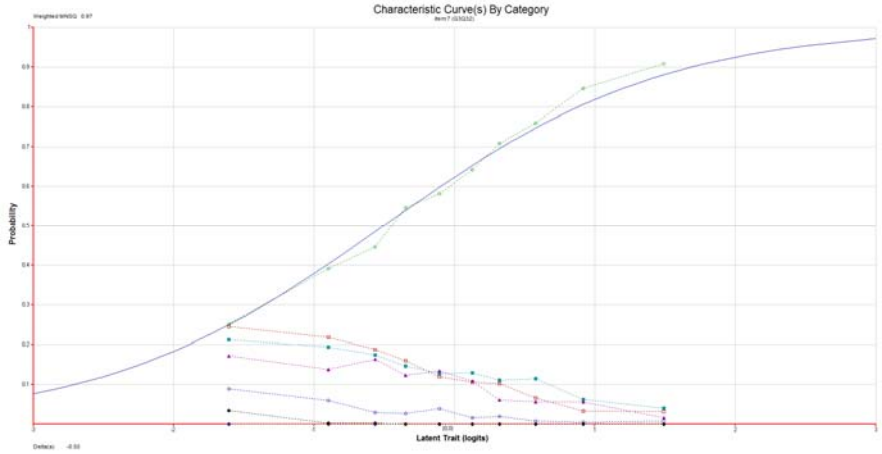


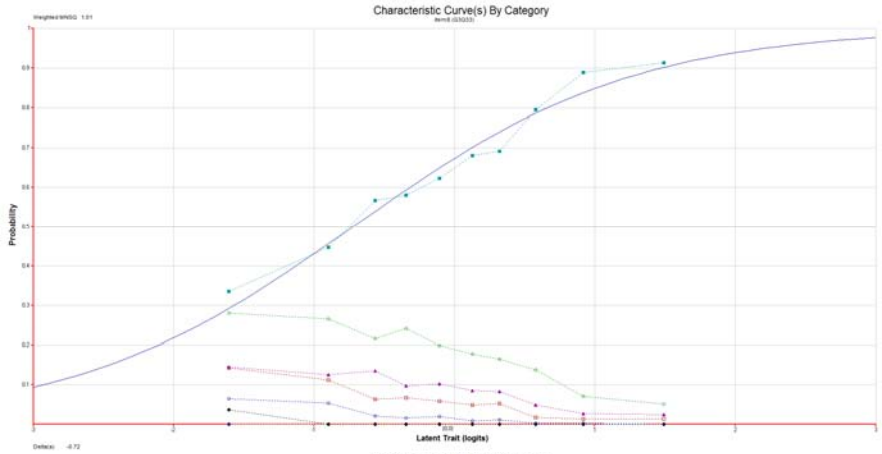


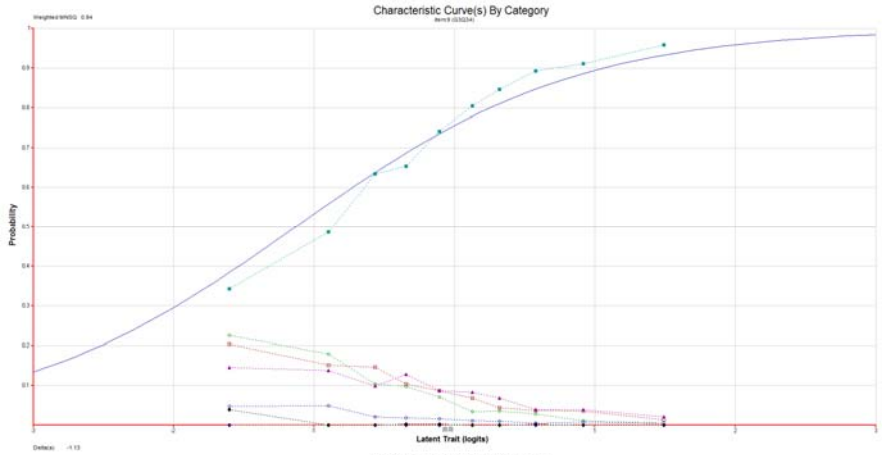

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

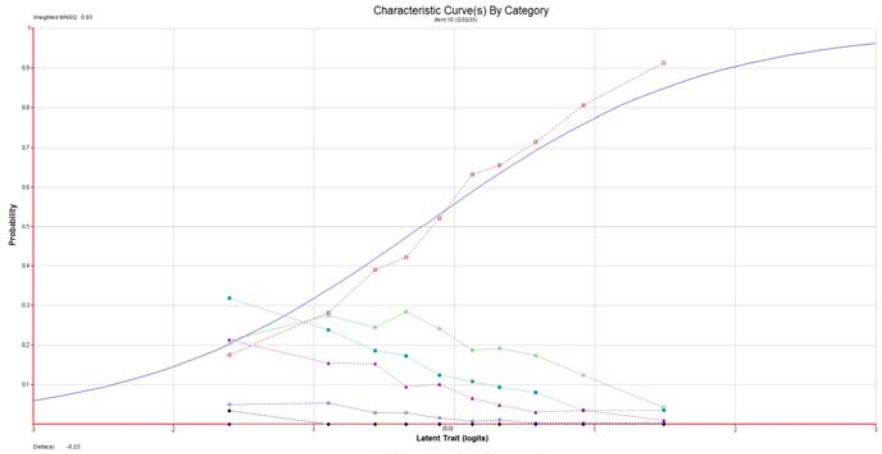

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

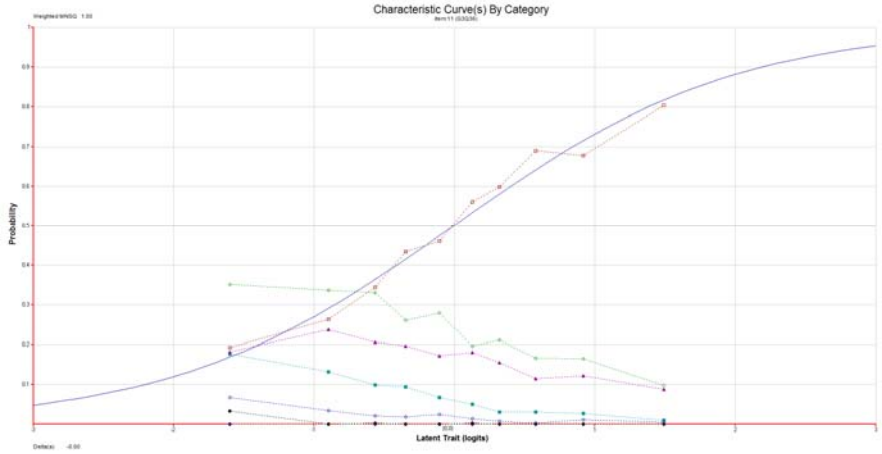

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

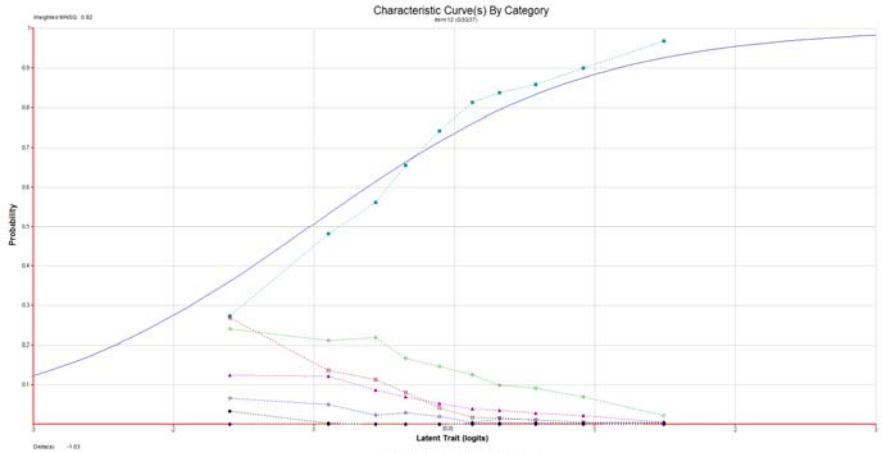

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

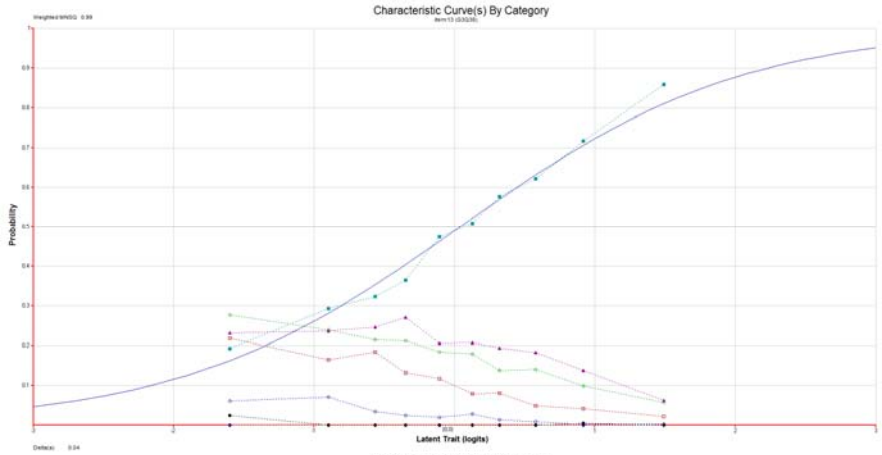

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

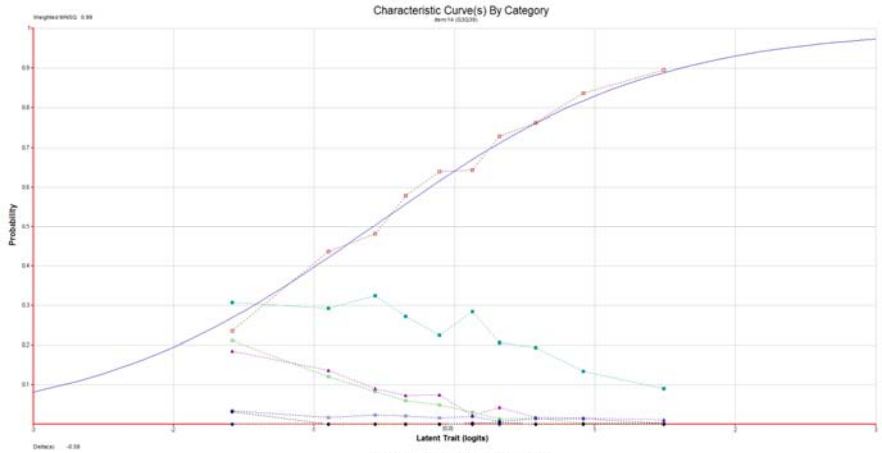

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

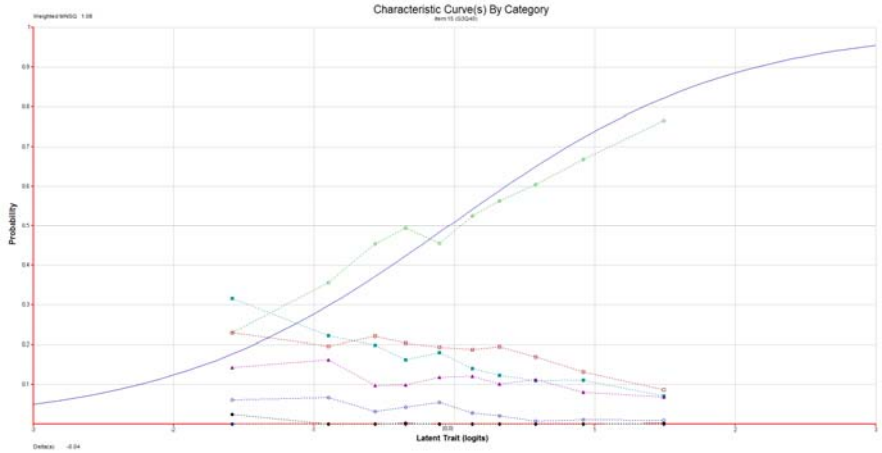

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

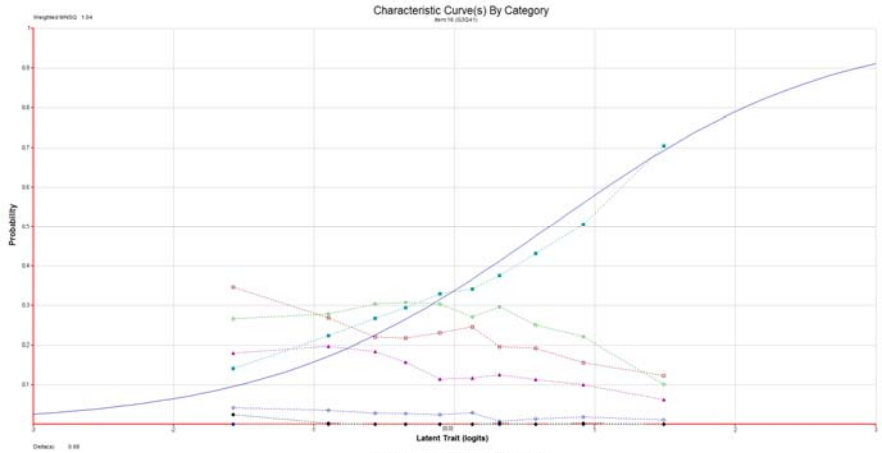

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

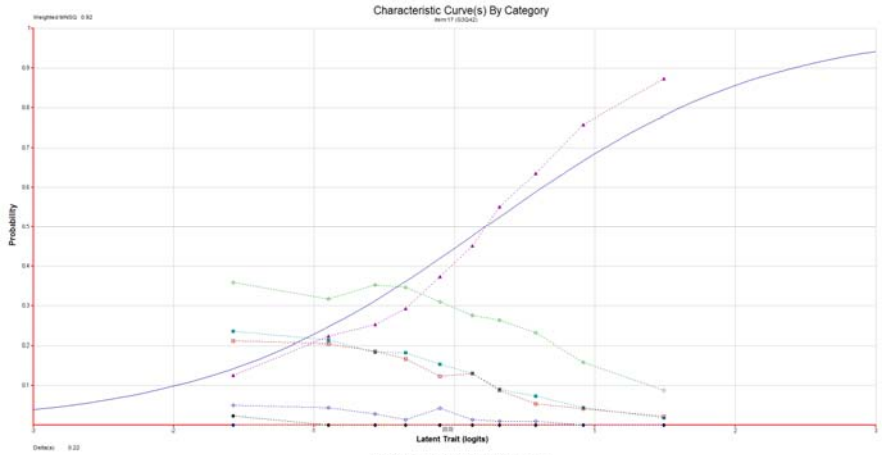

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

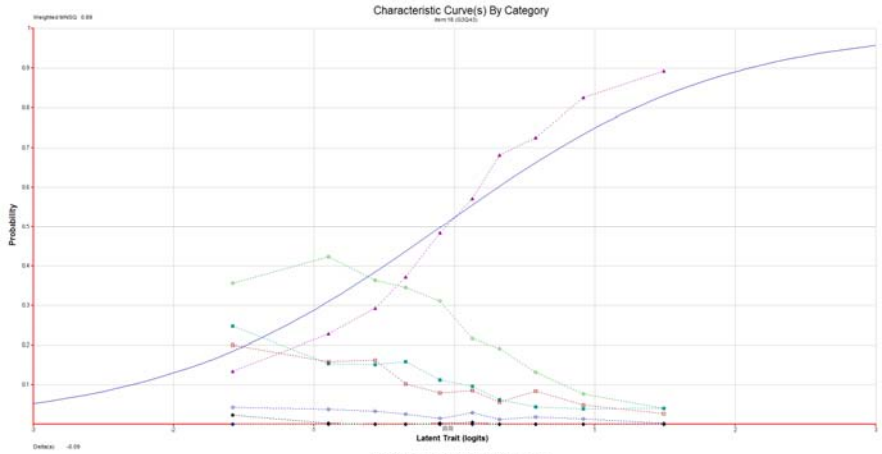

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

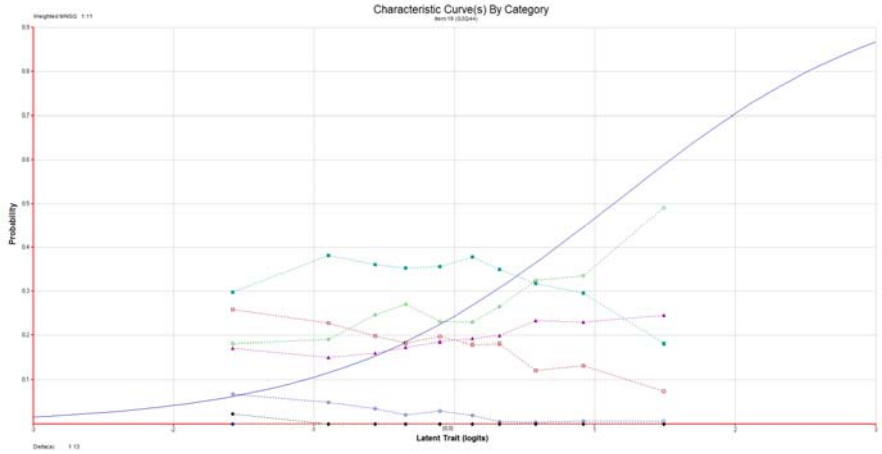

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

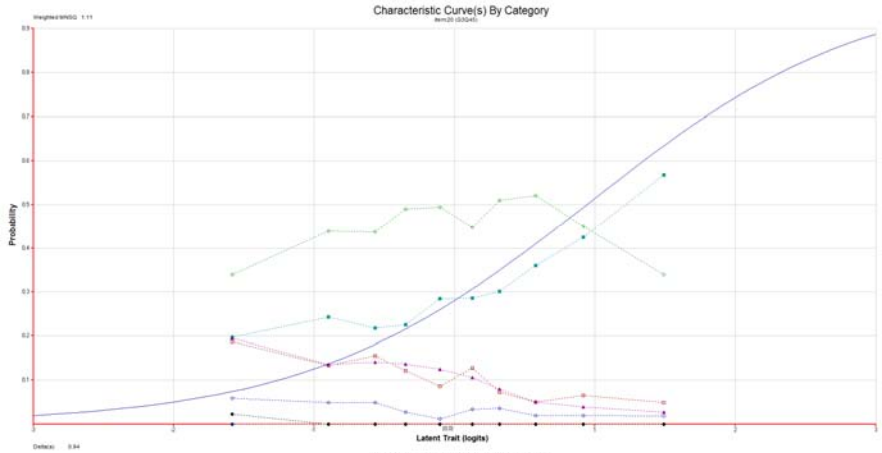

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

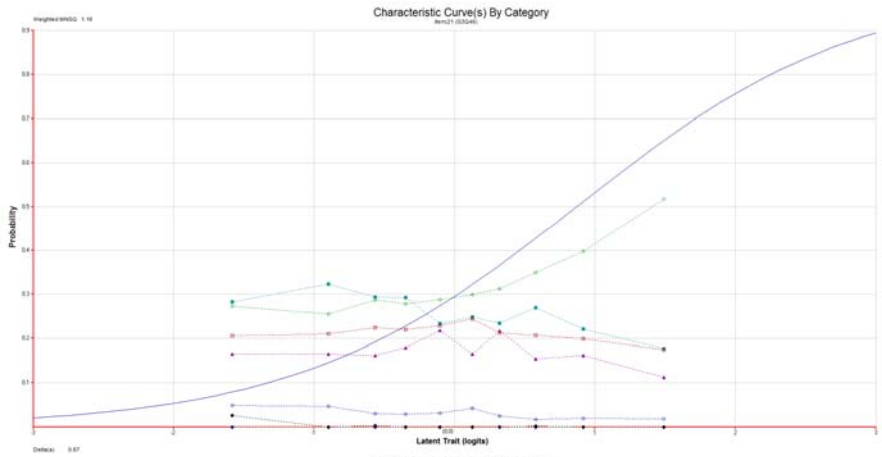

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

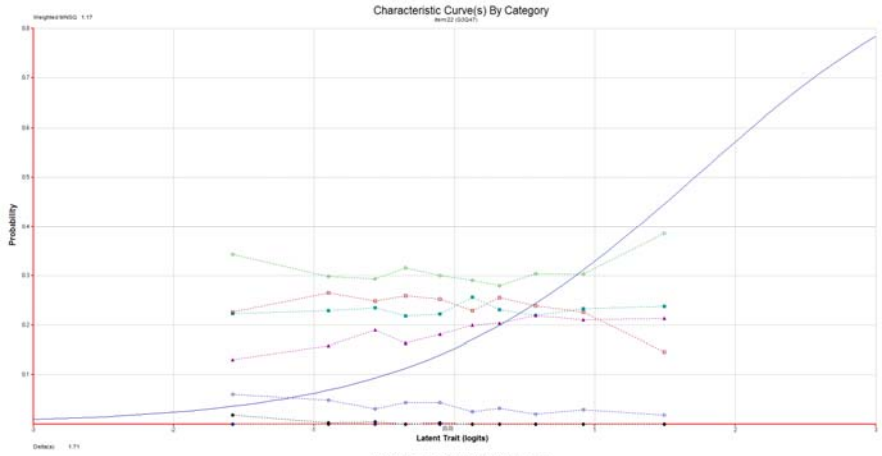

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

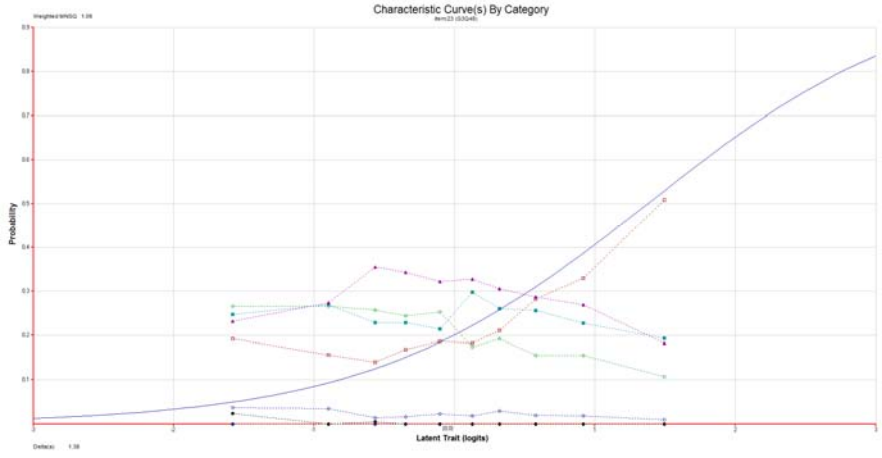

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

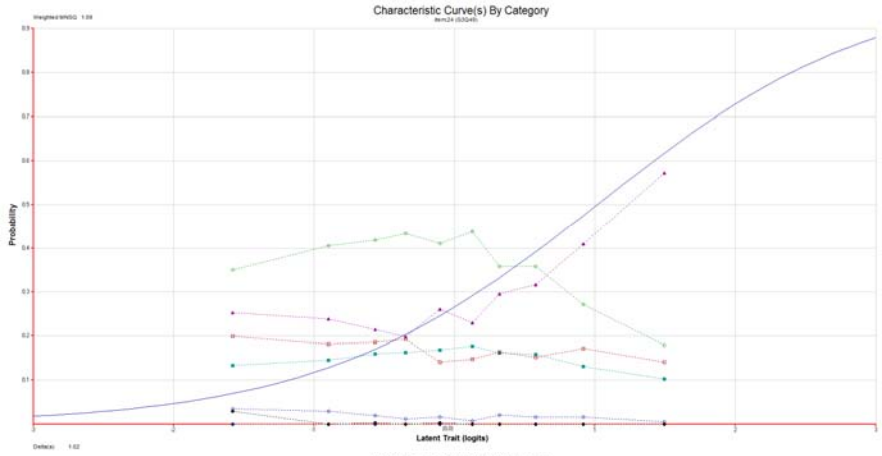

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

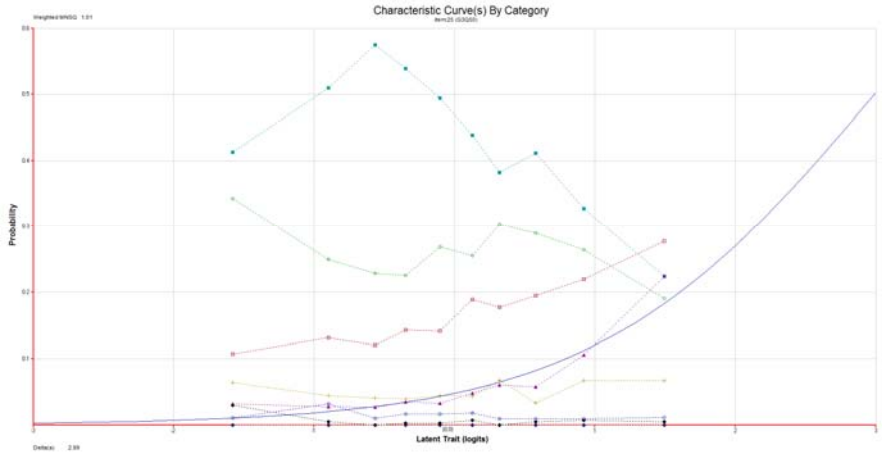

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

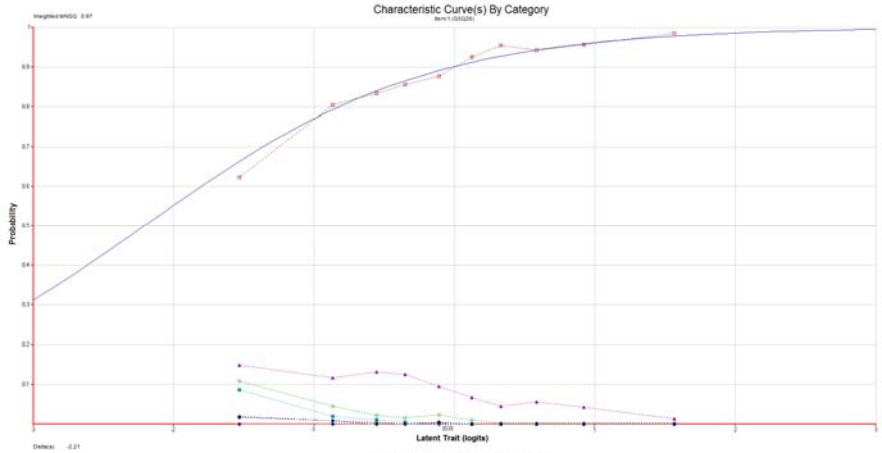

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

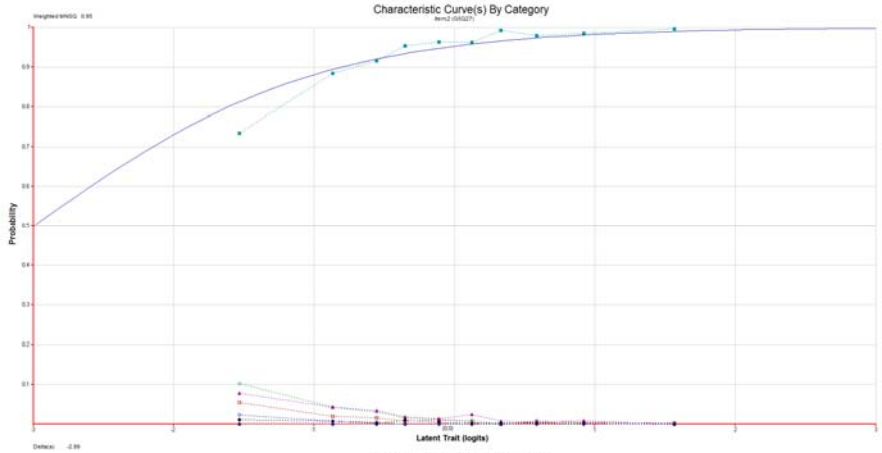

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

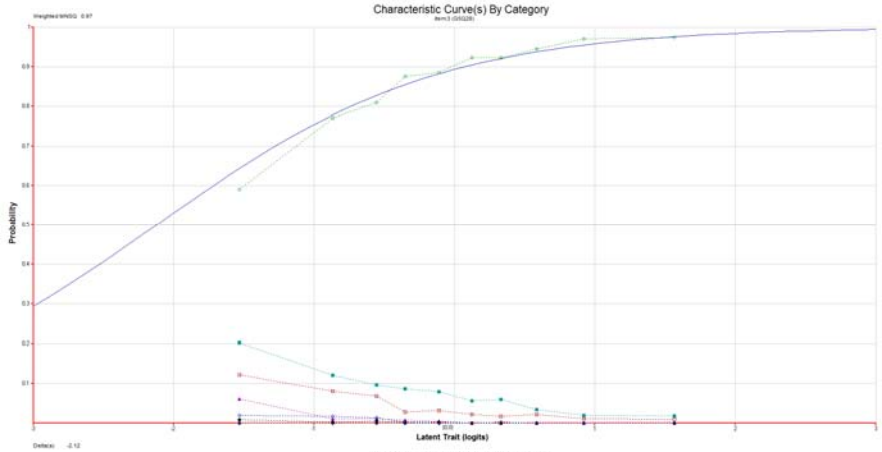

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

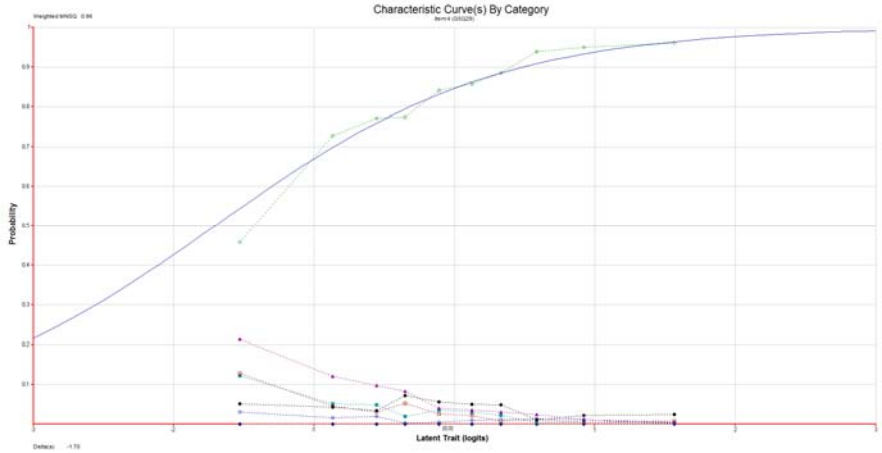

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

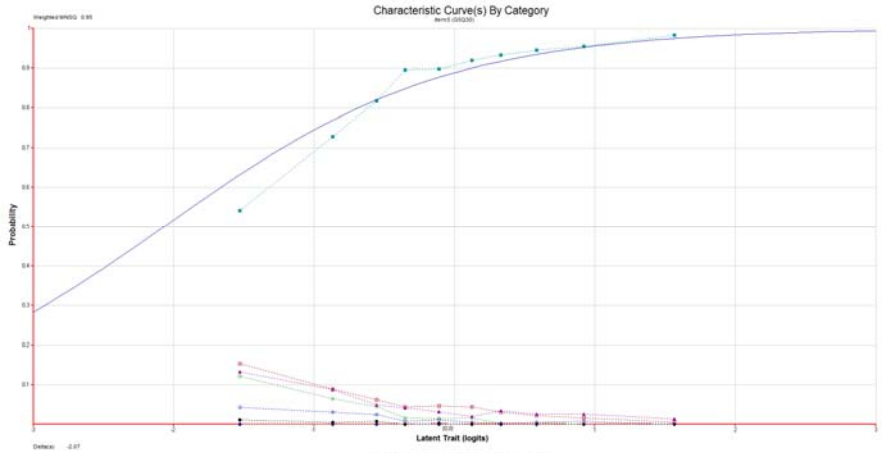
D.10. Year 5 Grammar and Punctuation

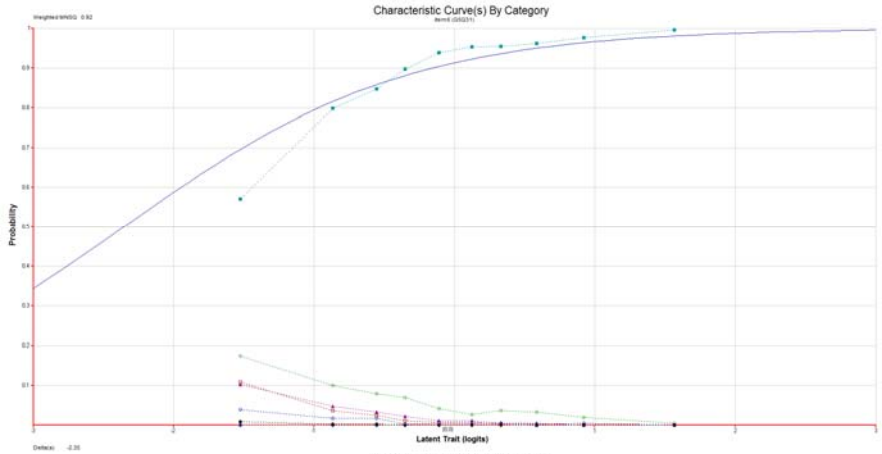


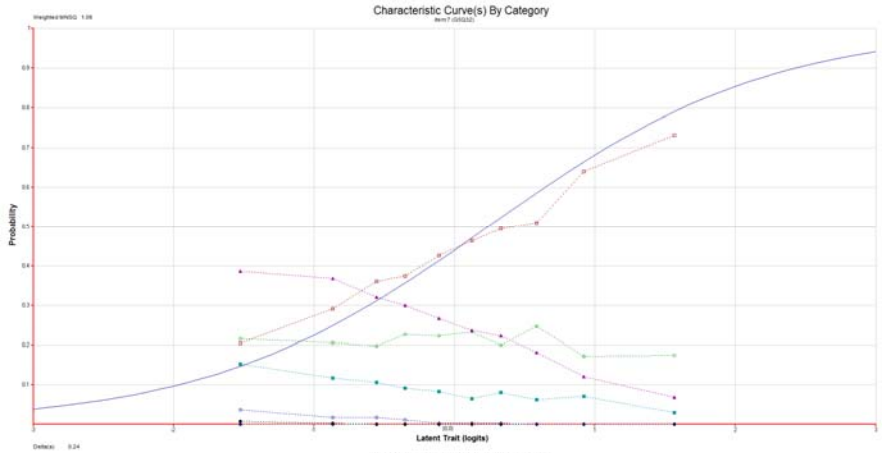


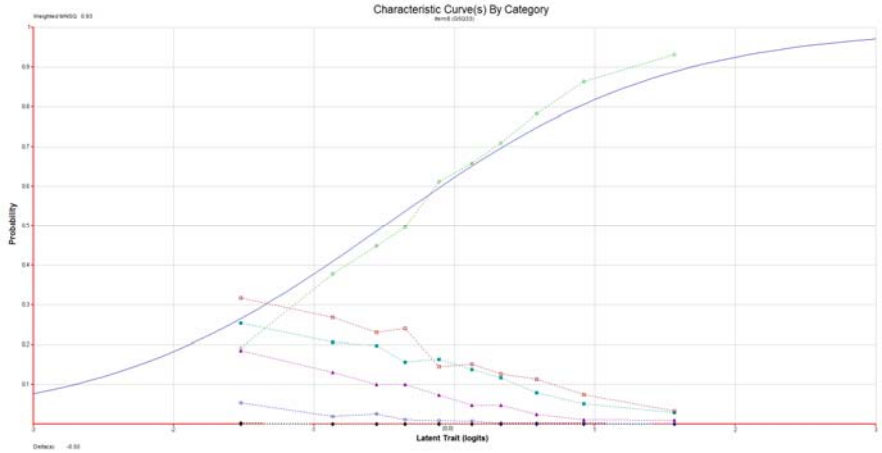


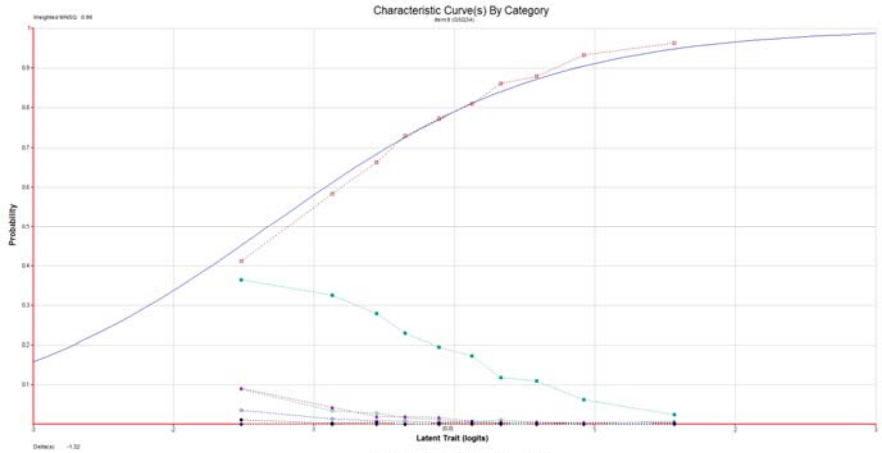


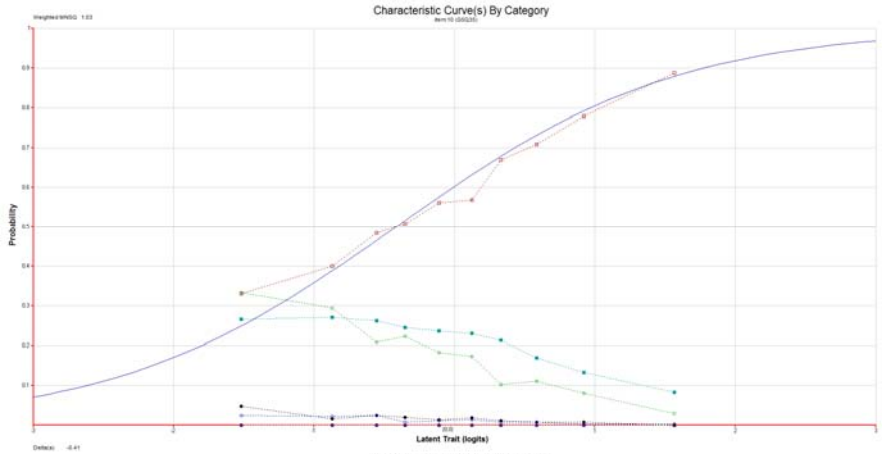

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

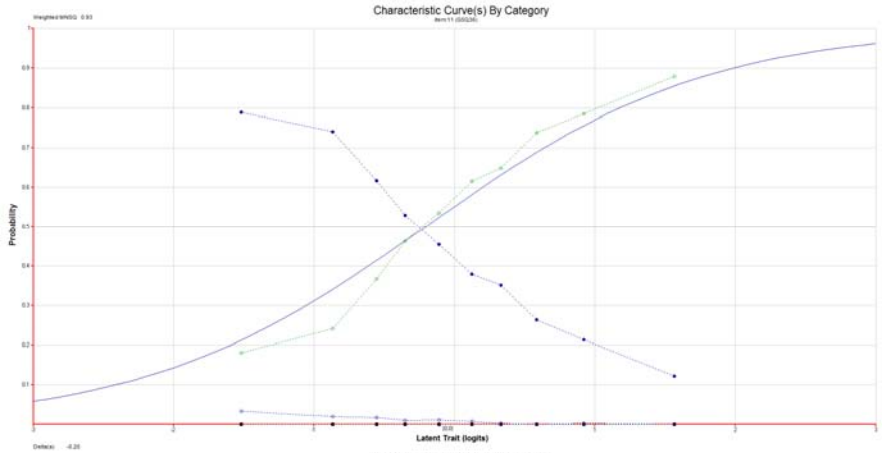

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

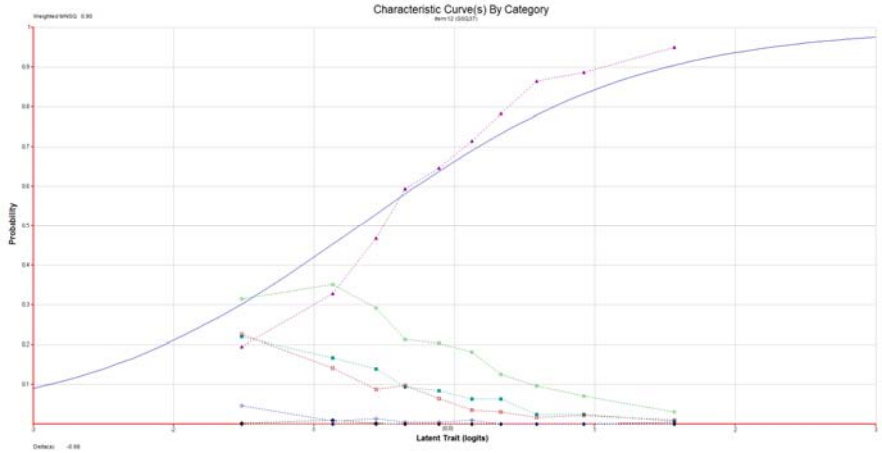

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

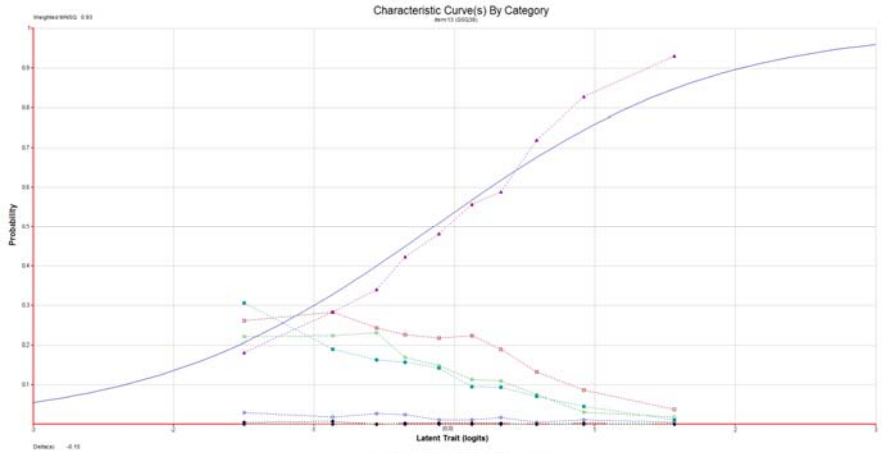

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

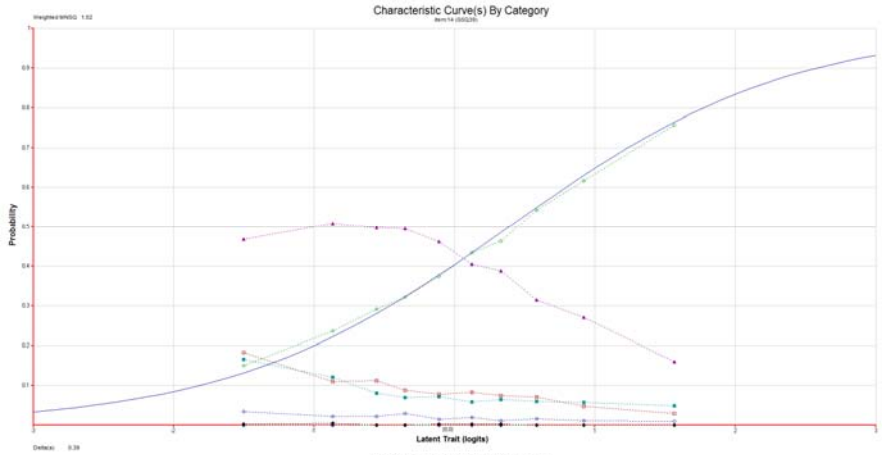

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

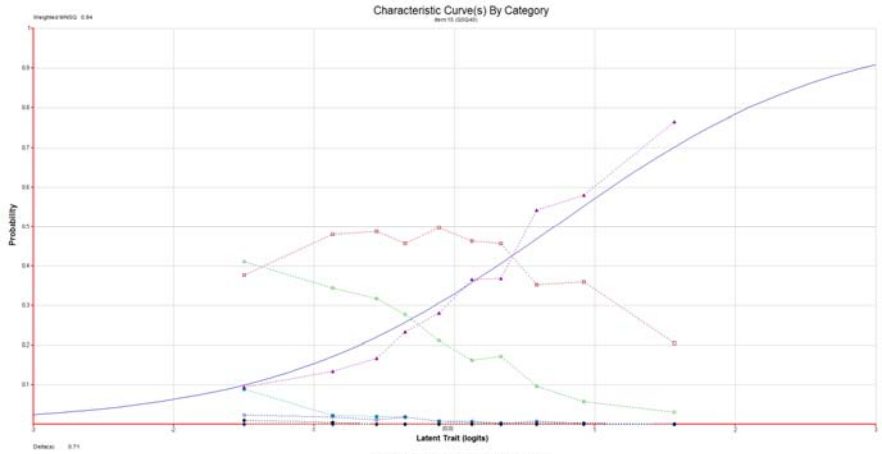

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

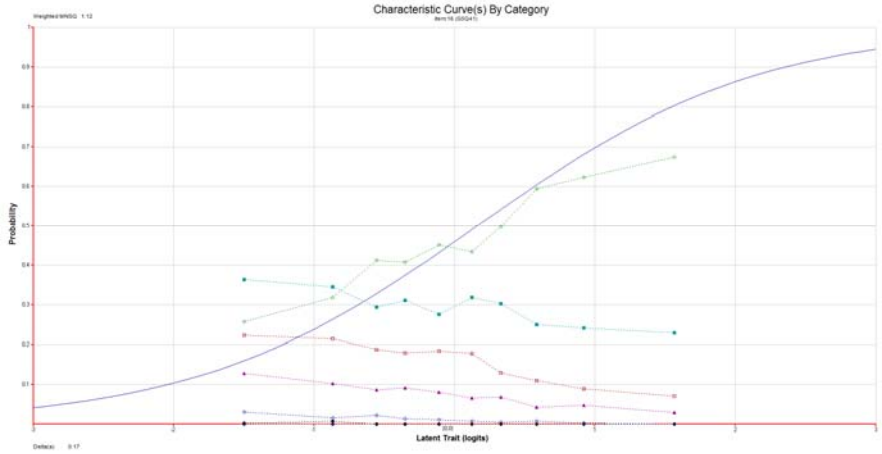

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

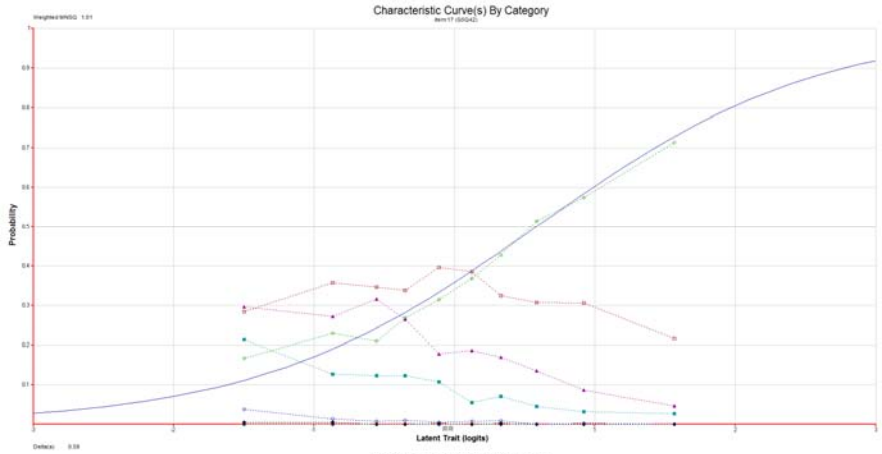

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

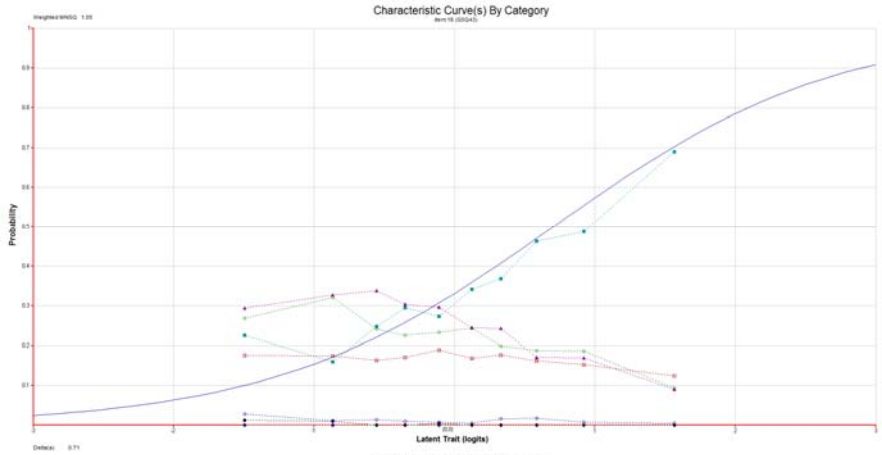

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

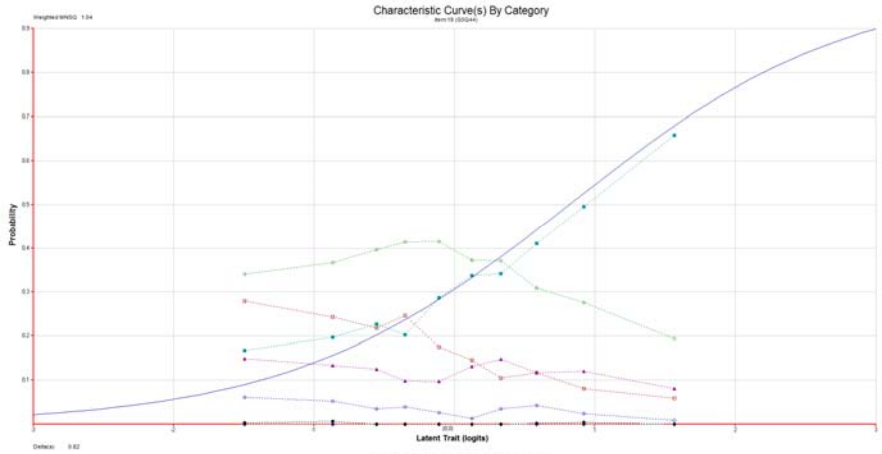

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

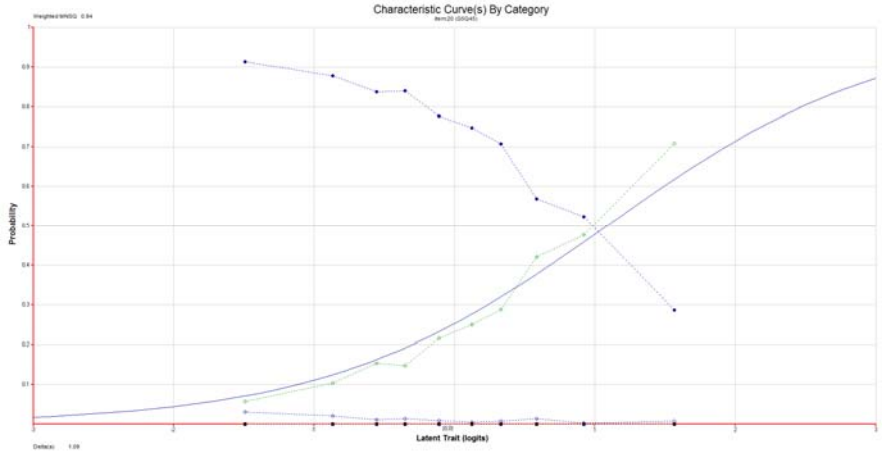

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

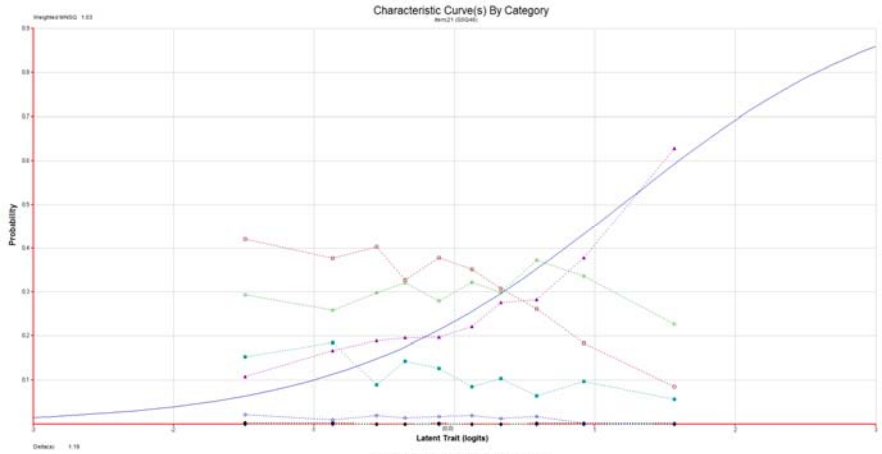

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

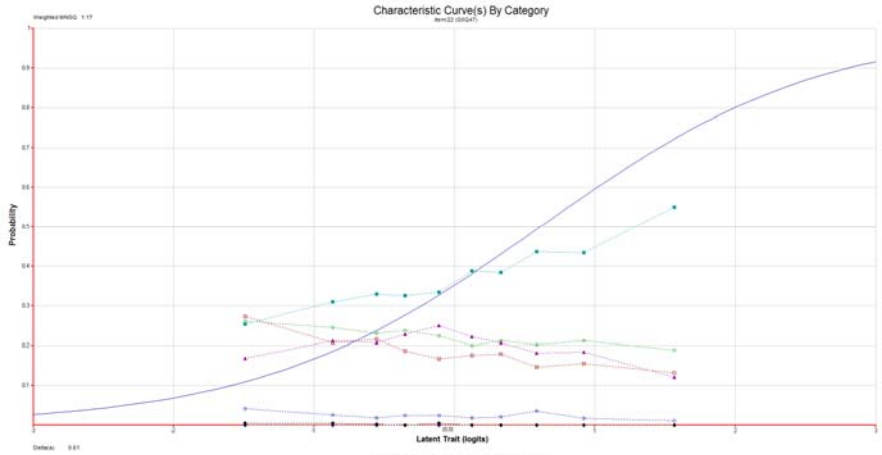

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

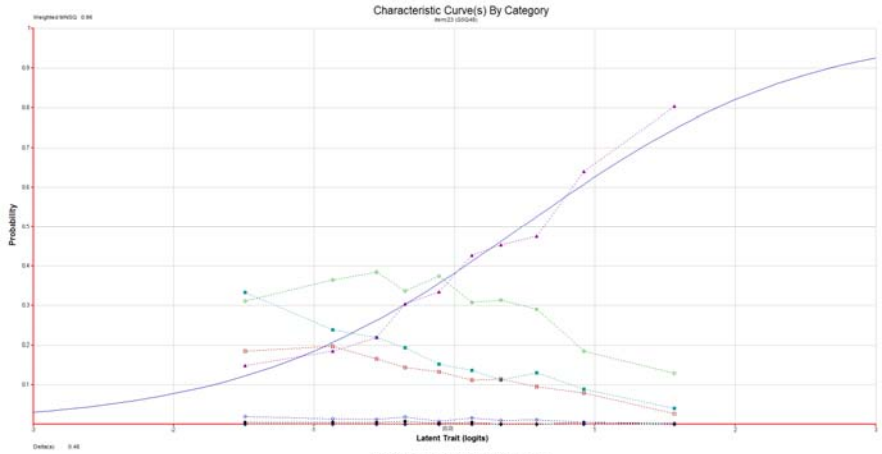

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

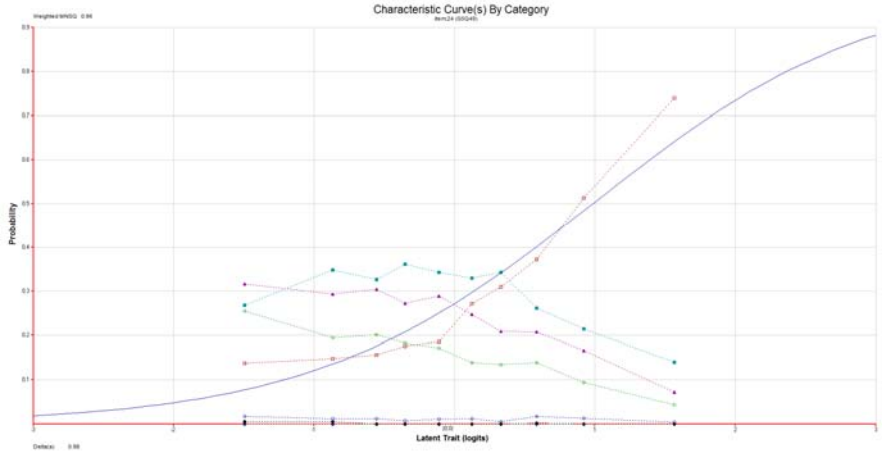

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

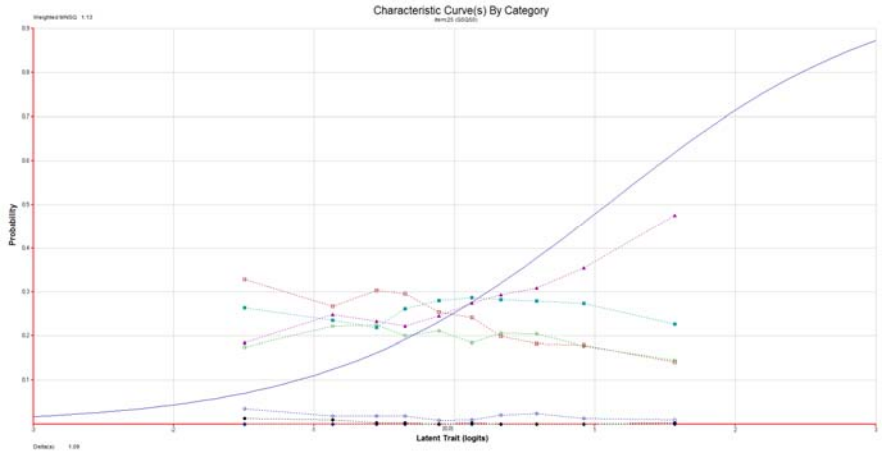

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

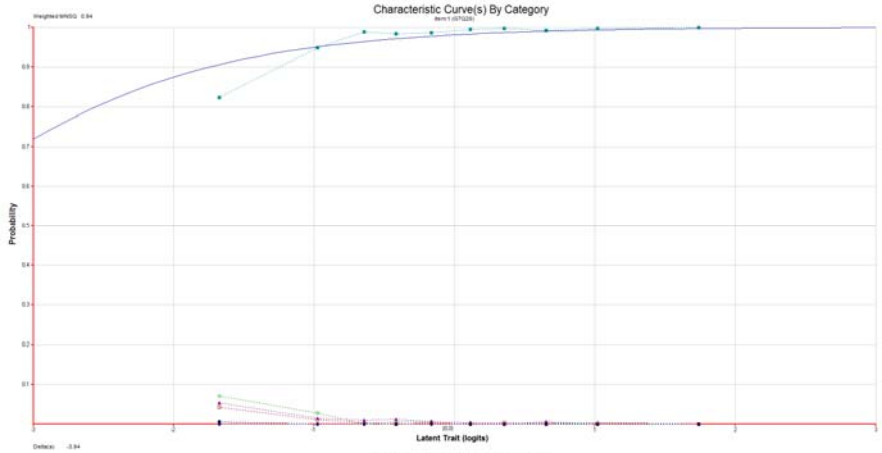

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

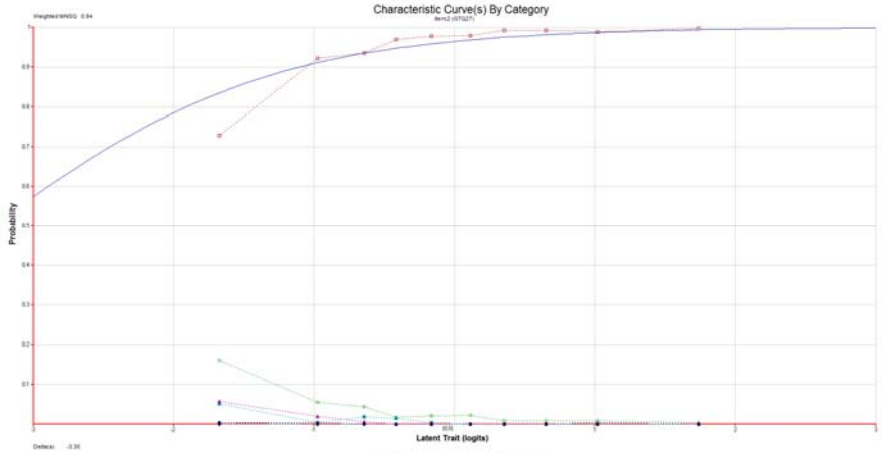

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

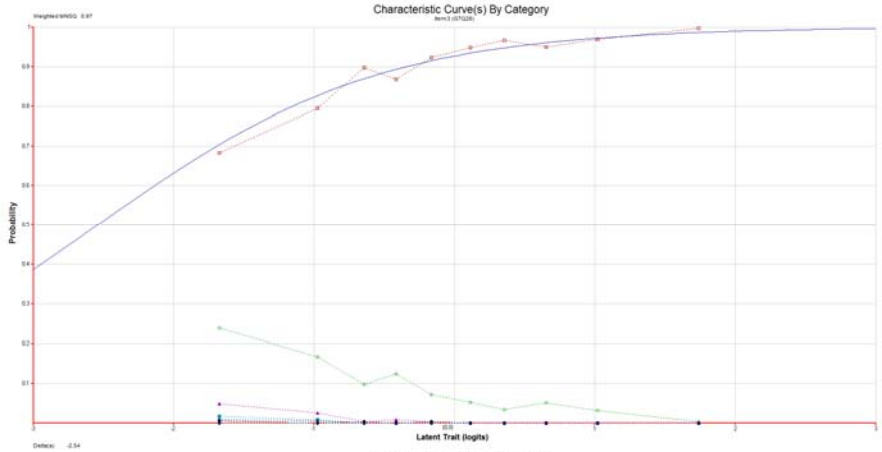

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

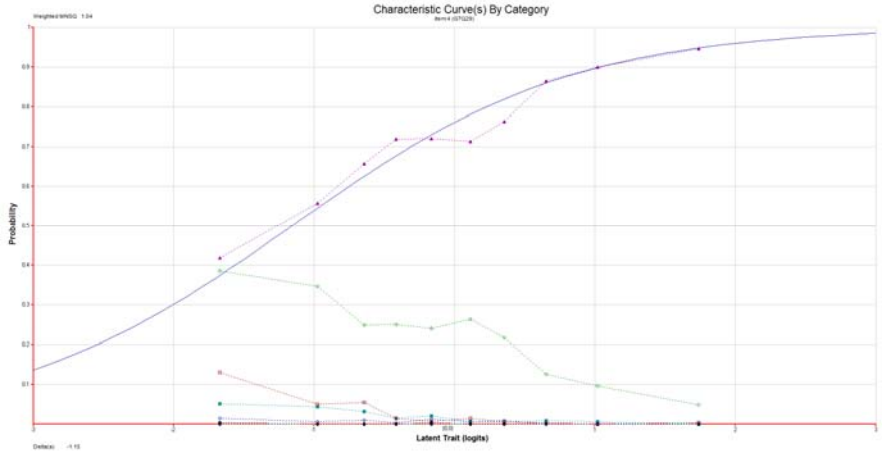

Characteristic Curve(s) By Category
Item25 (SGSGS)
Weighted MNSQ 1.13
Probability
Latent Trait (logits)
Delta(s) 1.09

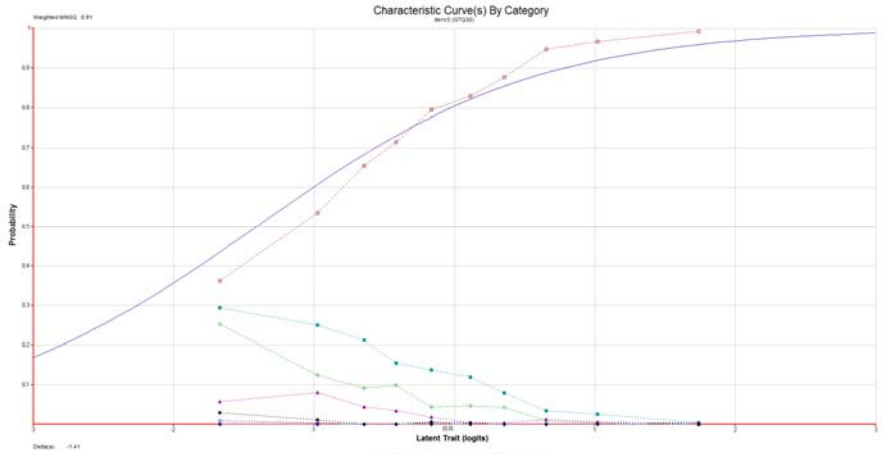
D.11. Year 7 Grammar and Punctuation

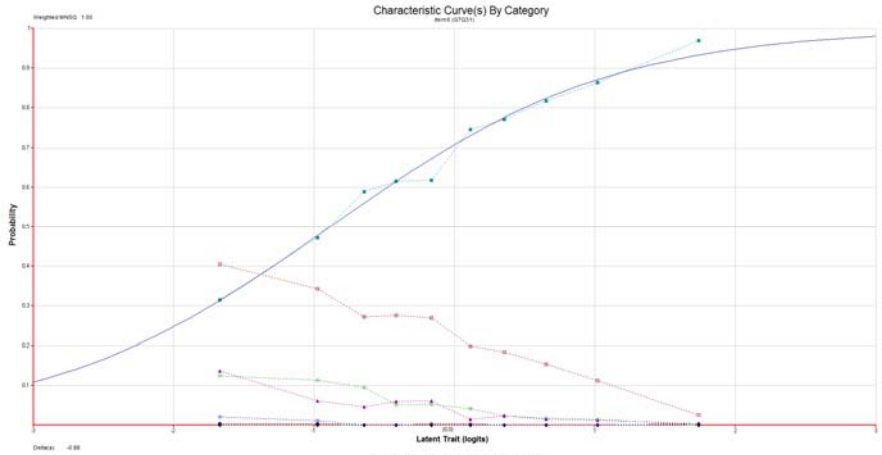


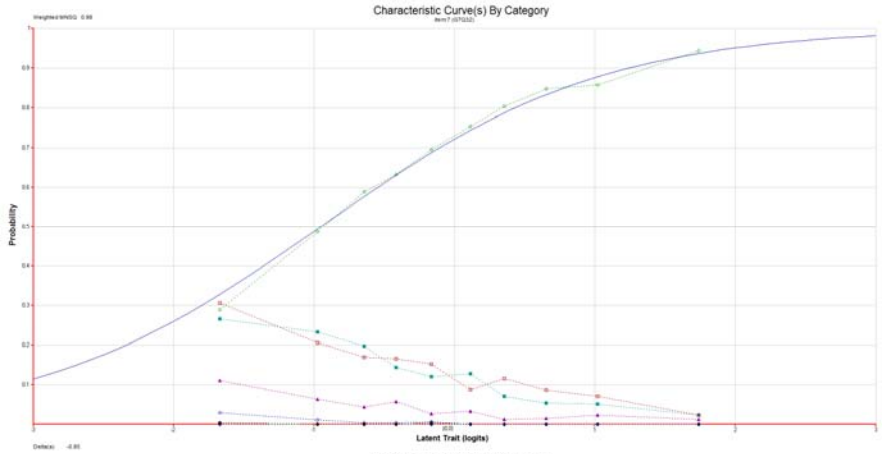


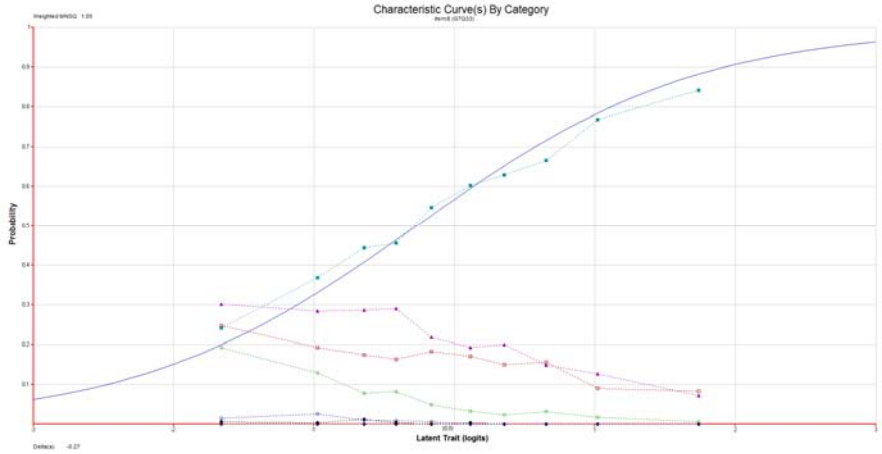


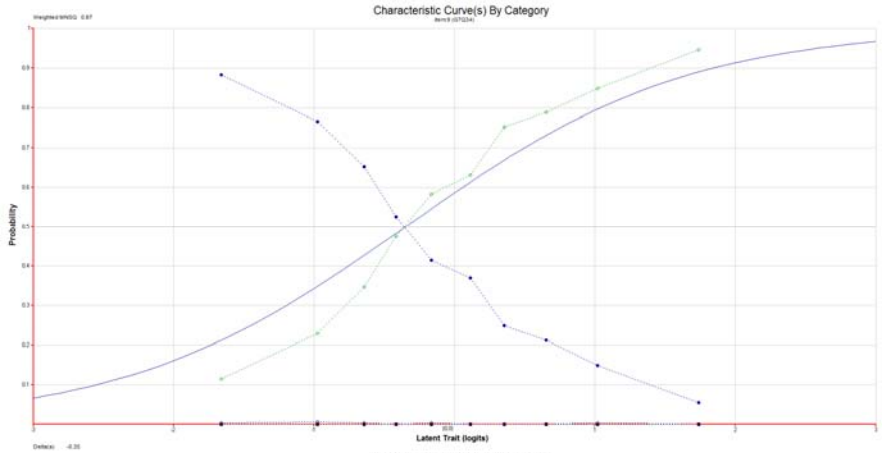


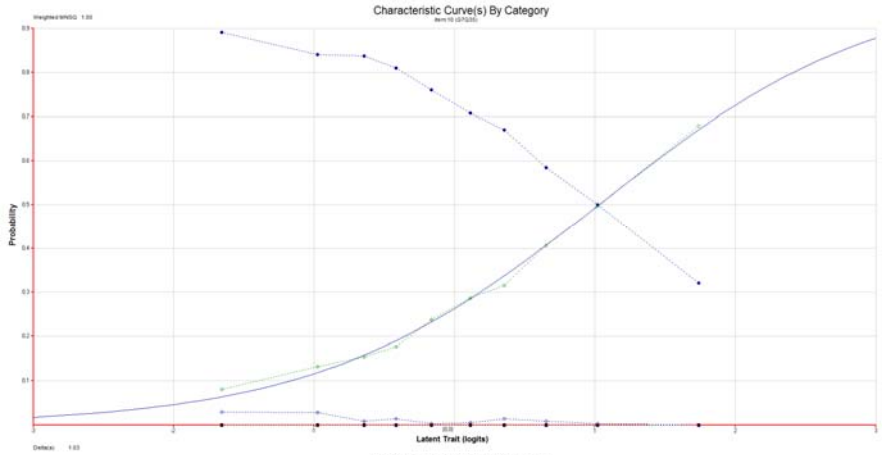

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

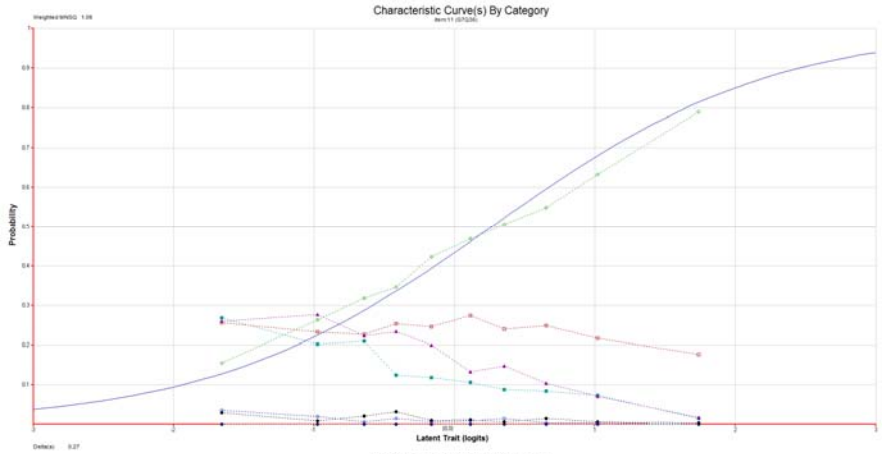

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

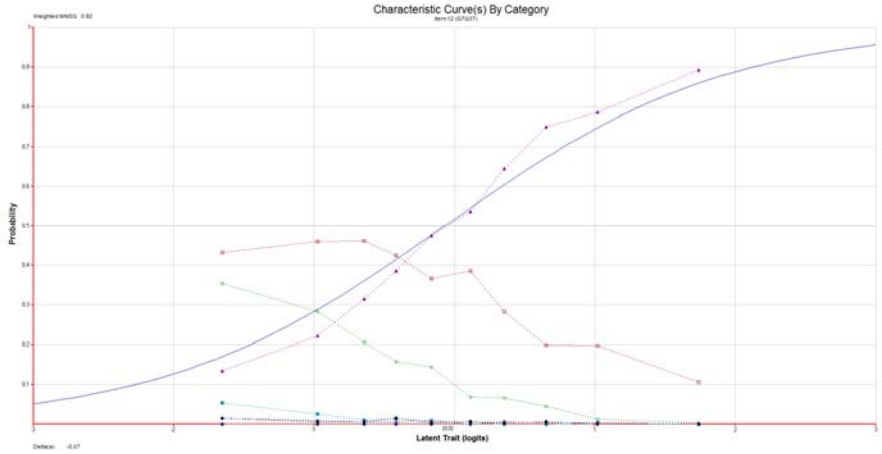

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

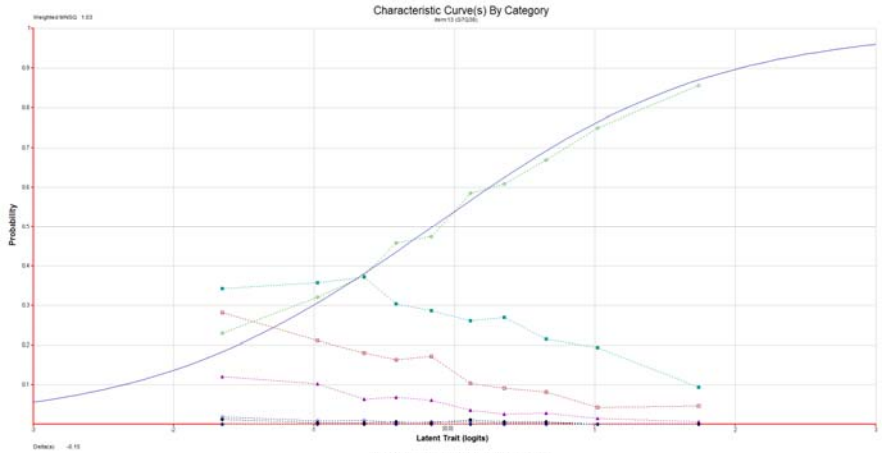

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

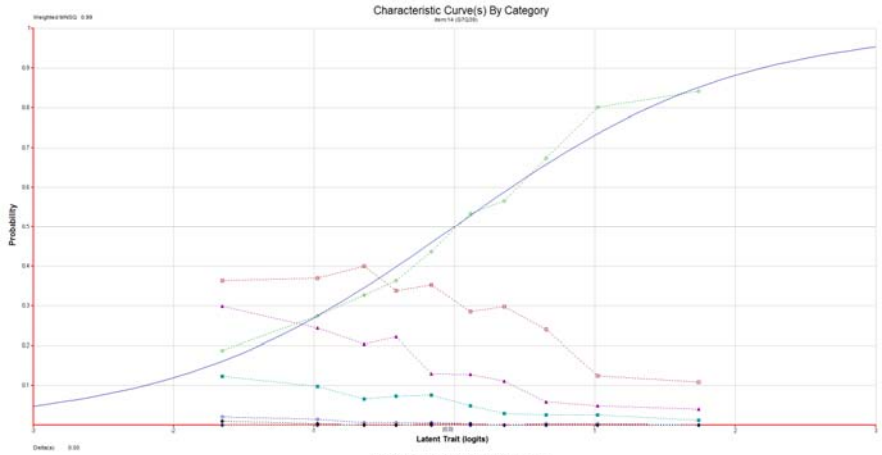

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

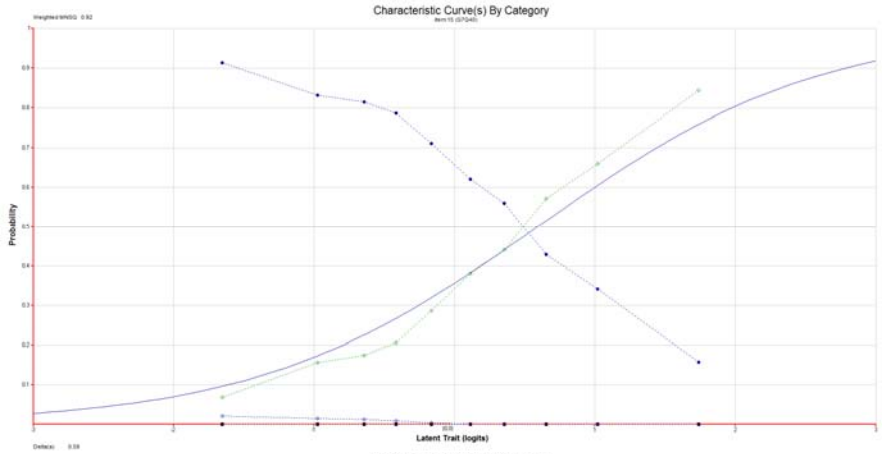

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

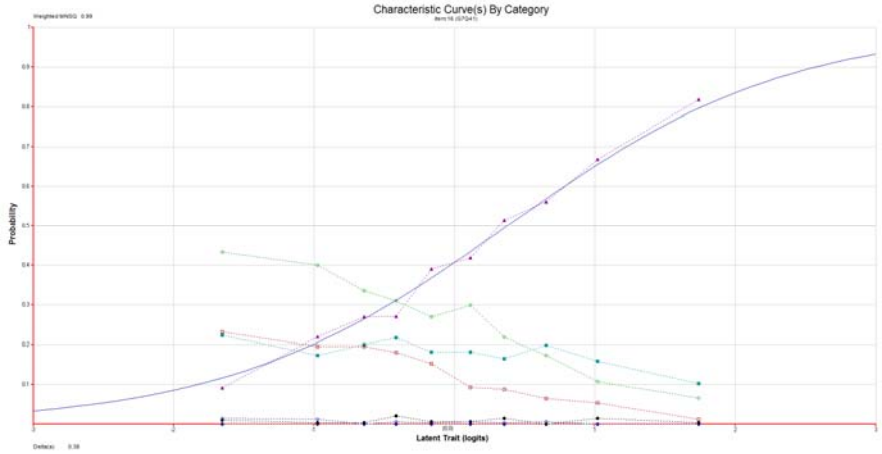

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

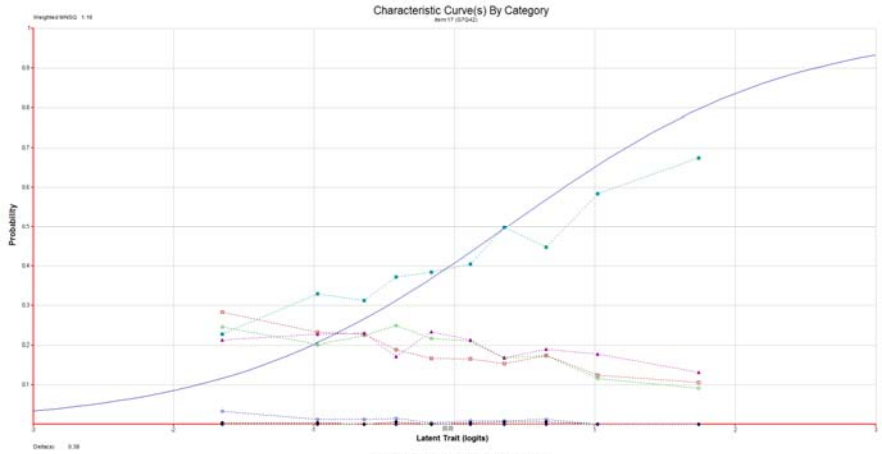

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

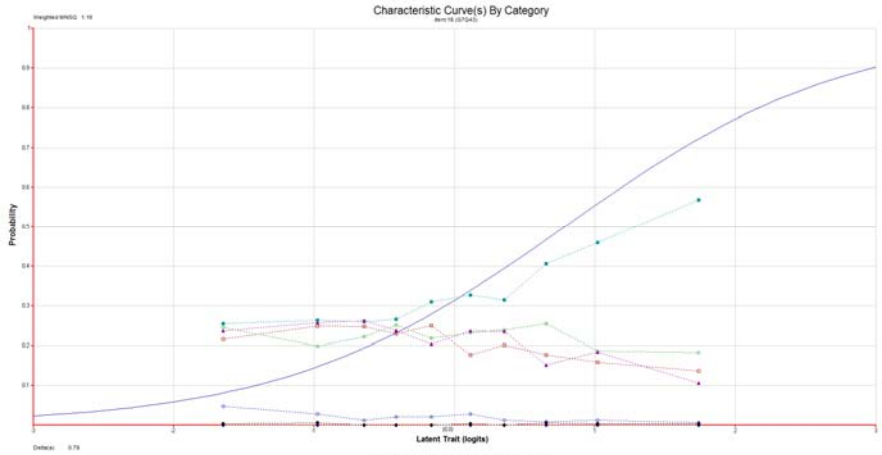

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

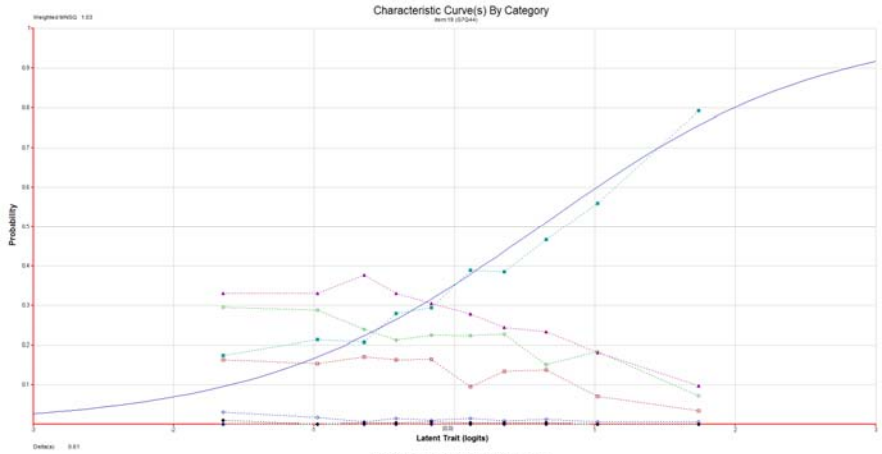

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

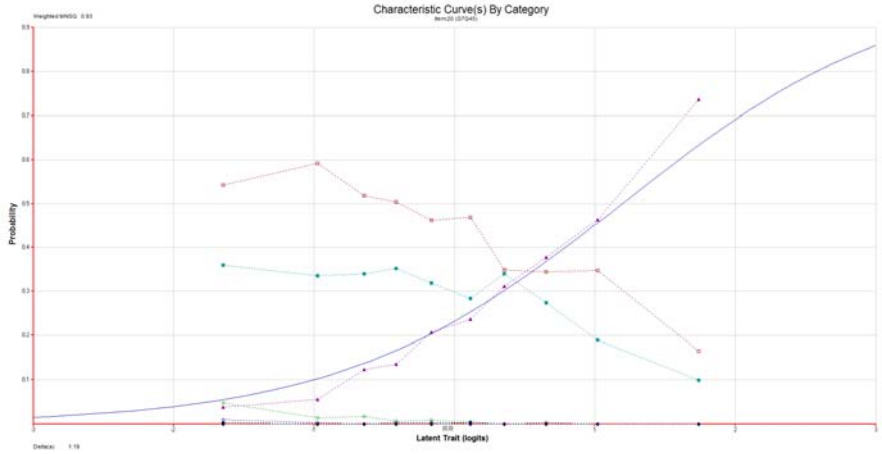

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

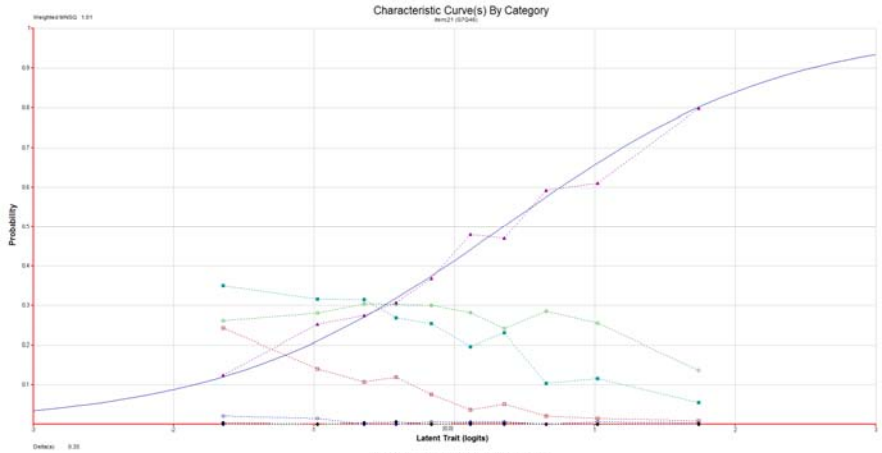

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

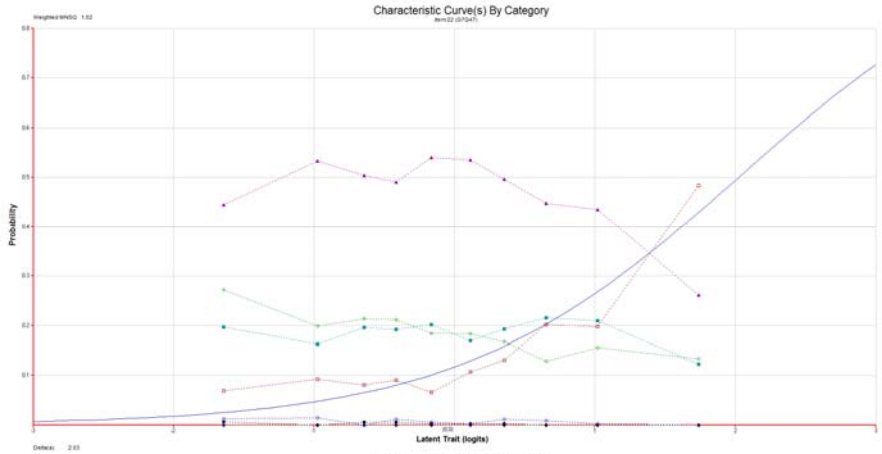

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

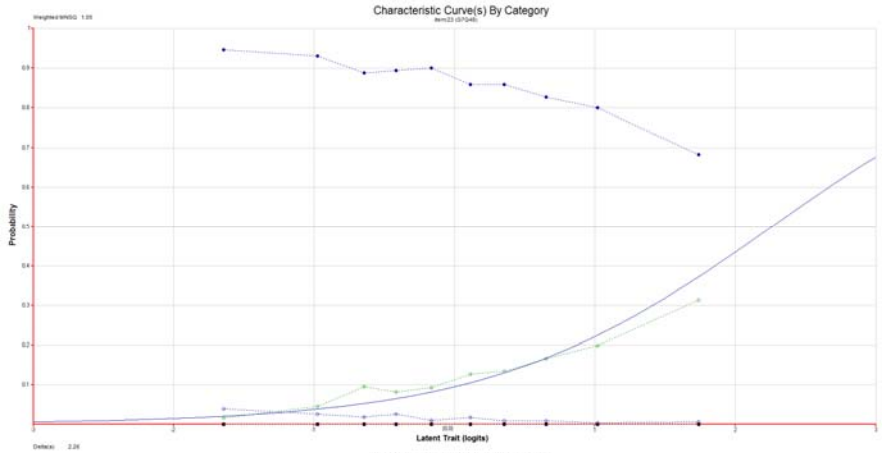

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

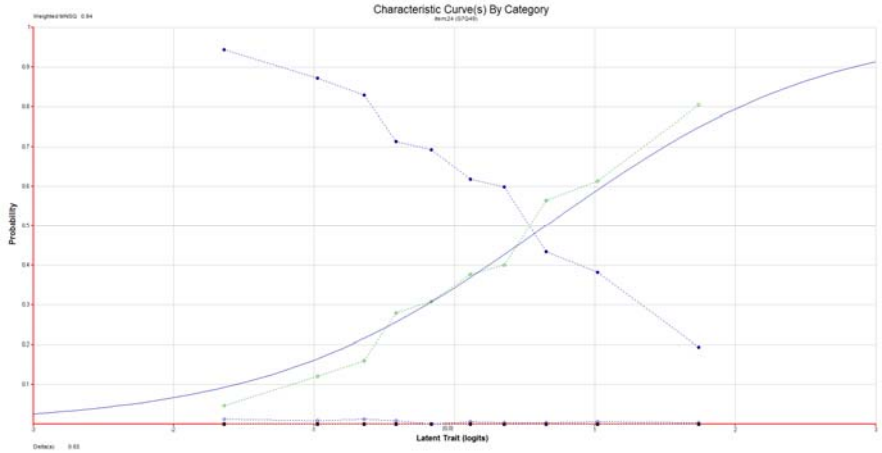

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

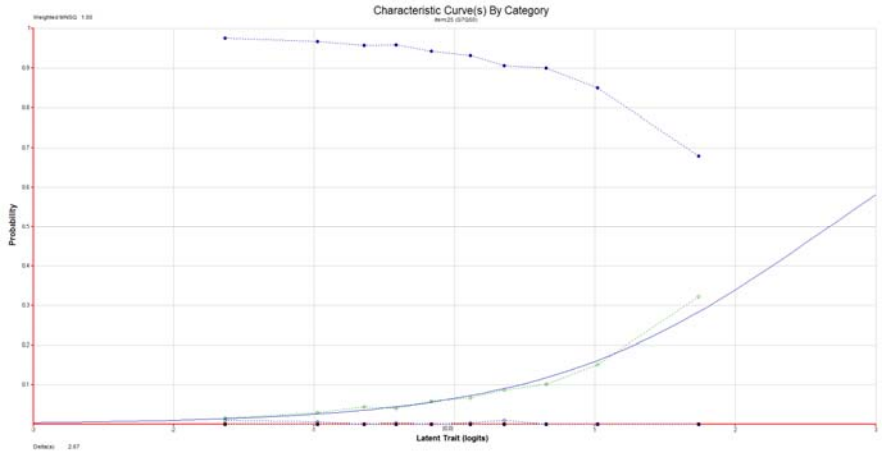

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

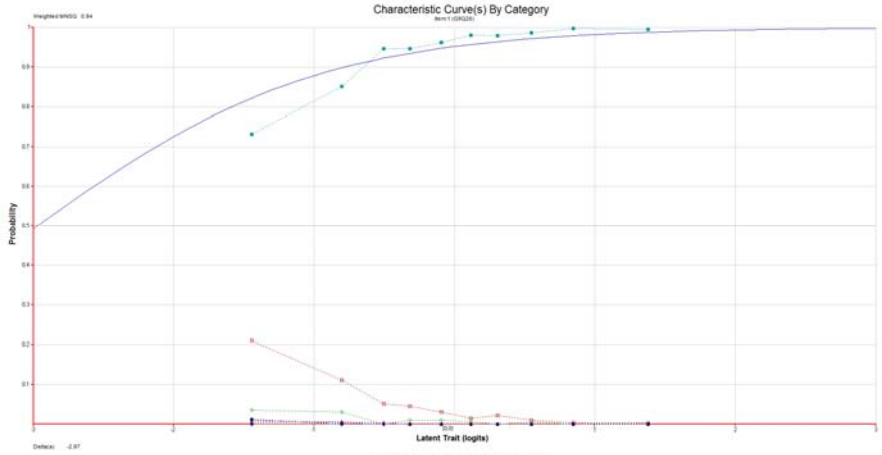

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

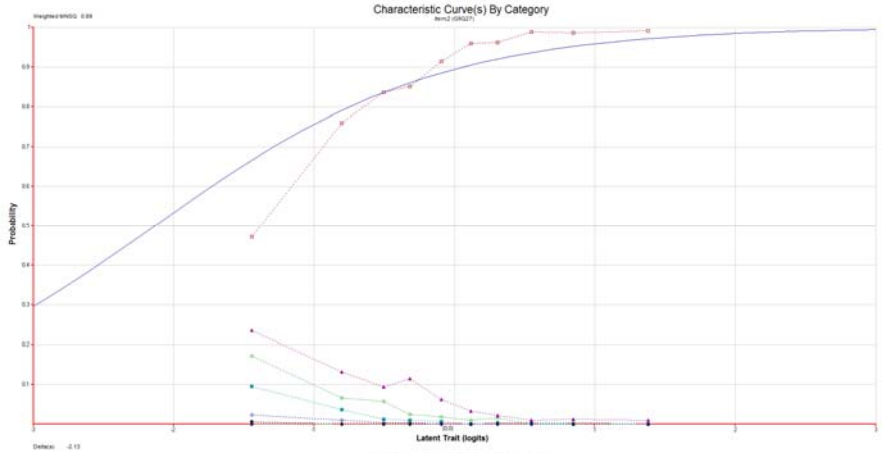

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

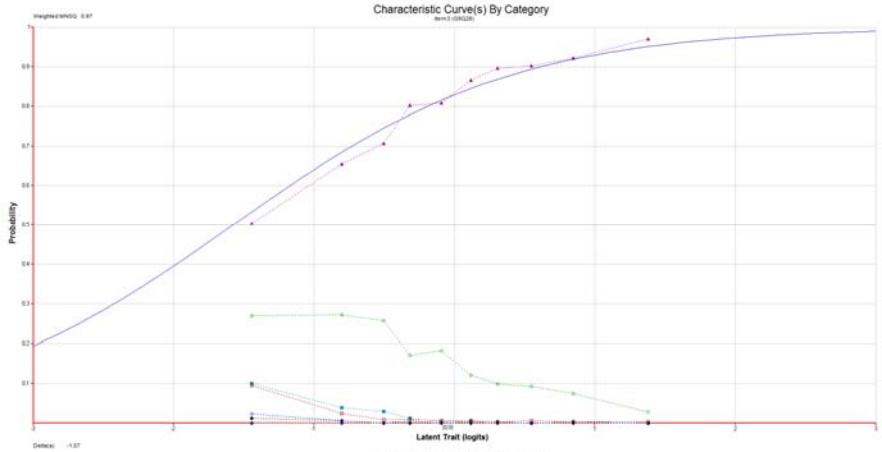

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

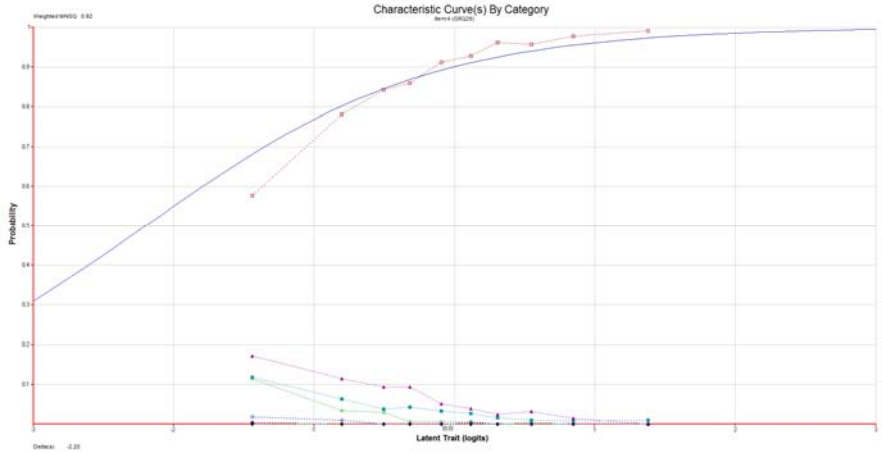

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

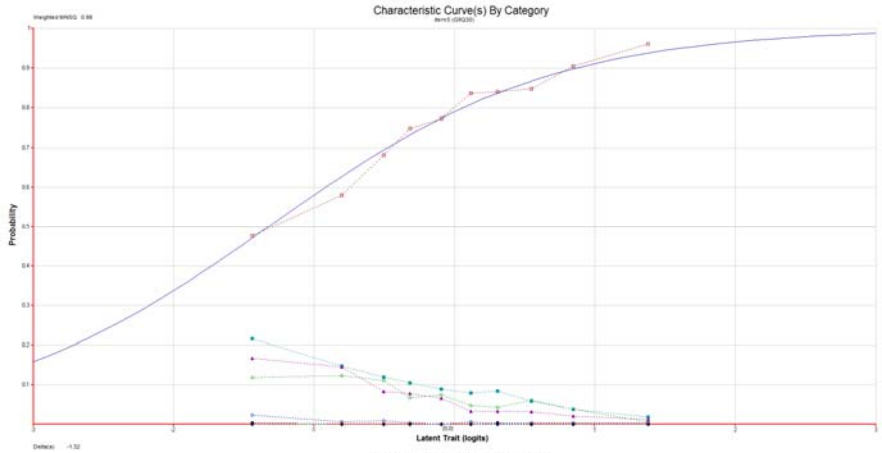
D.12. Year 9 Grammar and Punctuation

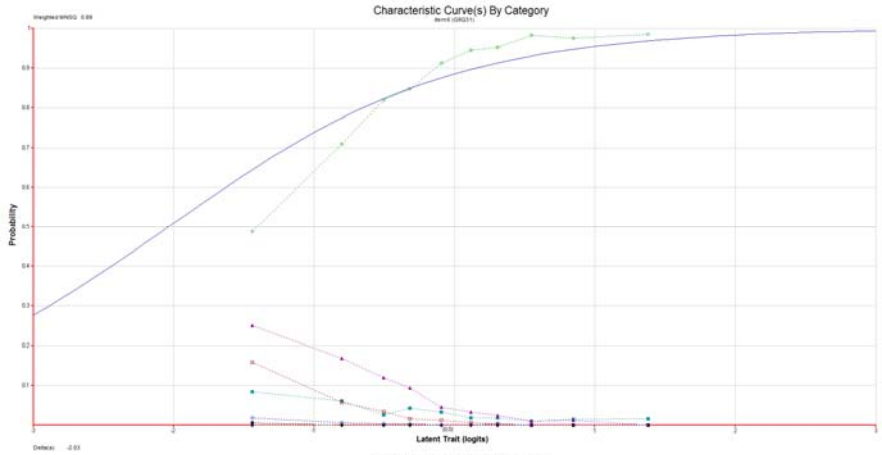


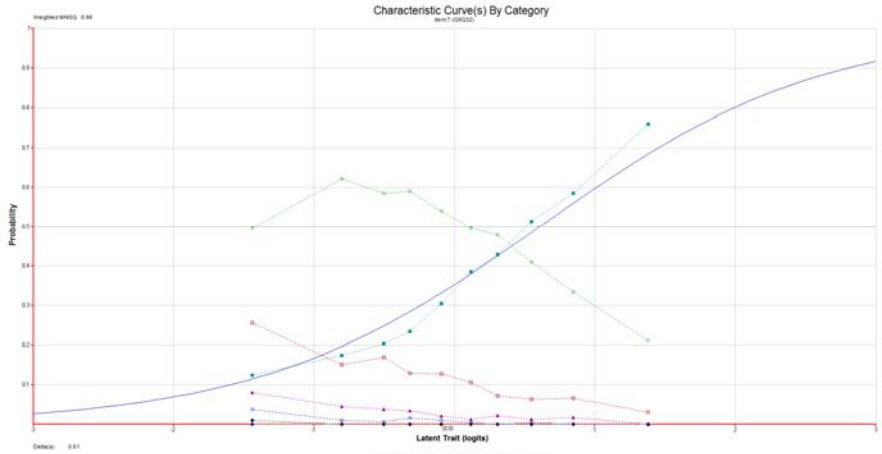


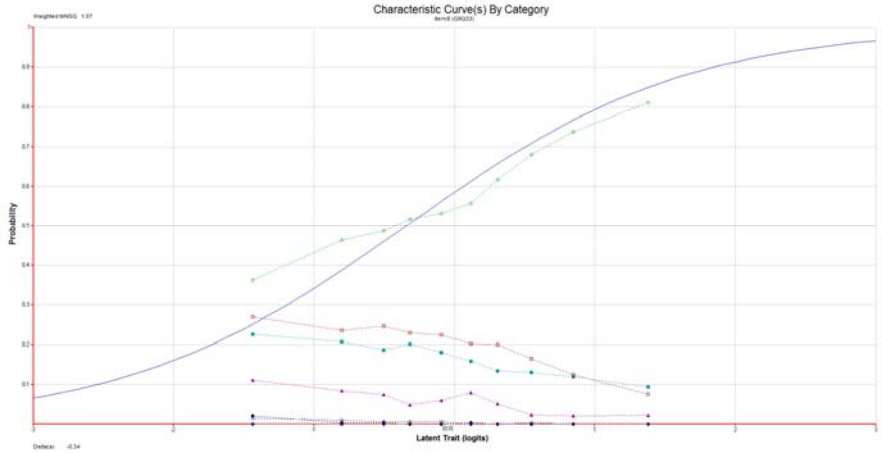


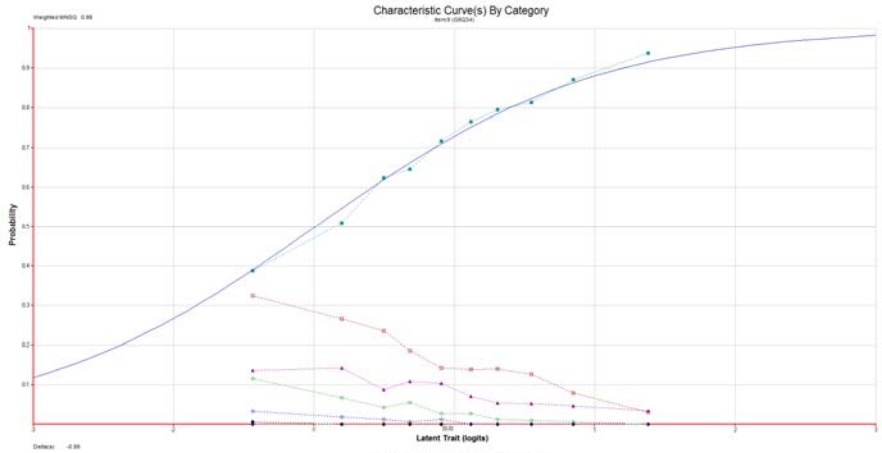


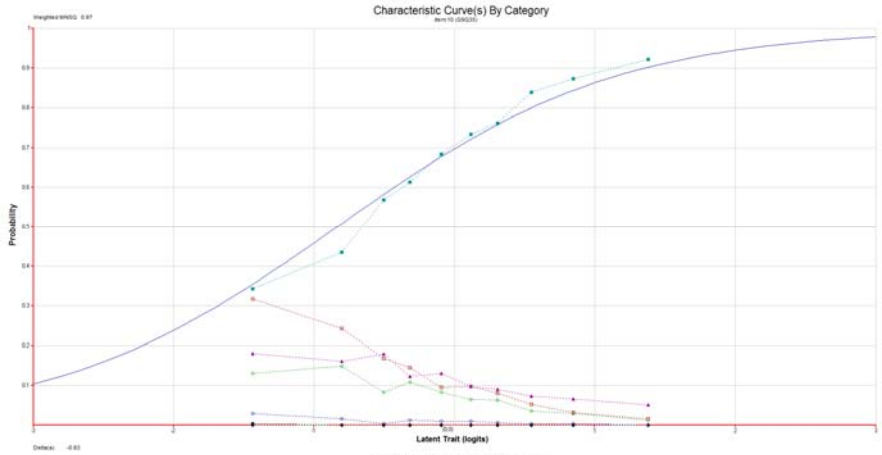

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

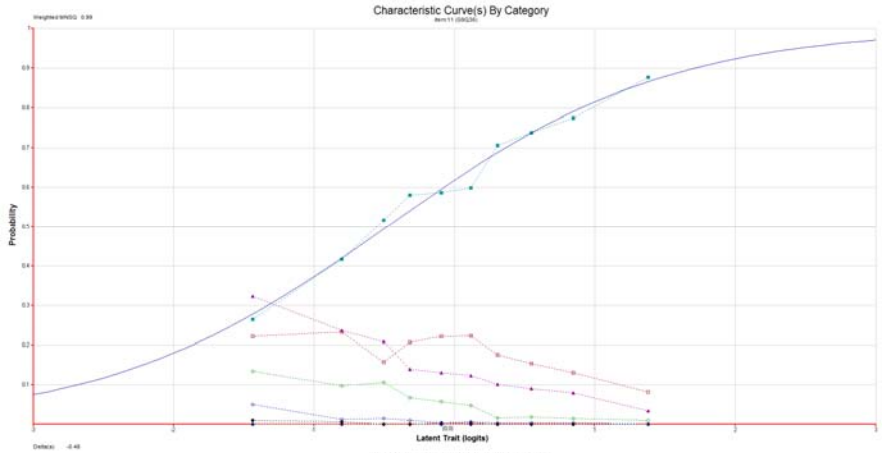

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

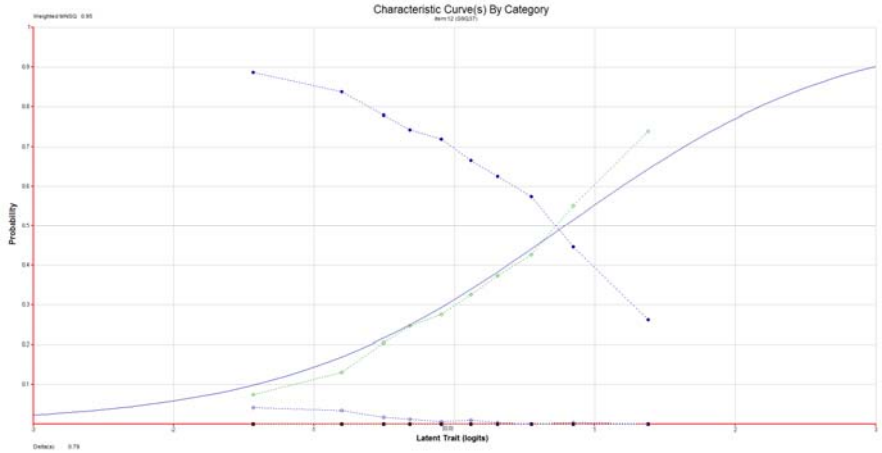

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

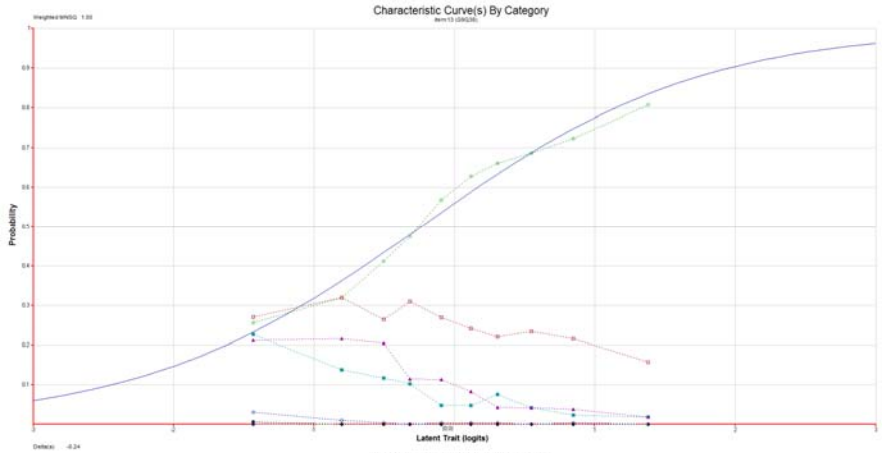

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

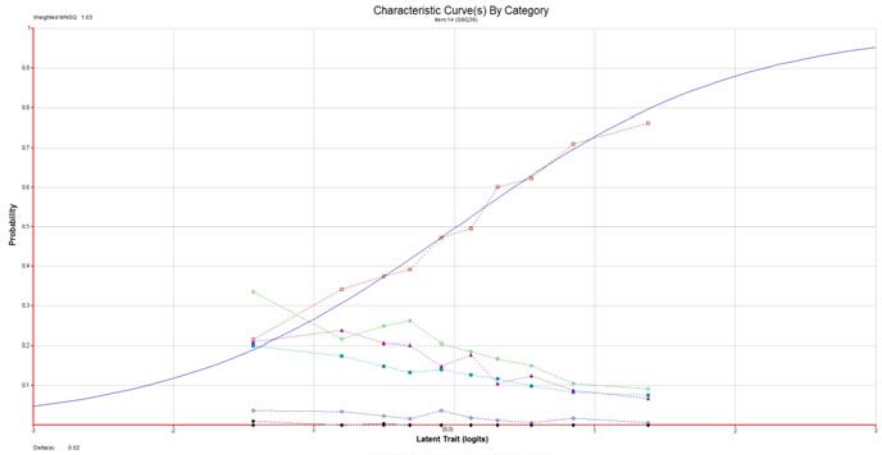

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

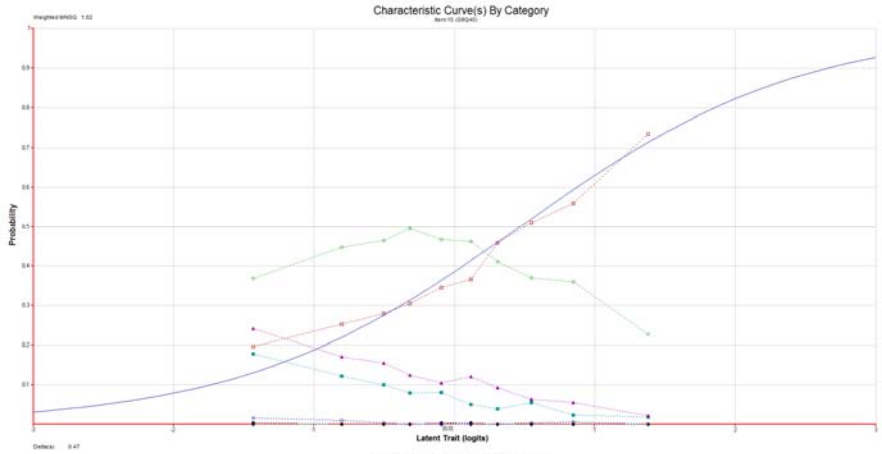

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

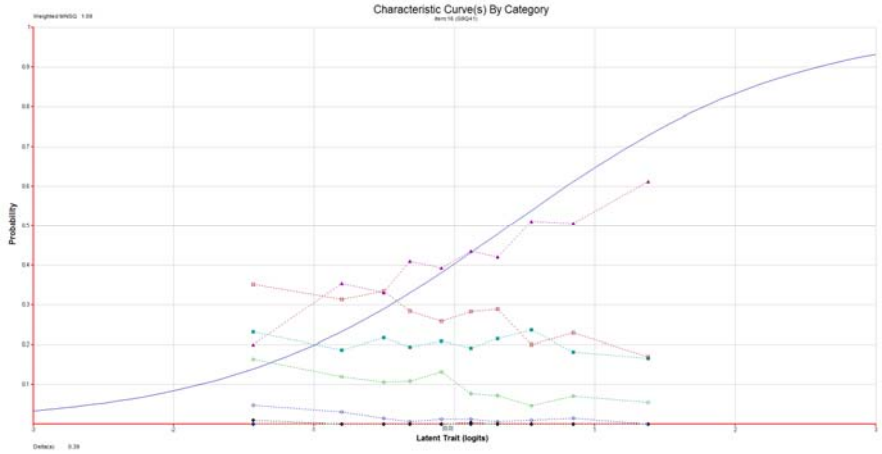

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

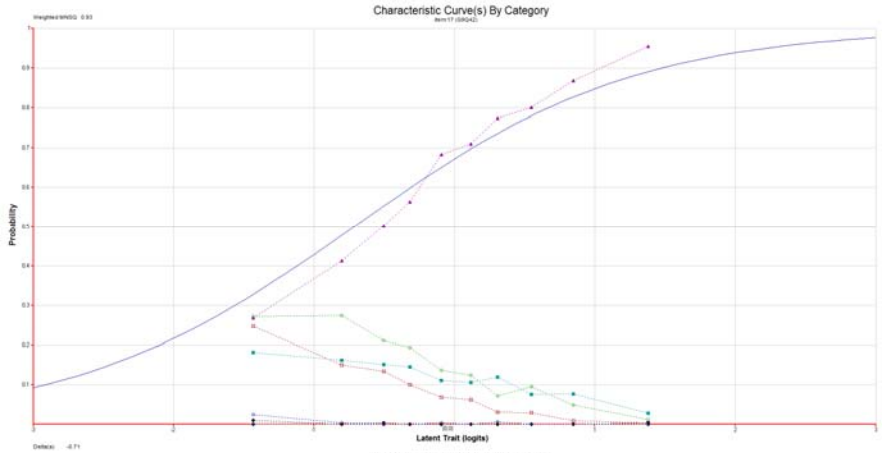

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

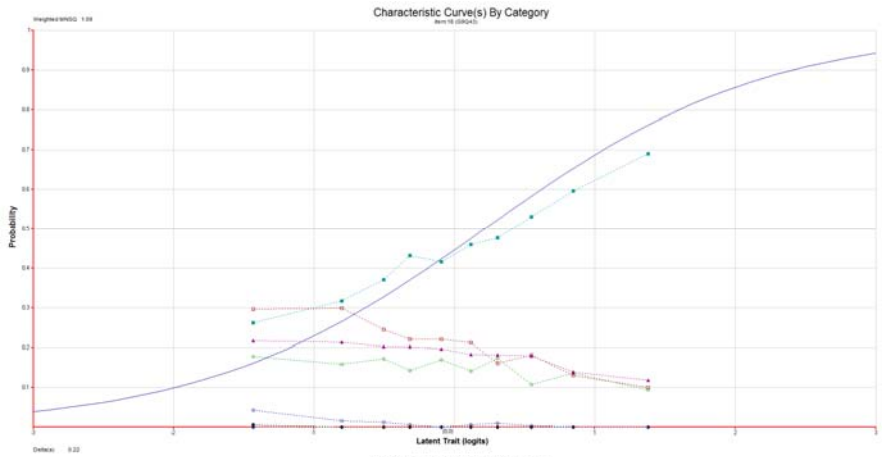

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

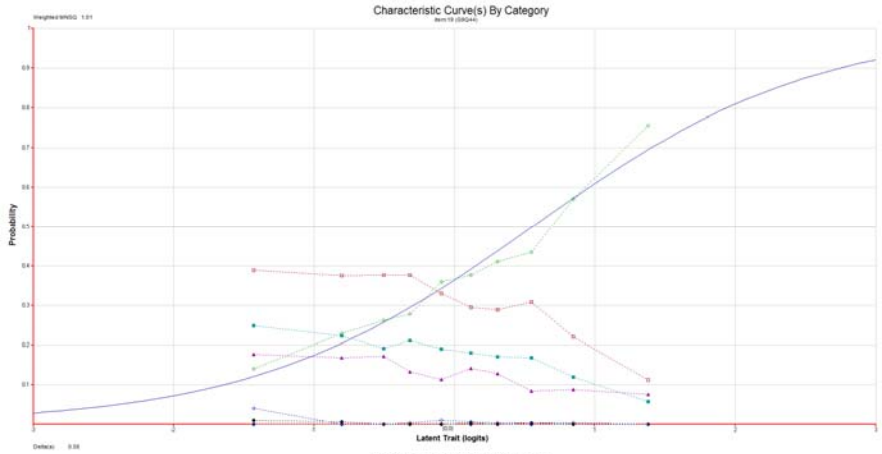

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

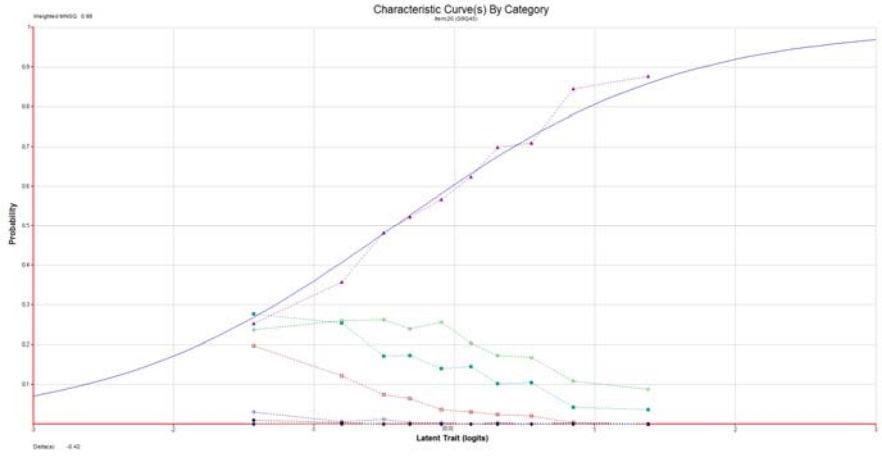

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

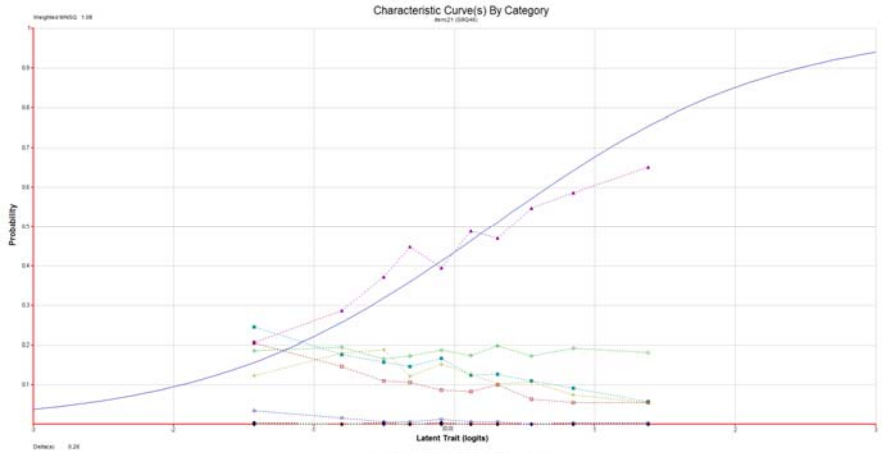

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

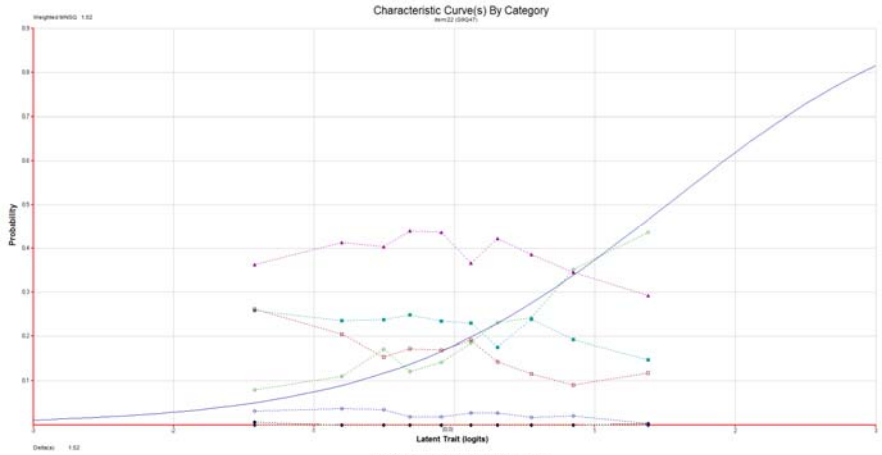

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

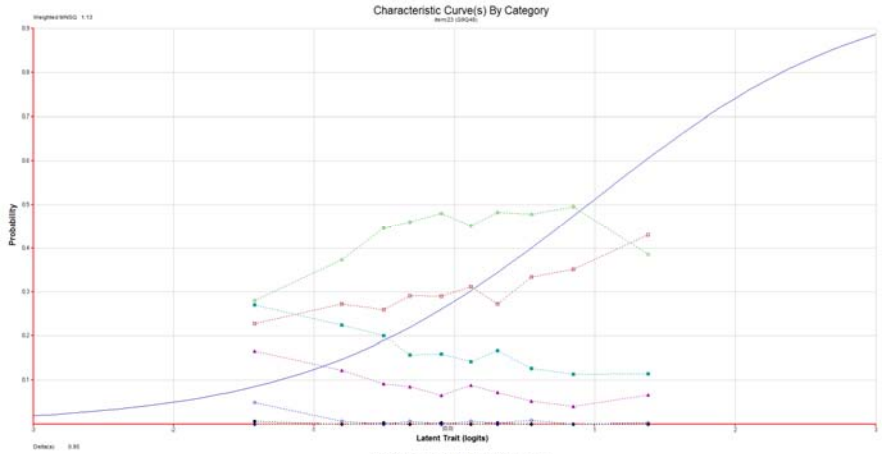

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

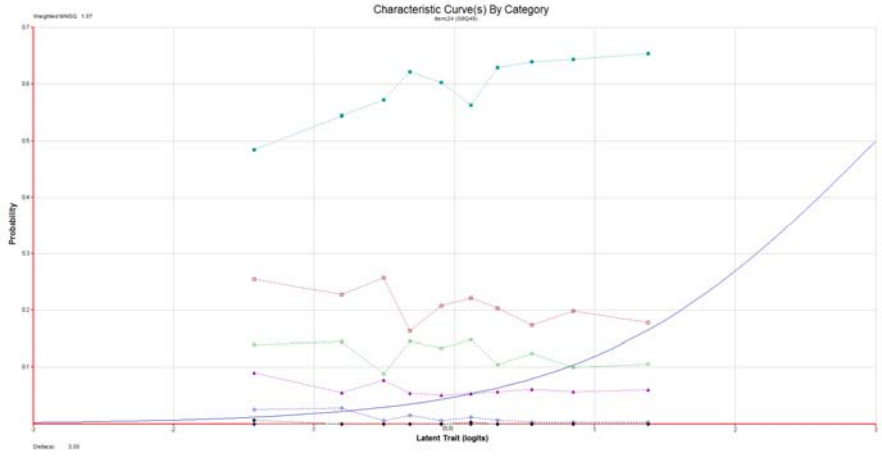

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

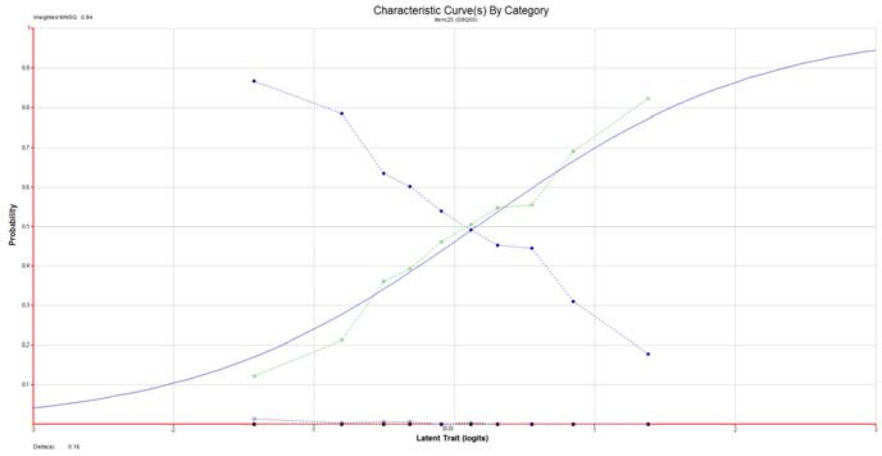

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

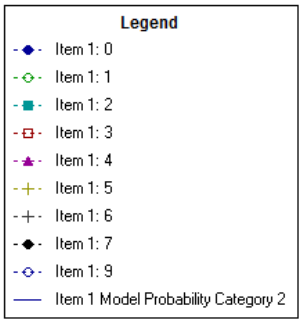

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

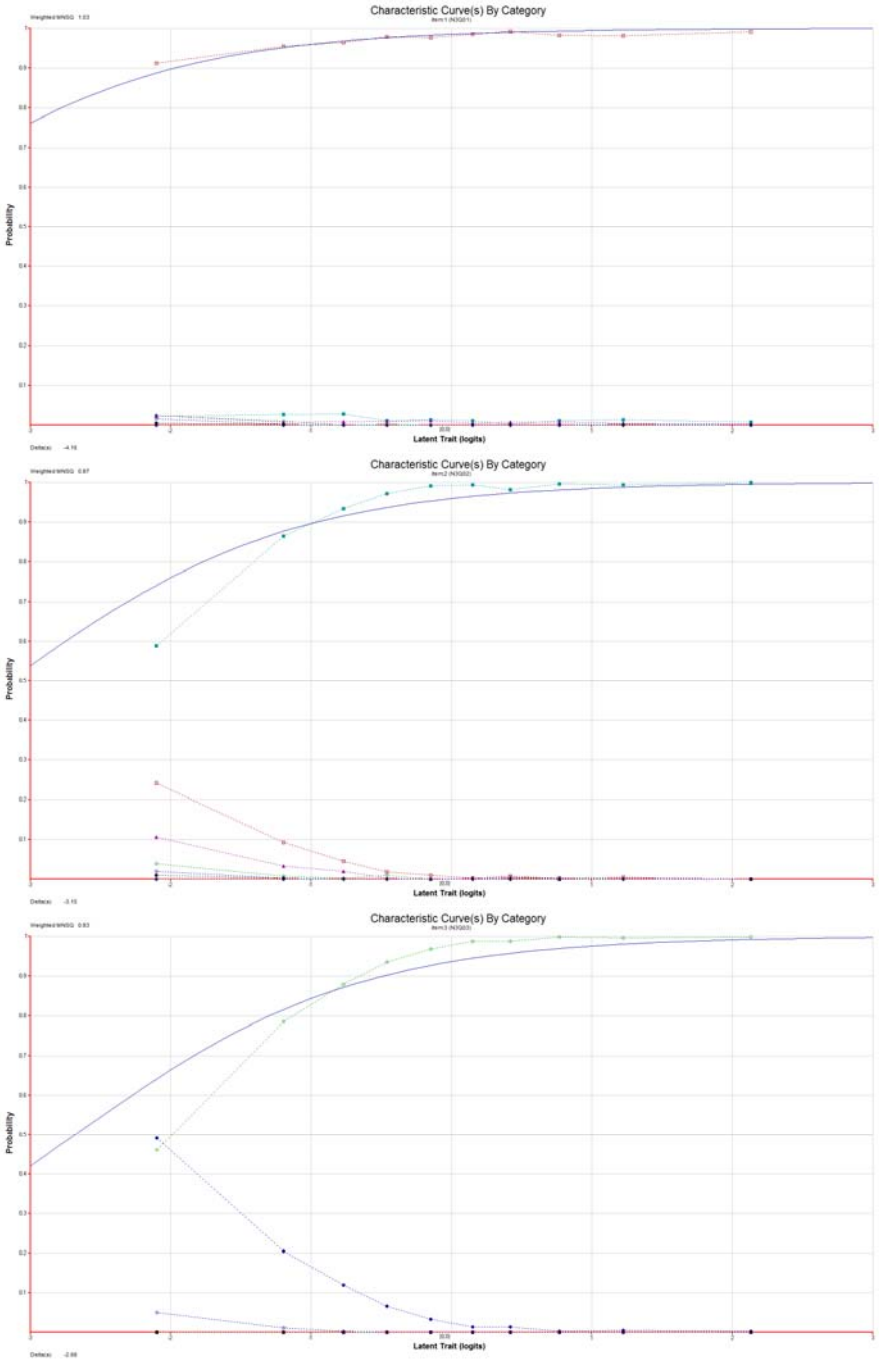

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

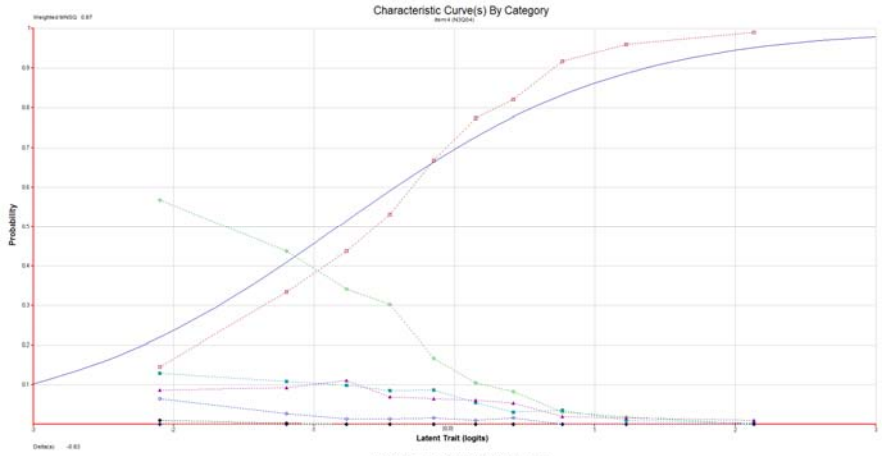

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

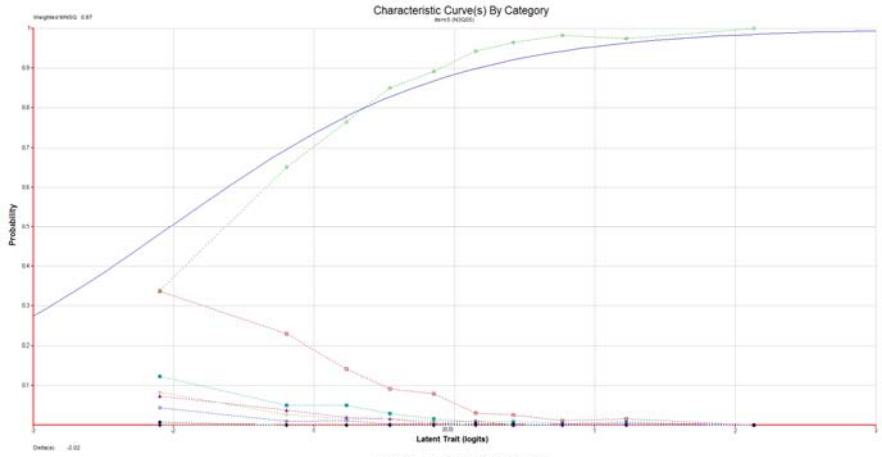

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

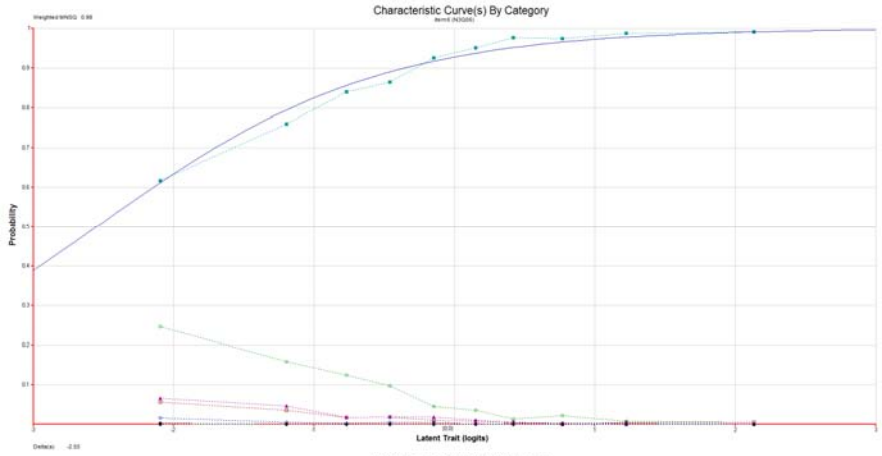
D.13. Year 3 Numeracy

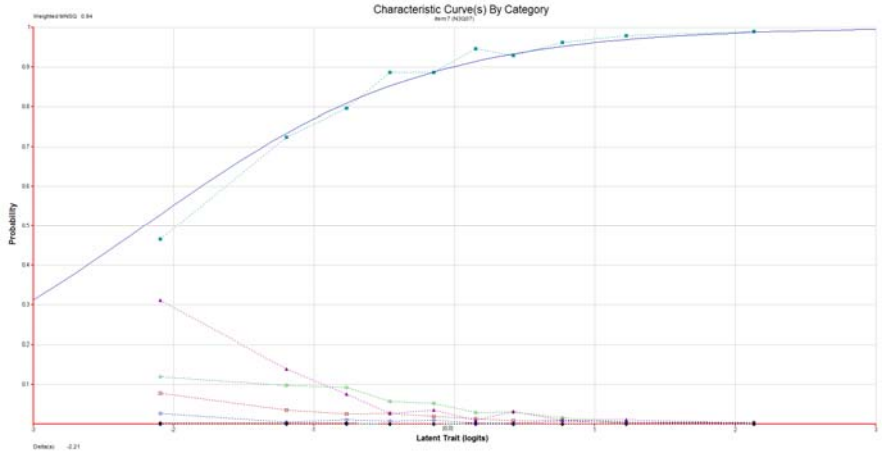


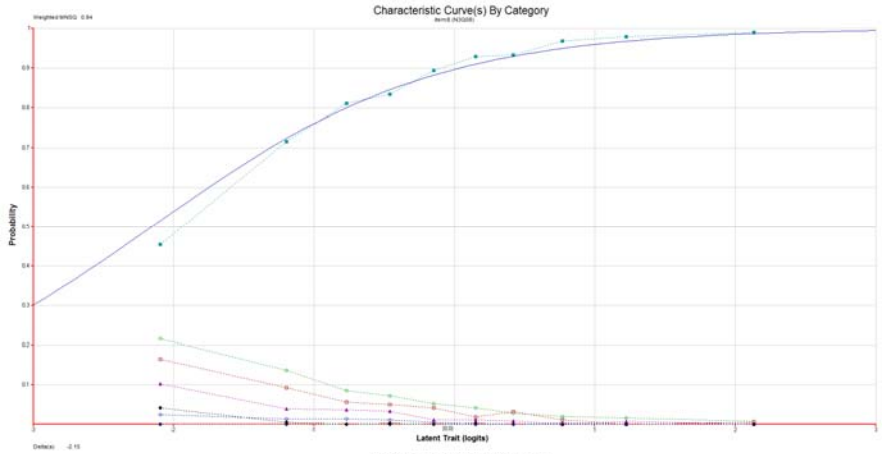


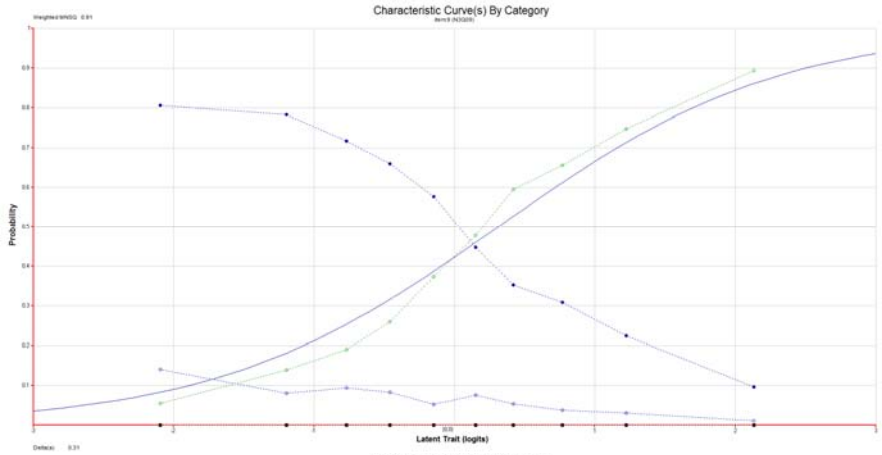

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

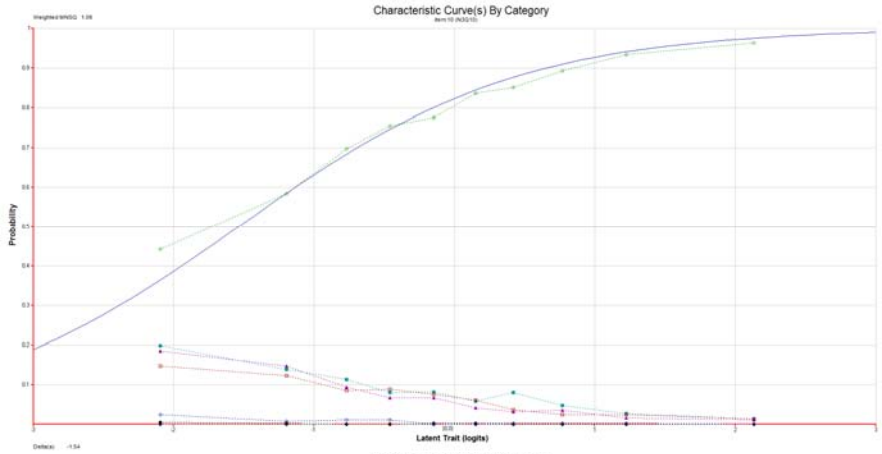

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

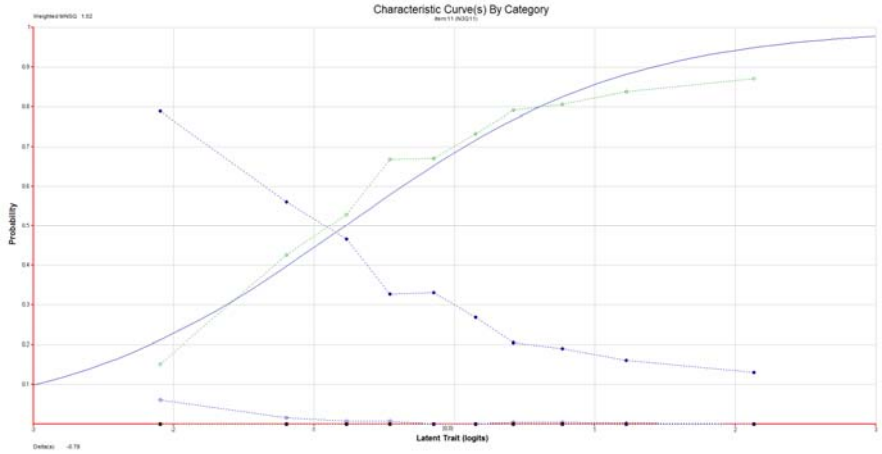

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

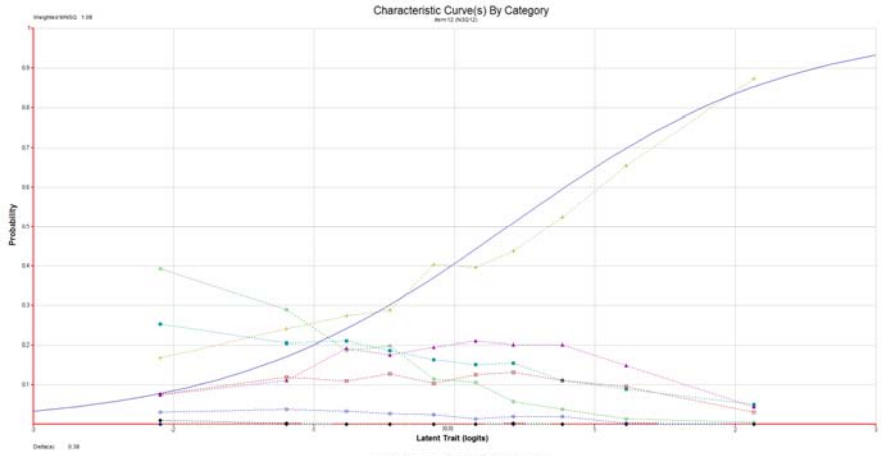

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

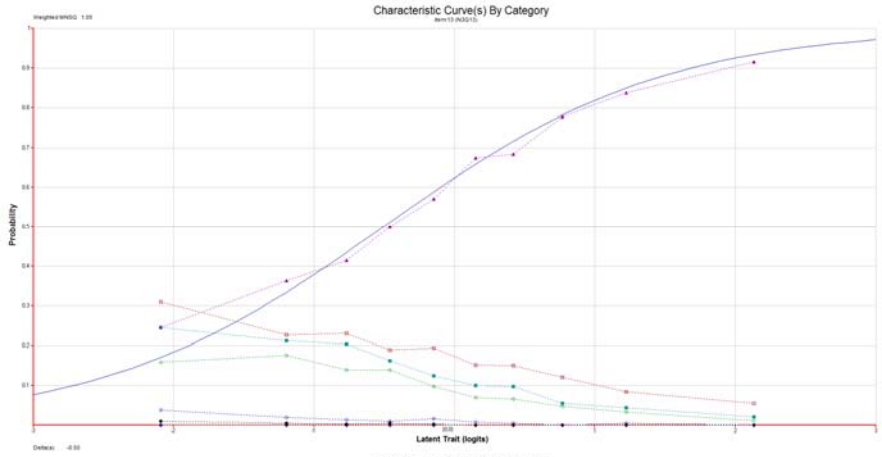

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

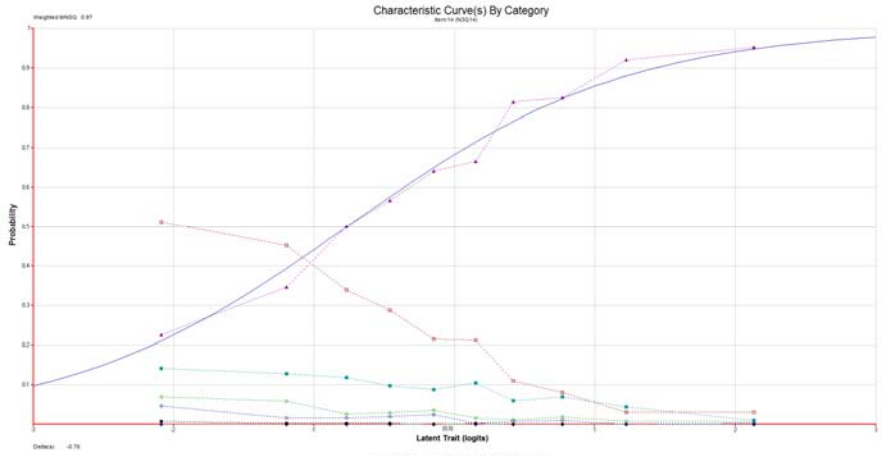

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

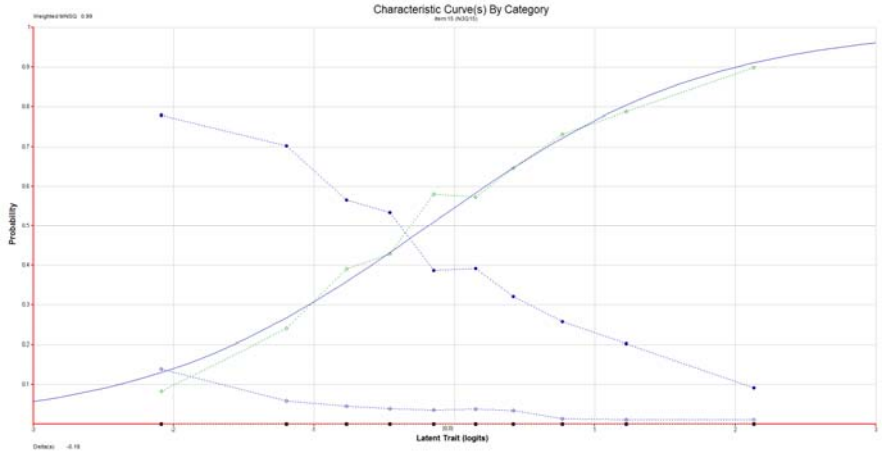

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

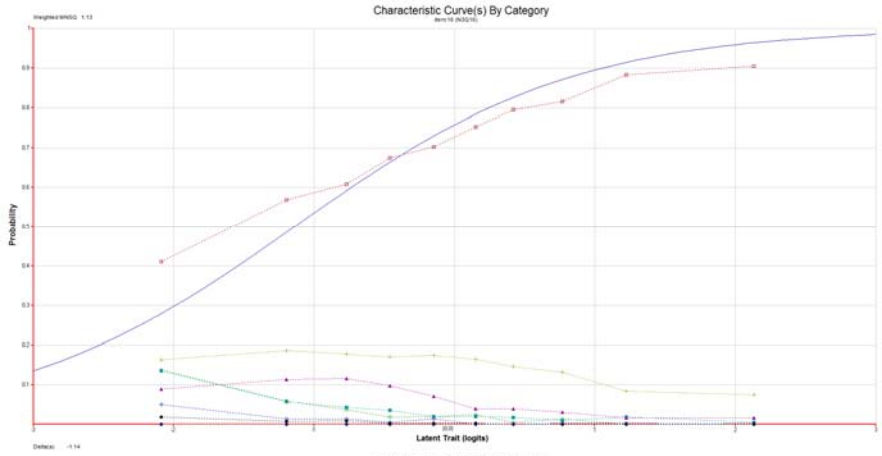

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

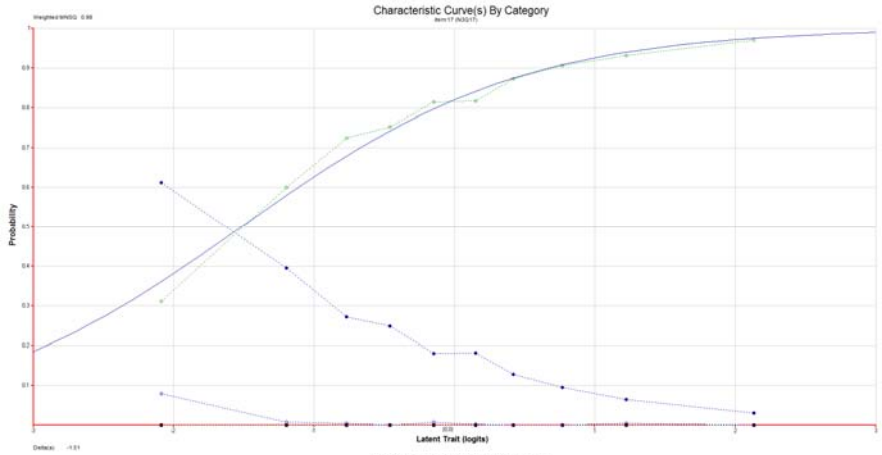

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

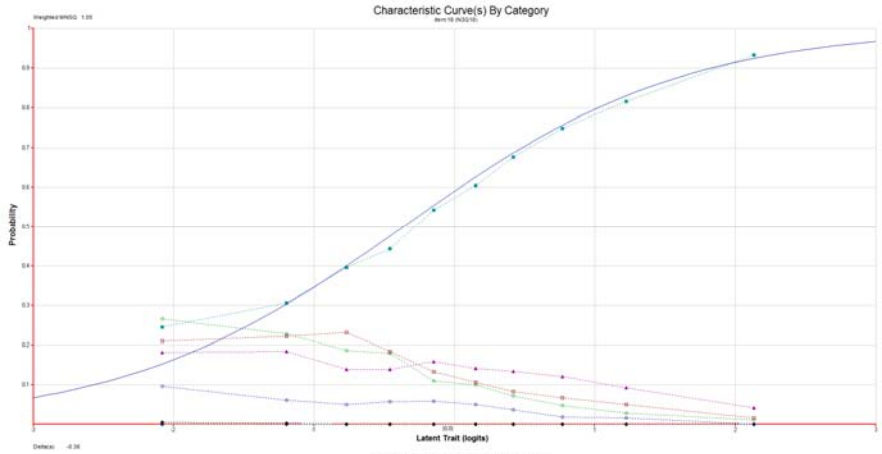

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

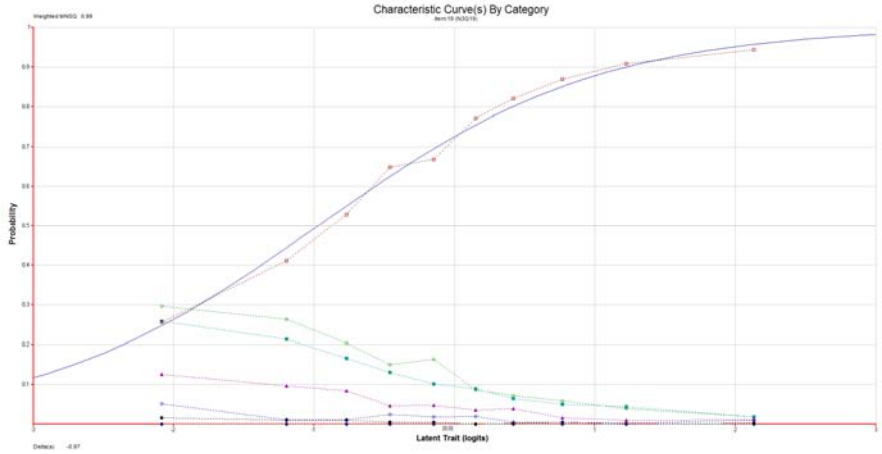

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

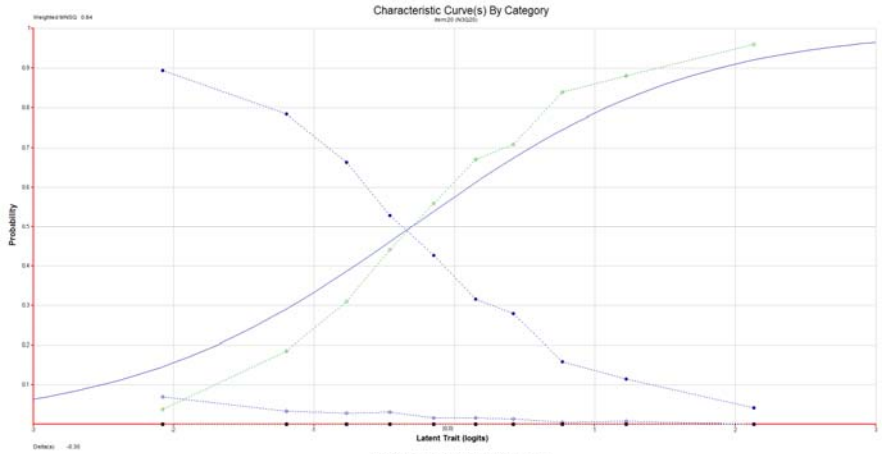

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

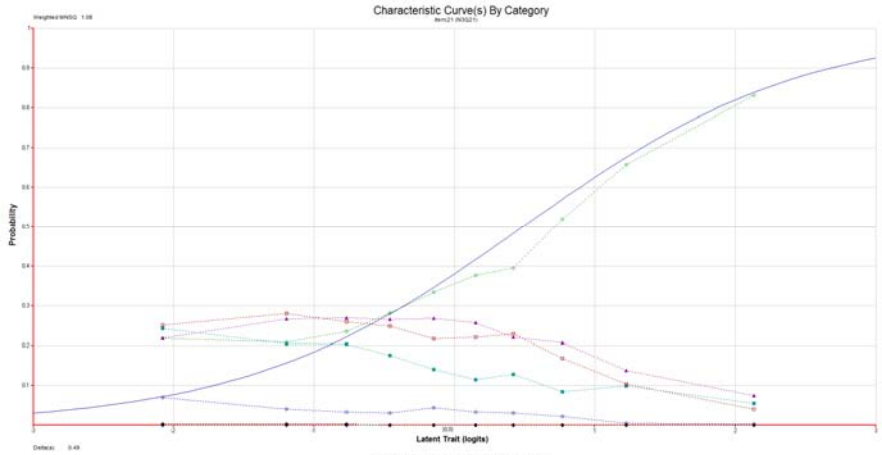

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

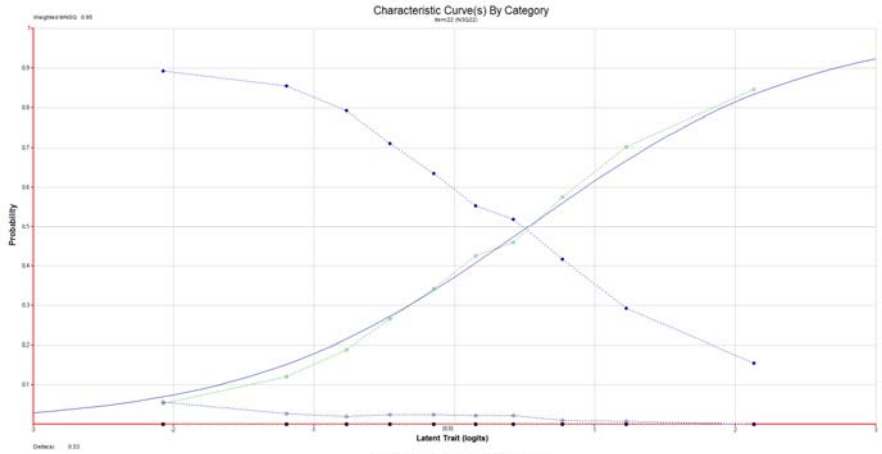

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

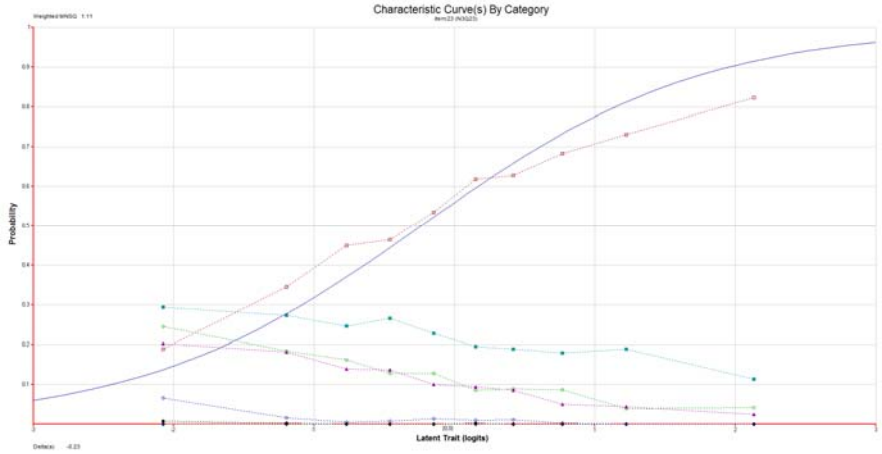

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

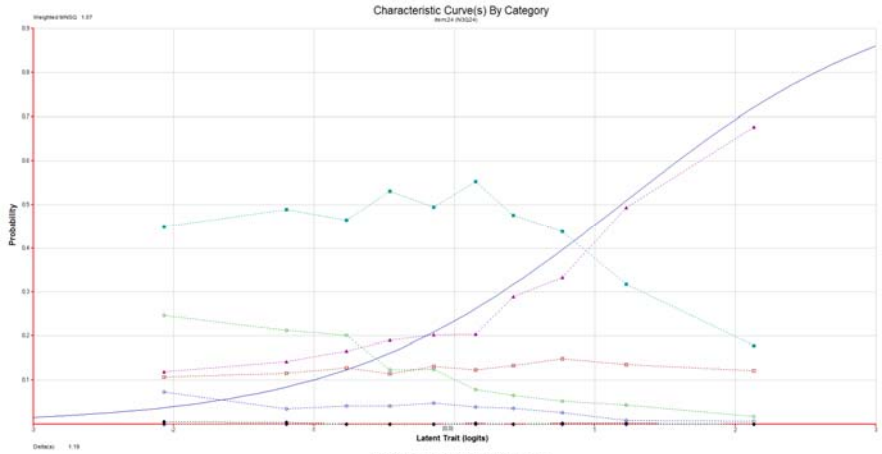

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

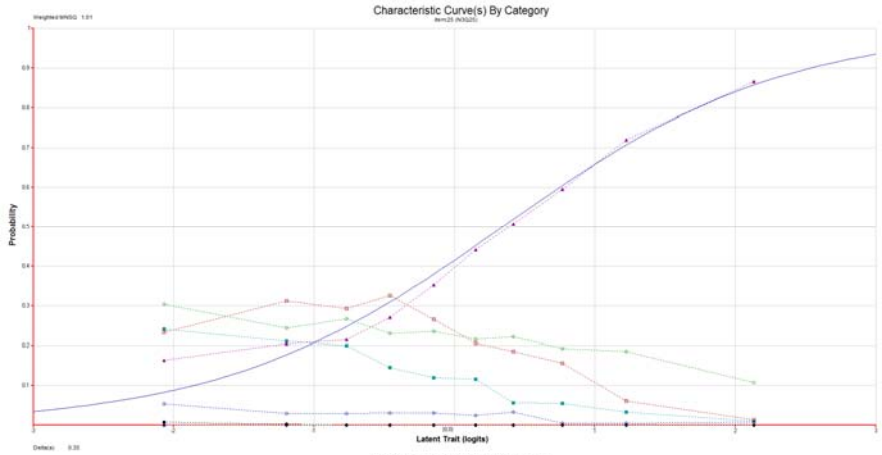

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

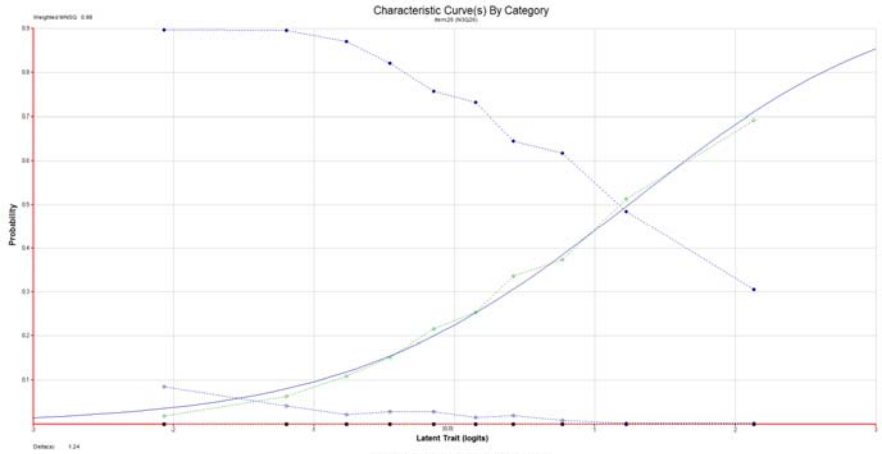

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

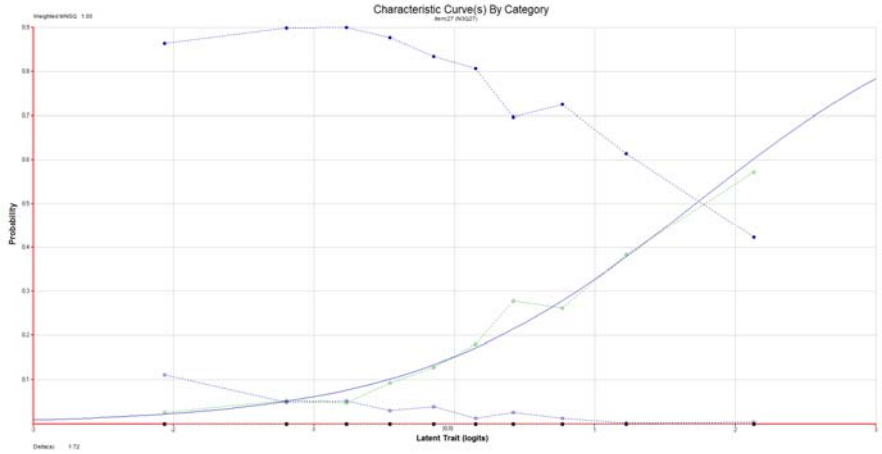

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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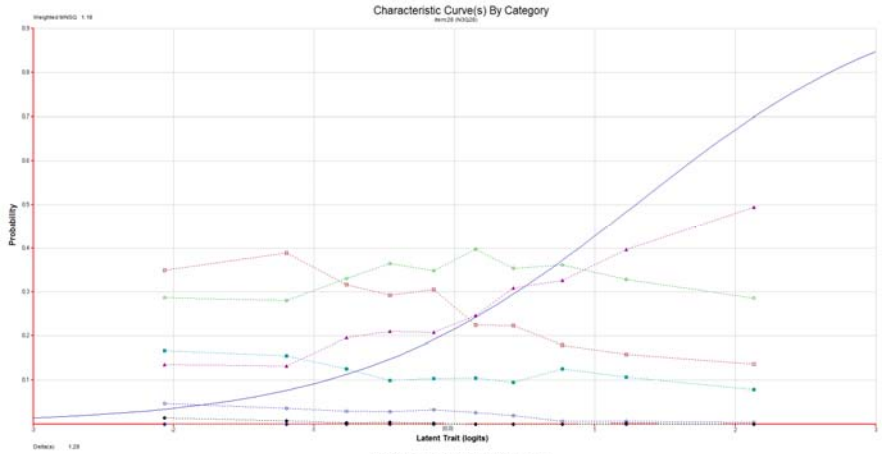
Probability
Latent Trait (logits)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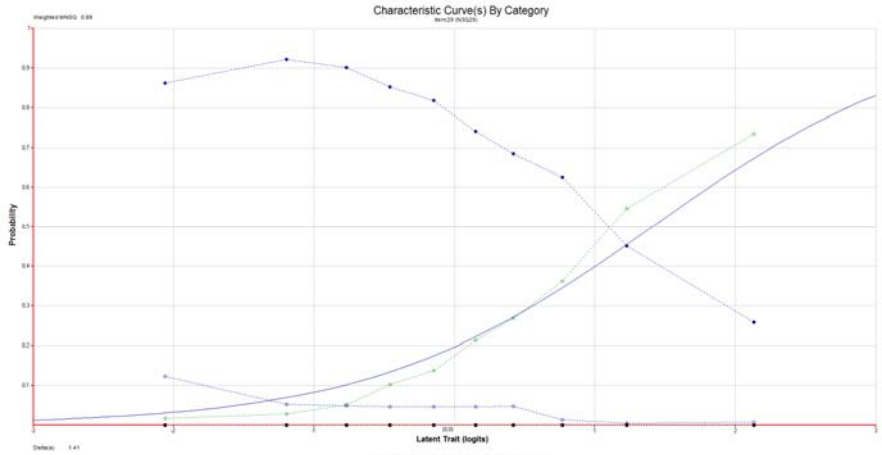
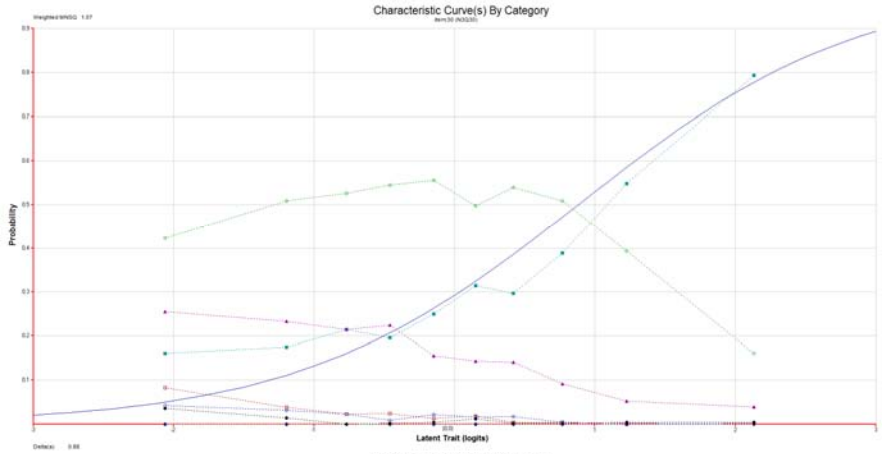
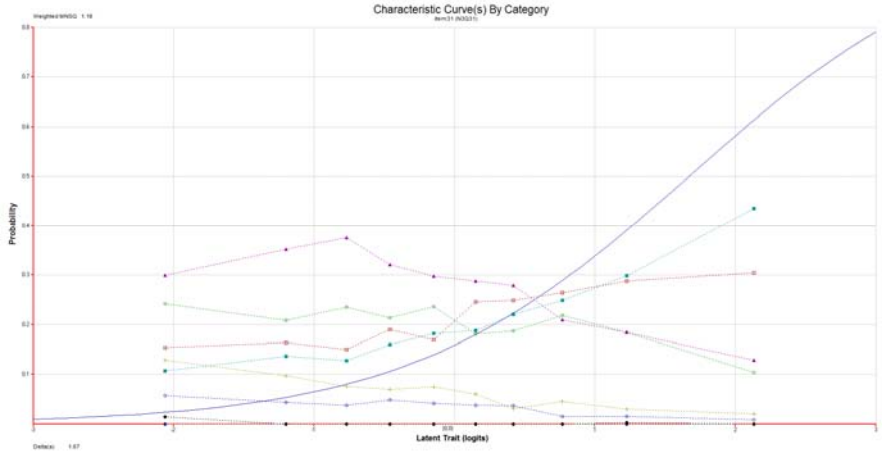
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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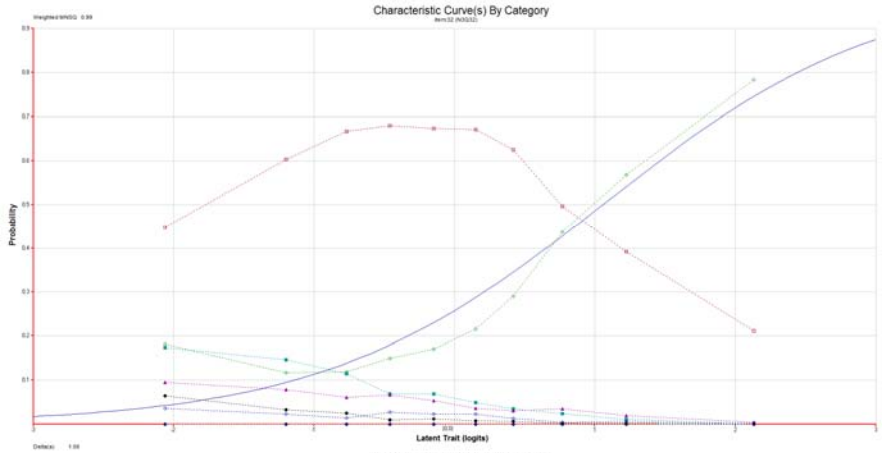
Latent Trait (logits)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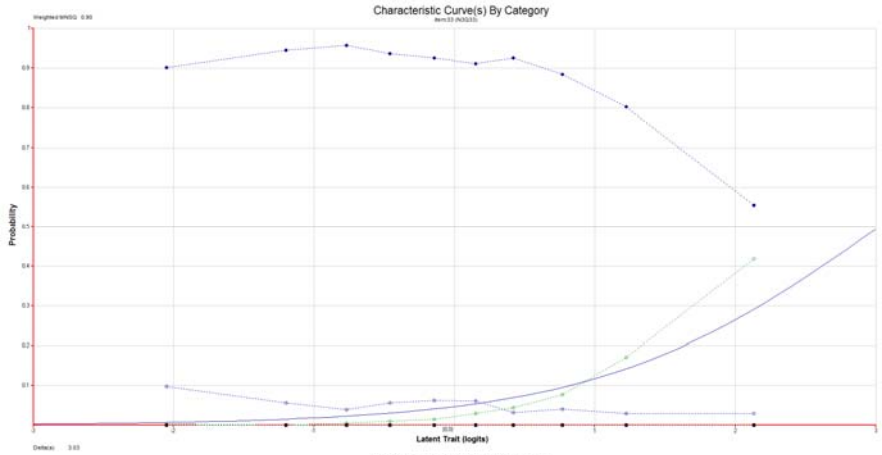
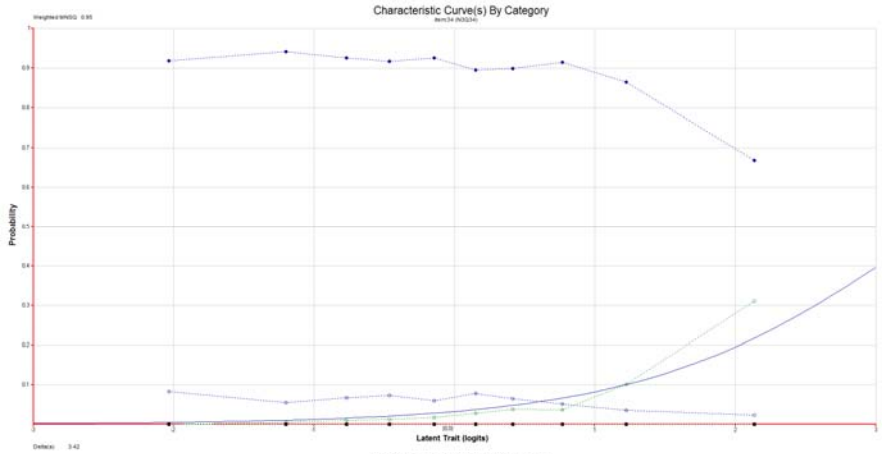
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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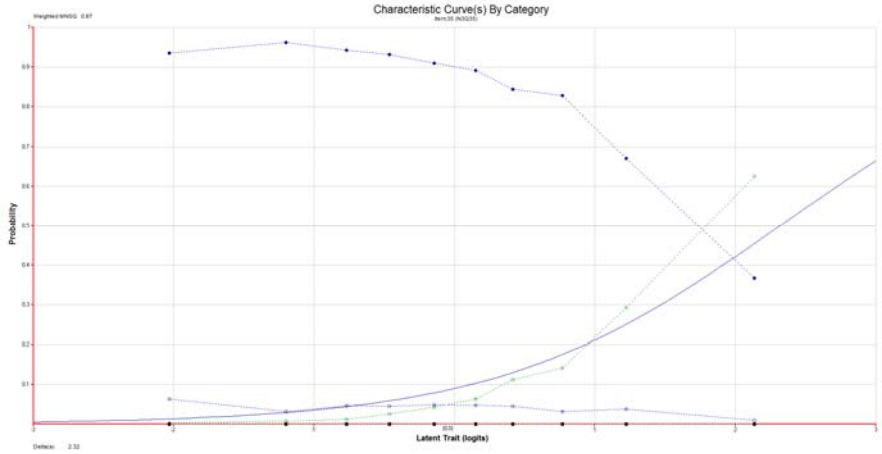
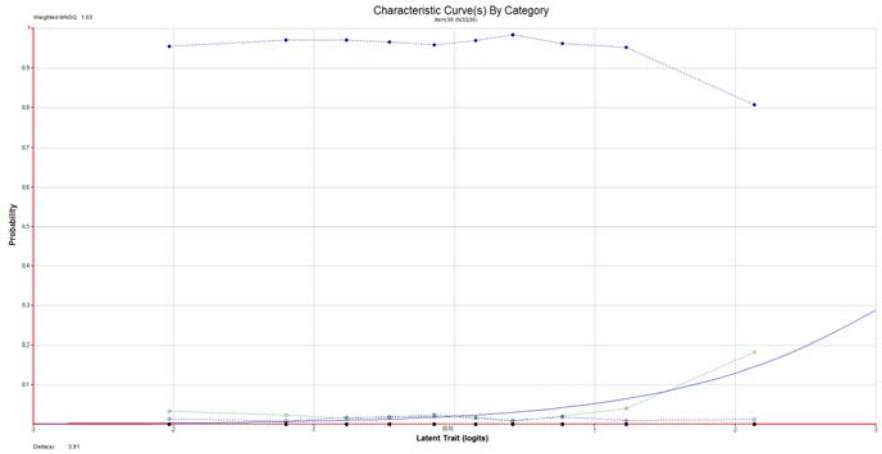
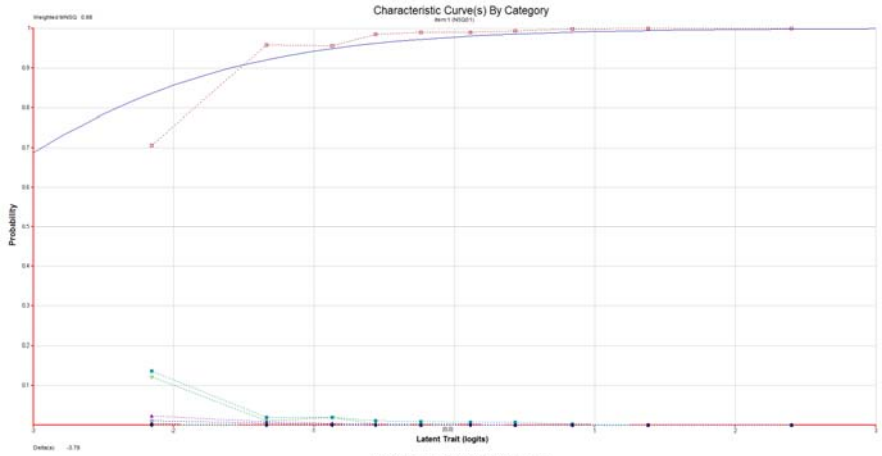
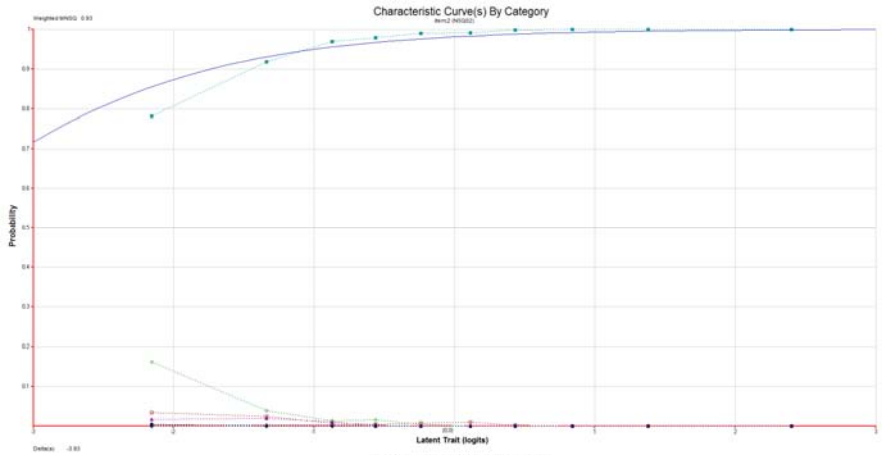
Probability
Latent Trait (logits)

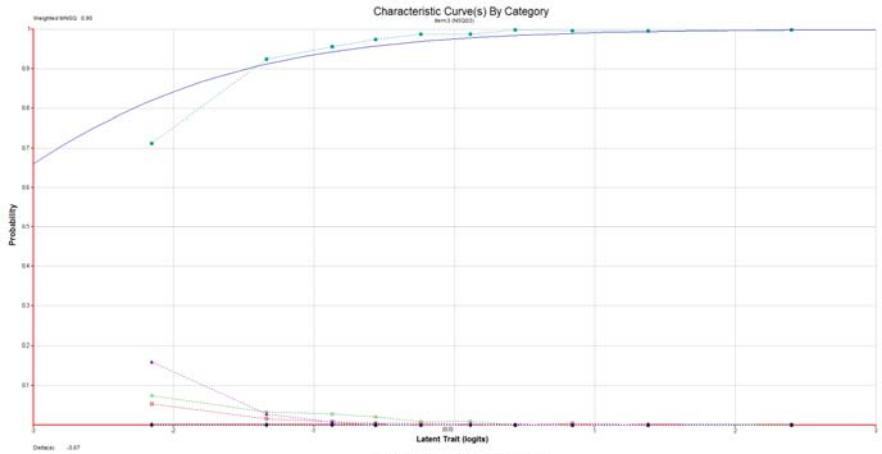

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

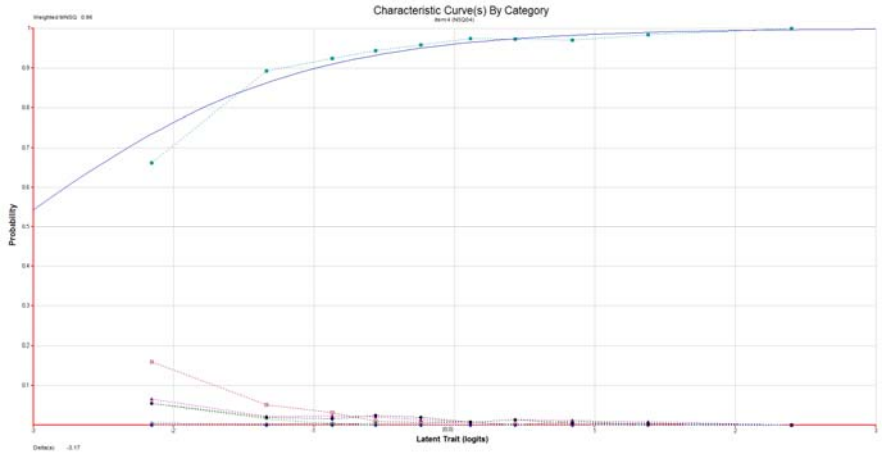

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

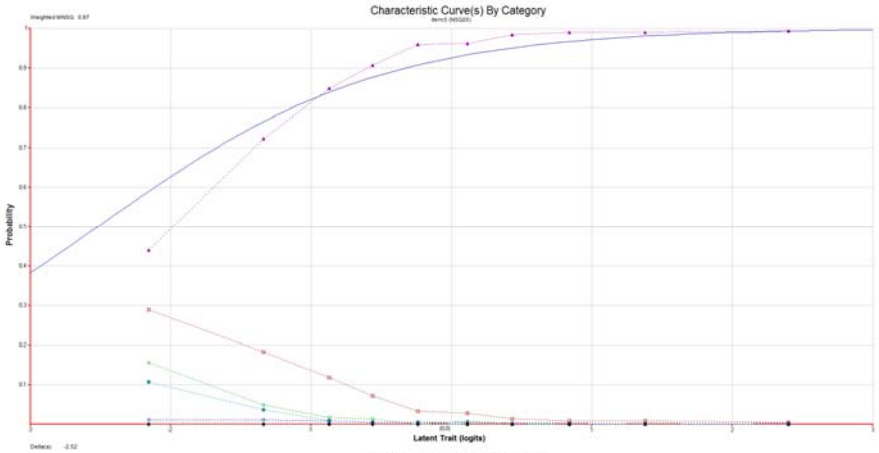
D.14. Year 5 Numeracy

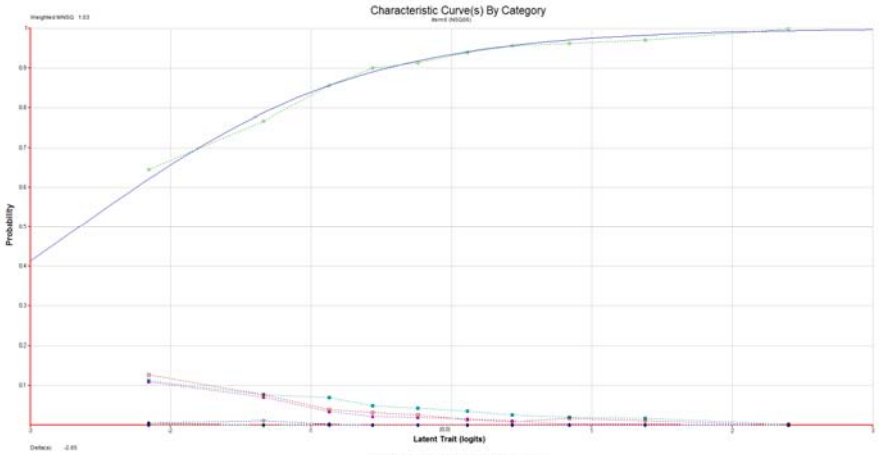


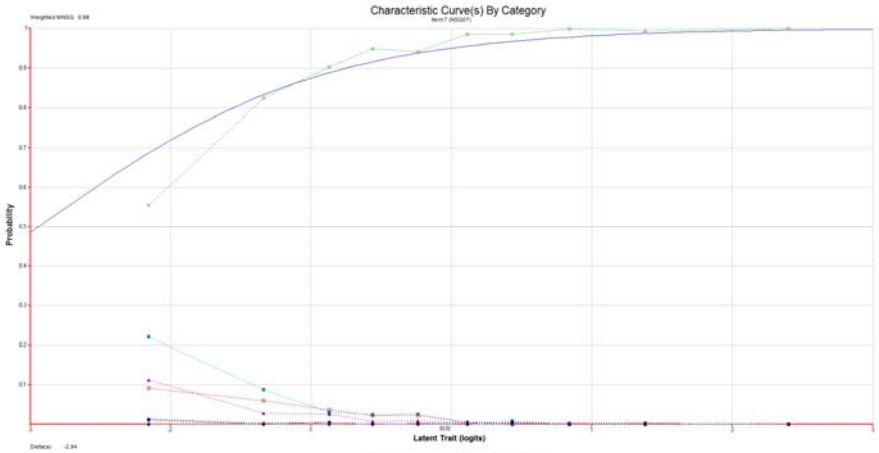


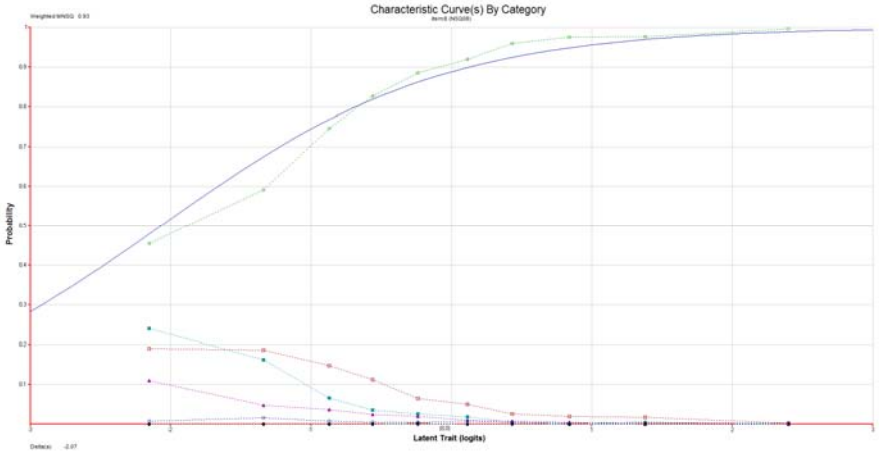


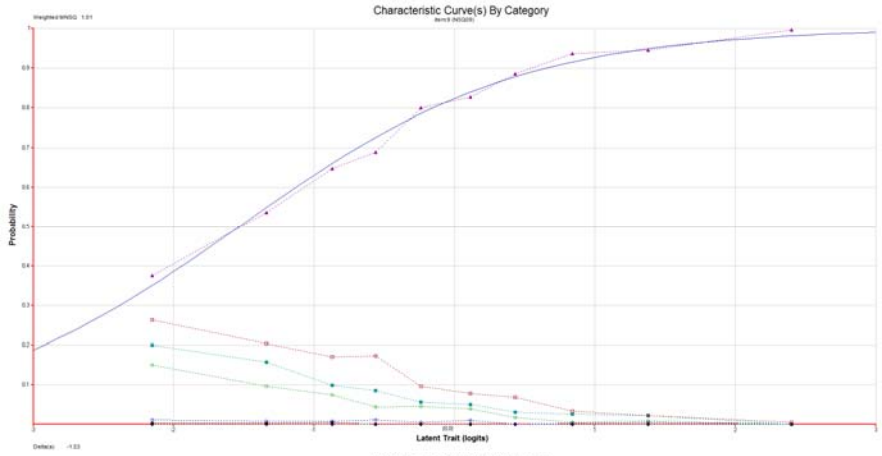


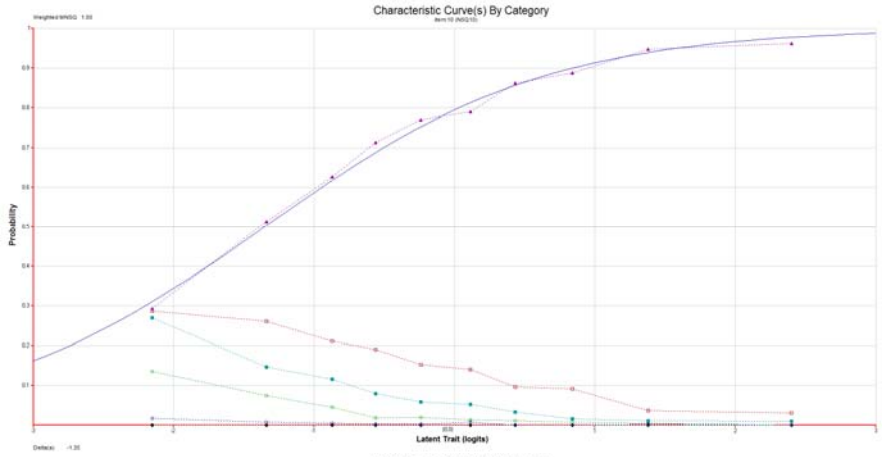

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

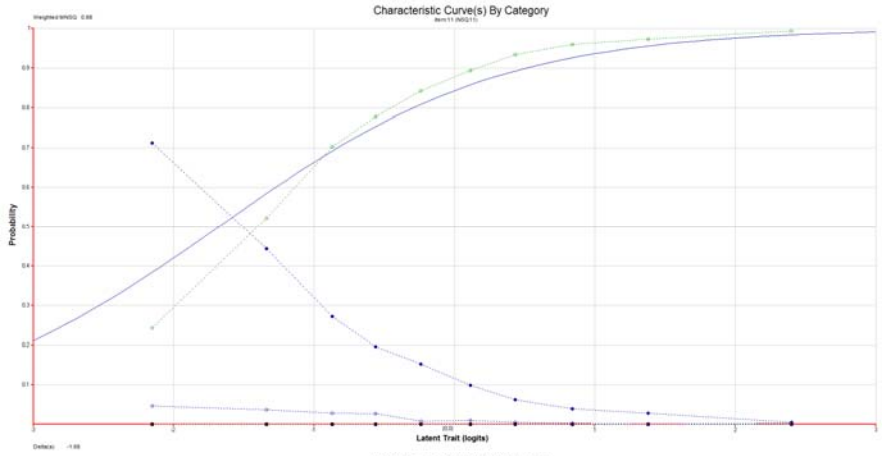

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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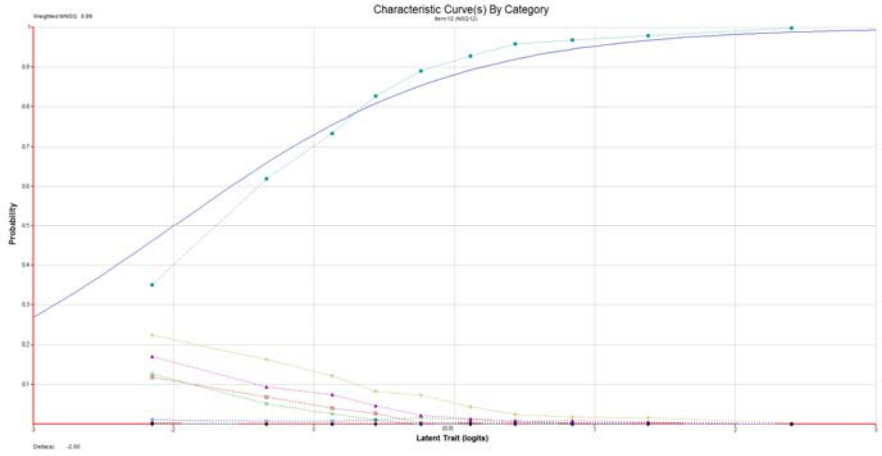
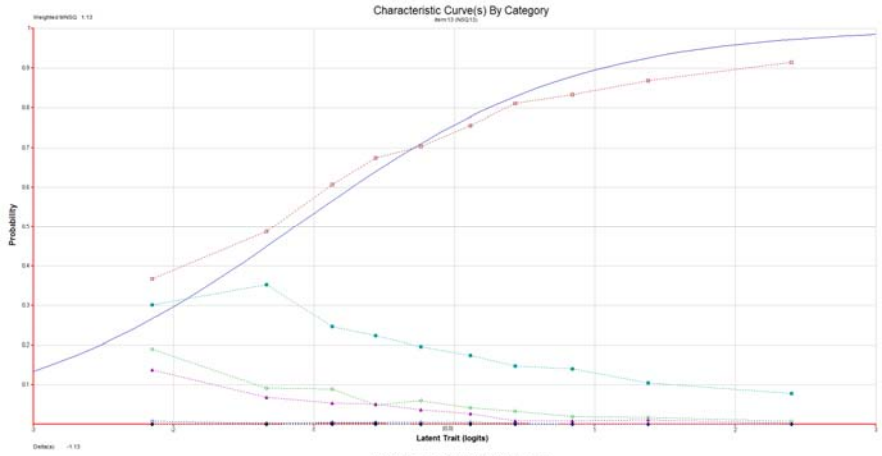
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
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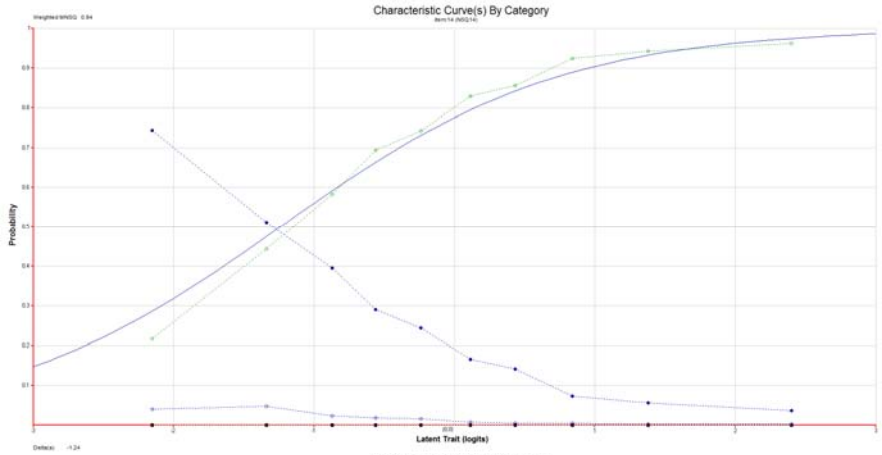
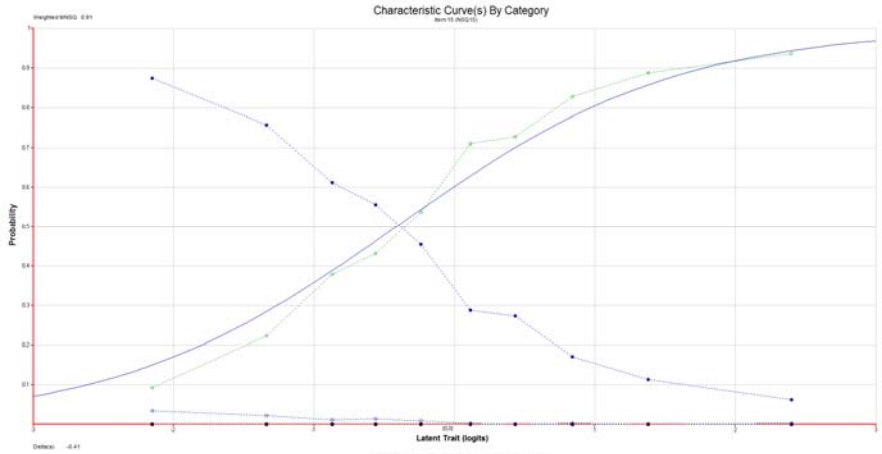
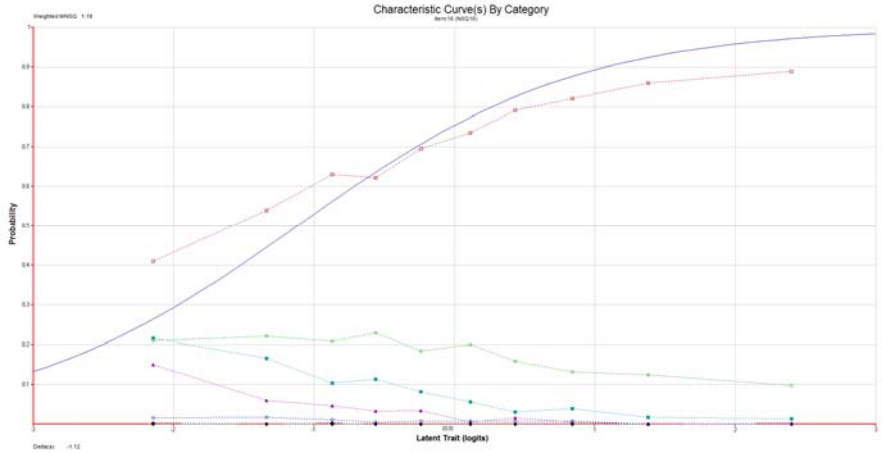

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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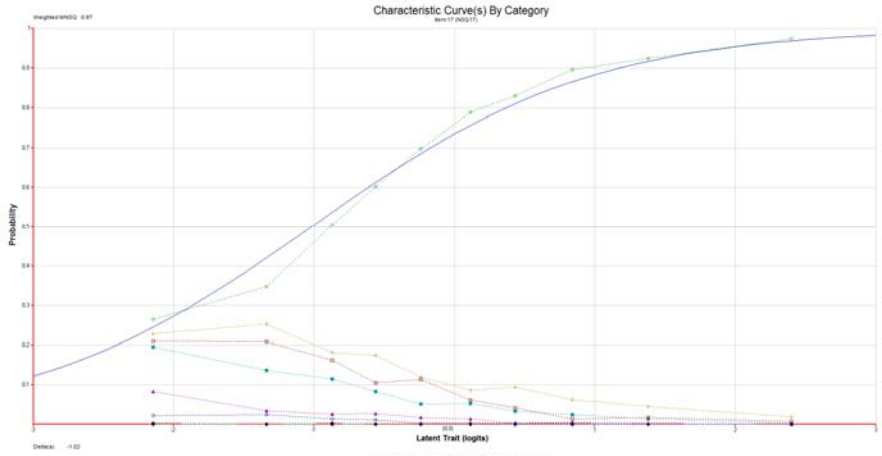
Probability
Latent Trait (logits)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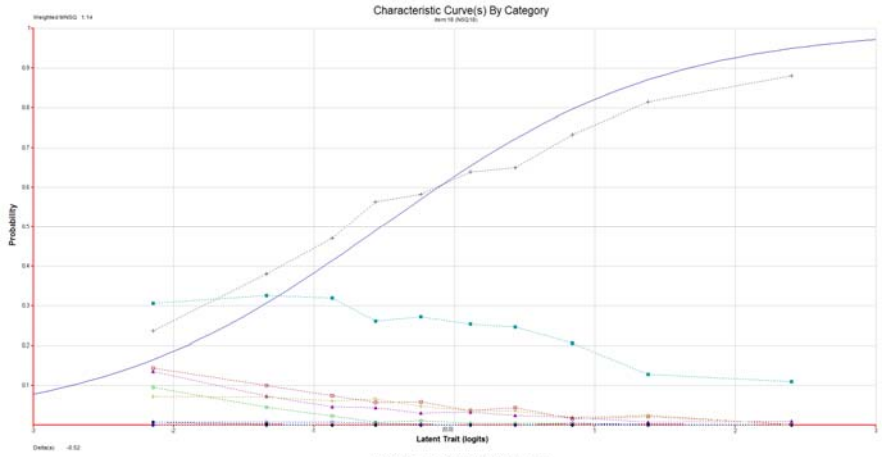
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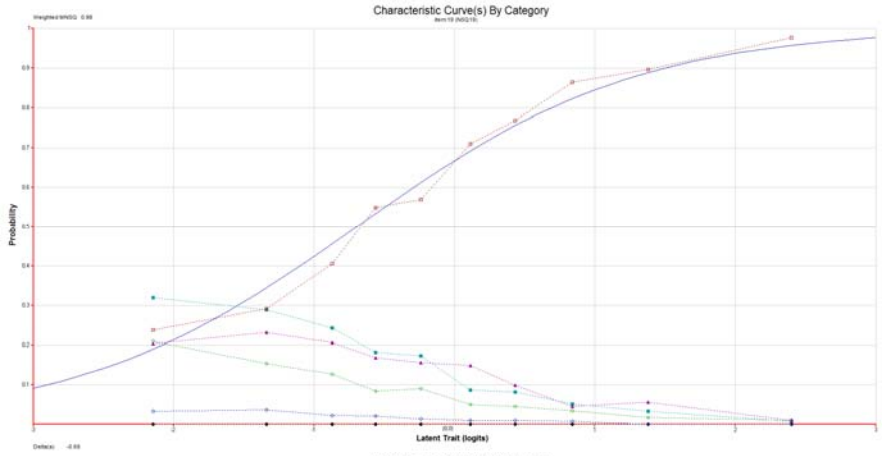
Characteristic Curve(s) By Category
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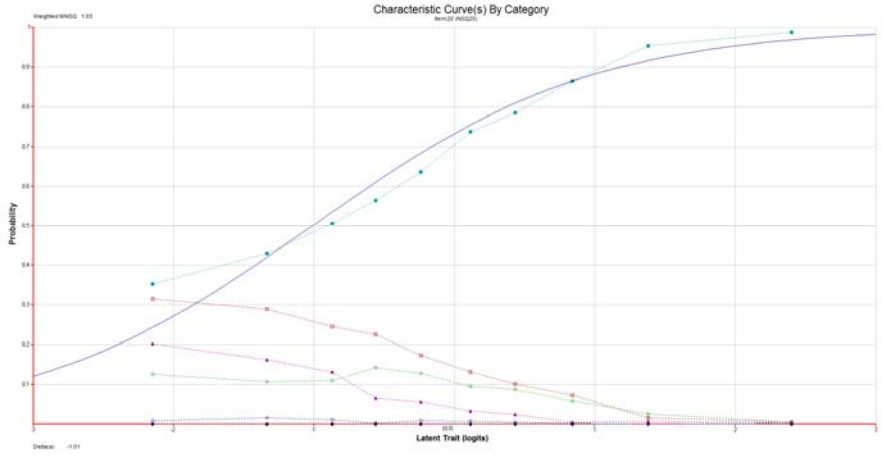
Characteristic Curve(s) By Category
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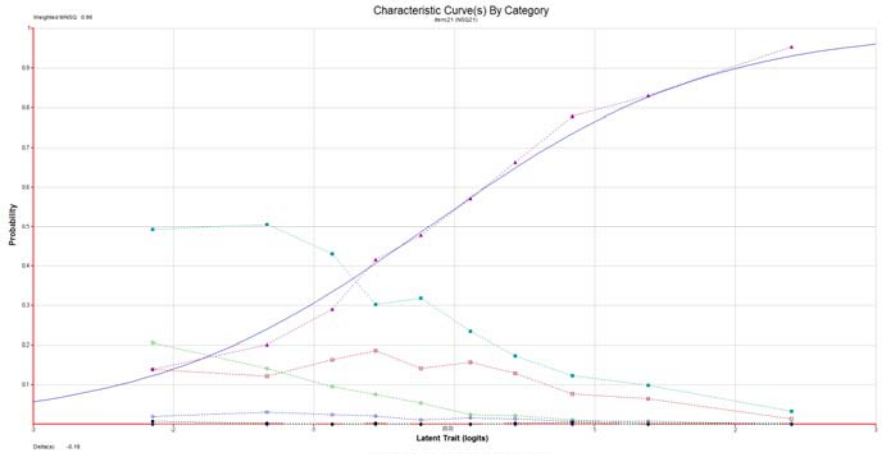
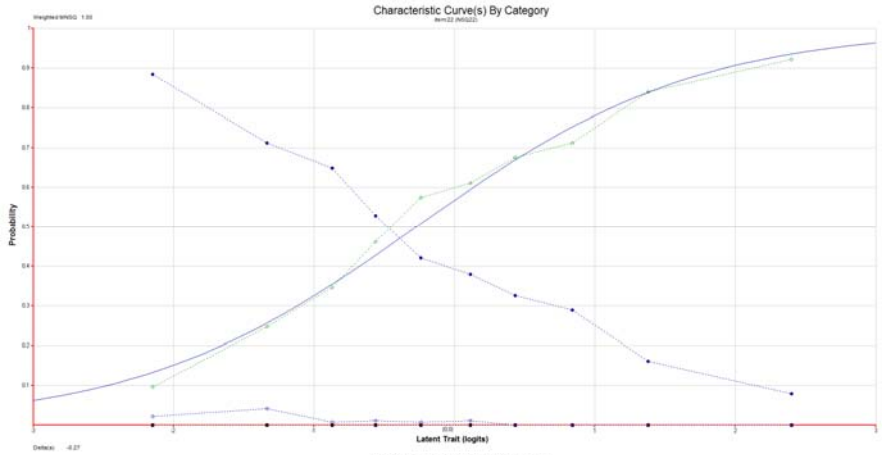
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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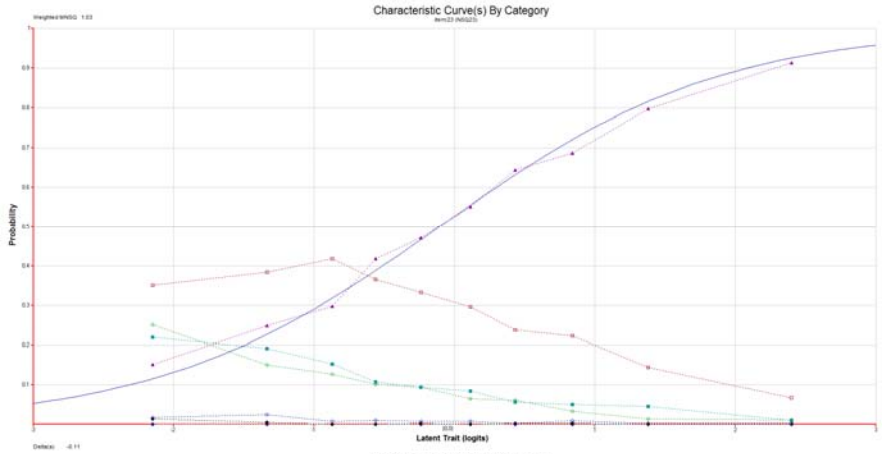
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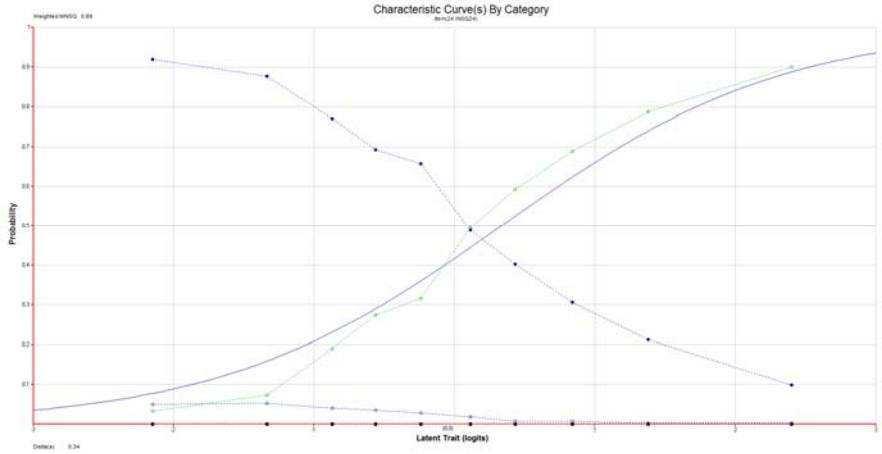
Characteristic Curve(s) By Category
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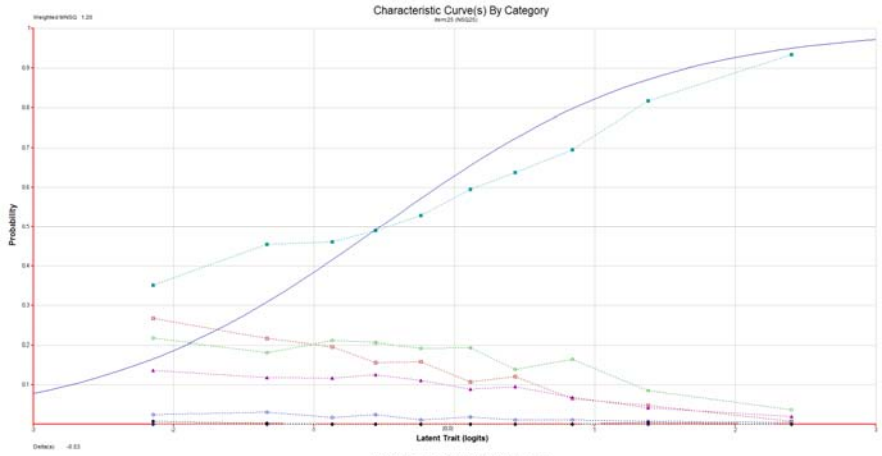
Characteristic Curve(s) By Category
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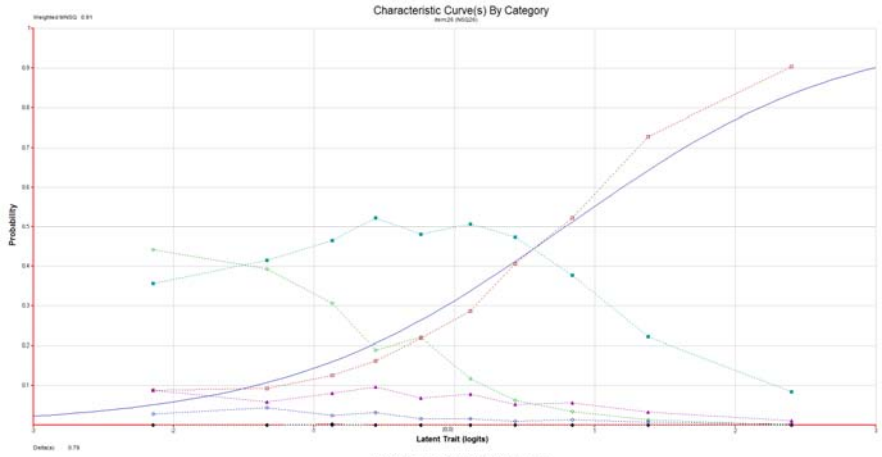
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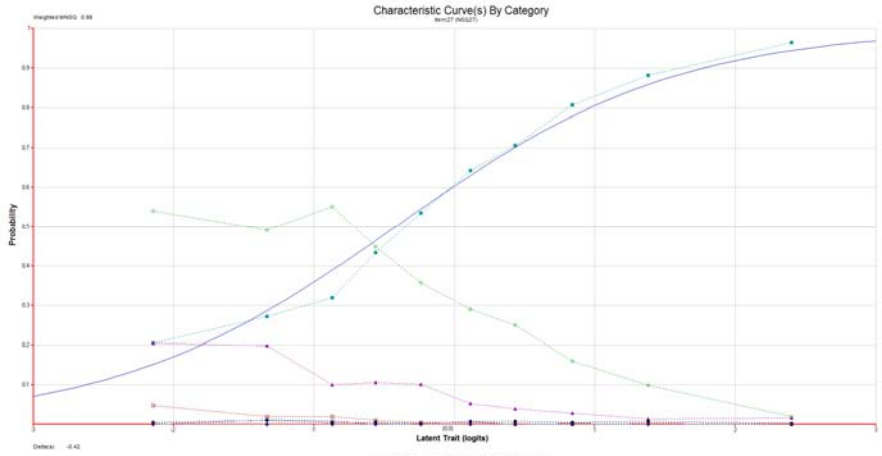
Probability
Latent Trait (logits)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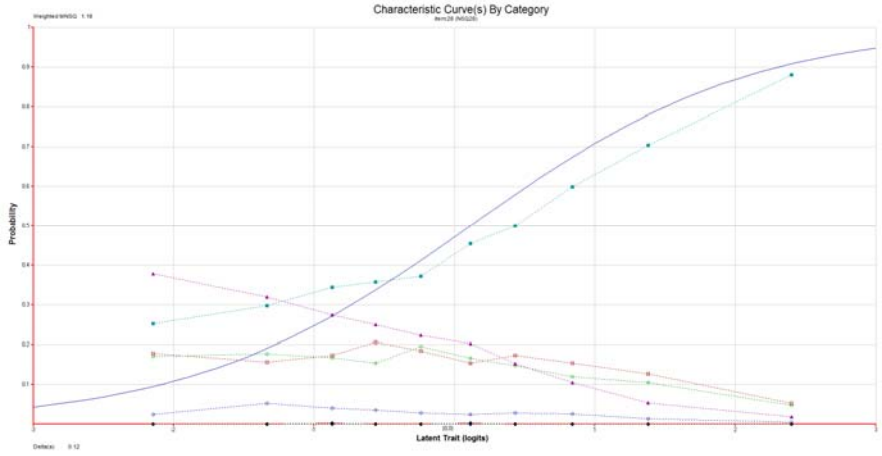
Probability
Latent Trait (logits)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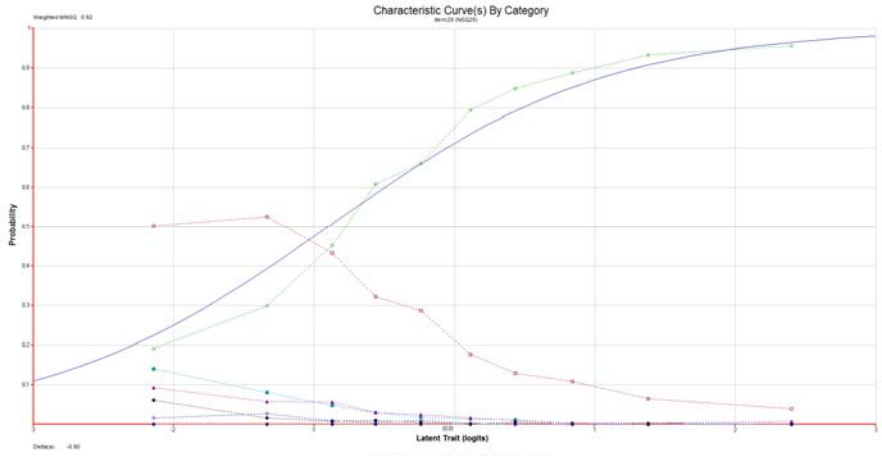
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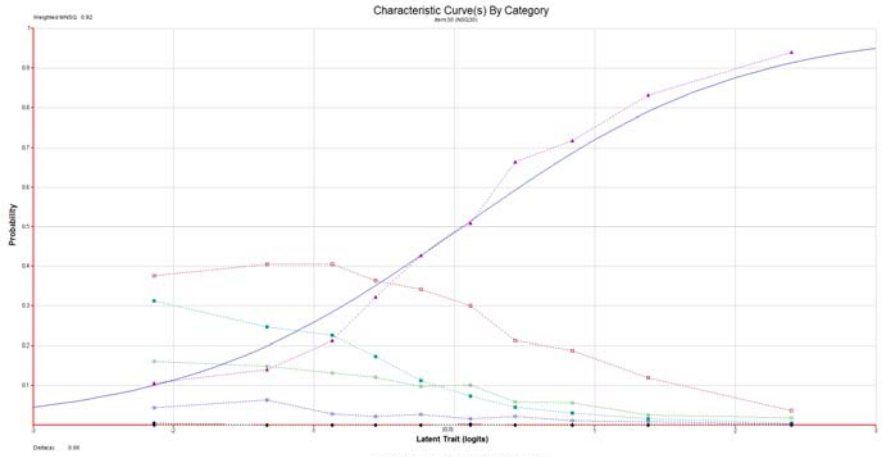
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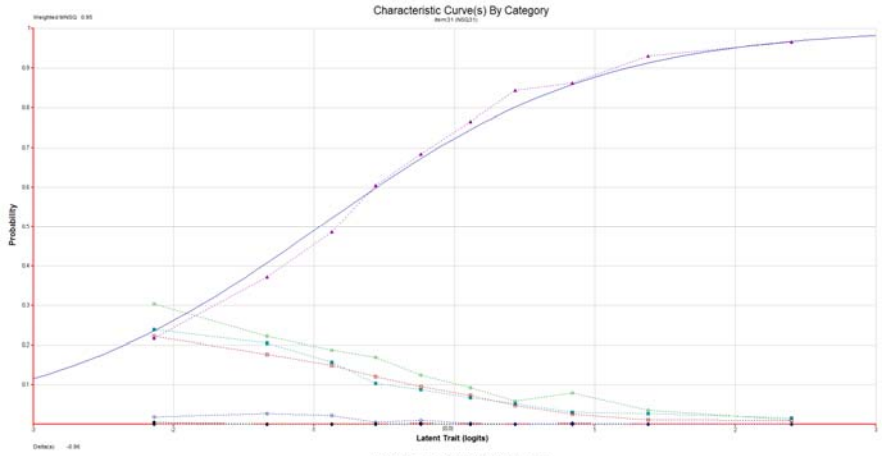
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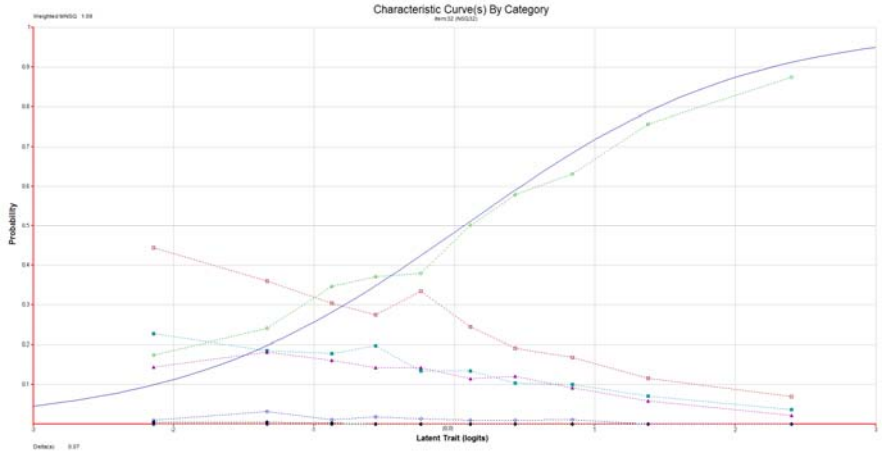
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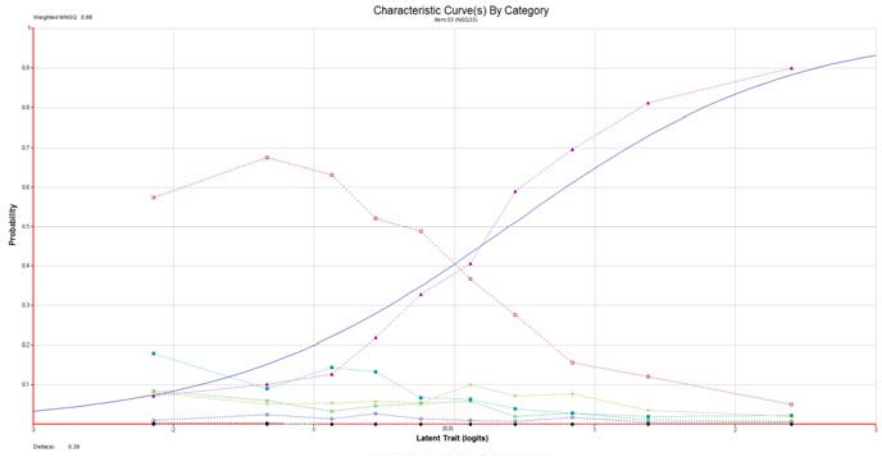
Characteristic Curve(s) By Category
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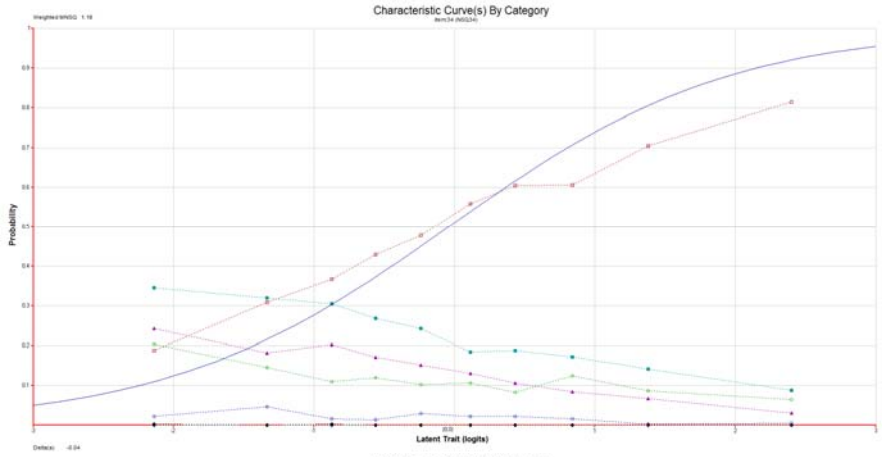
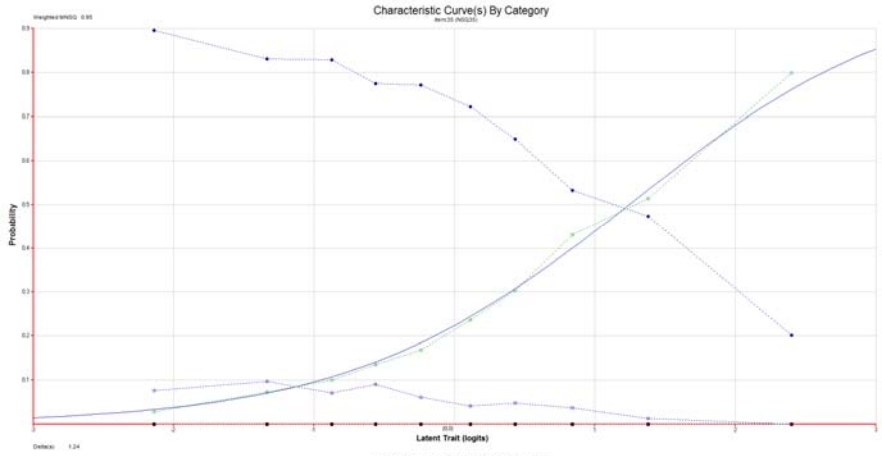
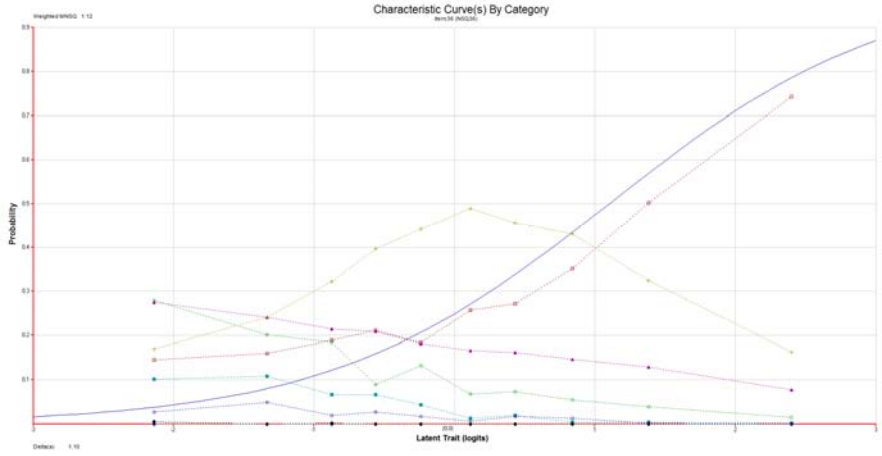

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
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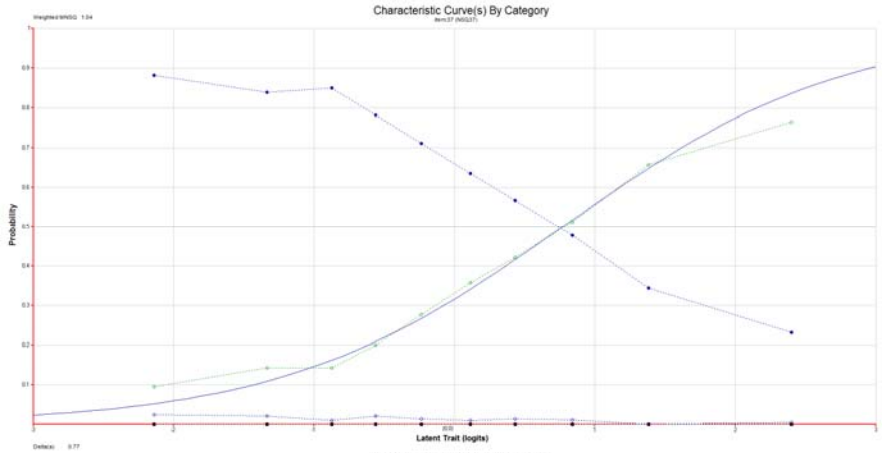
Characteristic Curve(s) By Category
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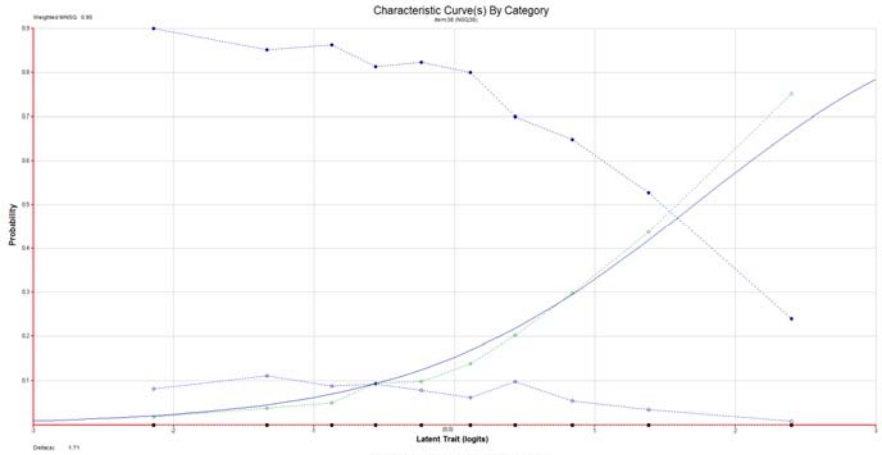
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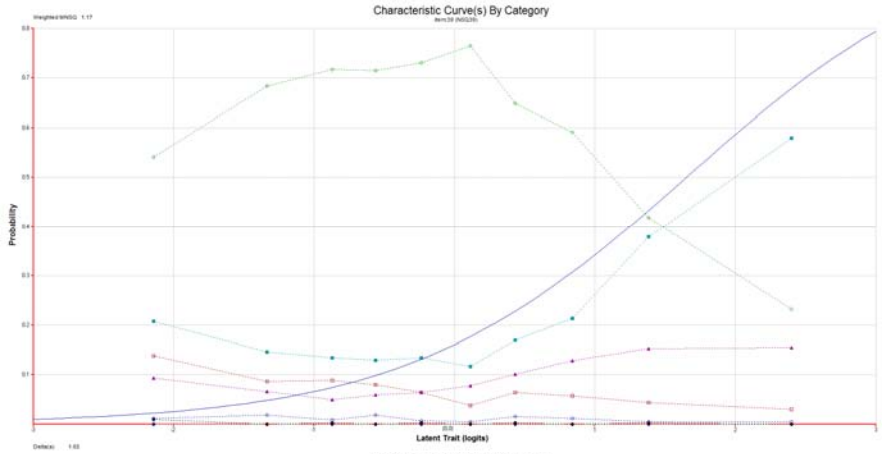
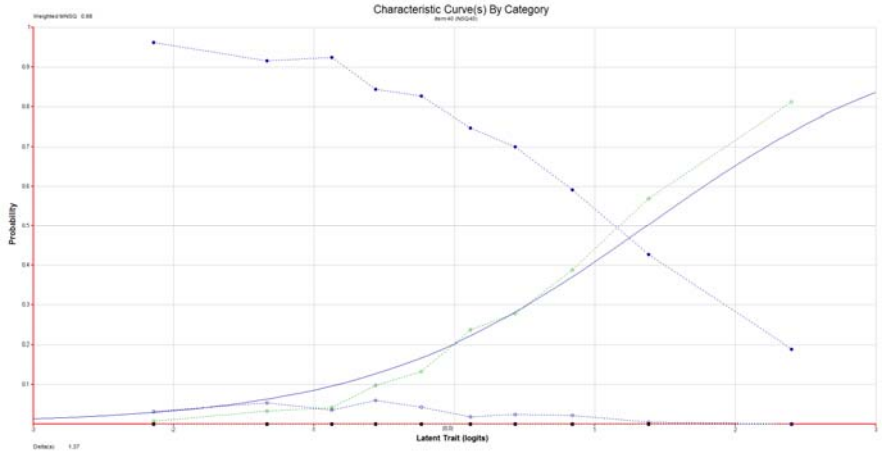
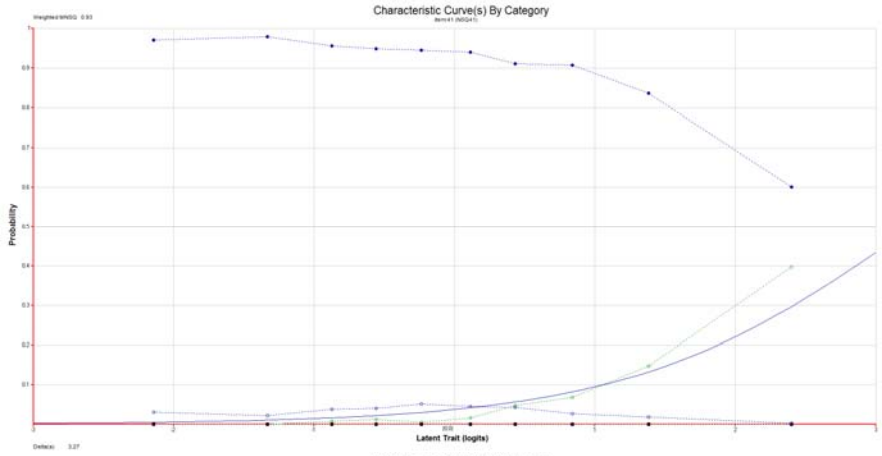
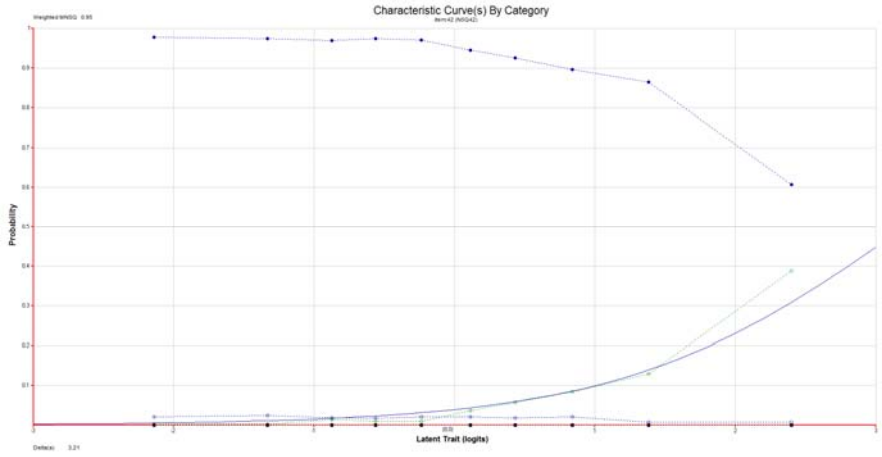
Probability
Latent Trait (logits)

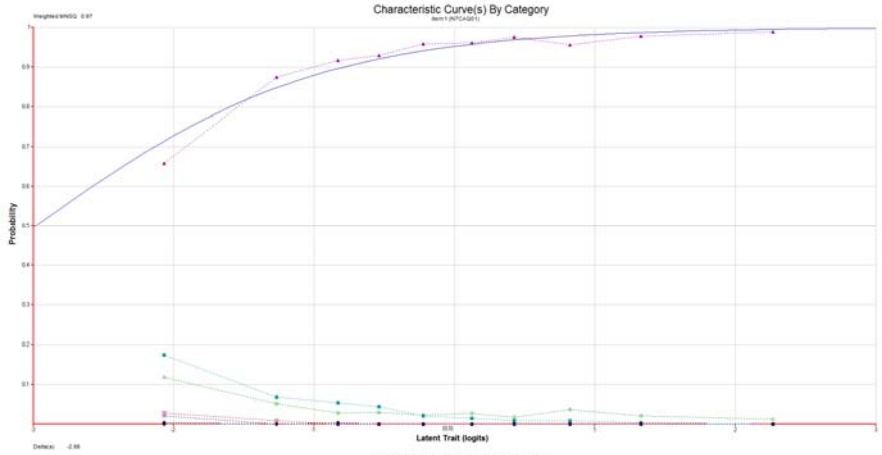

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

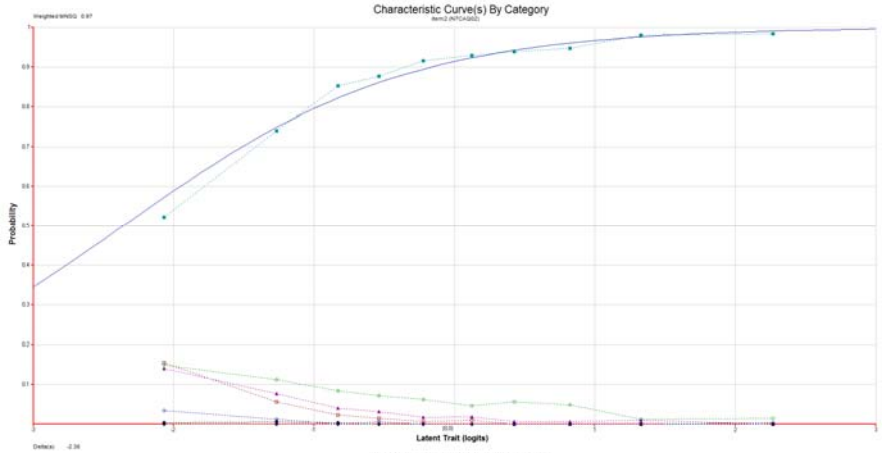

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

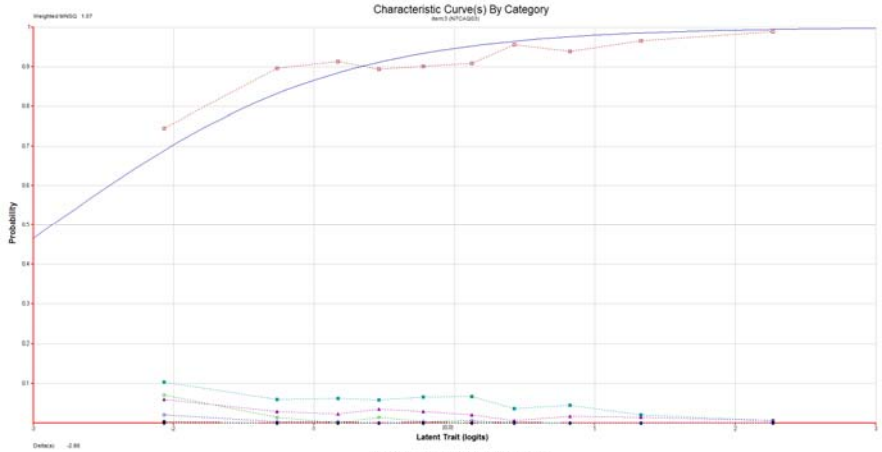

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

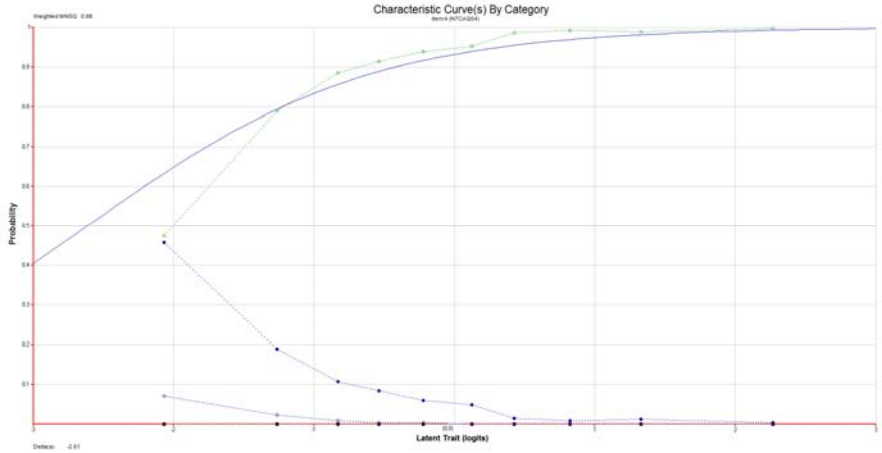

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

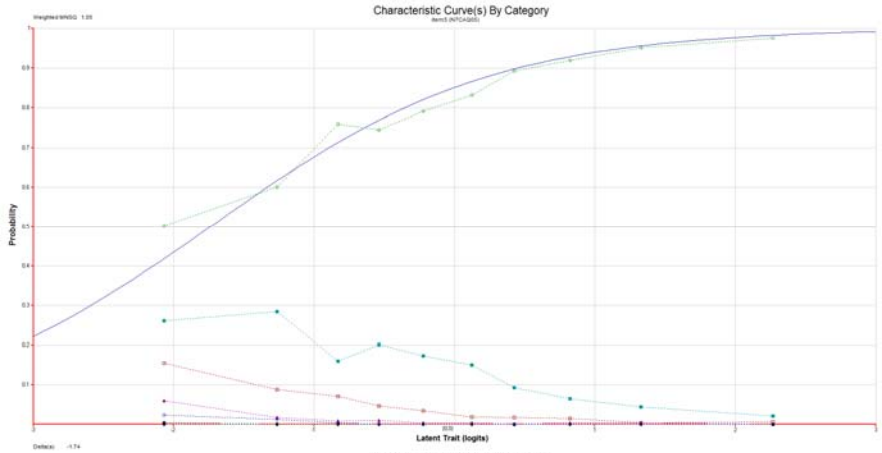
D.15. Year 7 Numeracy

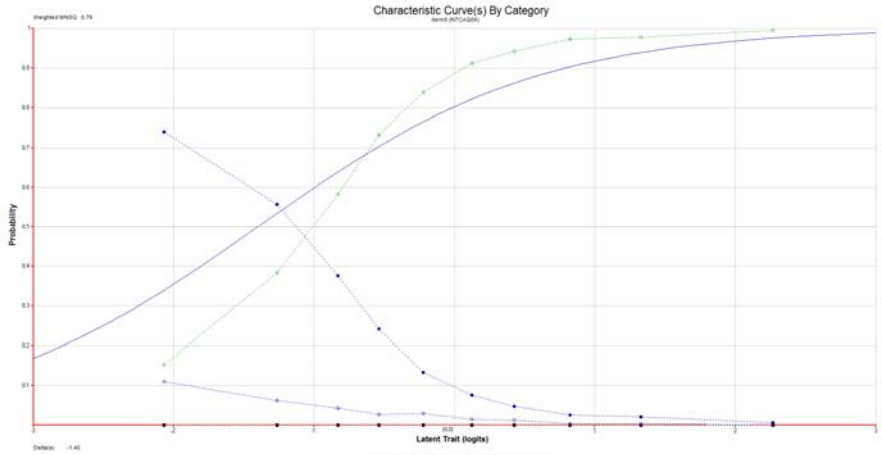


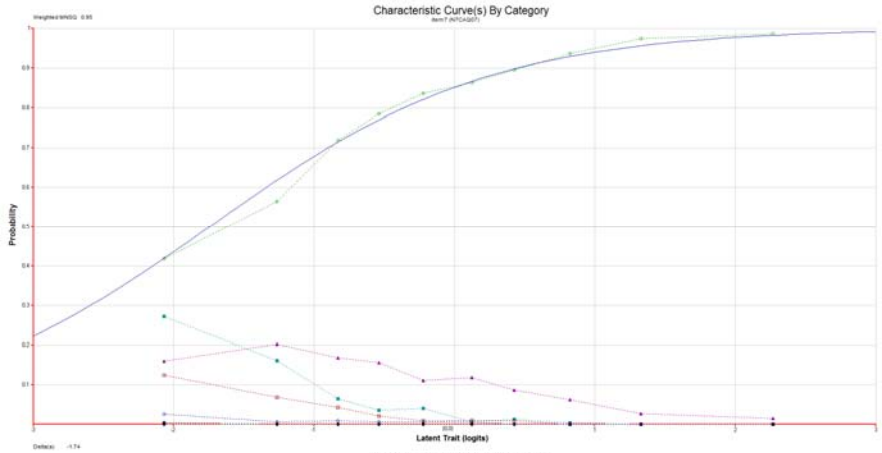







Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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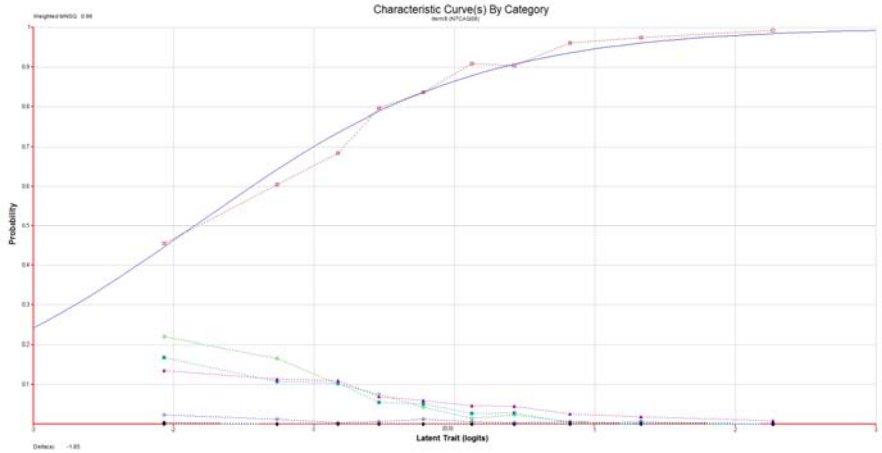
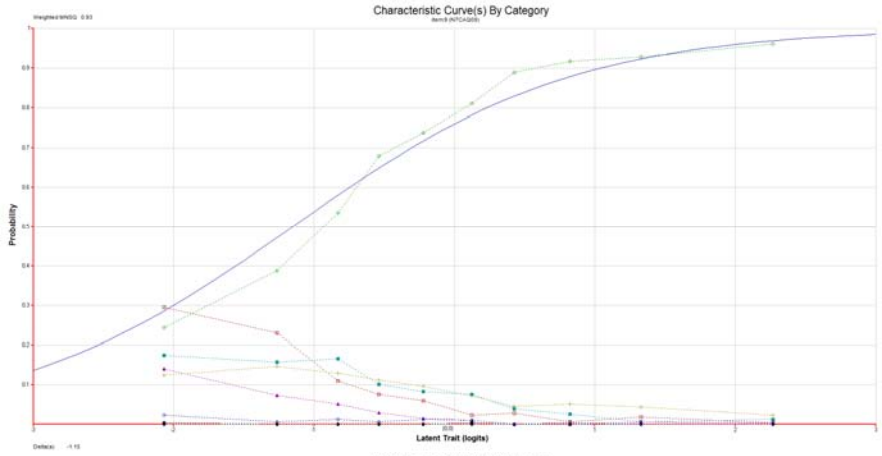
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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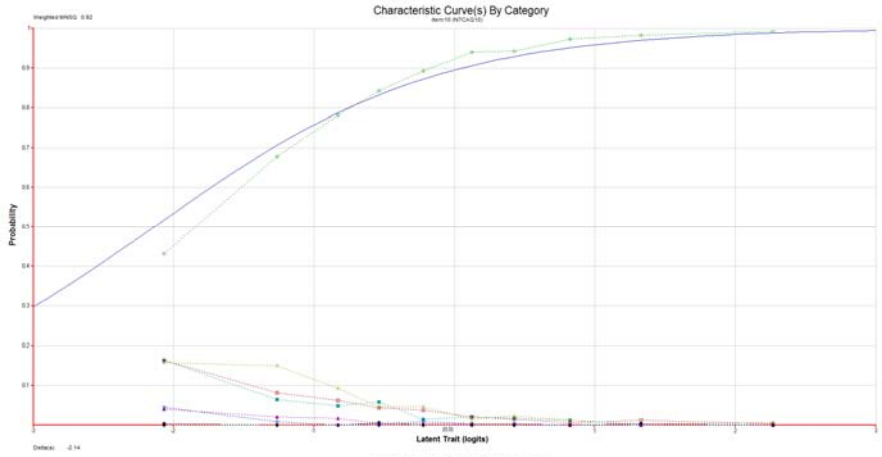
Probability
Latent Trait (logits)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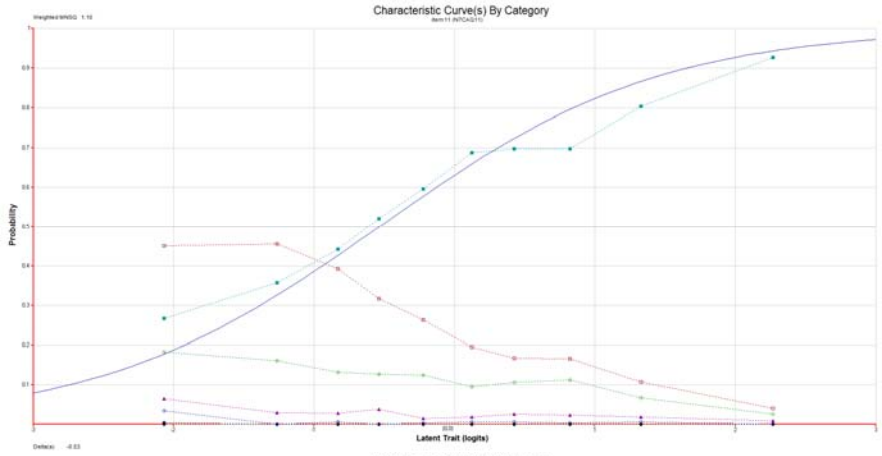
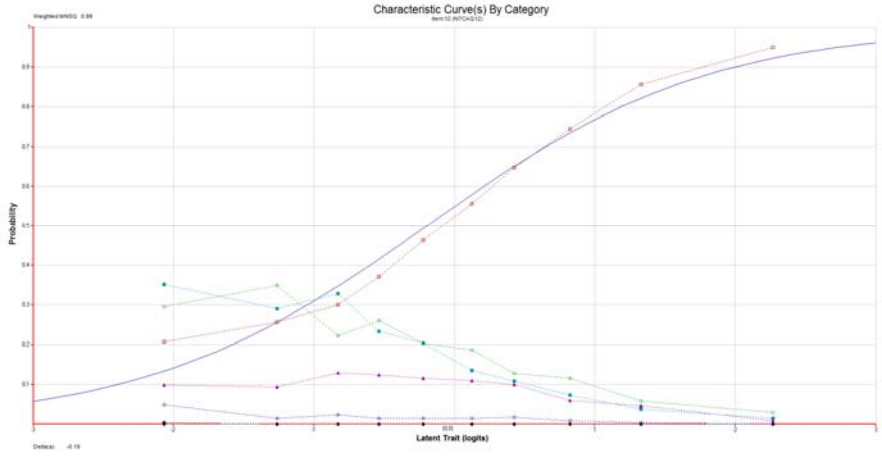
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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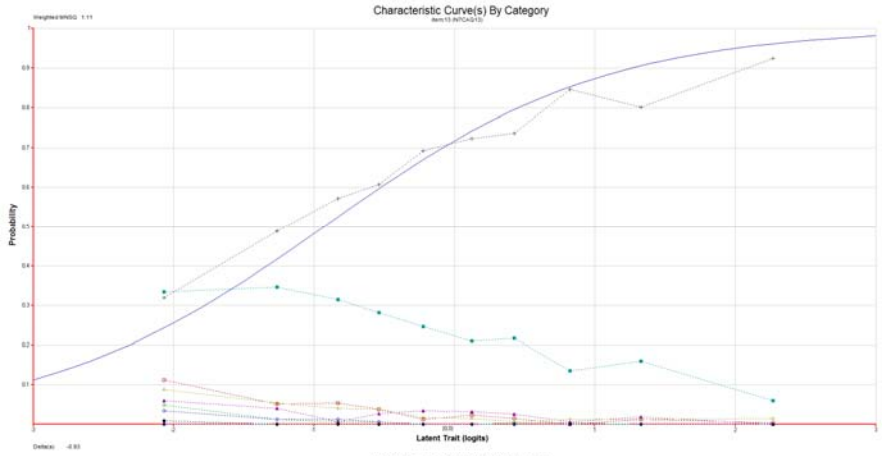
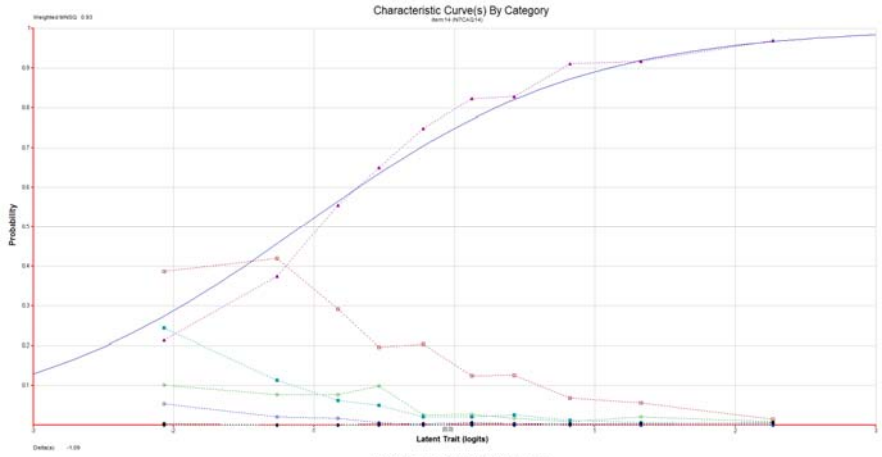
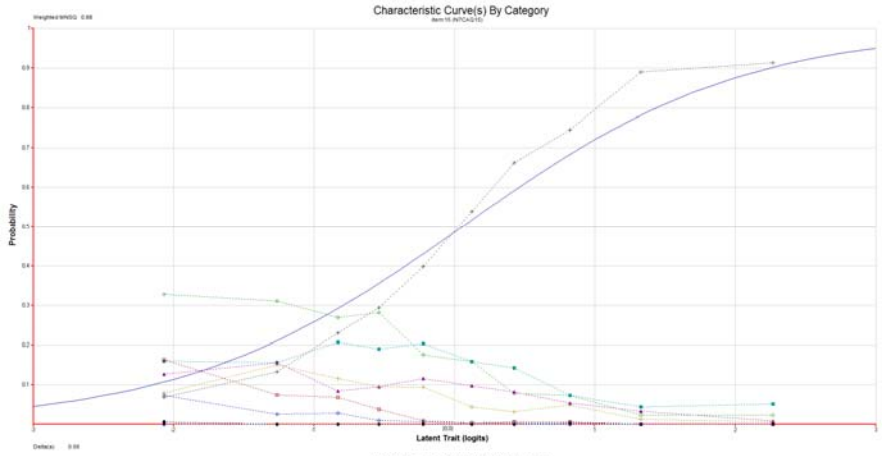
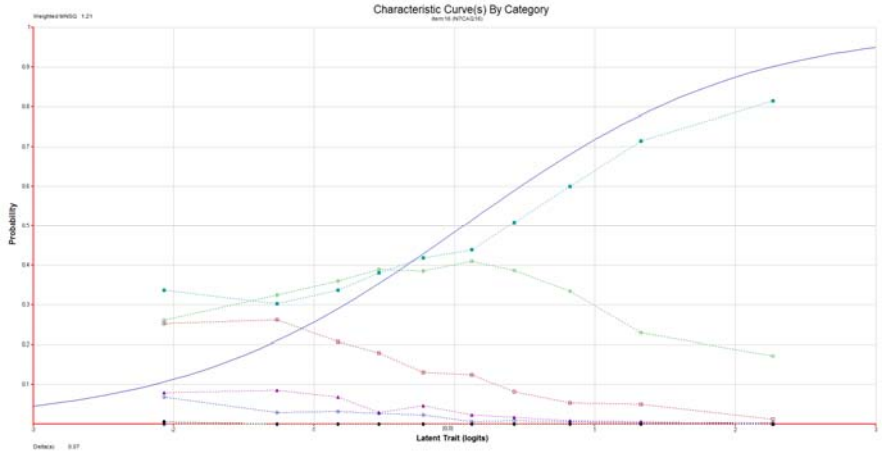
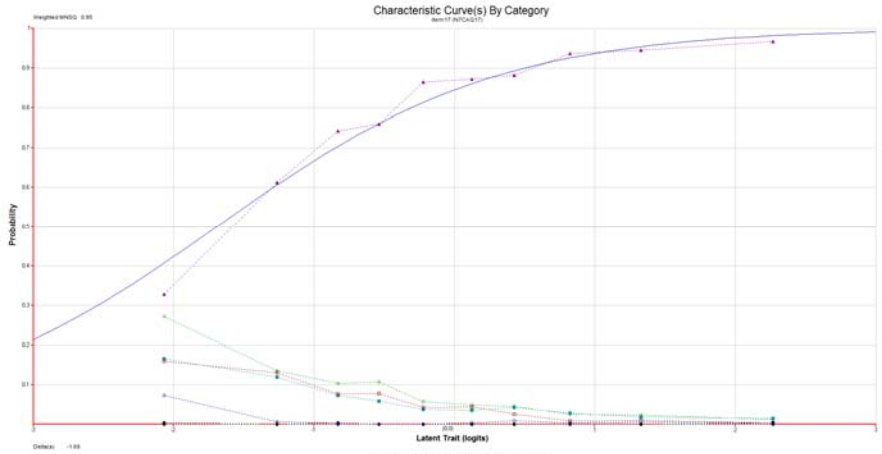
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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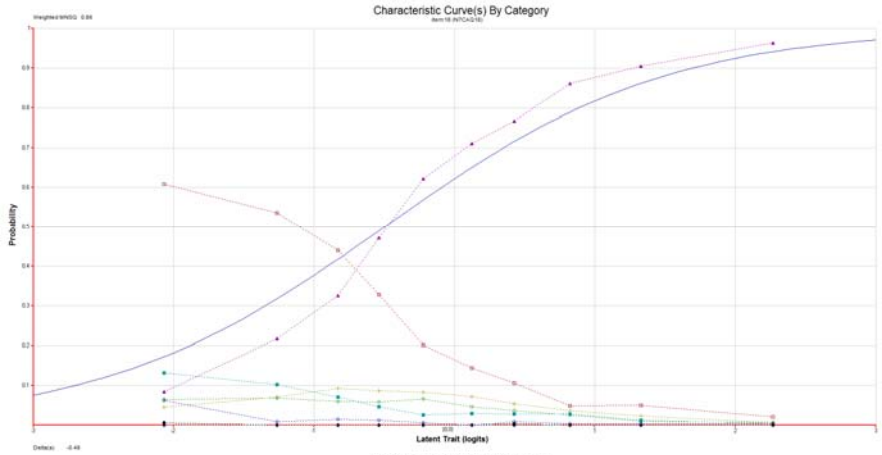
Probability
Latent Trait (logits)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Probability
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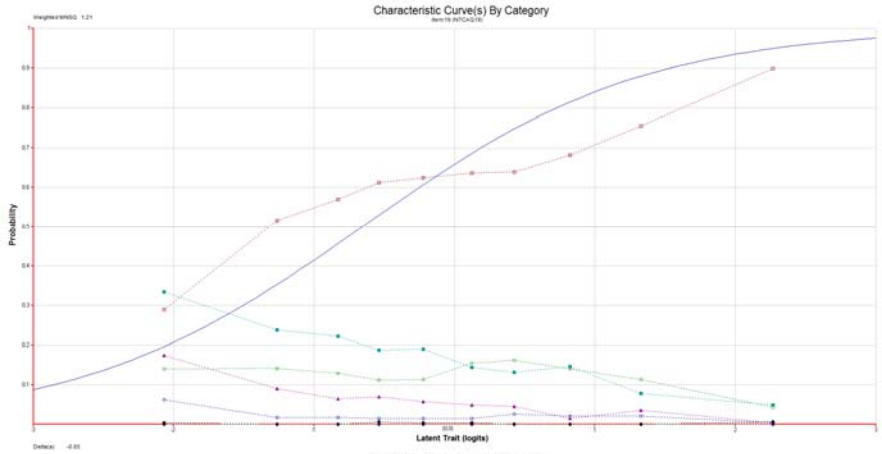
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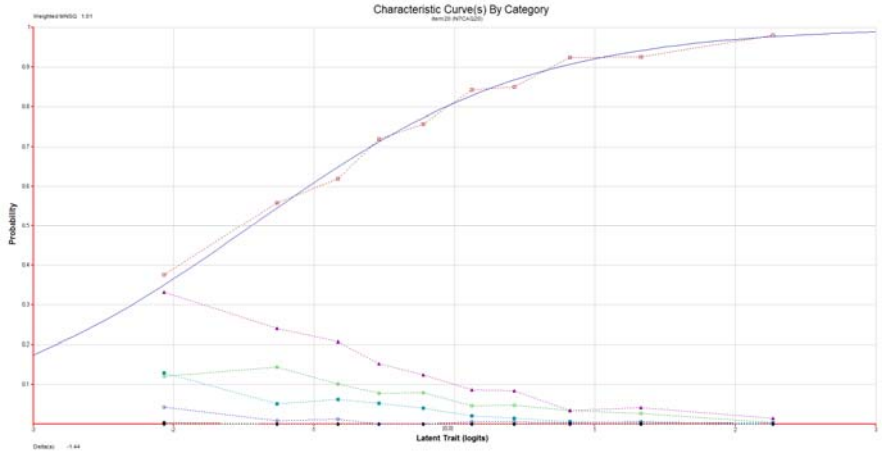
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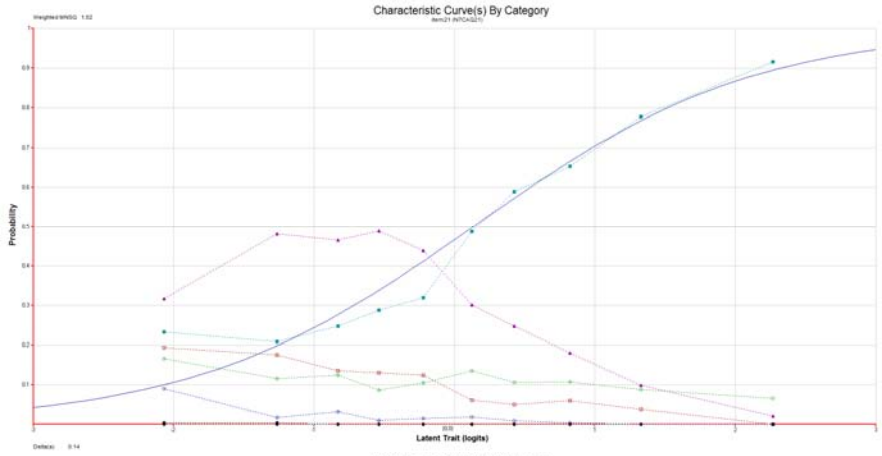
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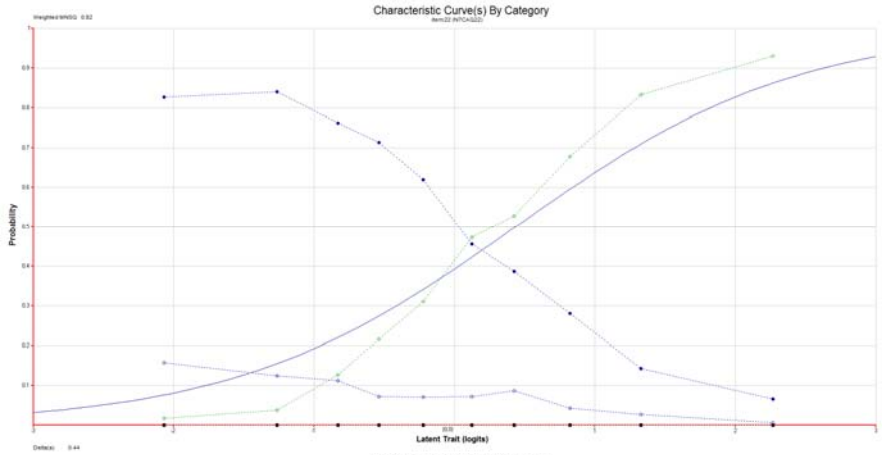
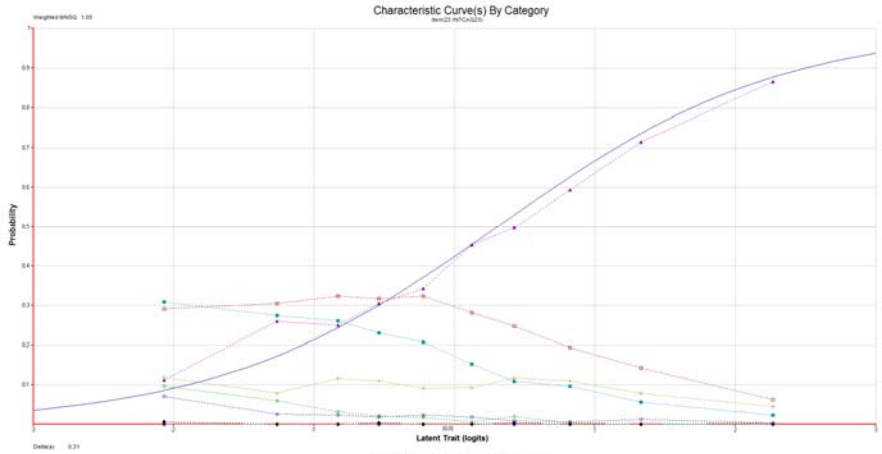

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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Probability
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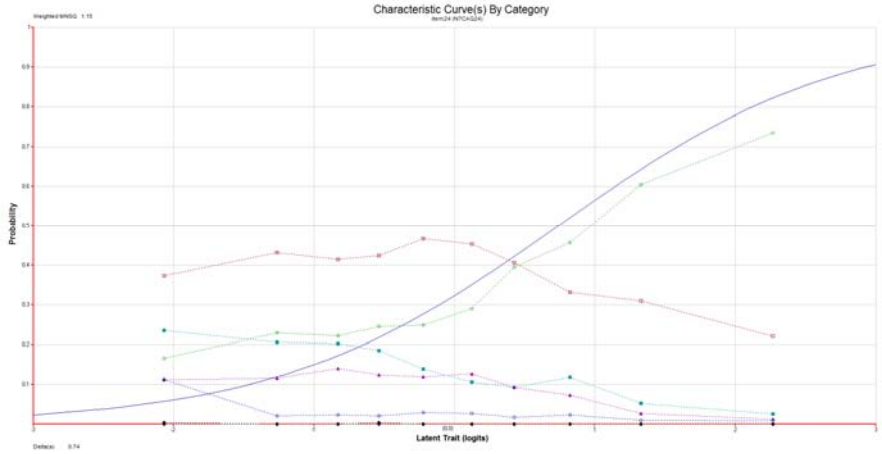
Characteristic Curve(s) By Category
Probability
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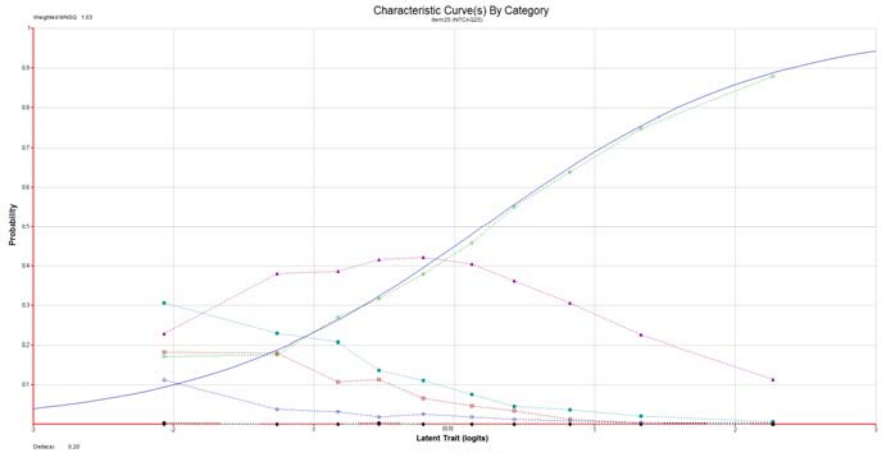
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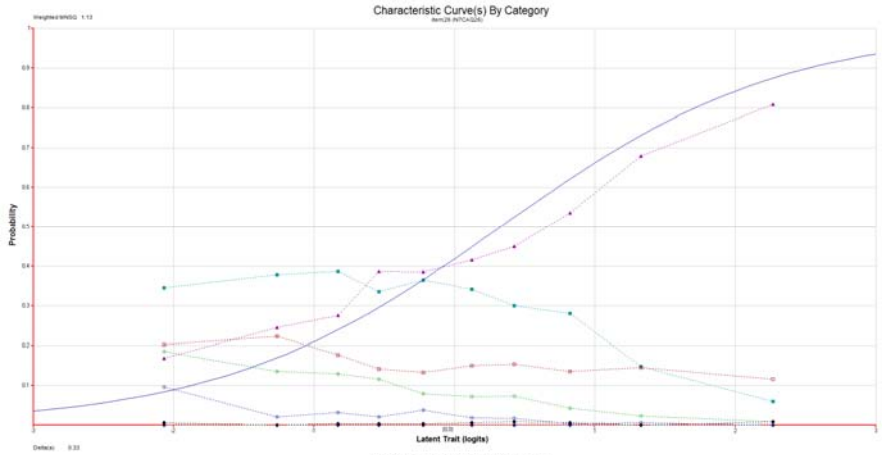
Latent Trait (logits)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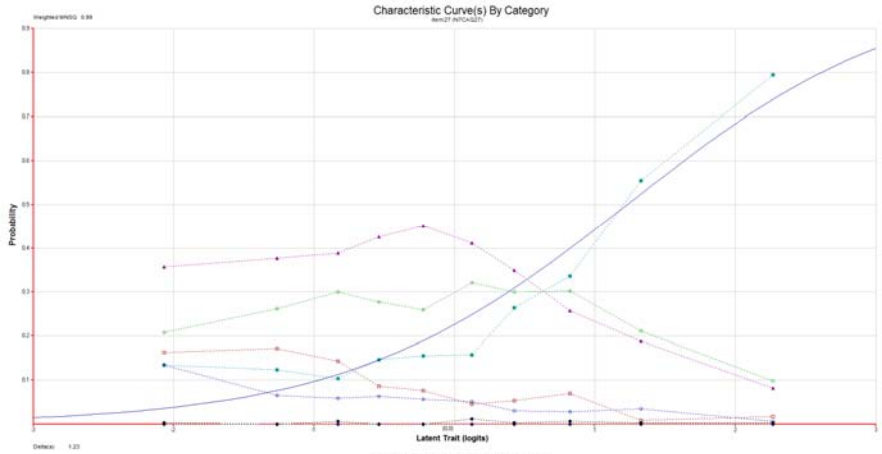
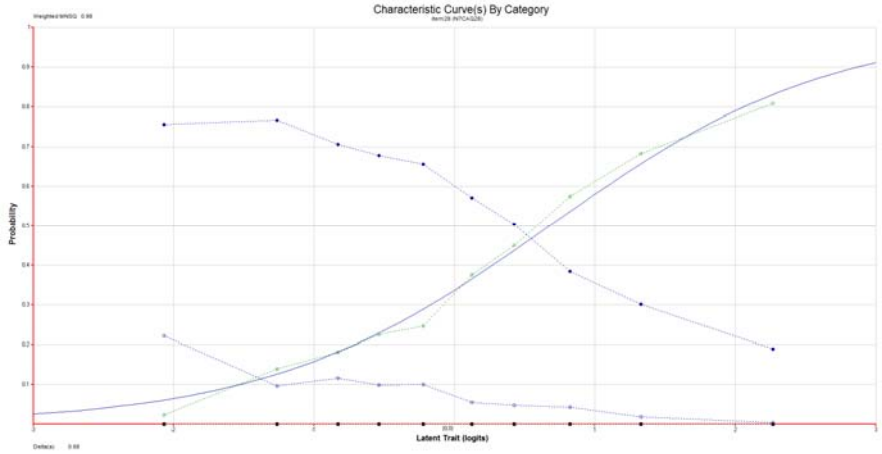
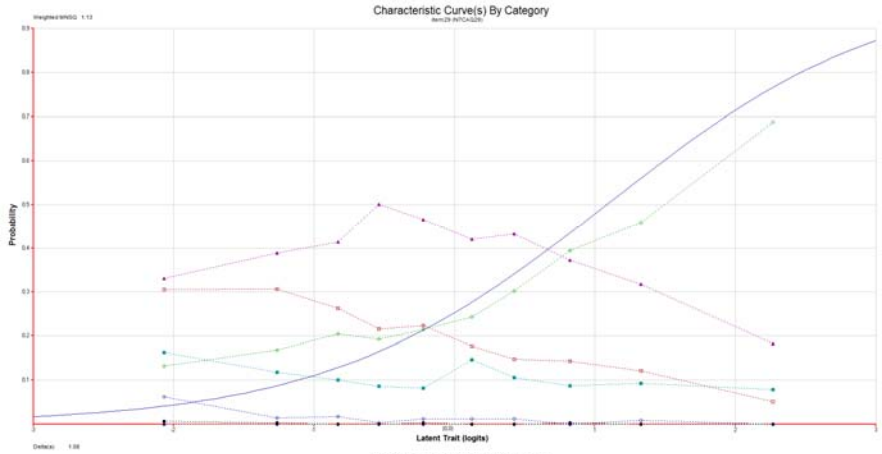
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
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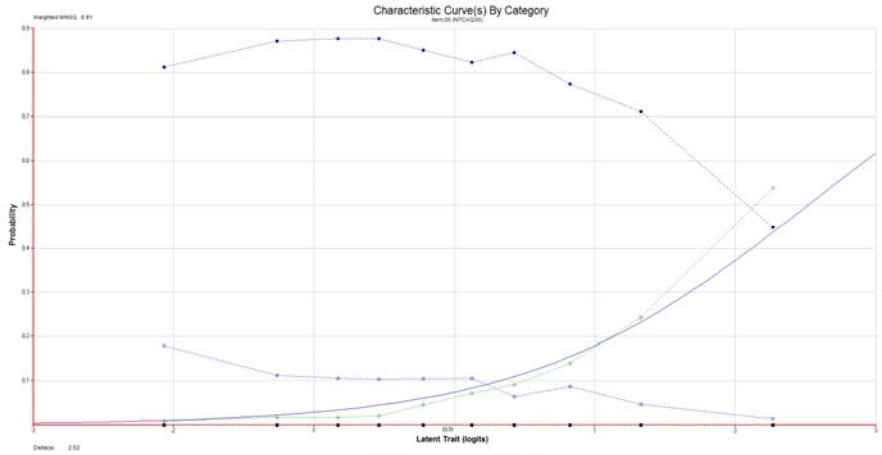
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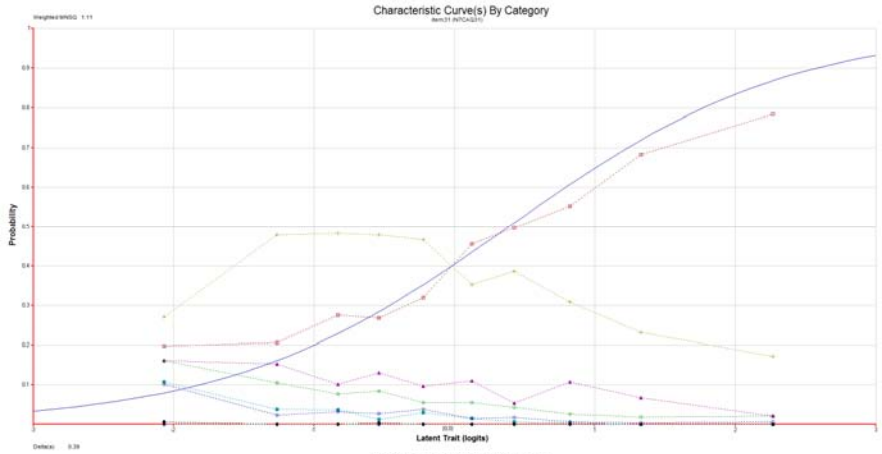
Characteristic Curve(s) By Category
Probability
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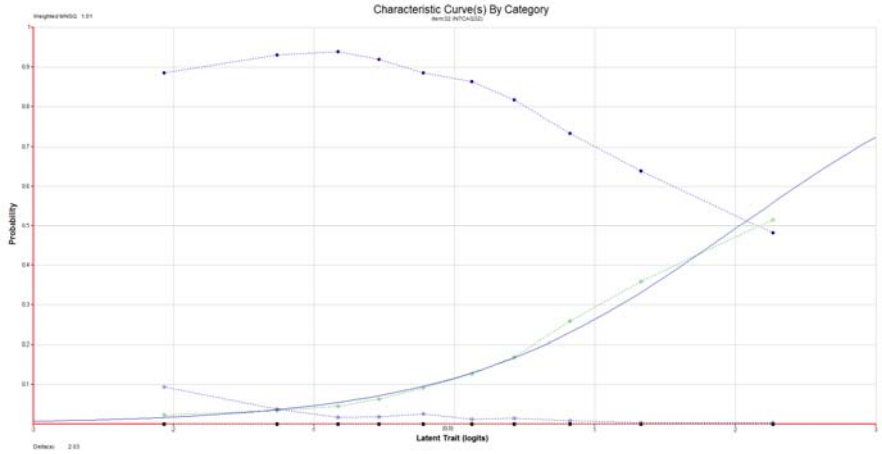
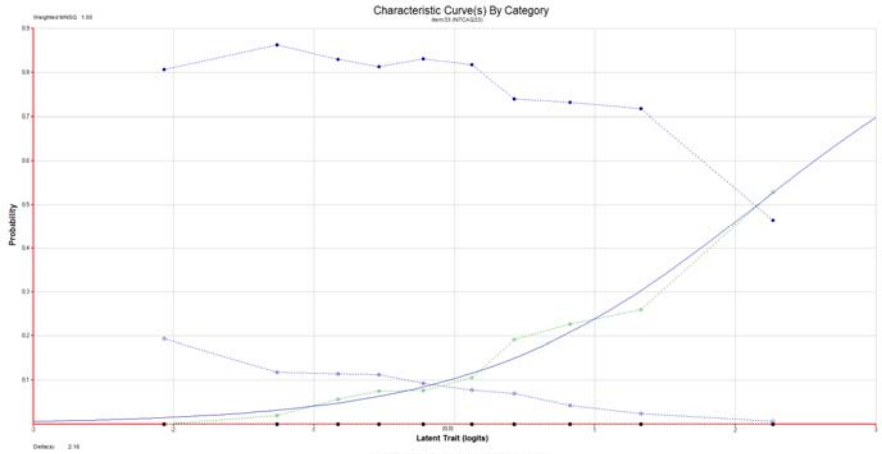

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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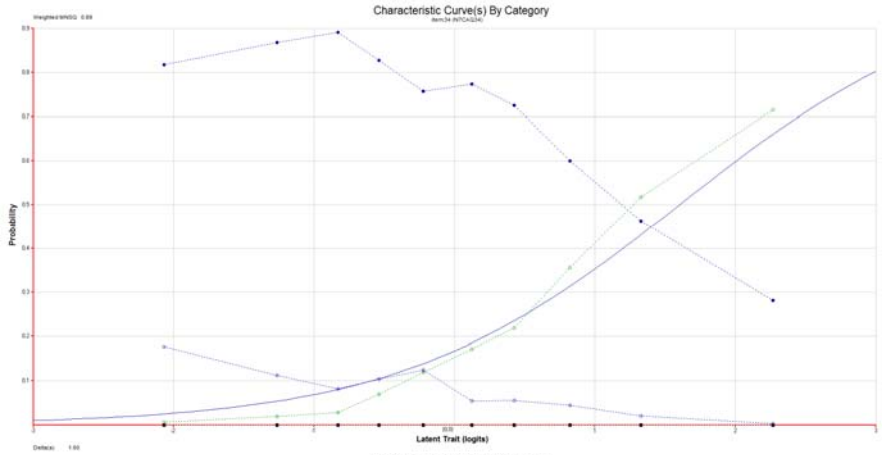
Characteristic Curve(s) By Category
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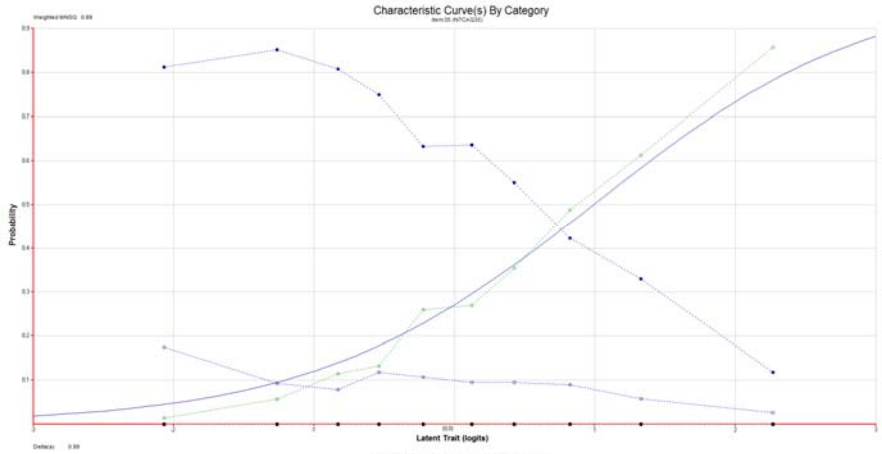
Latent Trait (logits)


Characteristic Curve(s) By Category
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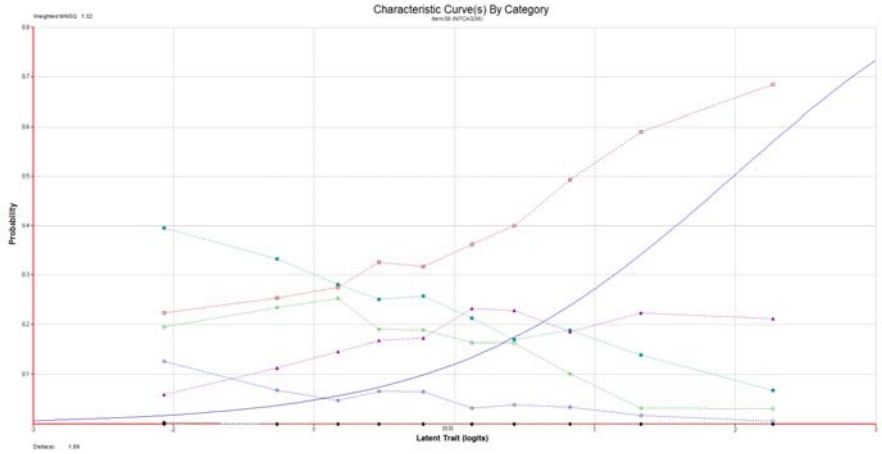
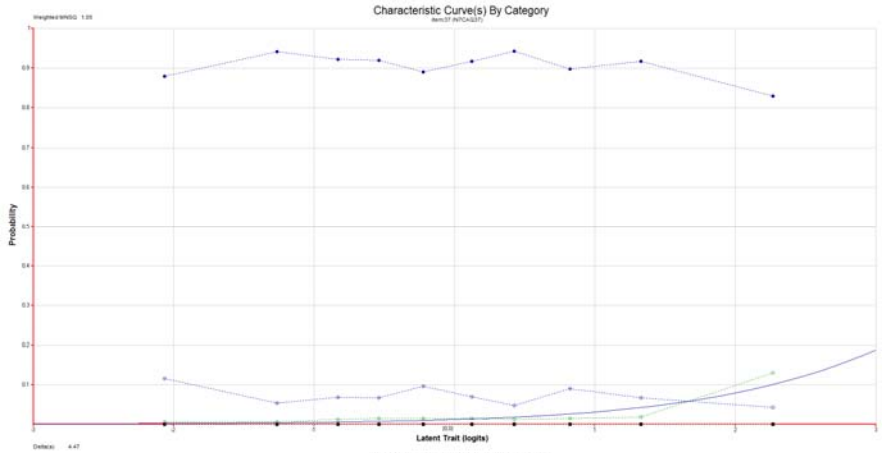
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
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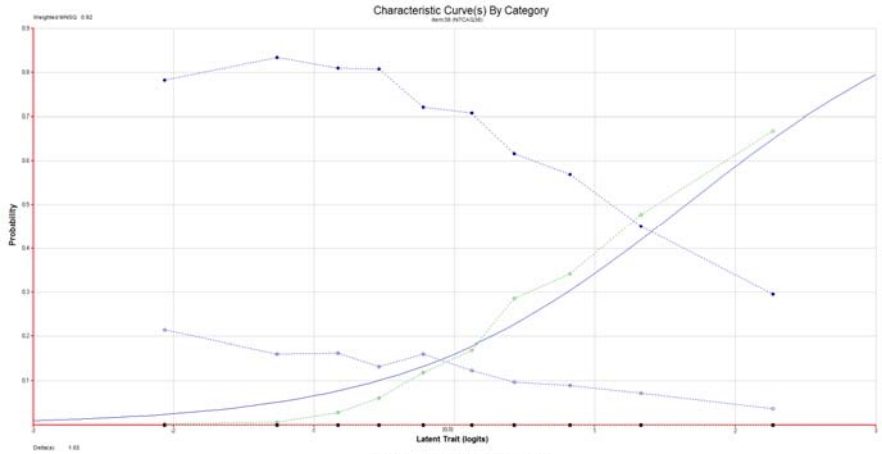
Characteristic Curve(s) By Category
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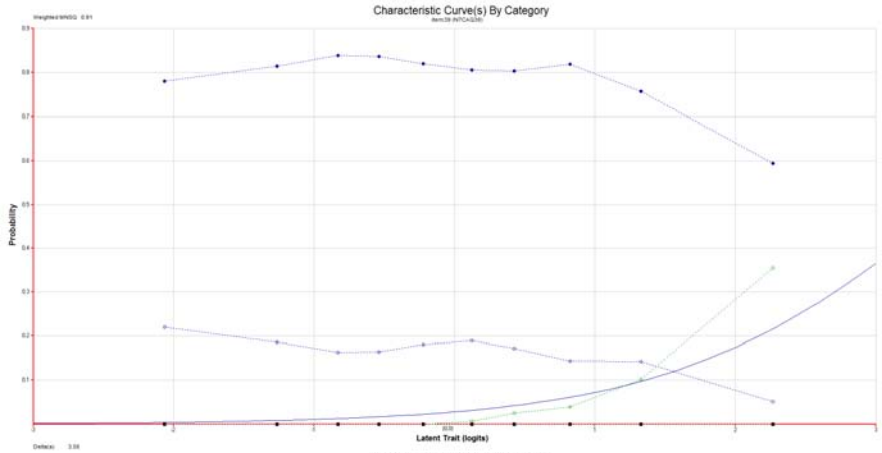
Characteristic Curve(s) By Category
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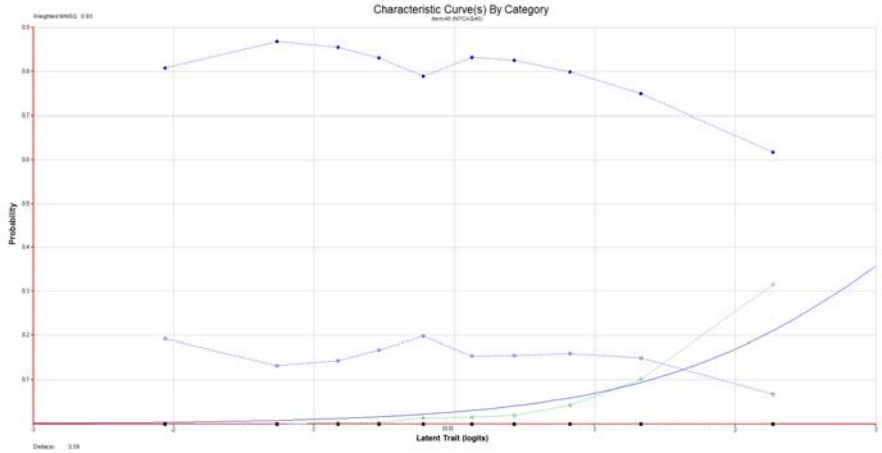
Characteristic Curve(s) By Category
Probability
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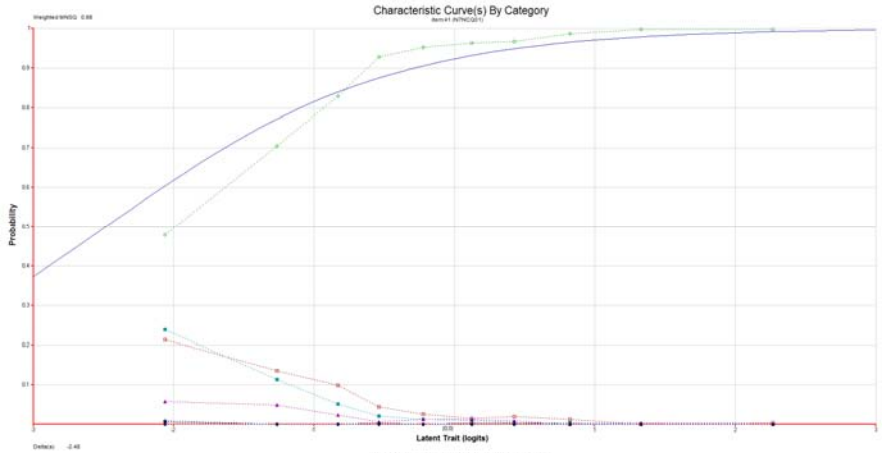
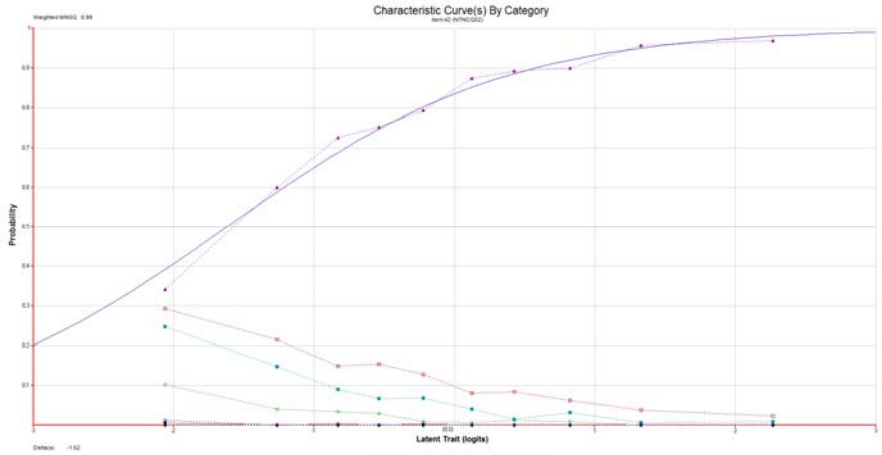
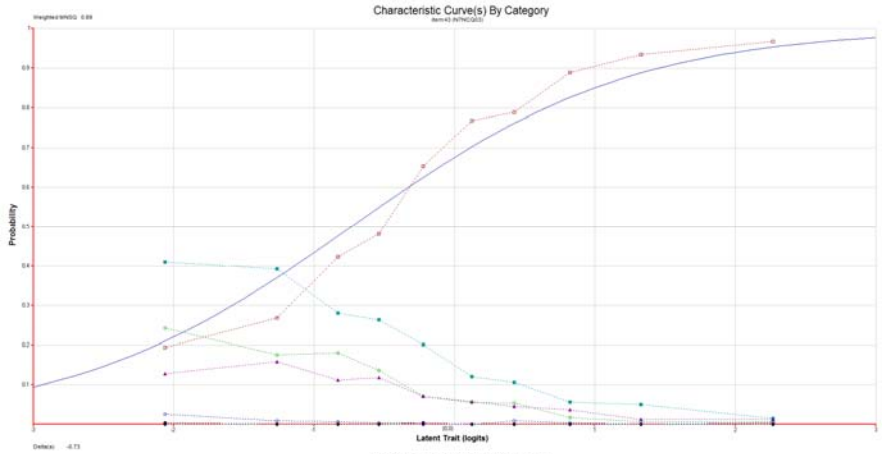

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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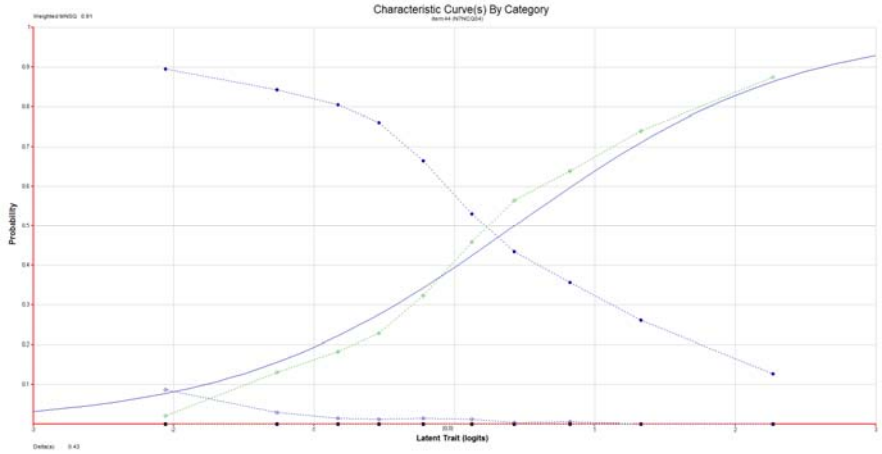
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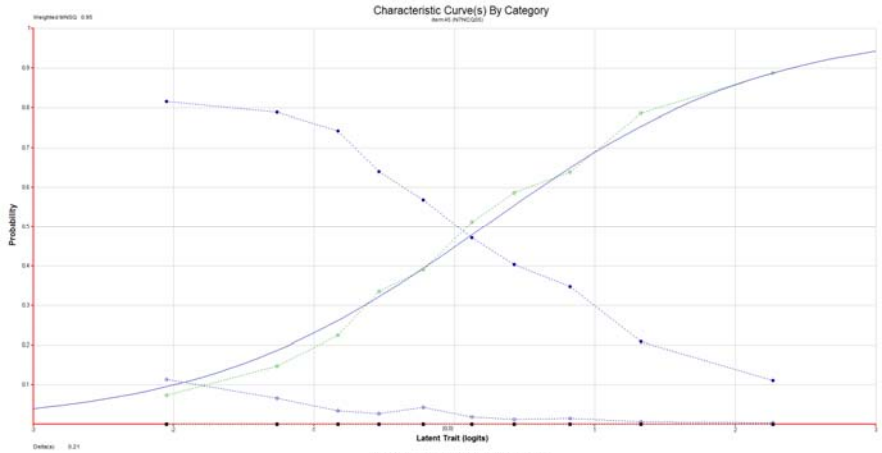
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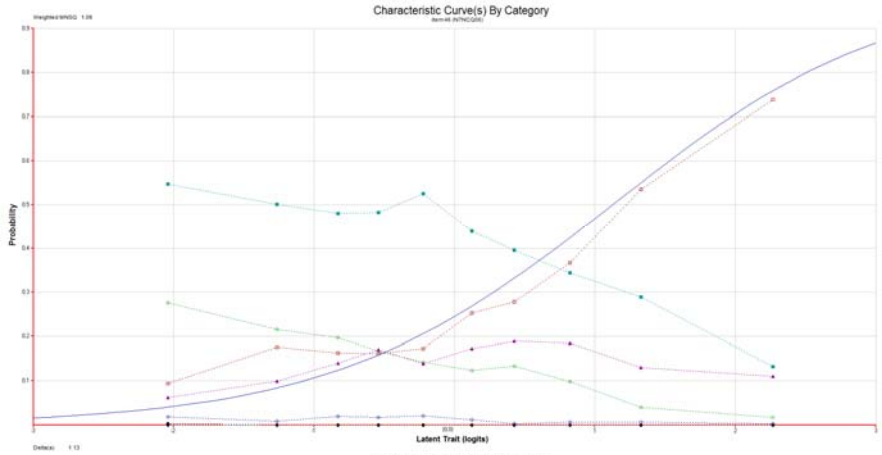
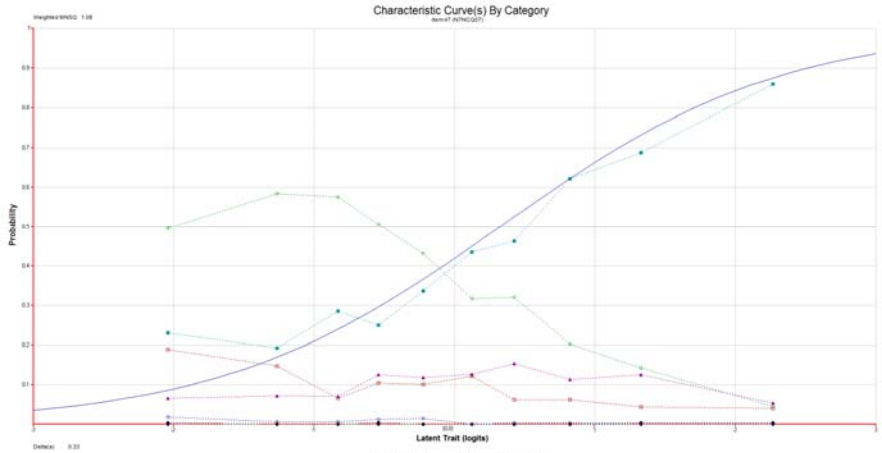
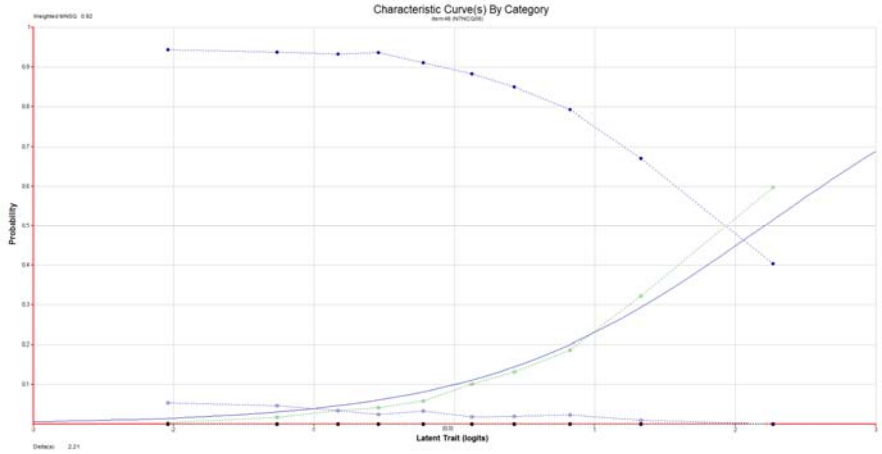
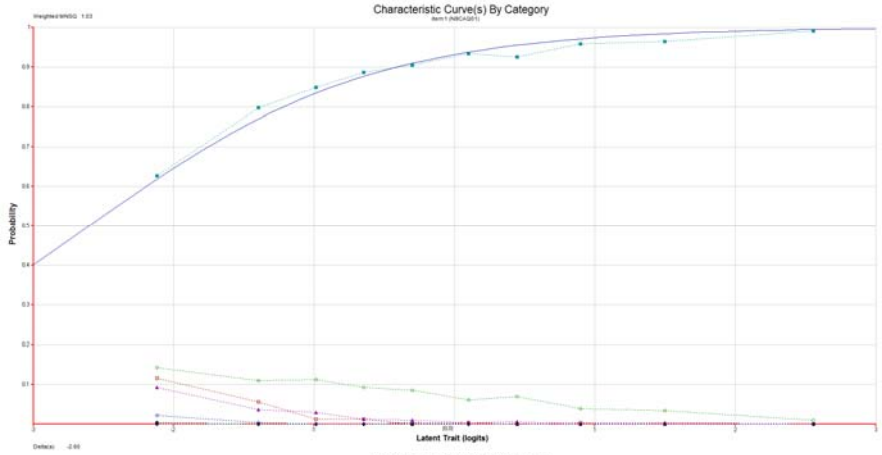
Latent Trait (logits)

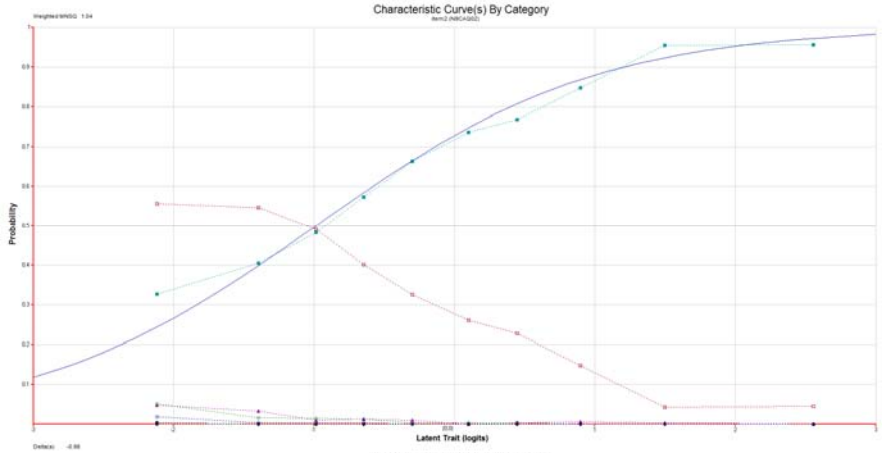

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

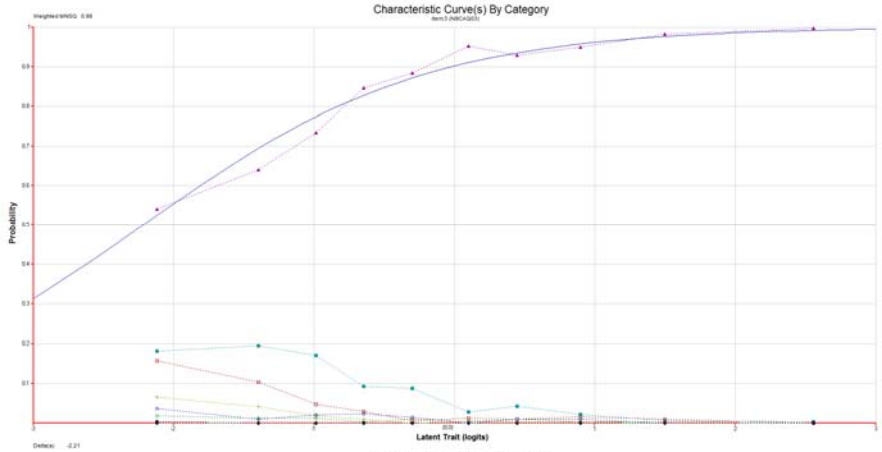

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

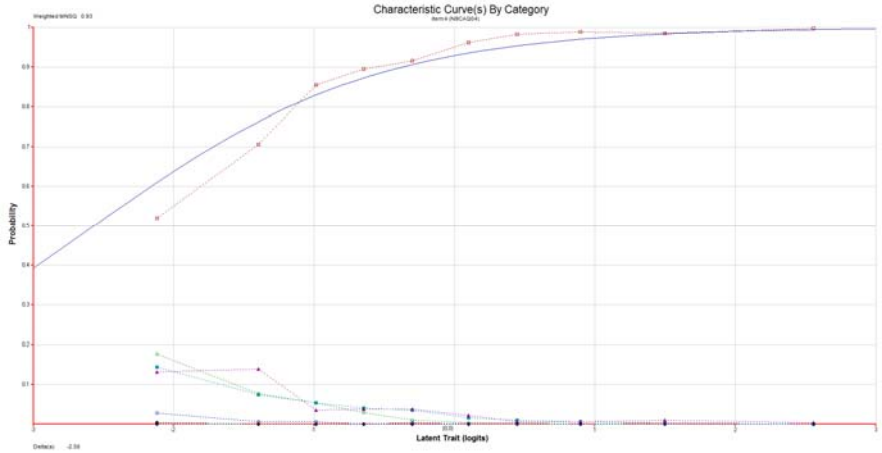

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

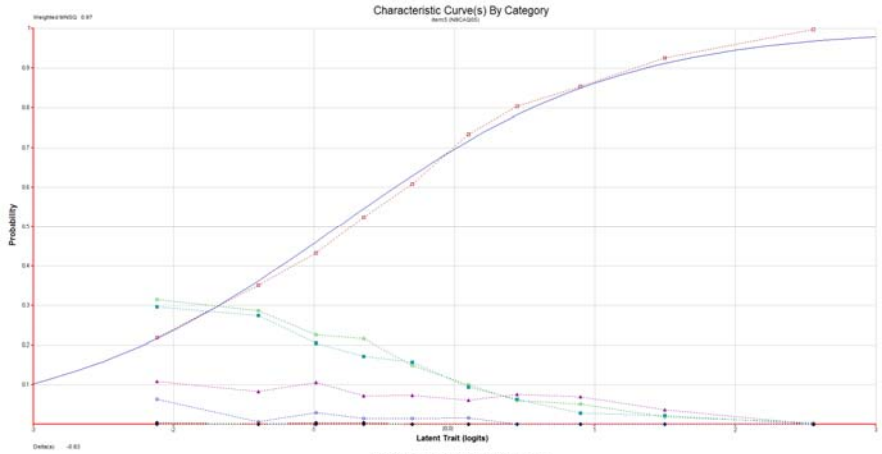
D.16. Year 9 Numeracy

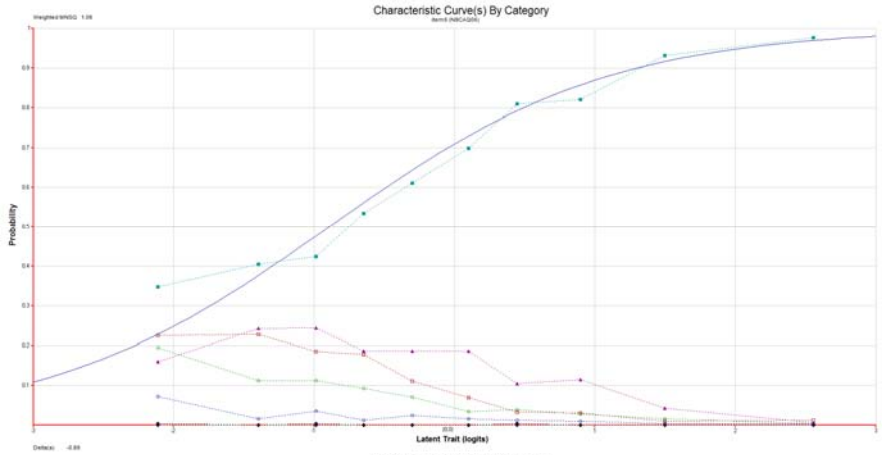









Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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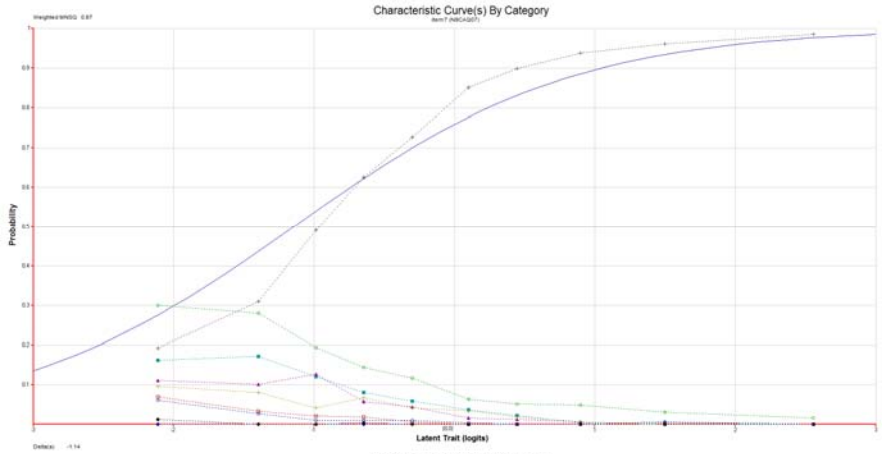
Probability
Latent Trait (logits)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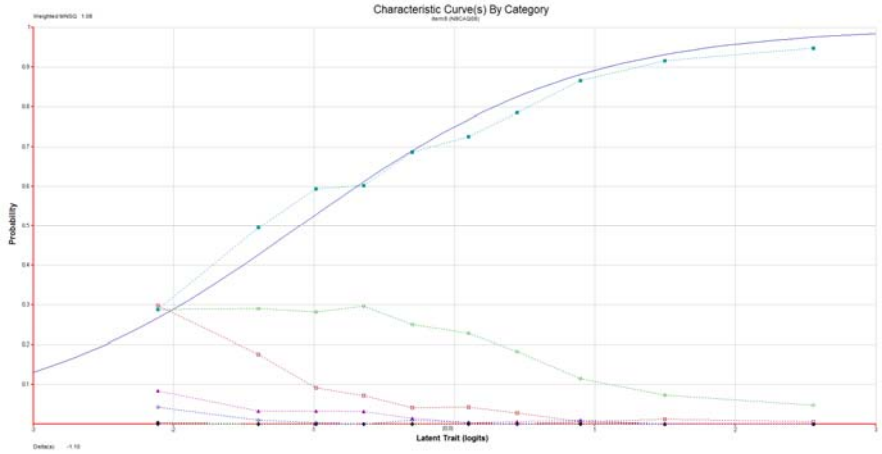
Probability
Latent Trait (logits)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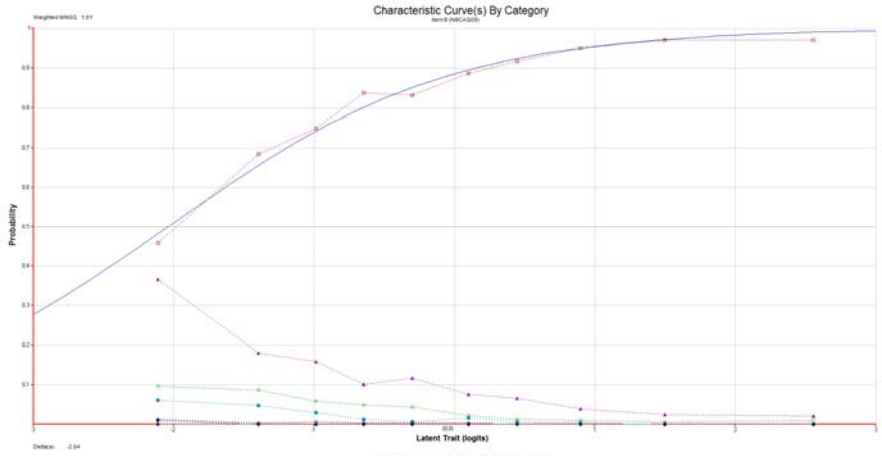
Probability
Latent Trait (logits)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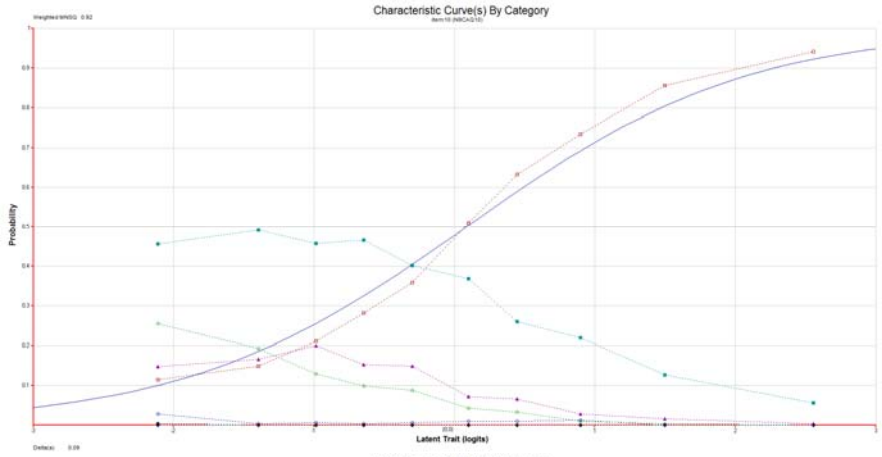
Probability
Latent Trait (logits)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Probability
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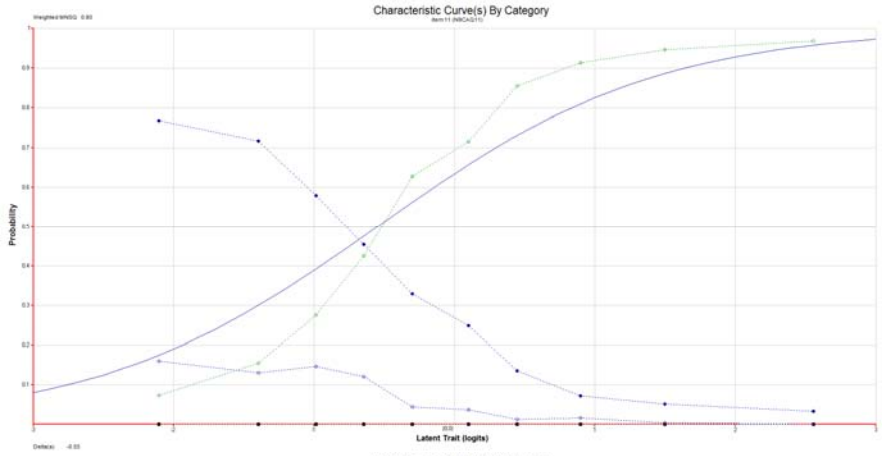
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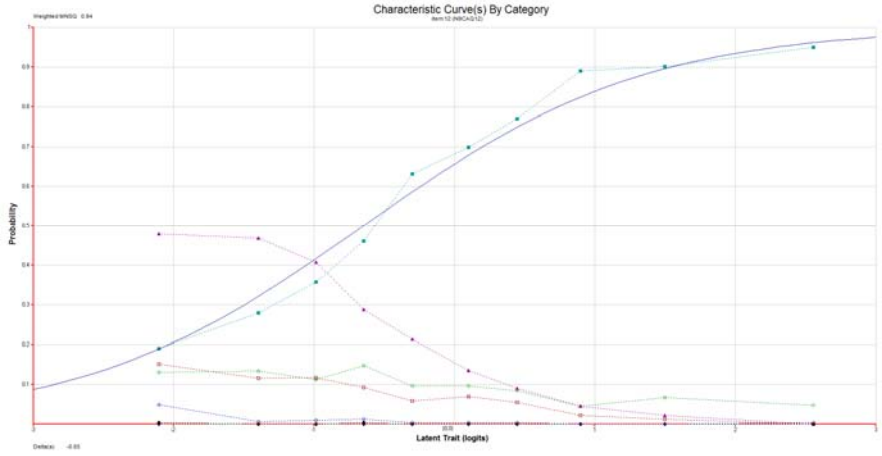
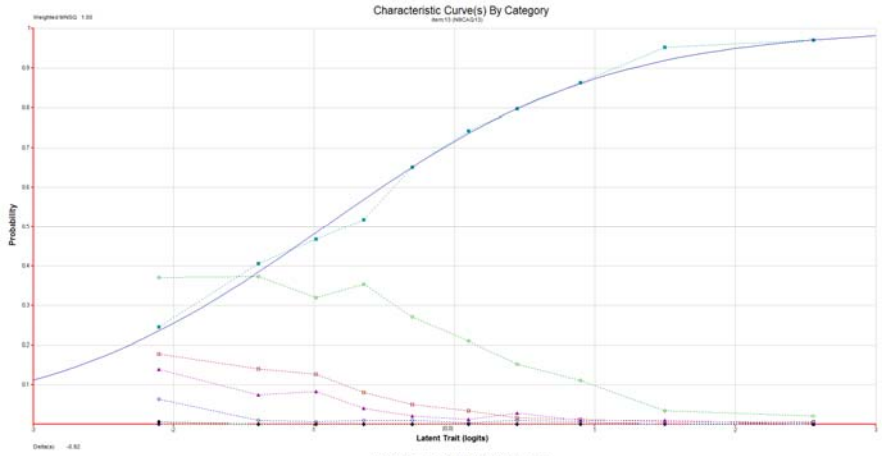
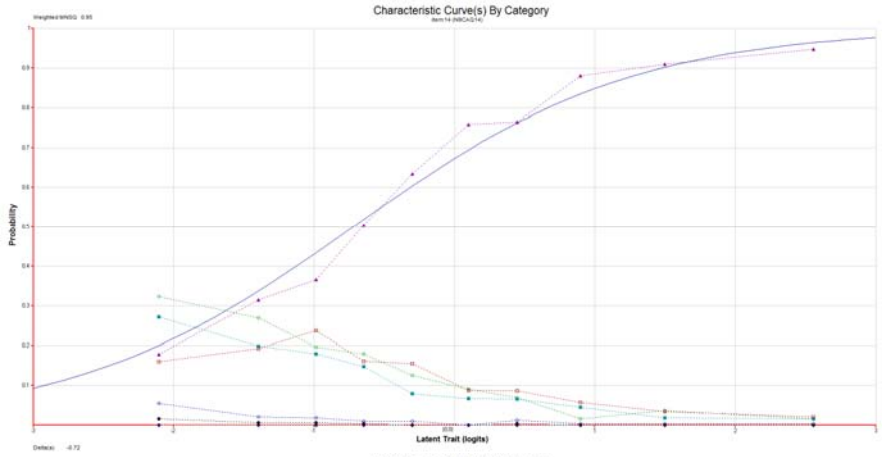
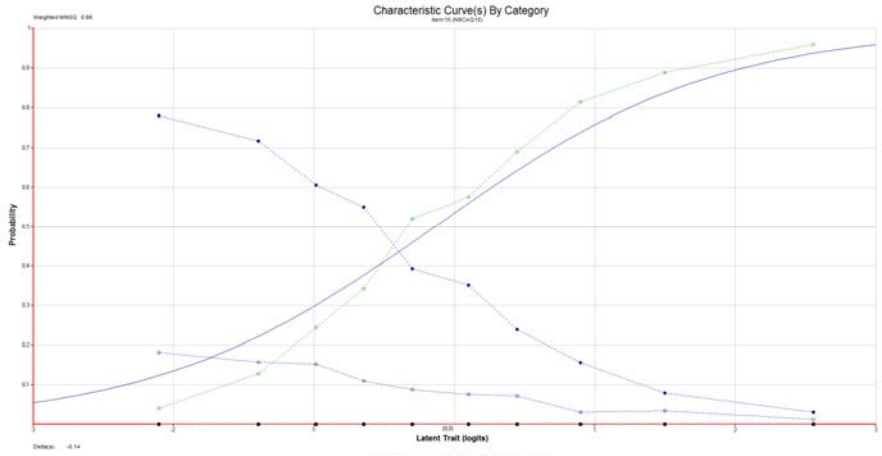
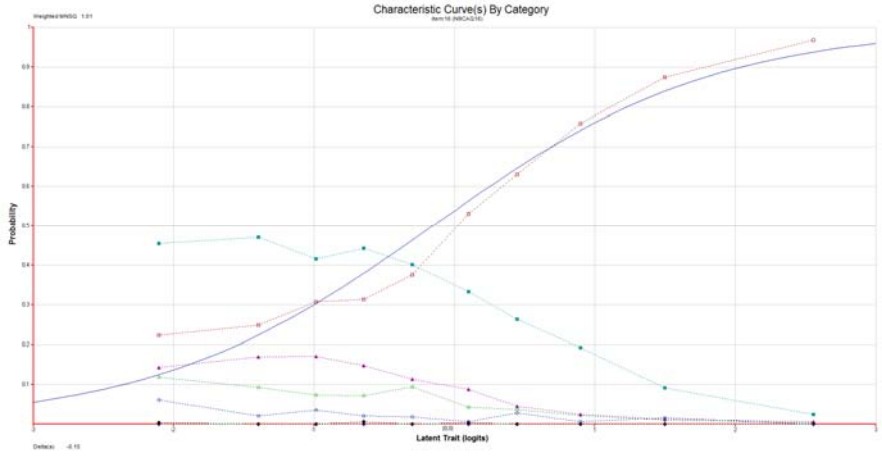
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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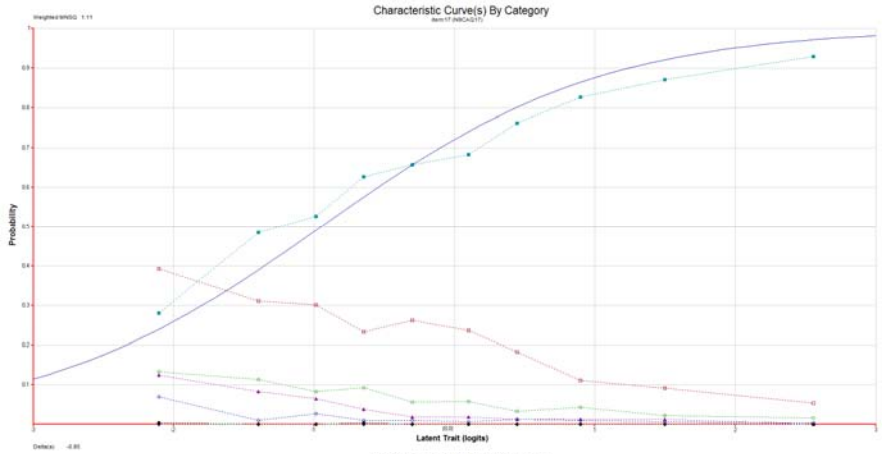
Probability
Latent Trait (logits)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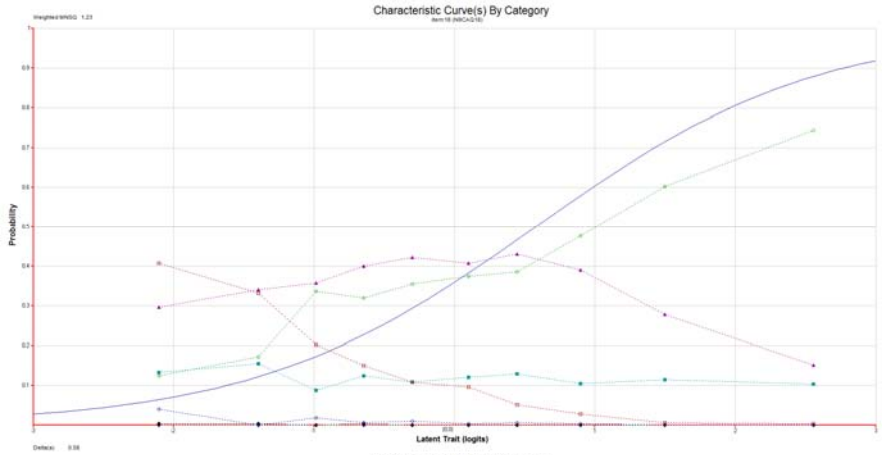
Probability
Latent Trait (logits)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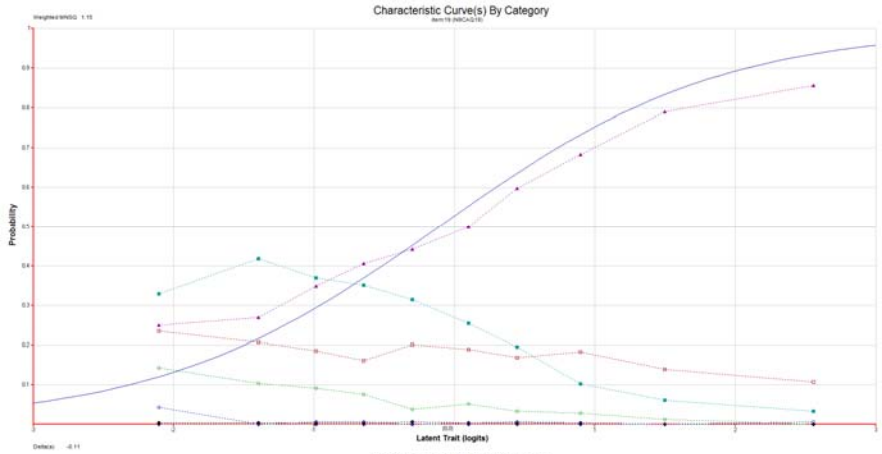
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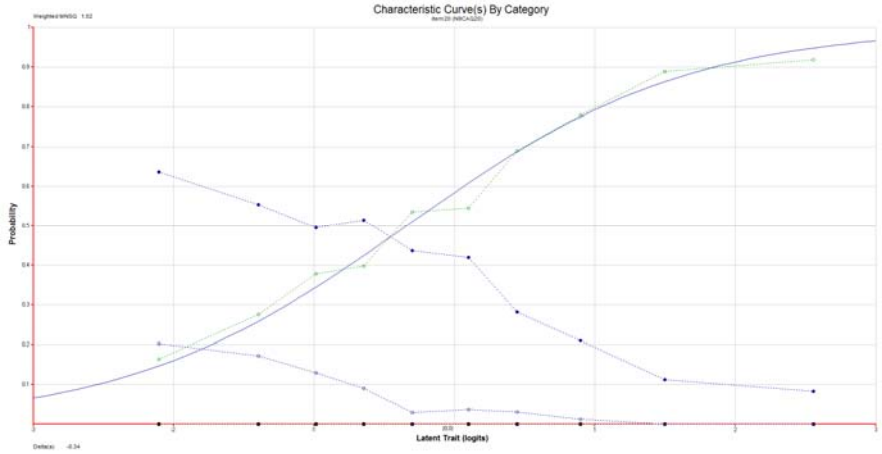
Characteristic Curve(s) By Category
Probability
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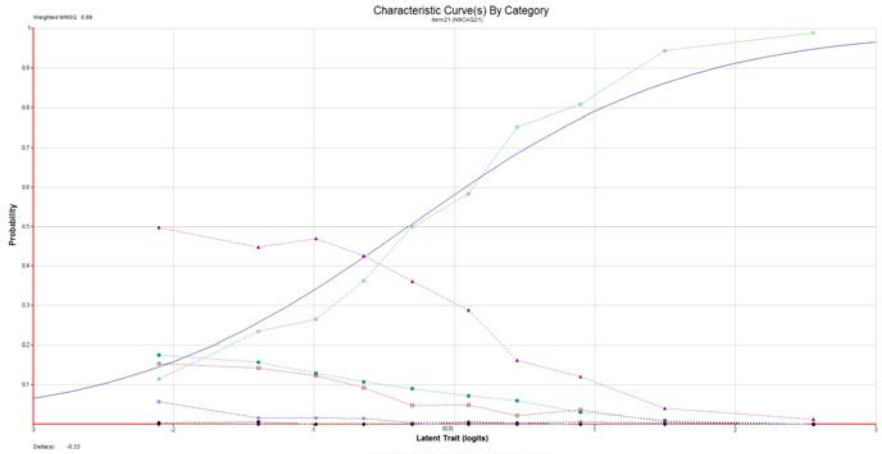
Characteristic Curve(s) By Category
Probability
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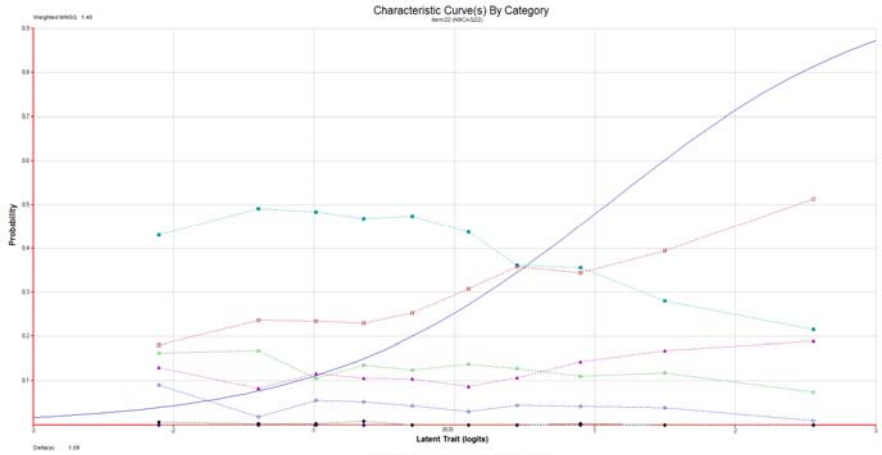
Characteristic Curve(s) By Category
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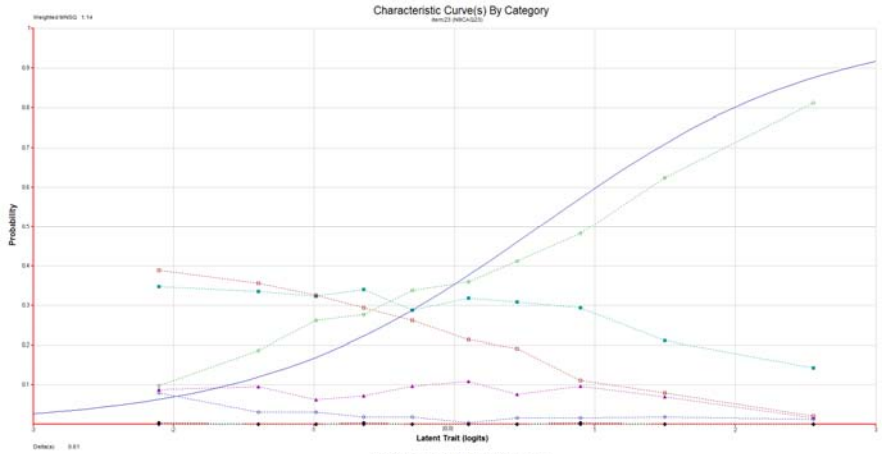
Characteristic Curve(s) By Category
Probability
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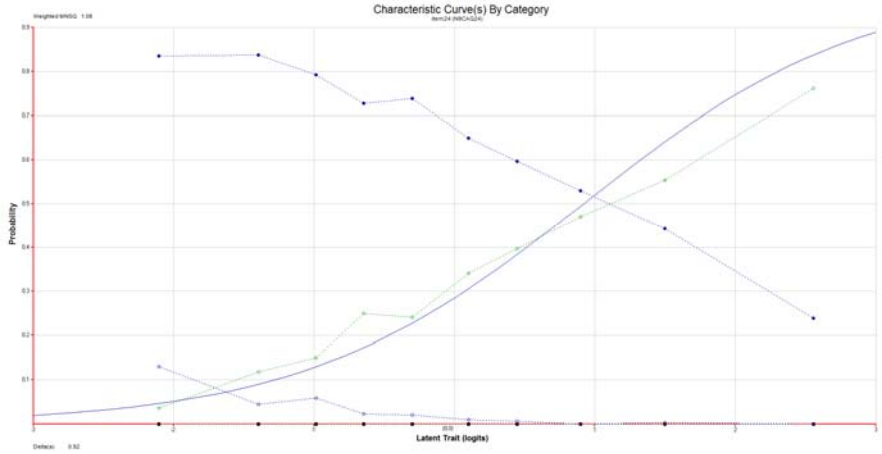
Characteristic Curve(s) By Category
Probability
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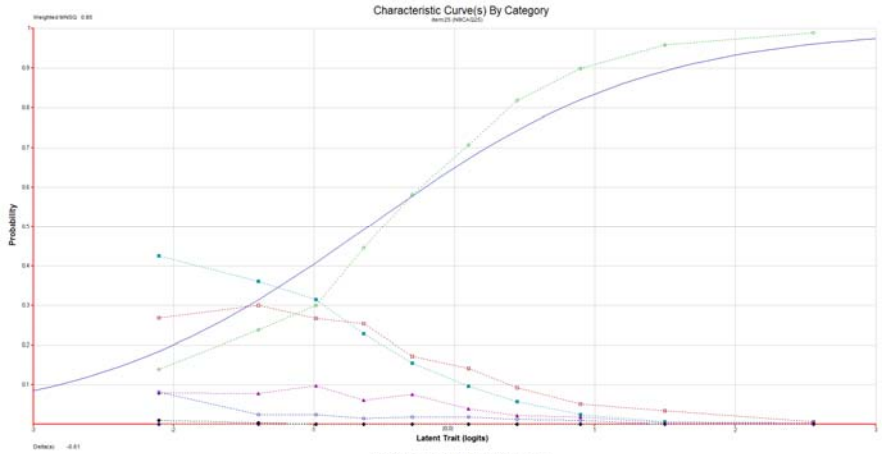
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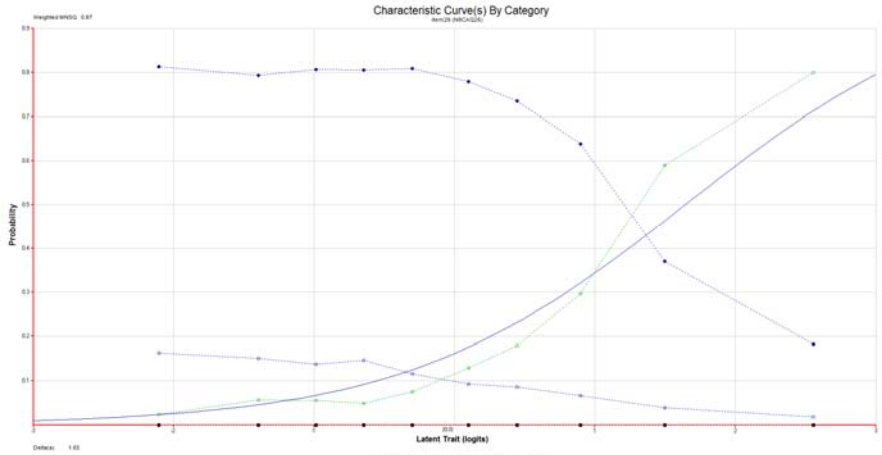
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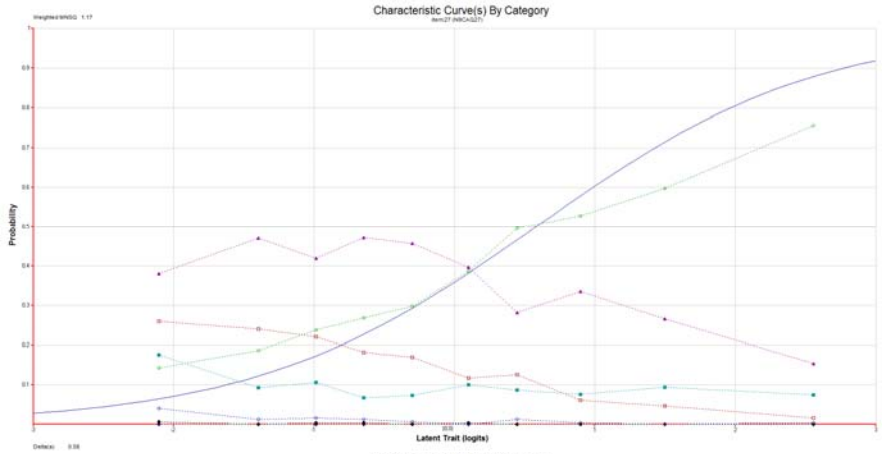
Probability
Latent Trait (logits)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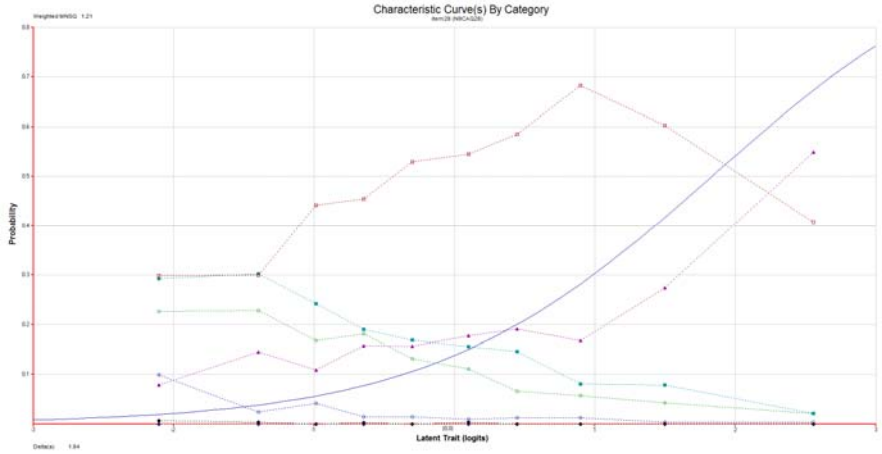
Probability
Latent Trait (logits)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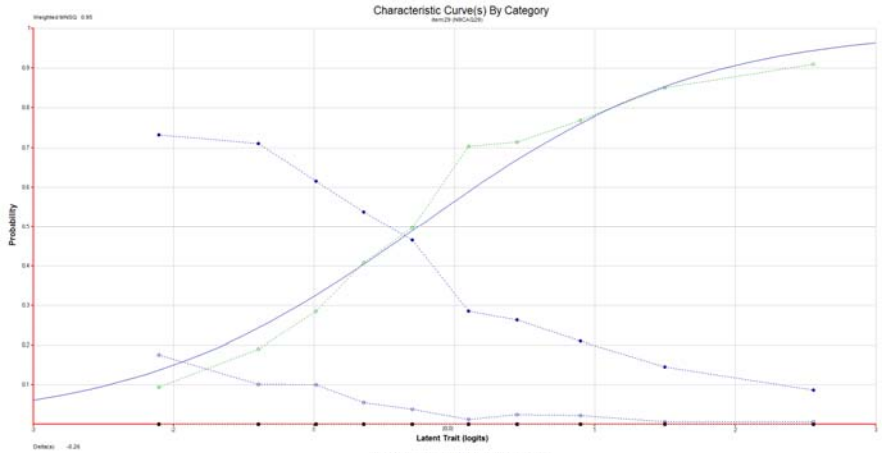
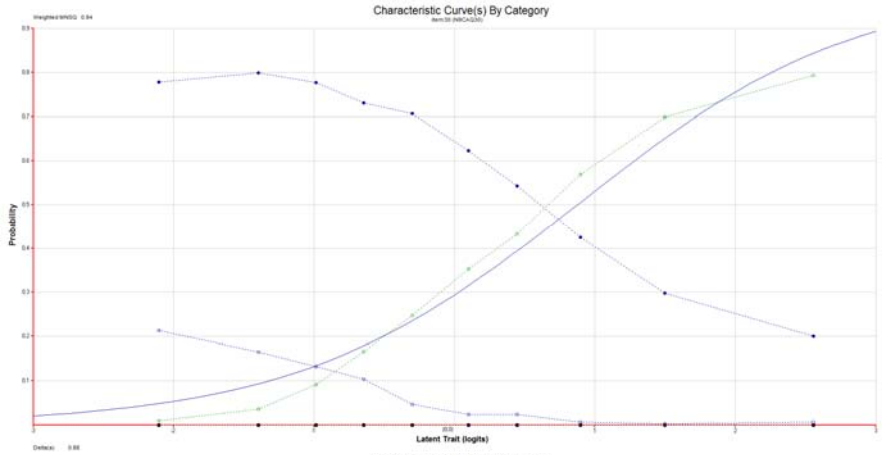
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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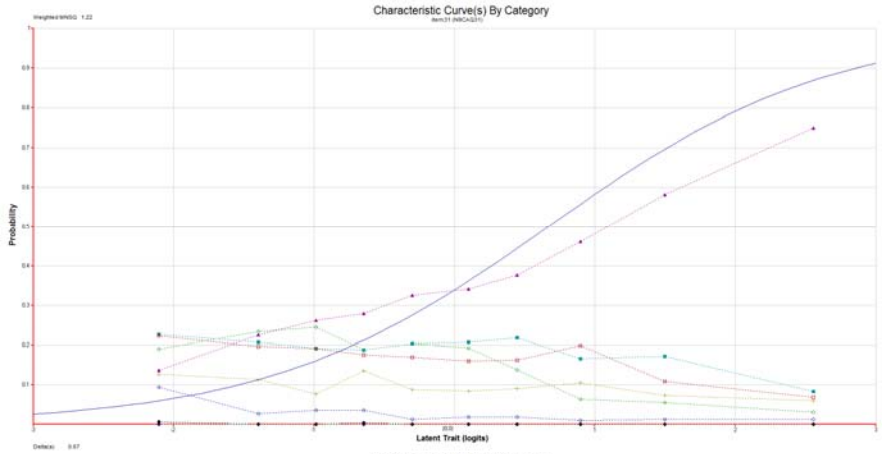
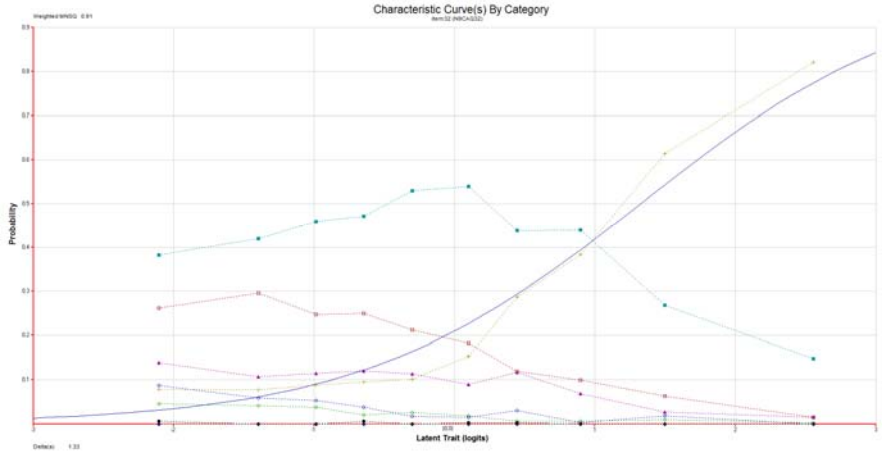
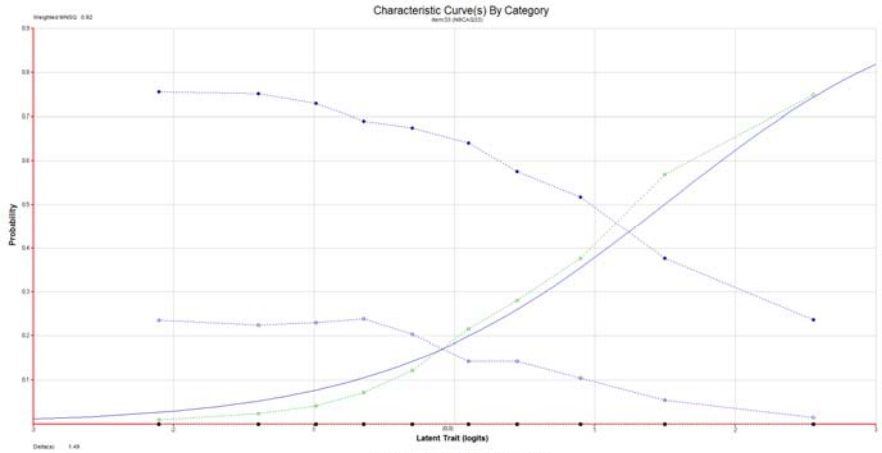
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)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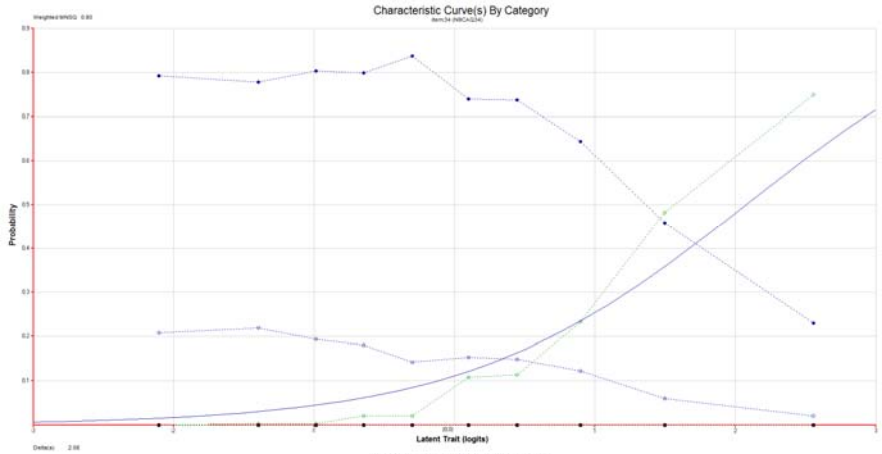
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
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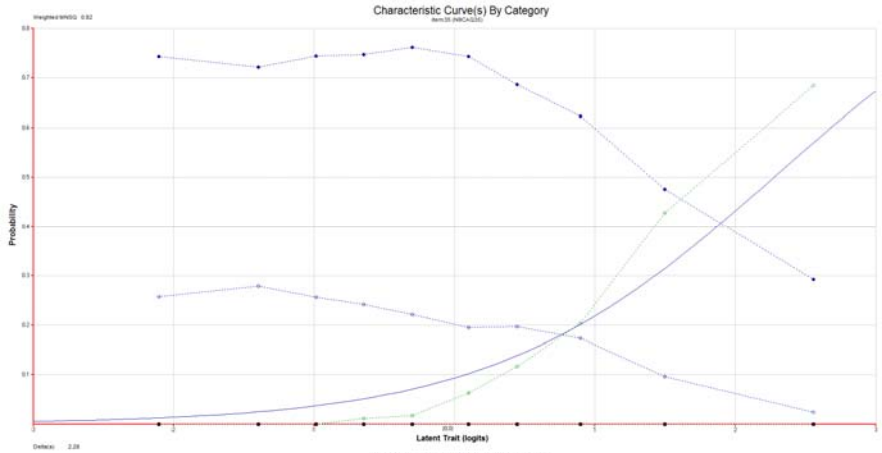
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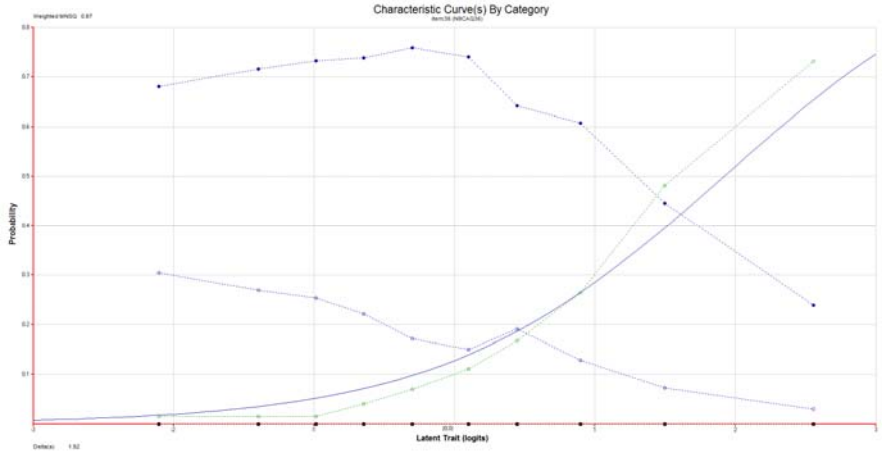
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
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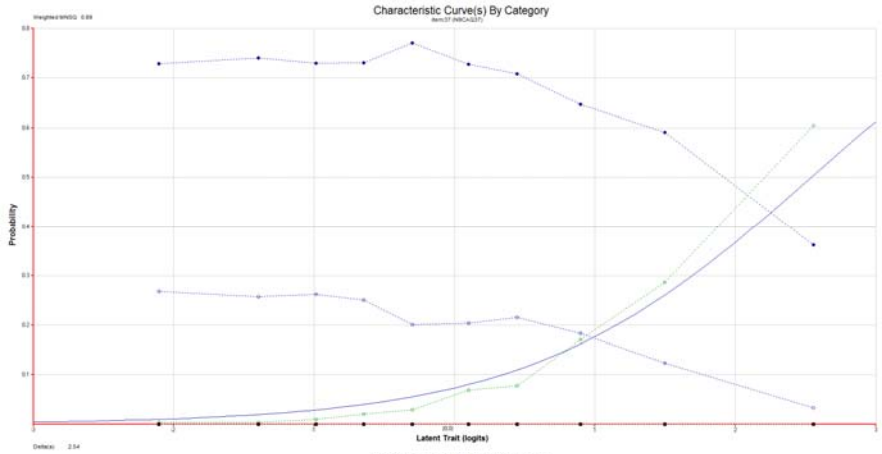
Latent Trait (logits)


Characteristic Curve(s) By Category
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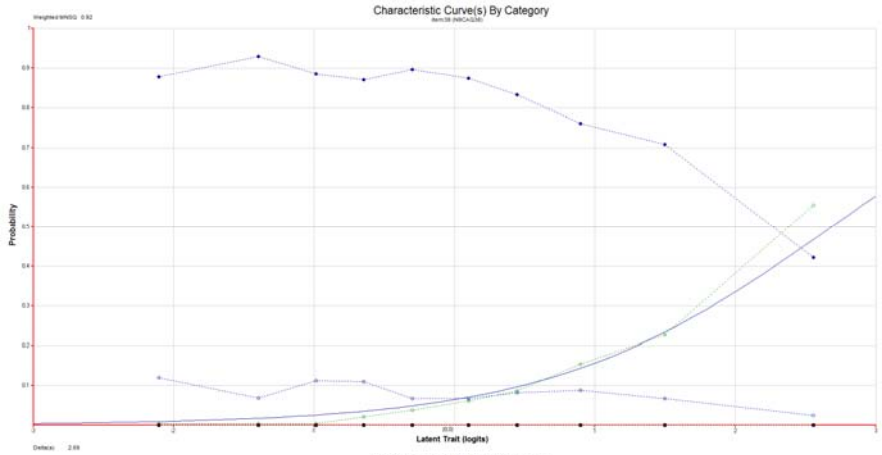
Characteristic Curve(s) By Category
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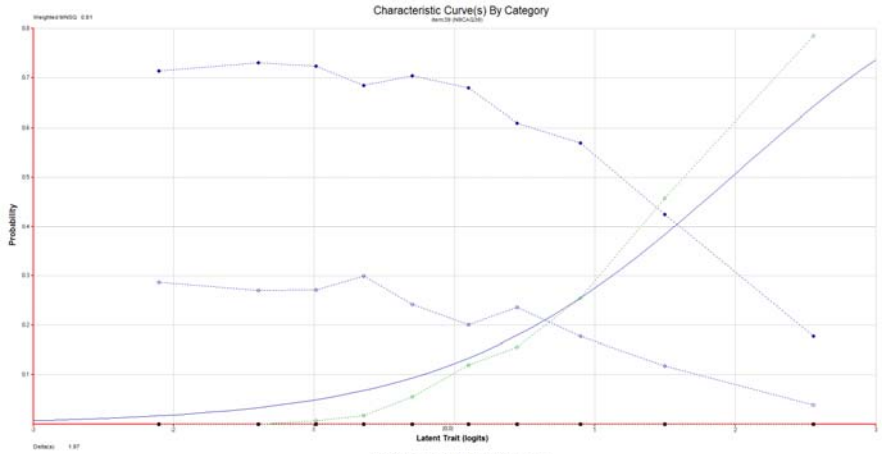
Characteristic Curve(s) By Category
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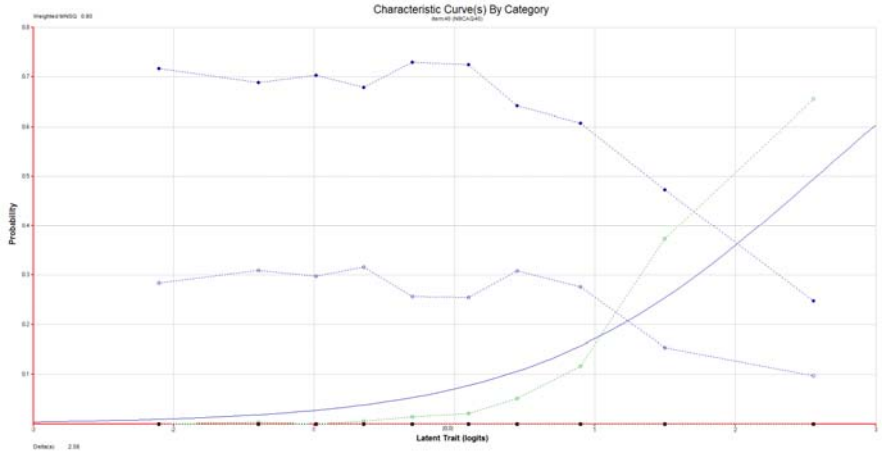
Characteristic Curve(s) By Category
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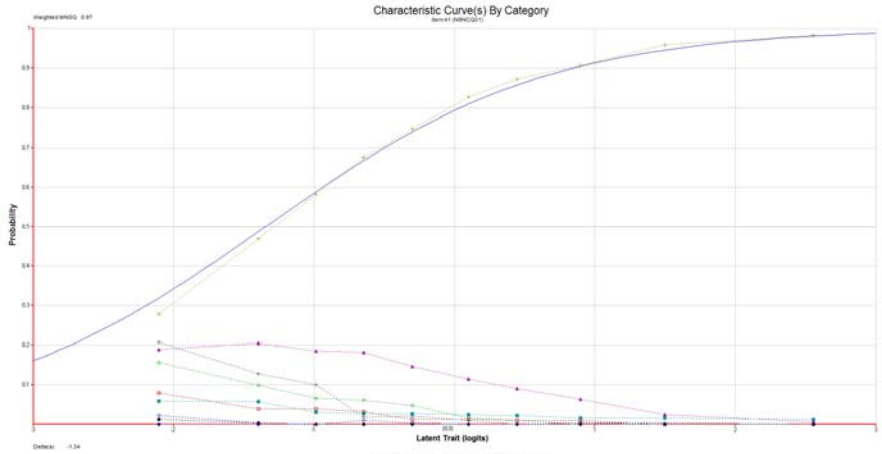
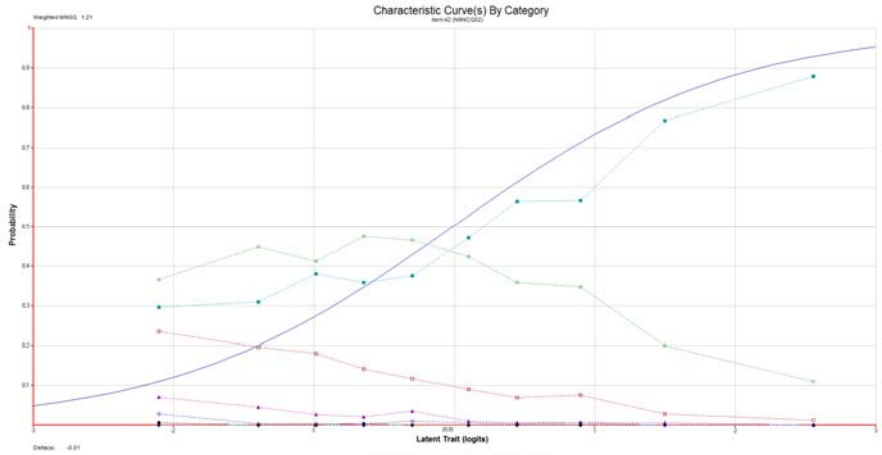
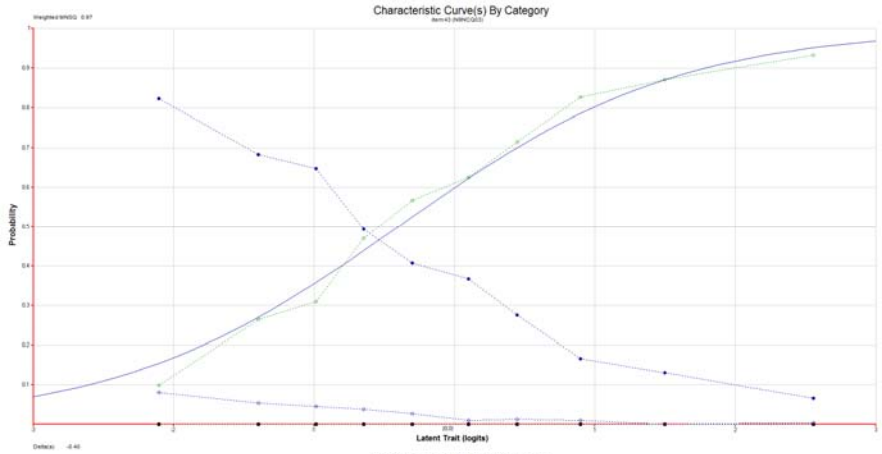
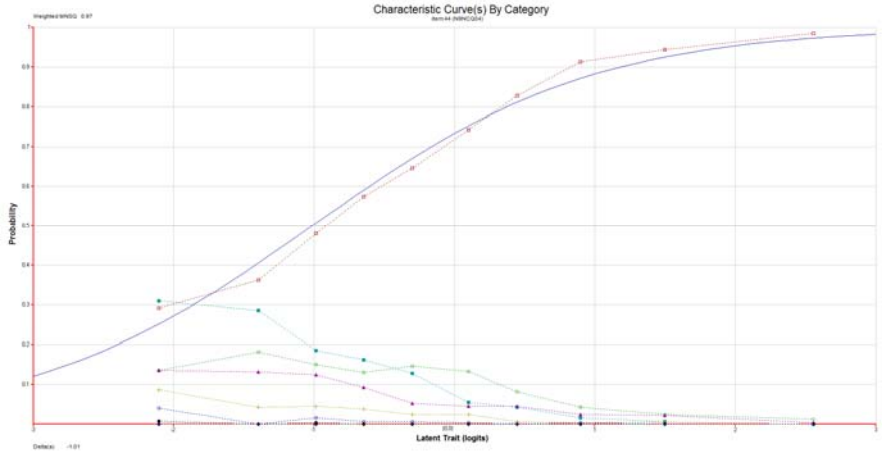
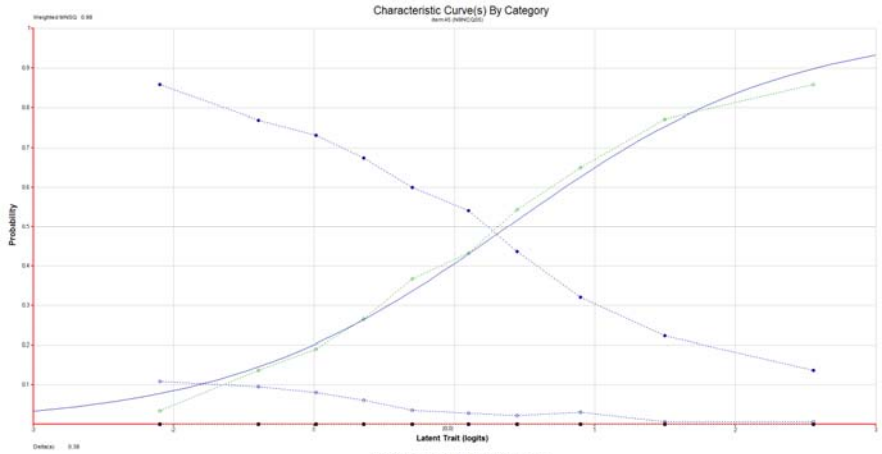

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
Probability
Latent Trait (logits)


Characteristic Curve(s) By Category
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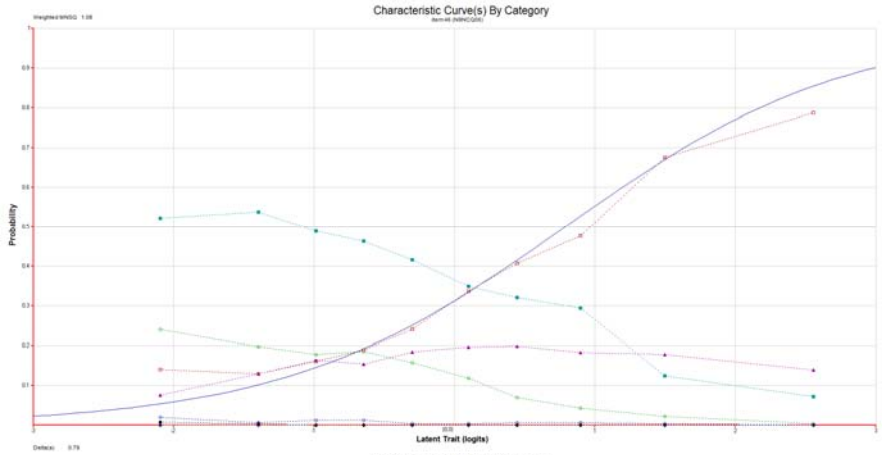
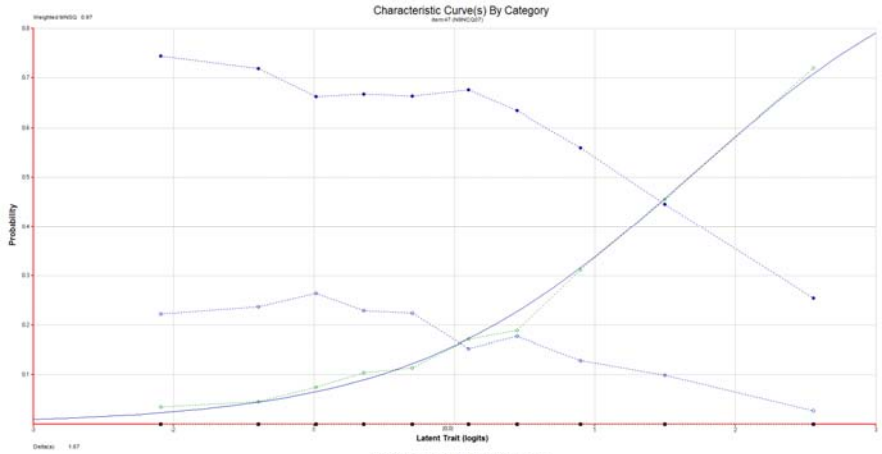
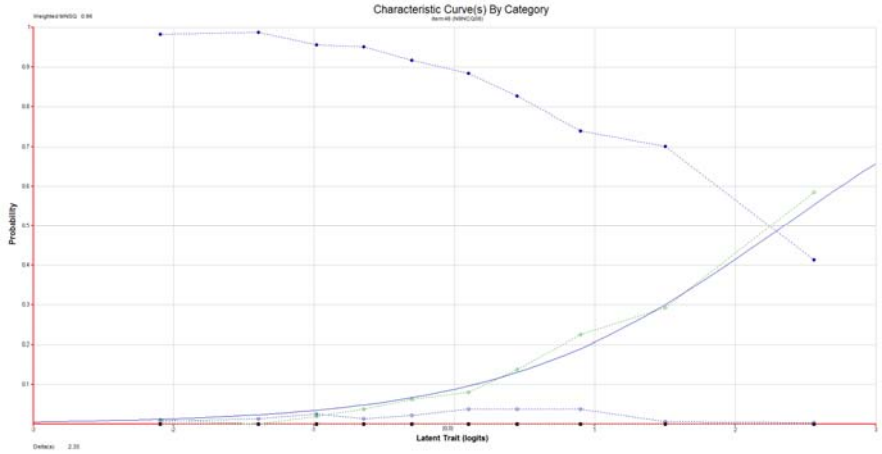
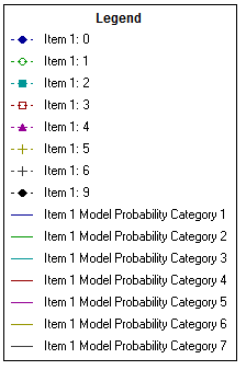
Latent Trait (logits)

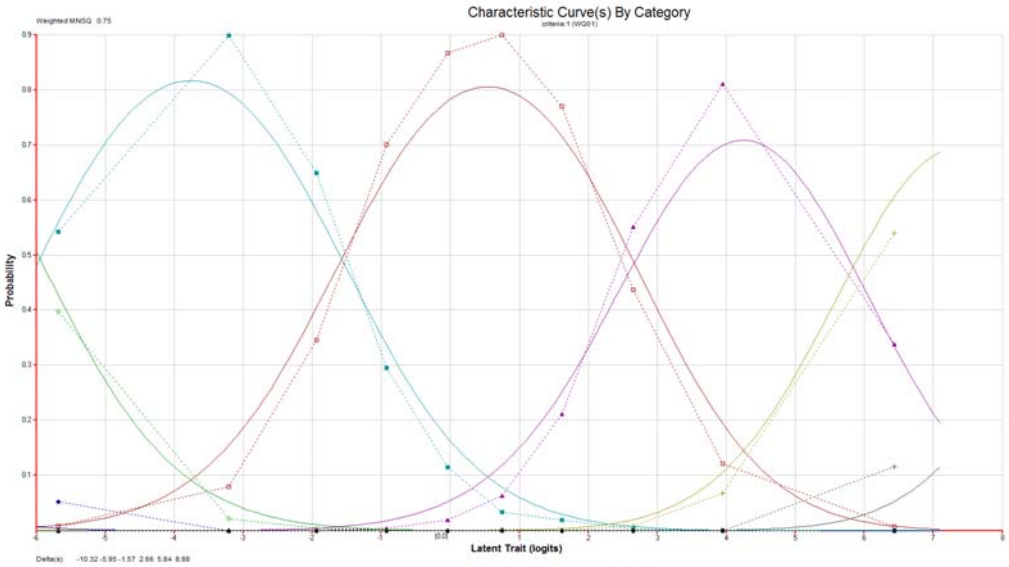

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

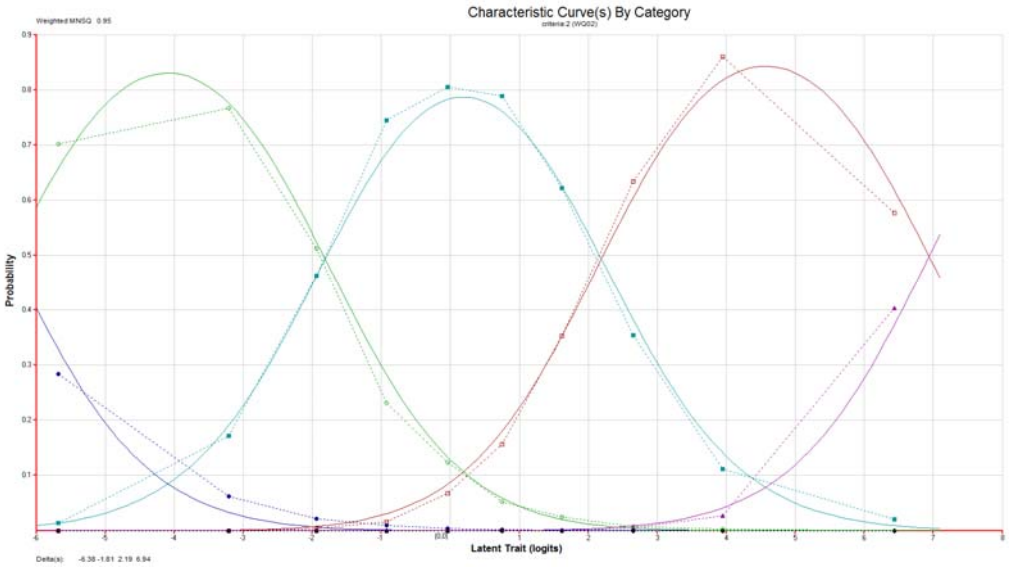

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

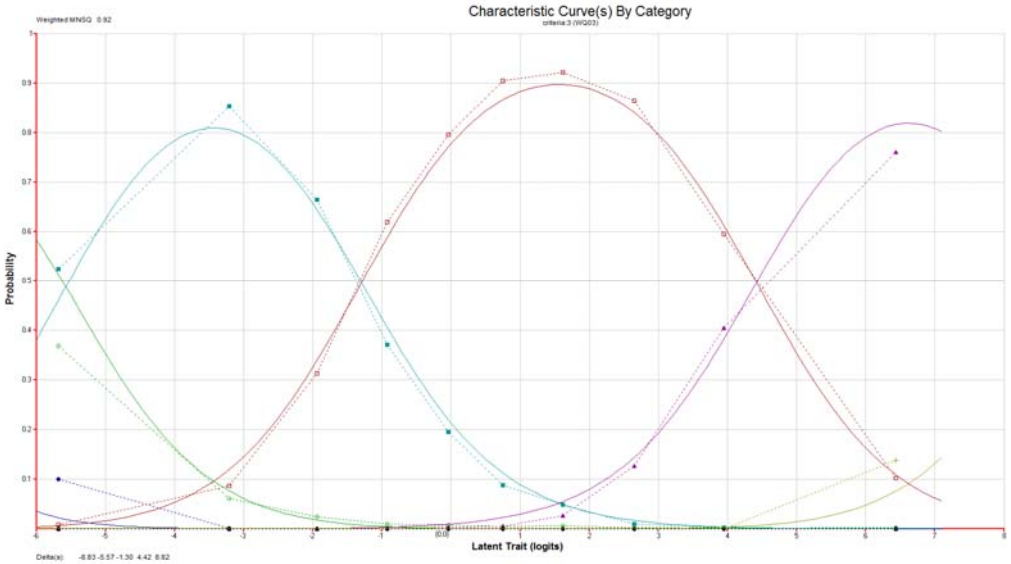

Characteristic Curve(s) By Category
Probability
Latent Trait (logits)

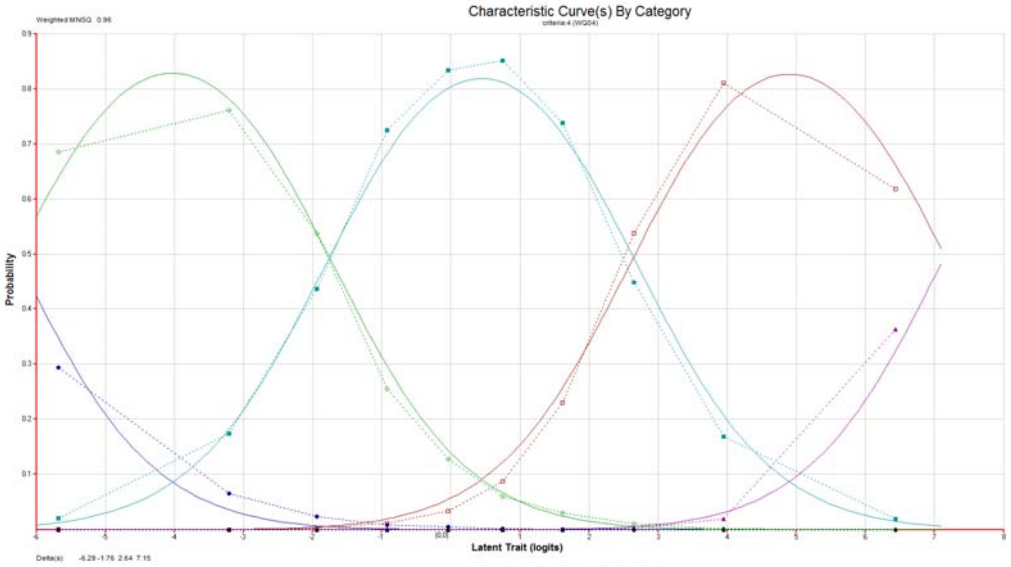
D.17. Year 3, 5, 7, 9 Writing

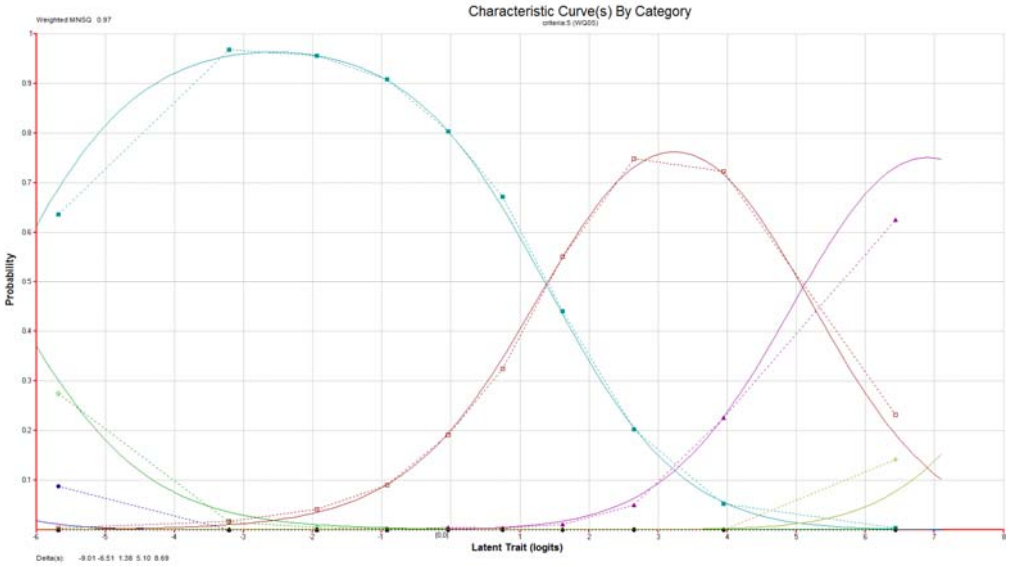


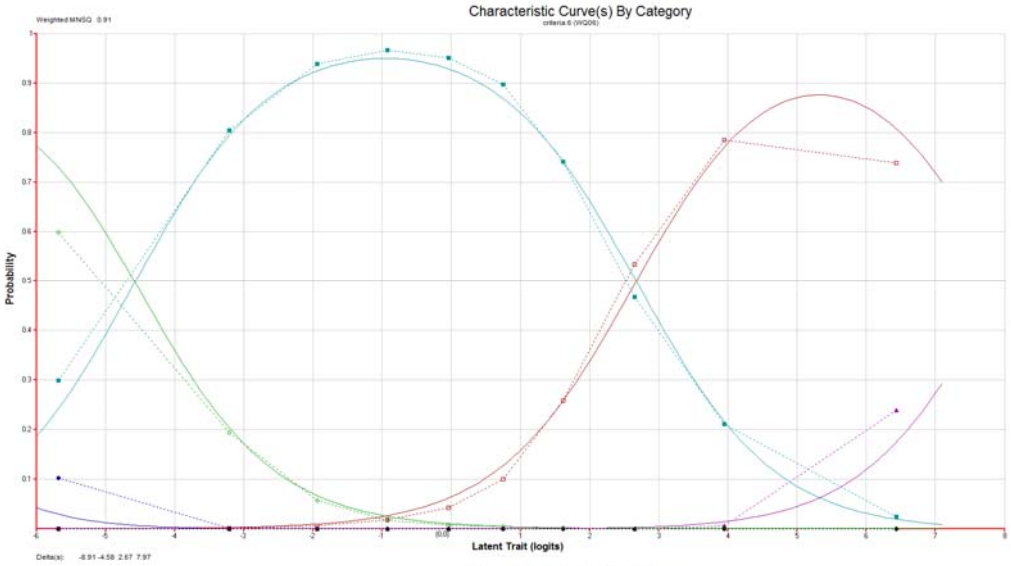


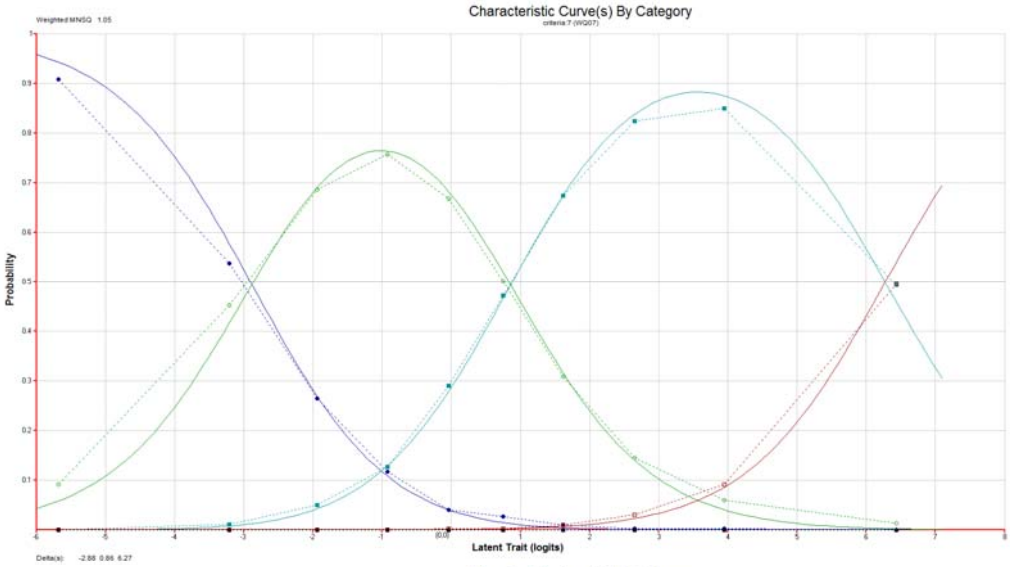


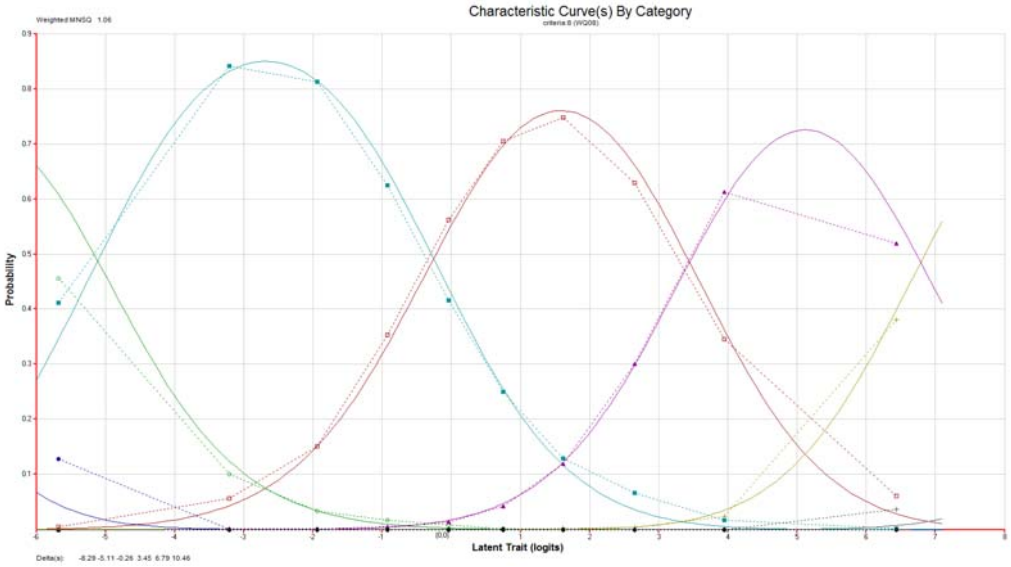

Characteristic Curve(s) By Category
Weighted MNSQ 0.92
criteria:3 (WQ03)
Probability
Latent Trait (logits)
Delta(s): -8.83 -5.57 -1.30 4.42 8.82

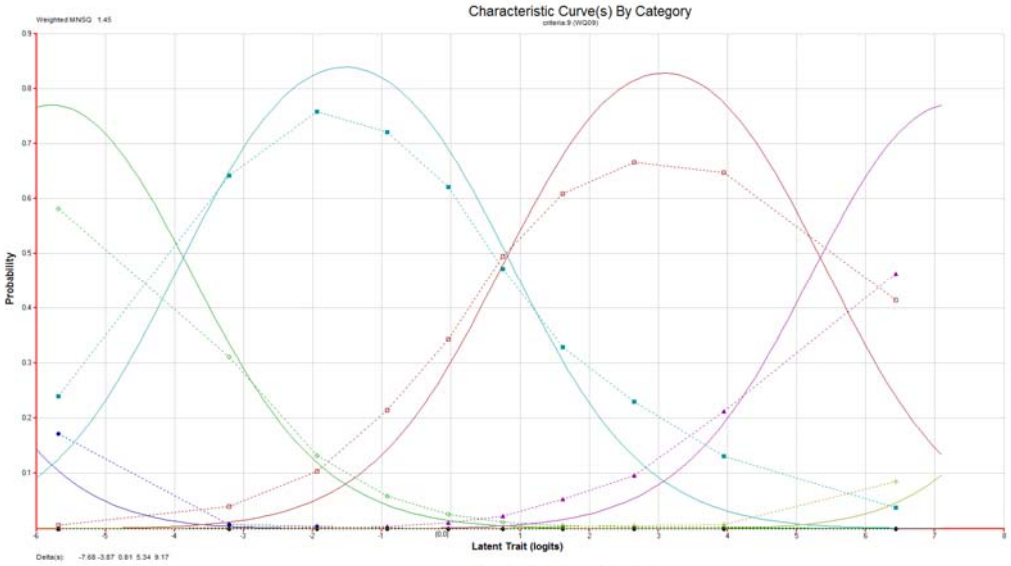

Characteristic Curve(s) By Category
Weighted MNSQ 0.96
criteria:4 (WQ04)
Probability
Latent Trait (logits)
Delta(s): -6.29 -1.76 2.64 7.15

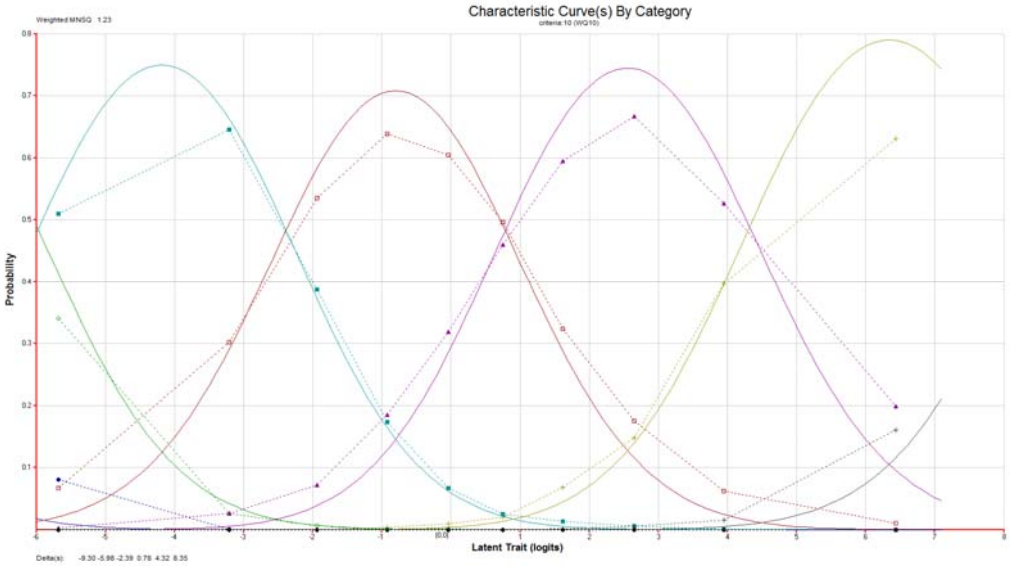

Characteristic Curve(s) By Category
Weighted MNSQ 0.97
criteria:5 (WQ05)
Probability
Latent Trait (logits)
Delta(s): -9.01 -6.51 1.36 5.10 8.69


Characteristic Curve(s) By Category
Weighted MNSQ 0.91
criteria 6 (WQ06)
Probability
Latent Trait (logits)
Delta(s): -8.91 -4.58 2.67 7.97


Characteristic Curve(s) By Category
Weighted MNSQ 1.05
criteria 7 (WQ07)
Probability
Latent Trait (logits)
Delta(s): -2.88 0.86 6.27

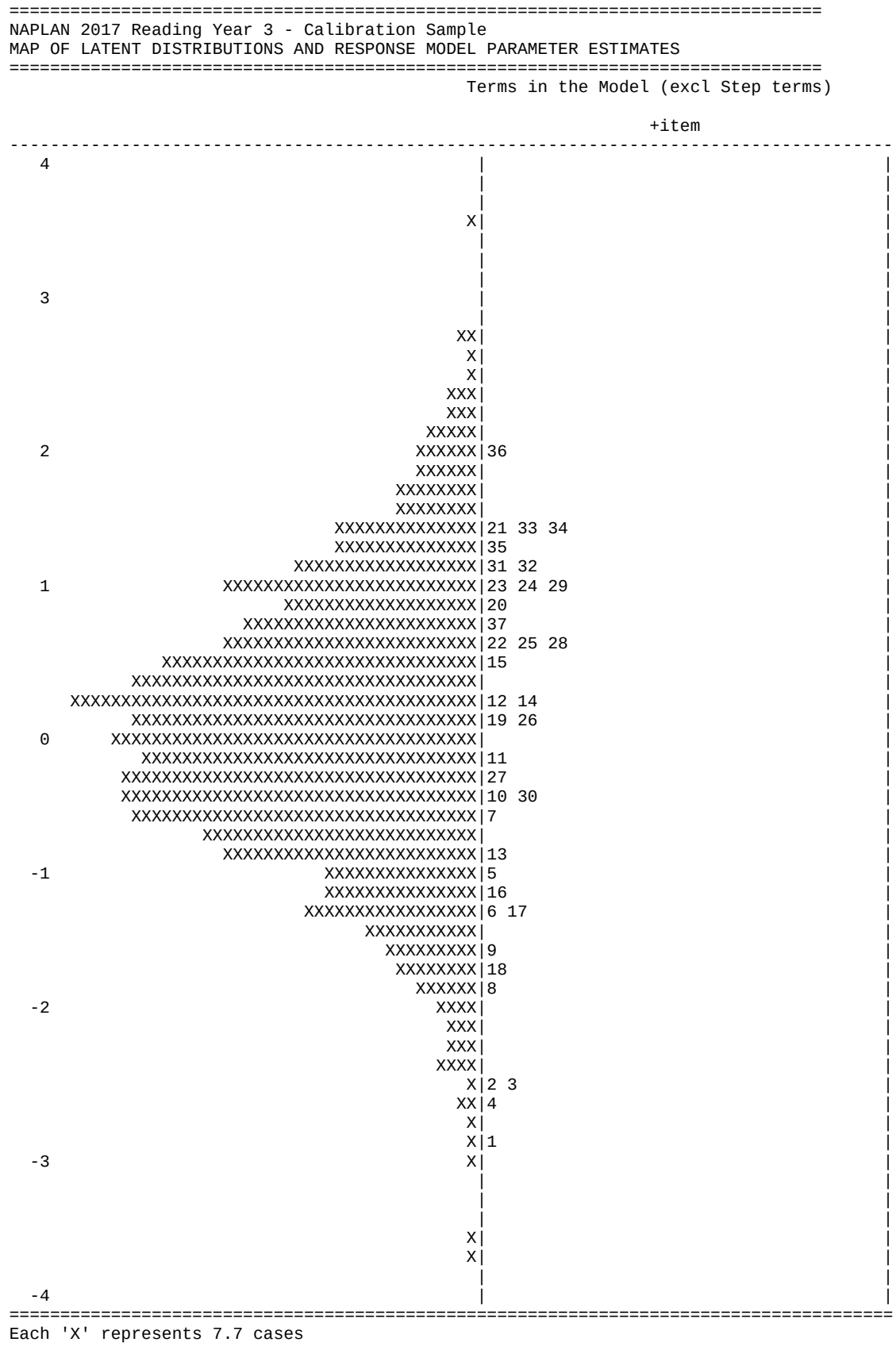

Characteristic Curve(s) By Category
Weighted MNSQ 1.06
criteria 8 (WQ08)
Probability
Latent Trait (logits)
Delta(s): -8.29 -5.11 -0.26 3.45 6.79 10.46


Characteristic Curve(s) By Category
Weighted MNSQ 1.45
criteria:9 (WQ09)
Probability
Latent Trait (logits)
Delta(s): -7.68 -3.87 0.81 5.34 9.17

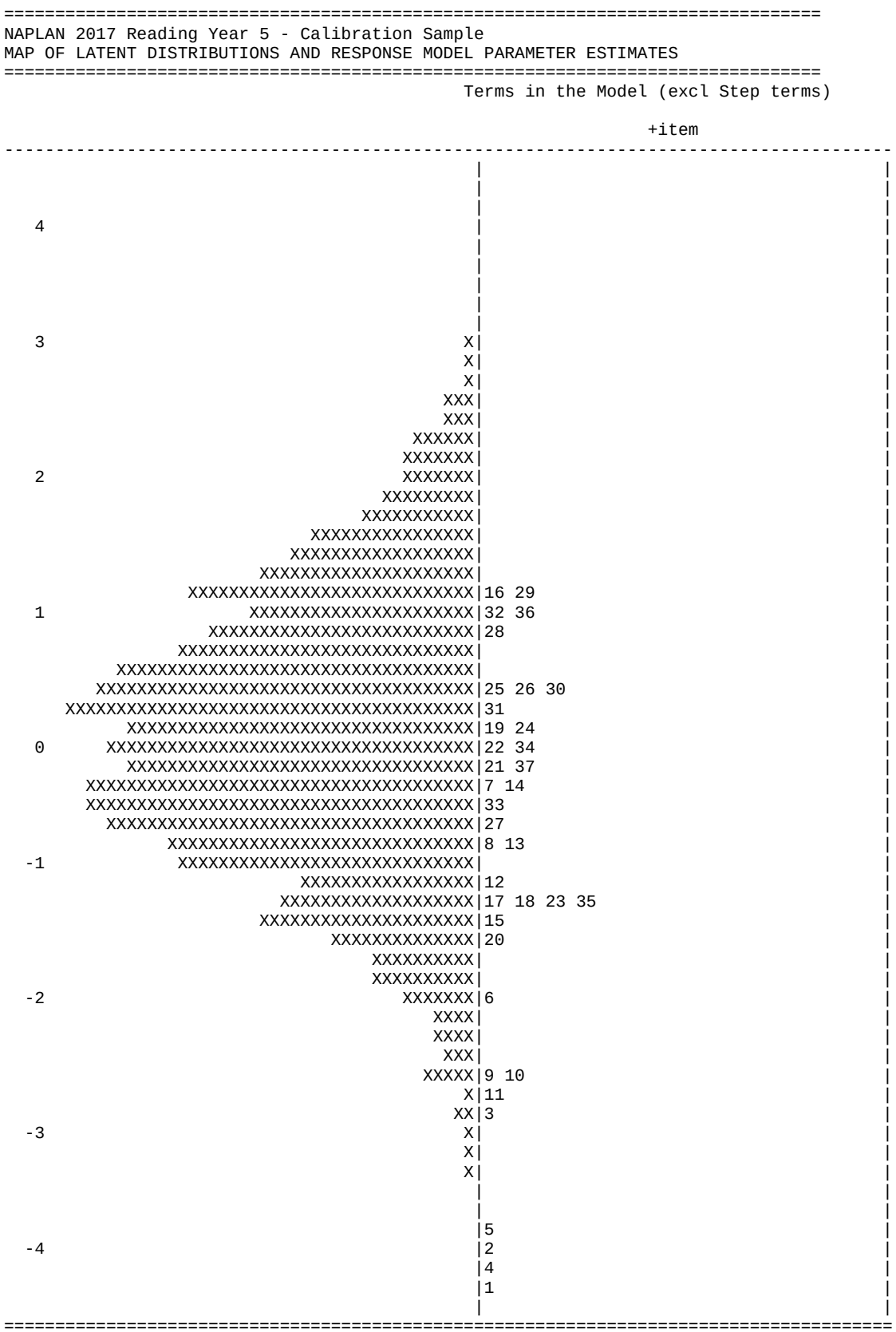

Characteristic Curve(s) By Category
Weighted MNSQ 1.23
criteria:10 (WQ10)
Probability
Latent Trait (logits)
Delta(s): -9.30 -5.96 -2.39 0.78 4.32 8.35

APPENDIX E. VARIABLE MAPS

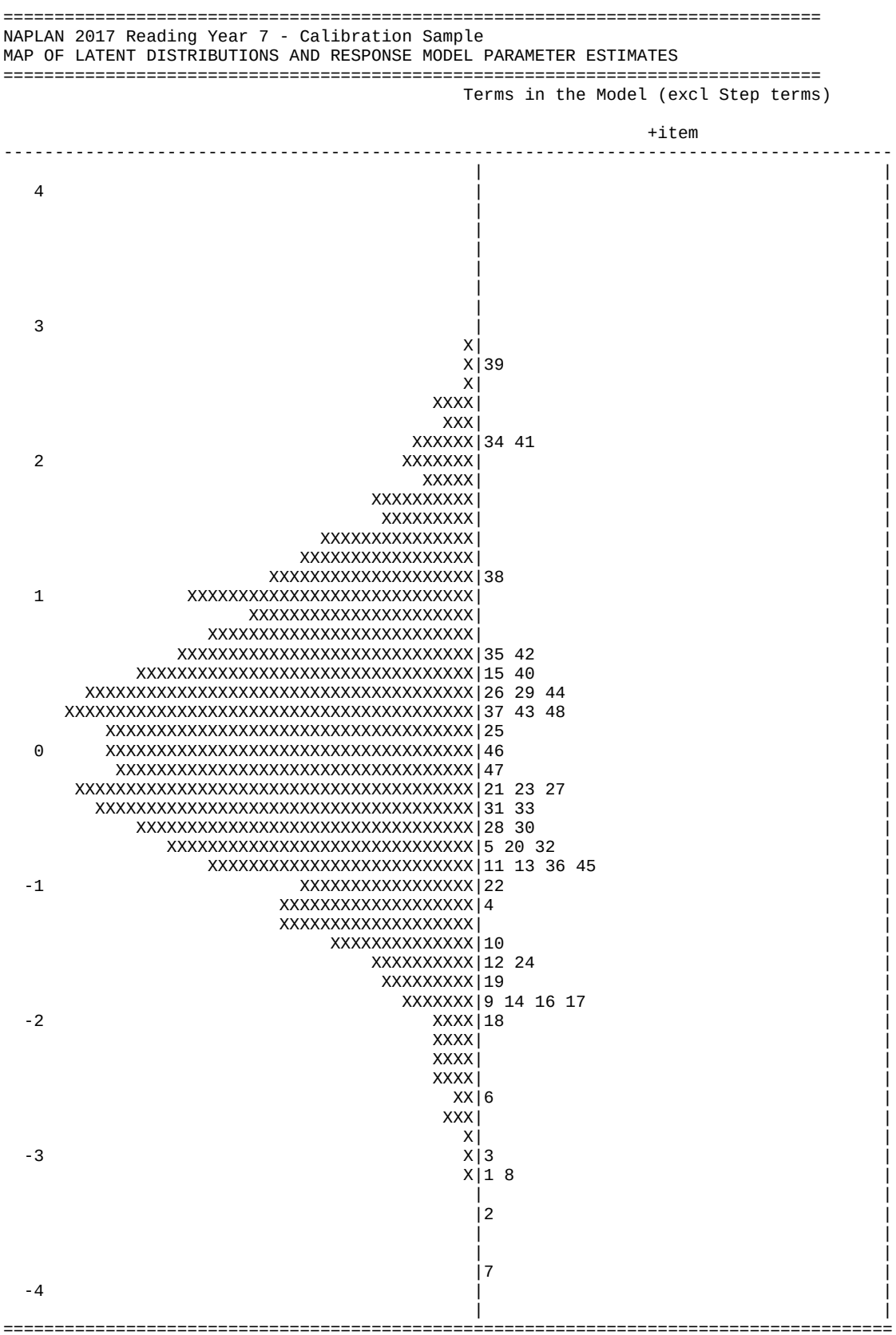
E.1 Year 3 Reading Variable Map



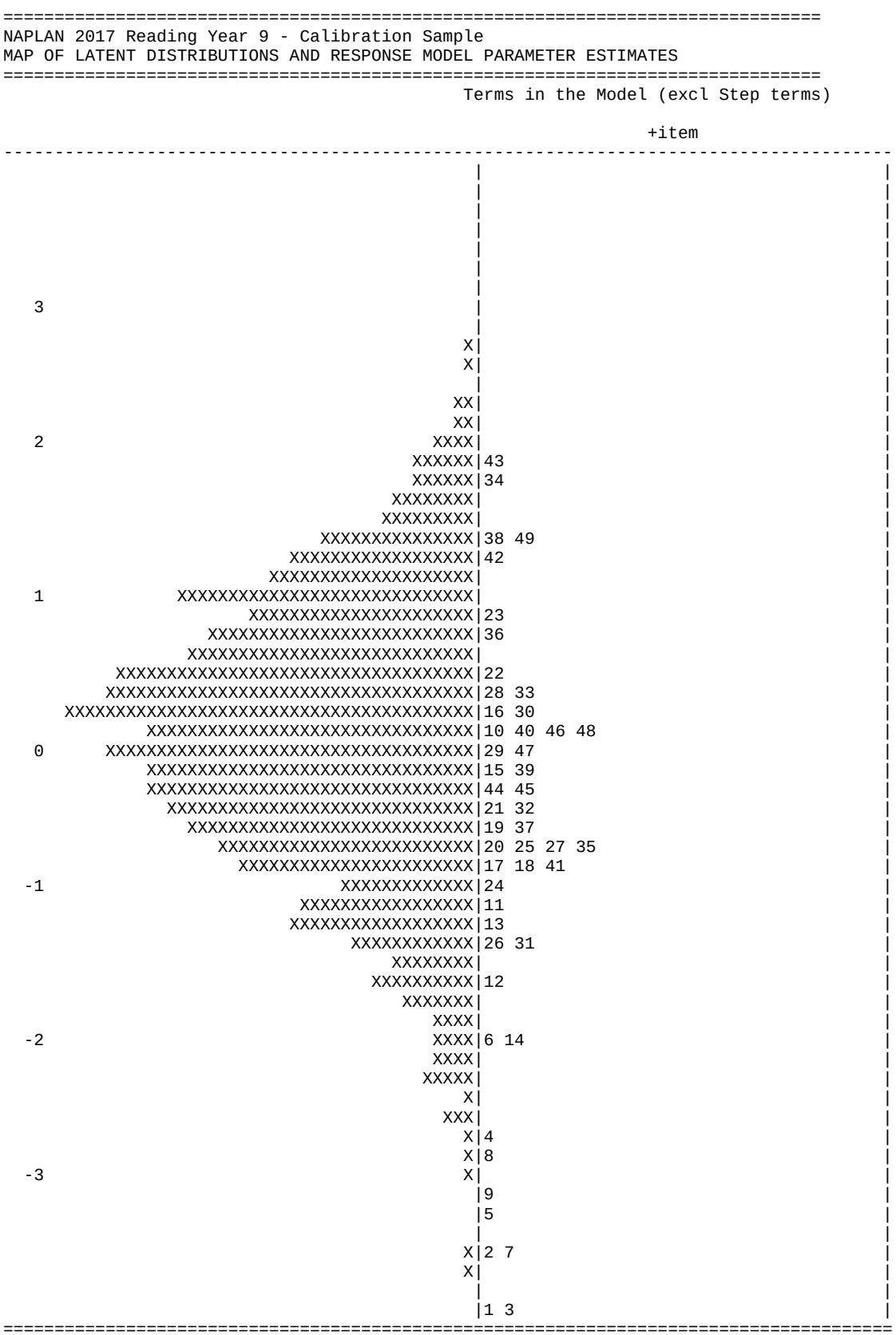
E.2 Year 5 Reading Variable Map



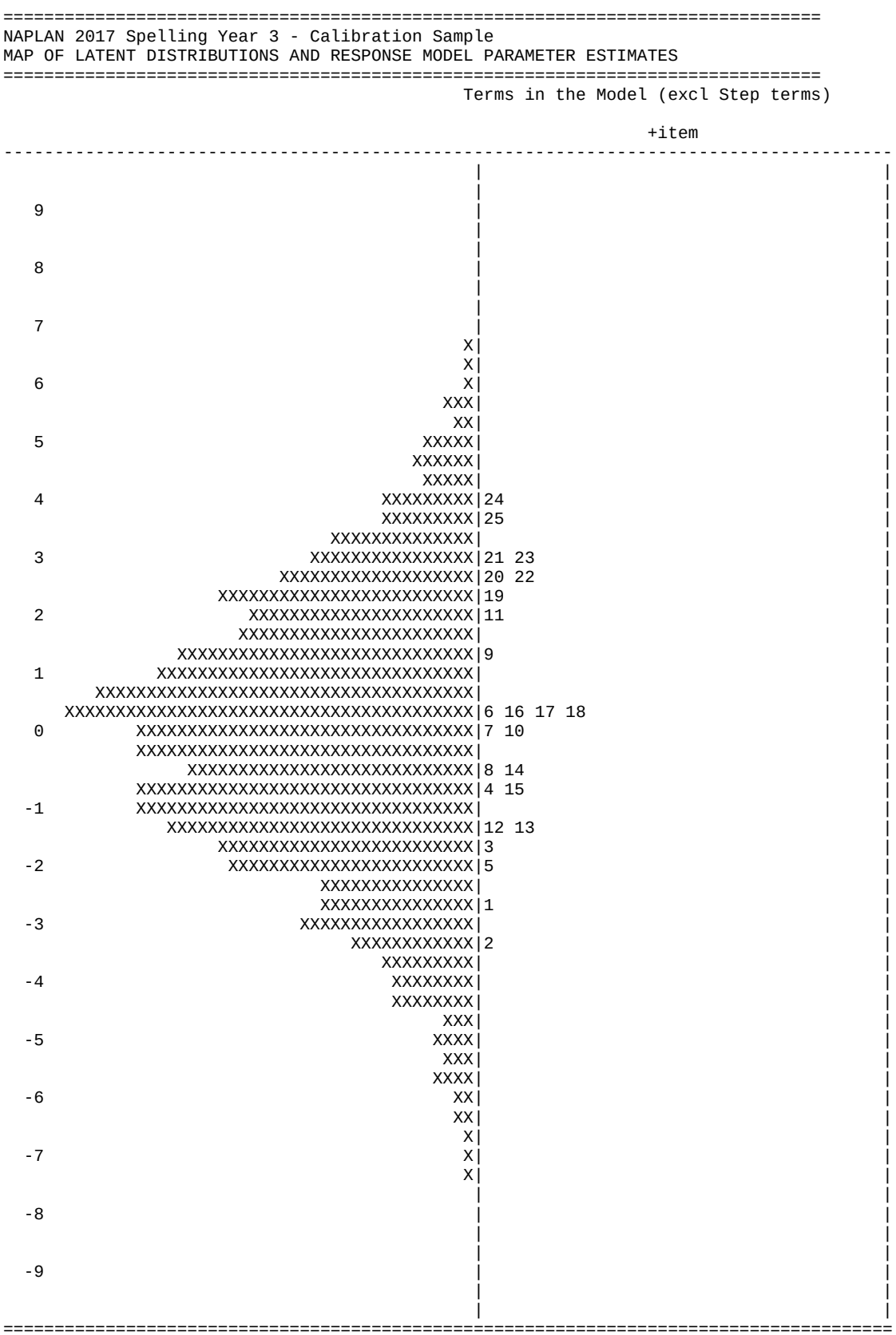
E.3 Year 7 Reading Variable Map



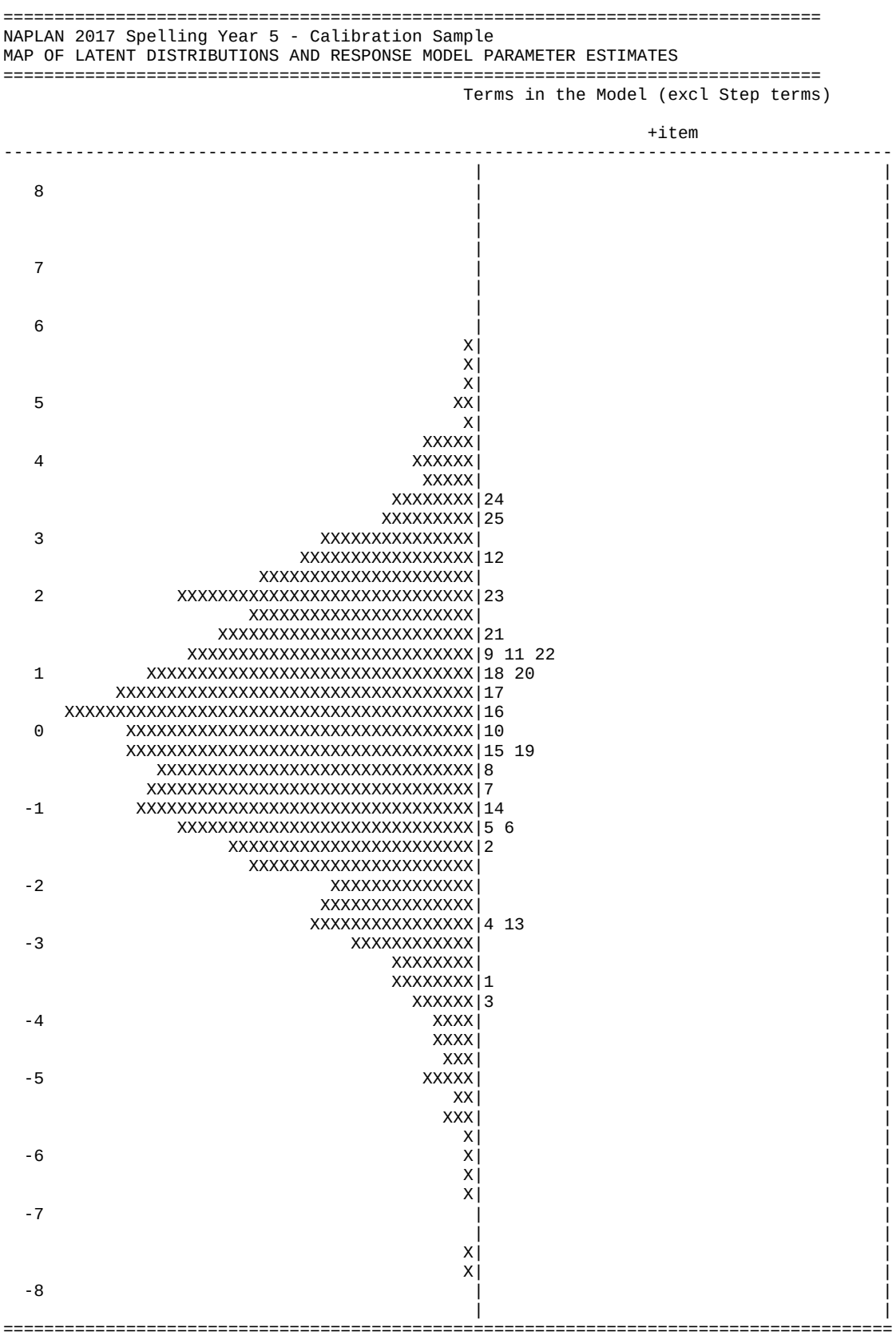
E.4 Year 9 Reading Variable Map



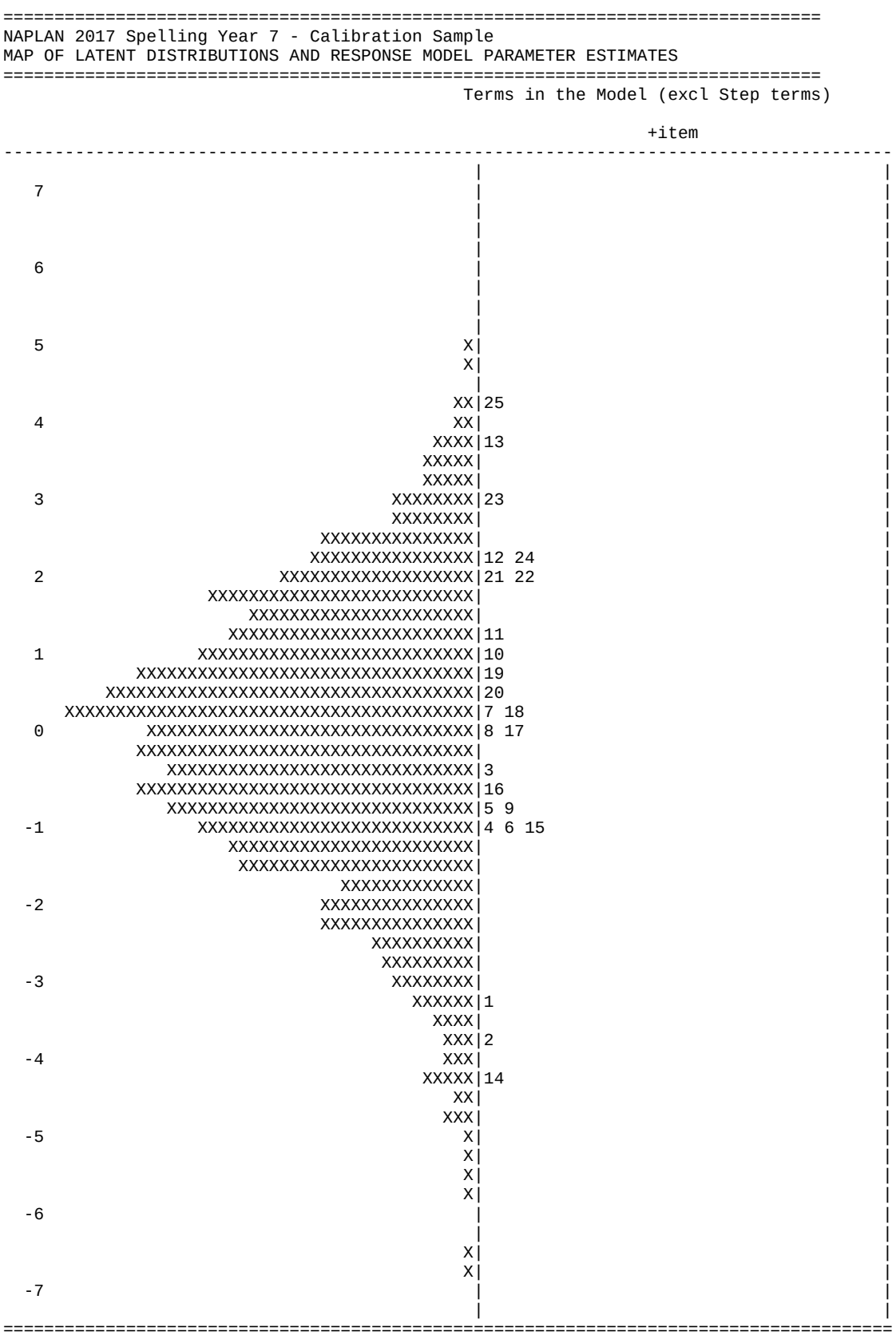
E.5 Year 3 Spelling Variable Map



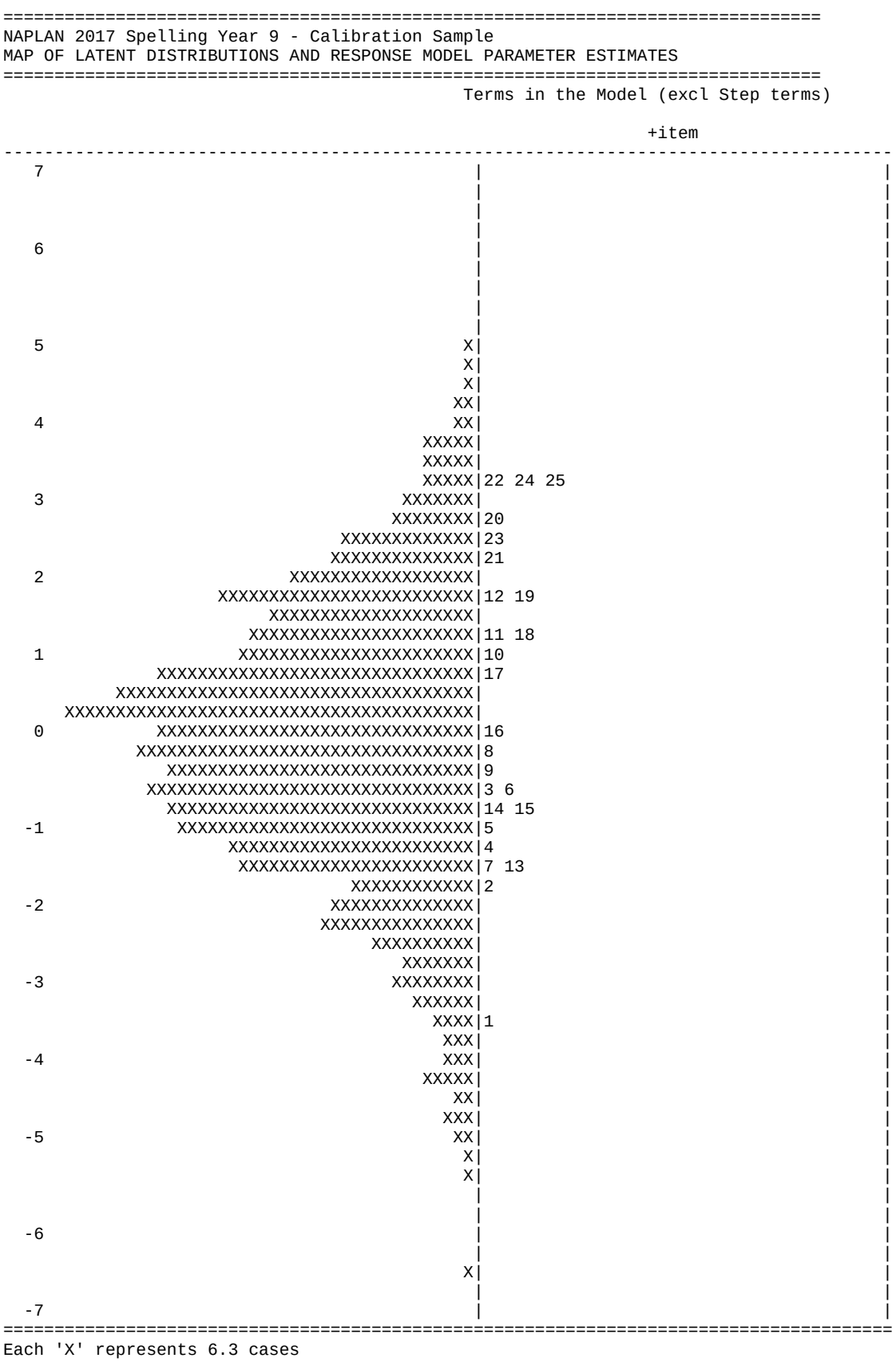
E.6 Year 5 Spelling Variable Map



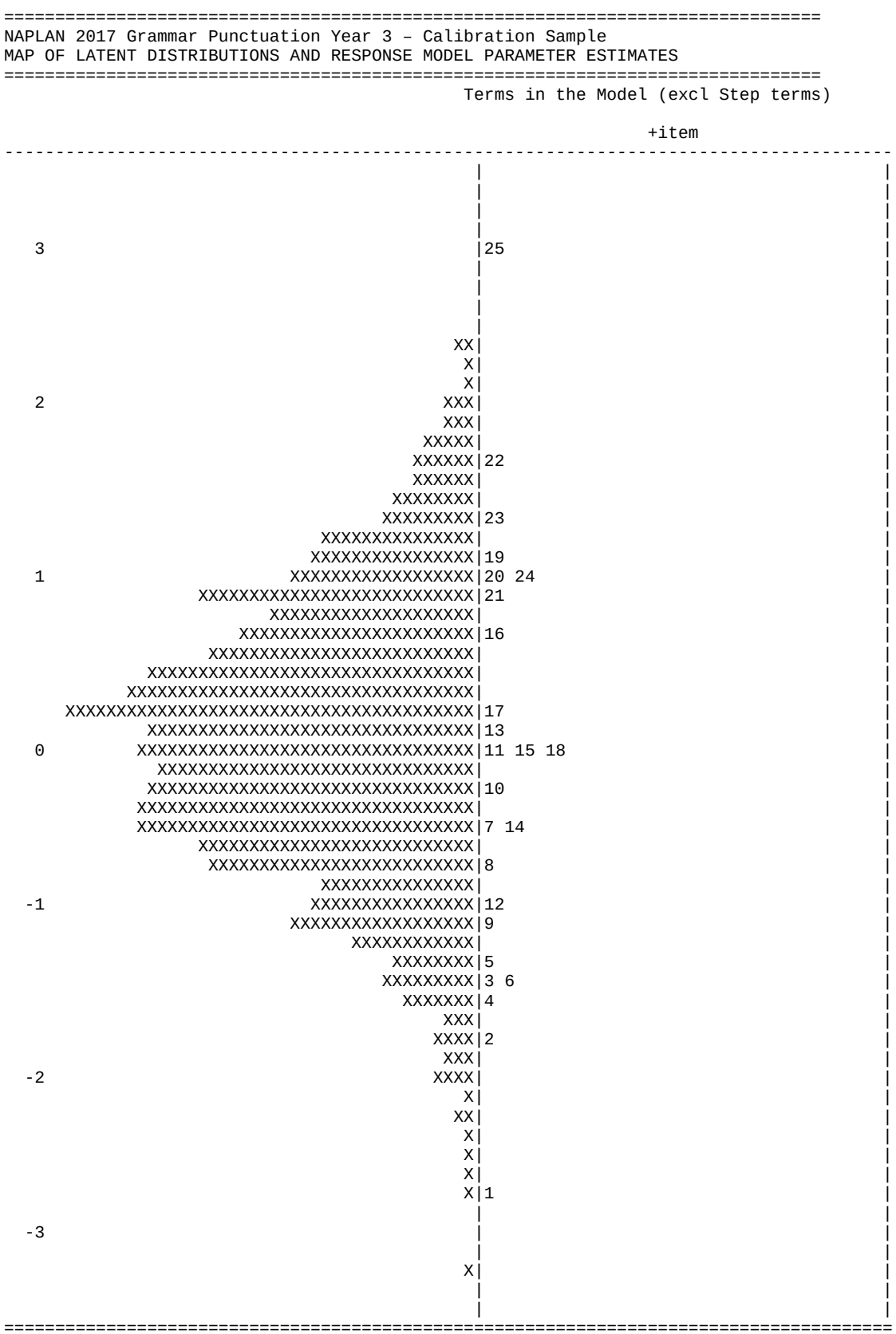
E.7 Year 7 Spelling Variable Map



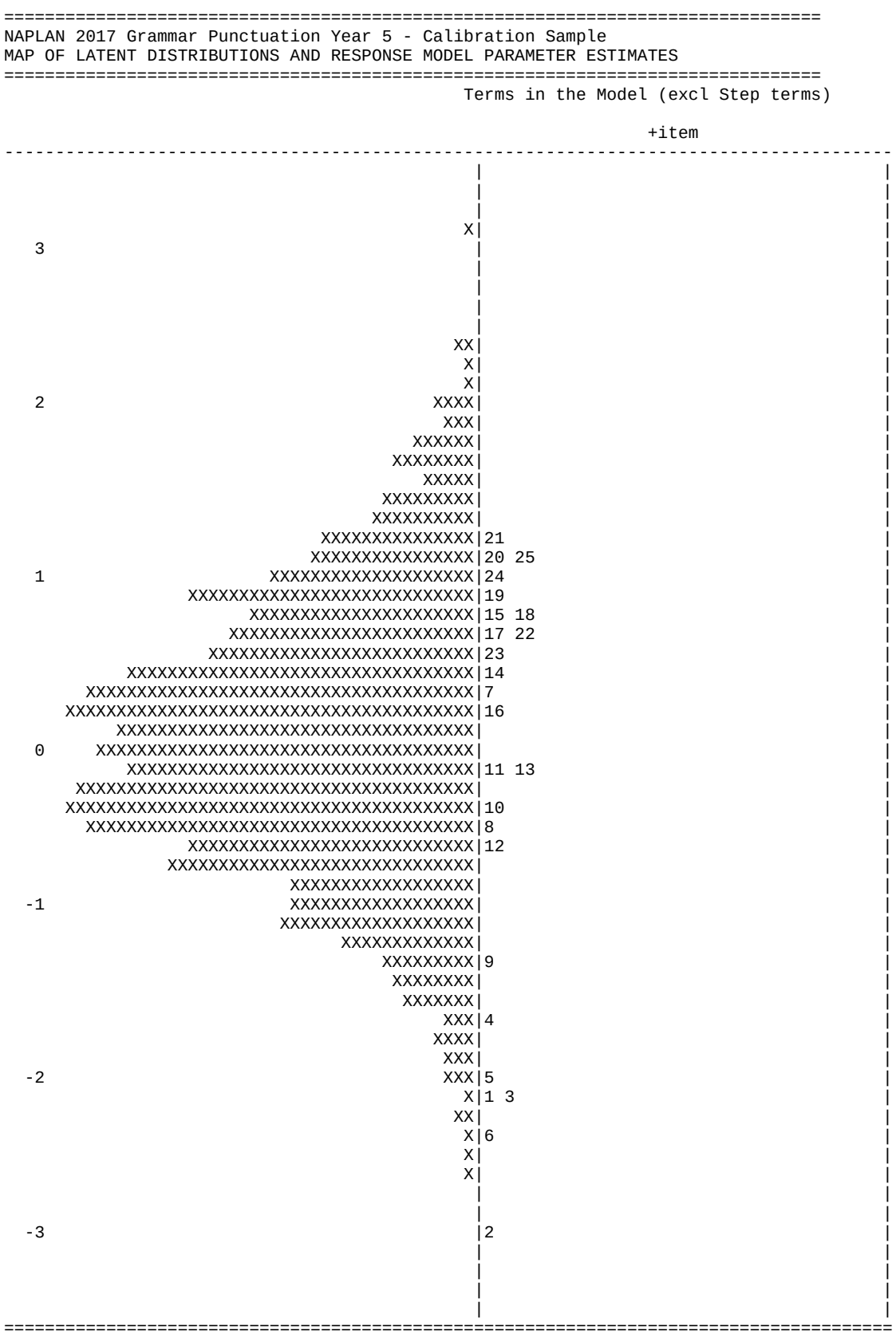
E.8 Year 9 Spelling Variable Map



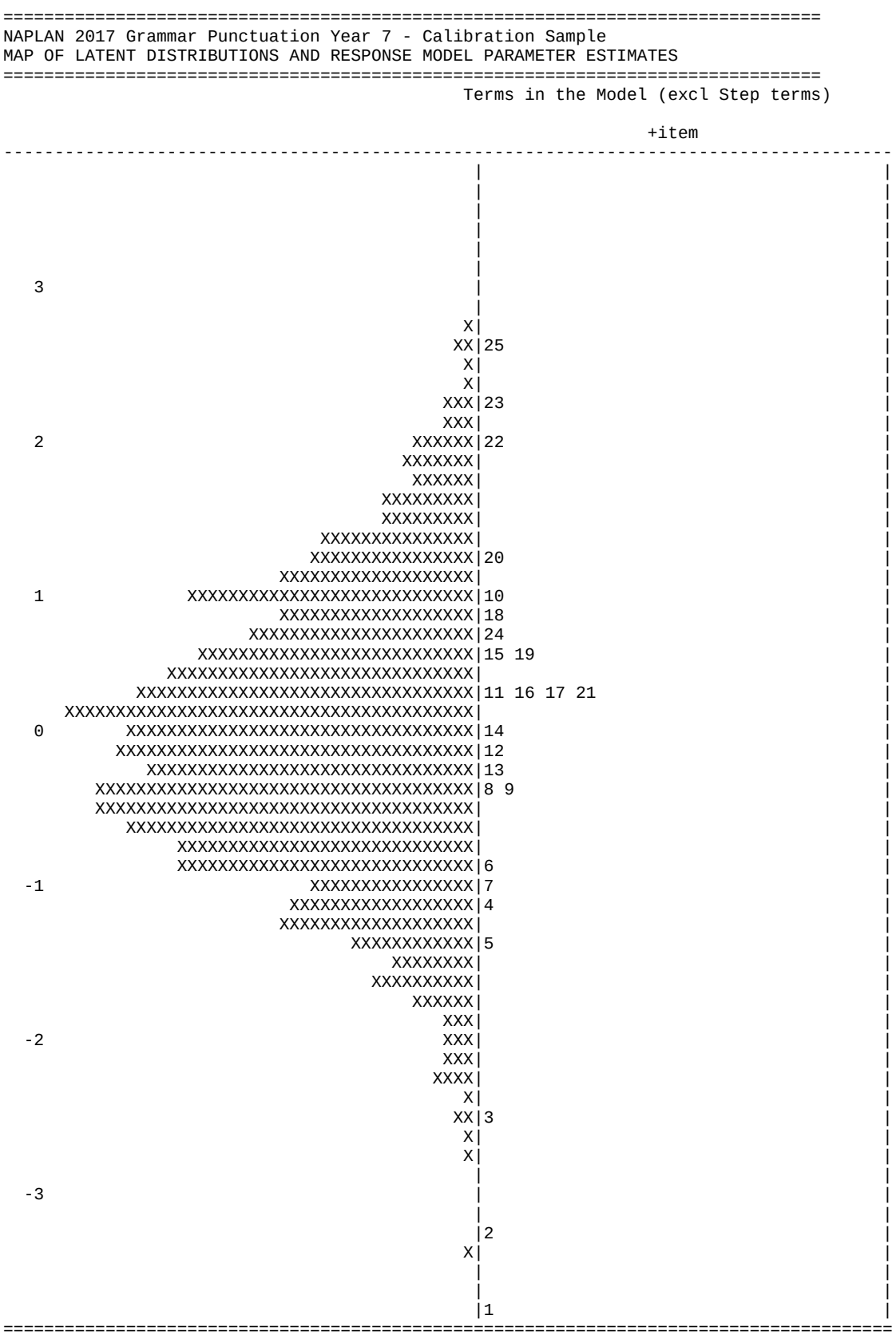
E.9 Year 3 Grammar and Punctuation Variable Map



E.10 Year 5 Grammar and Punctuation Variable Map

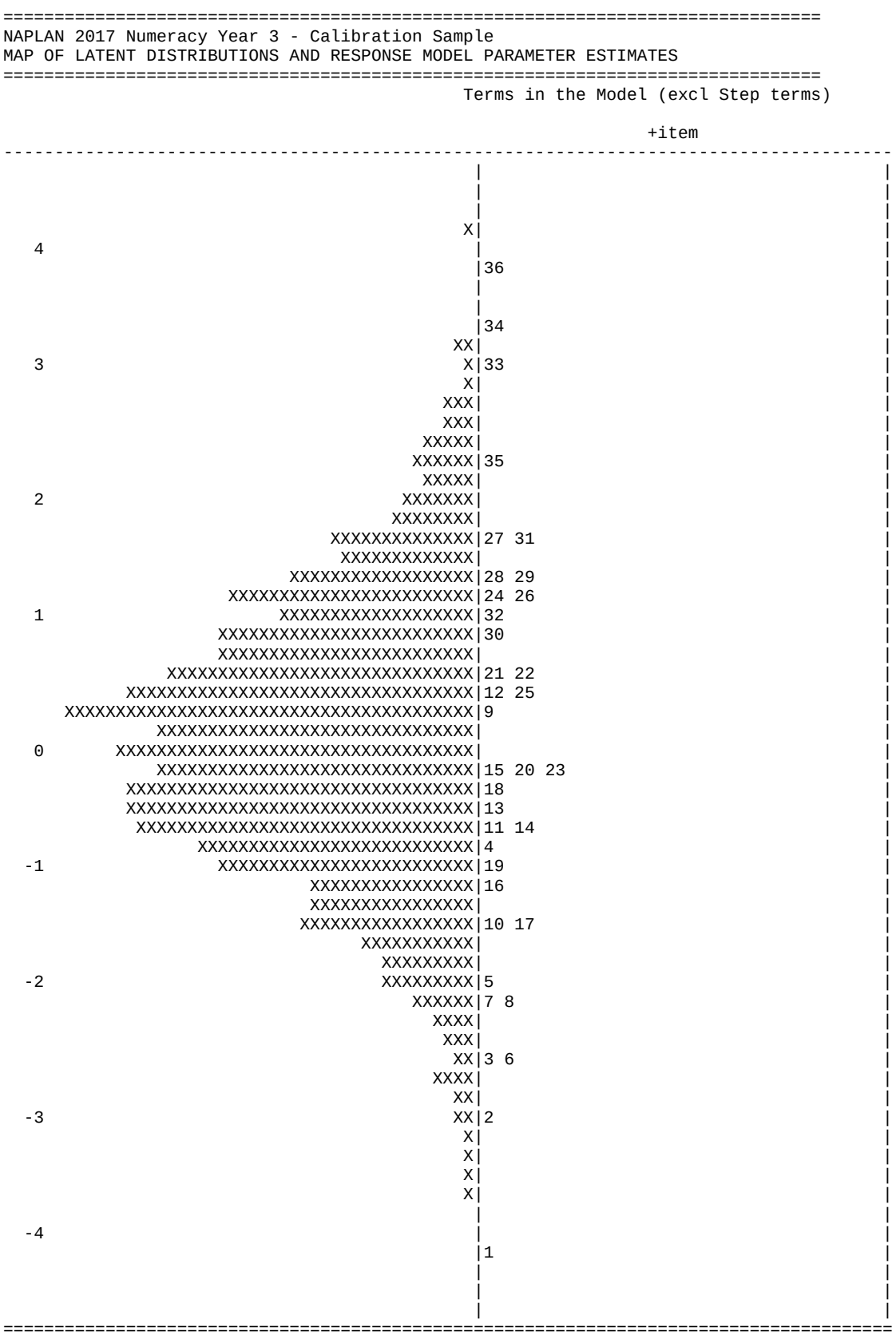


E.11 Year 7 Grammar and Punctuation Variable Map

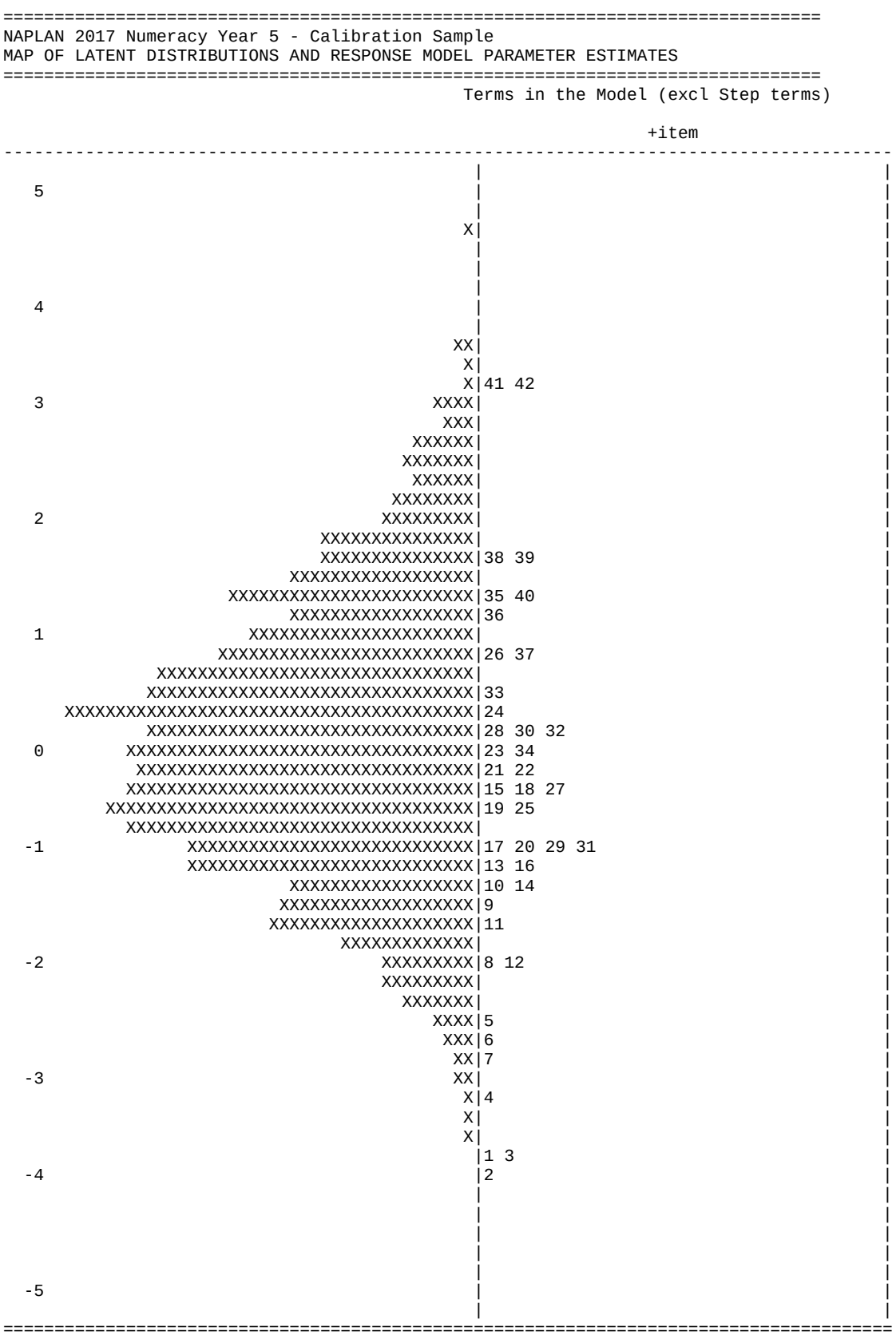


E.12 Year 9 Grammar and Punctuation Variable Map

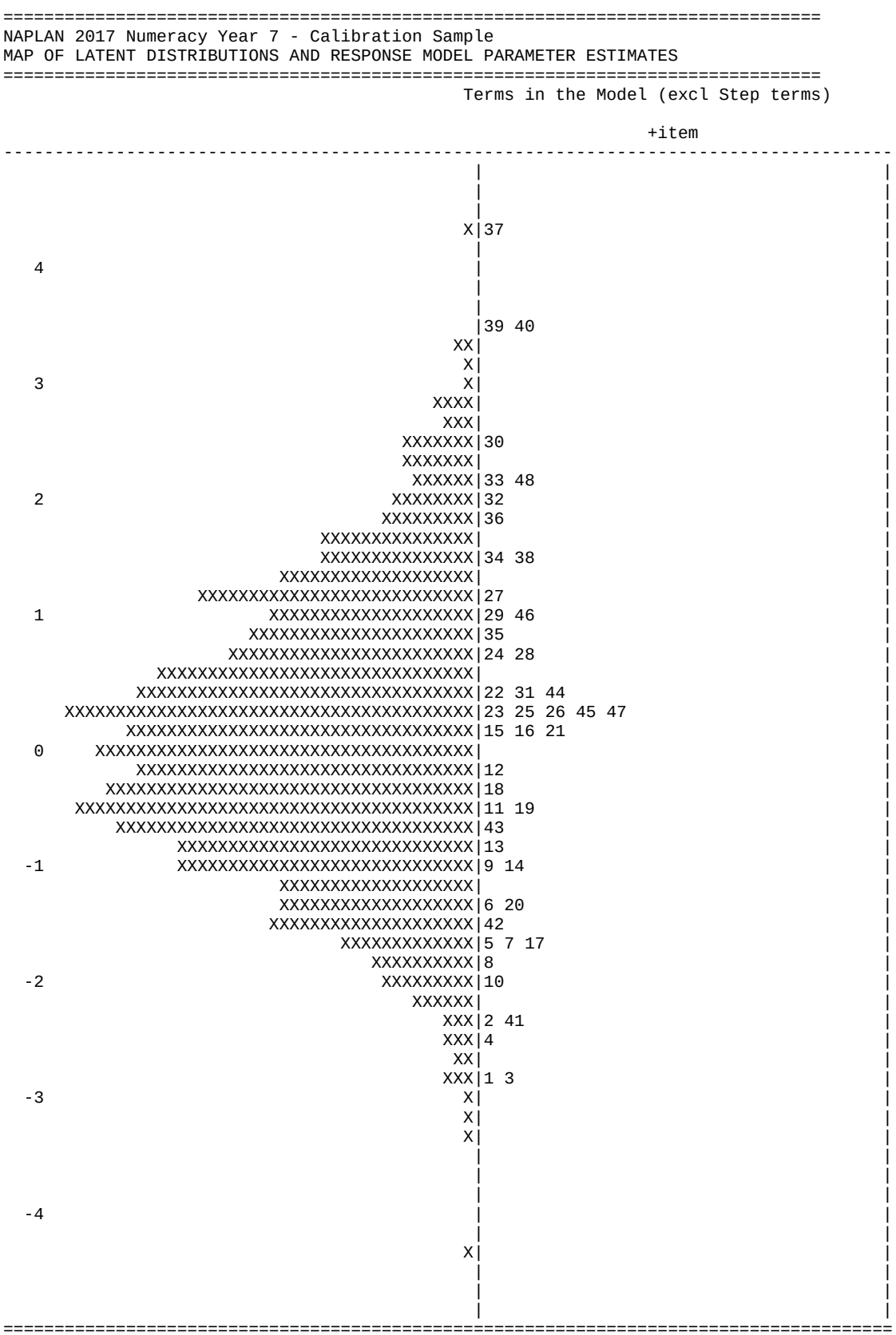
E.13 Year 3 Numeracy Variable Map



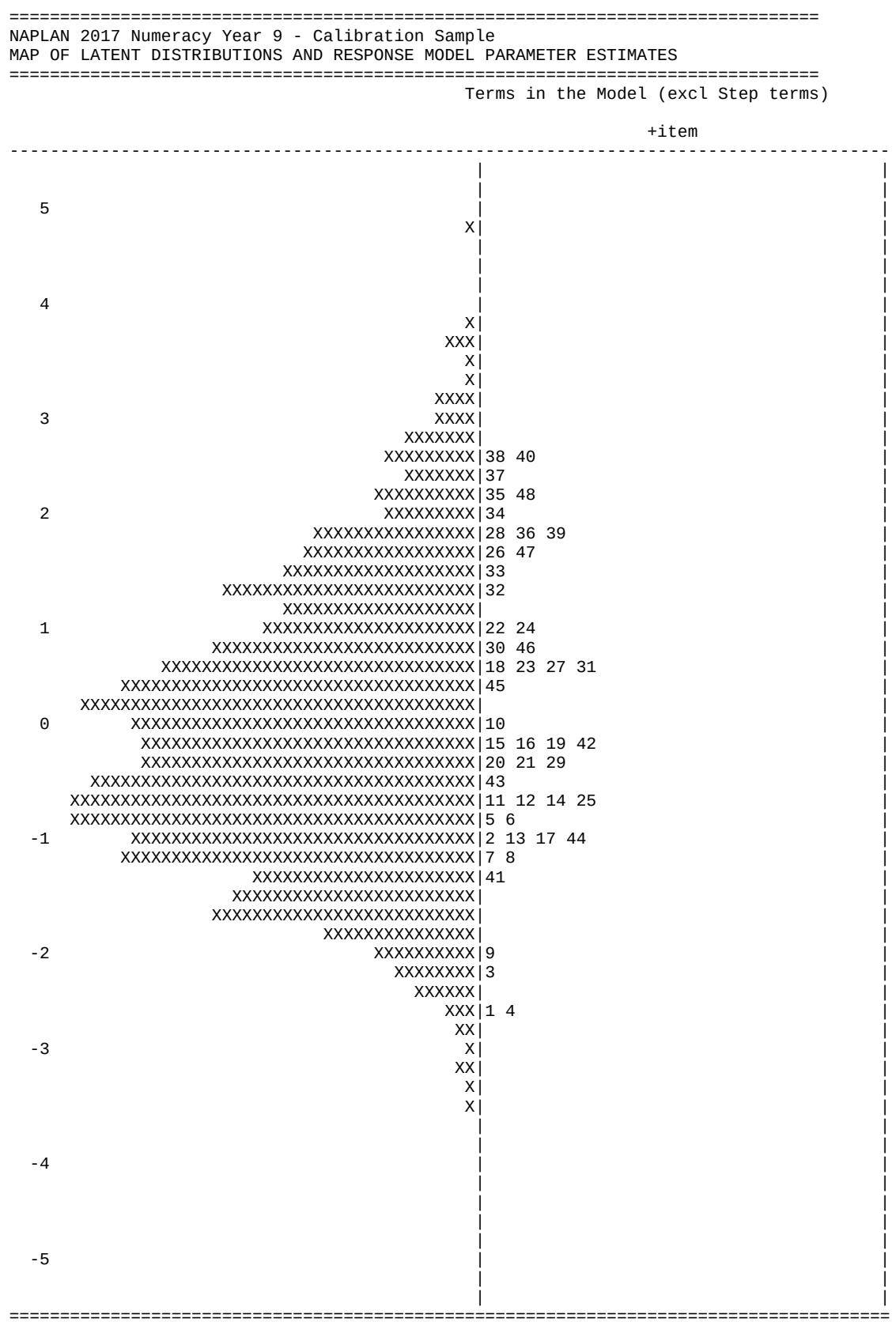
E.14 Year 5 Numeracy Variable Map



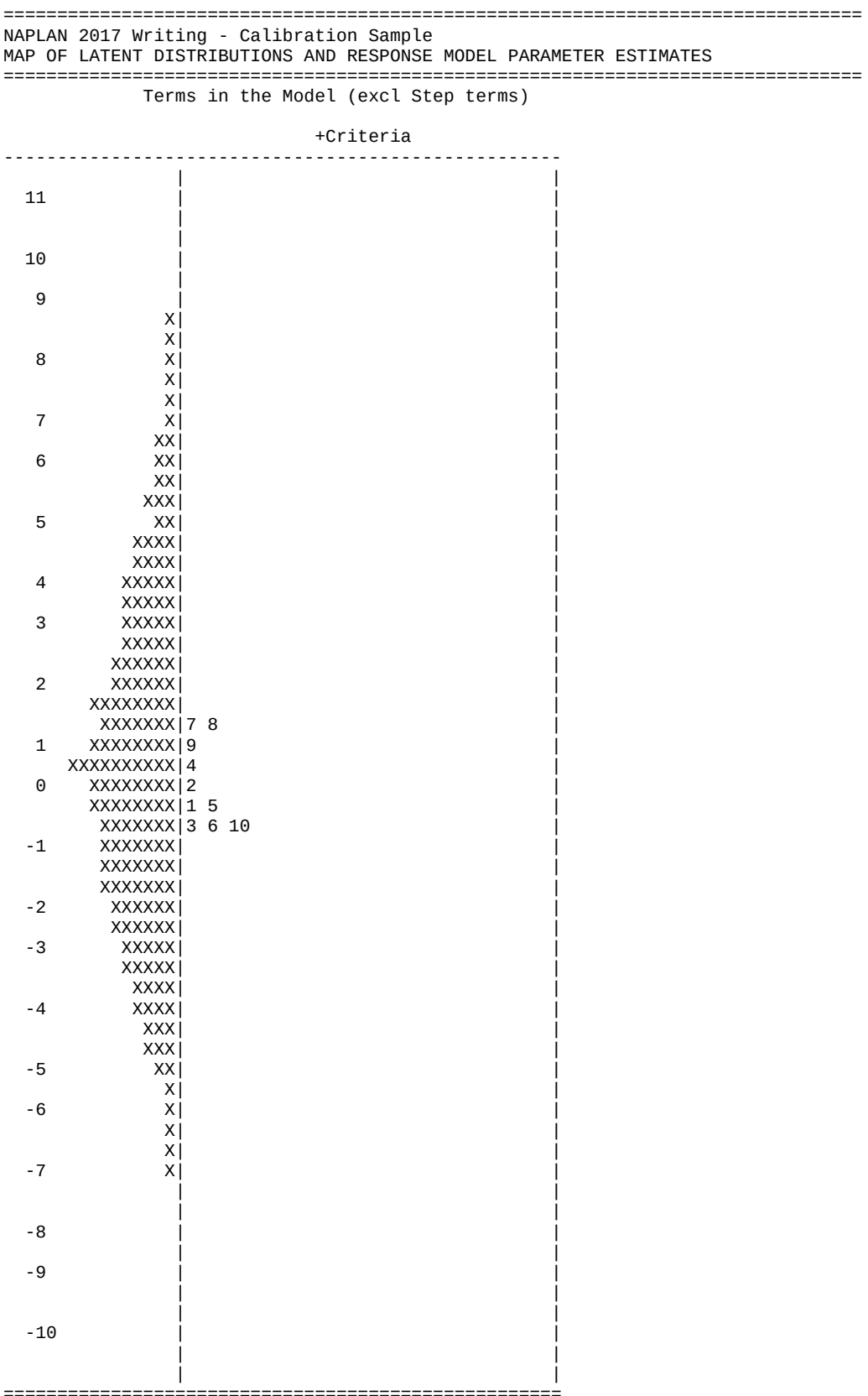
E.15 Year 7 Numeracy Variable Map



E.16 Year 9 Numeracy Variable Map



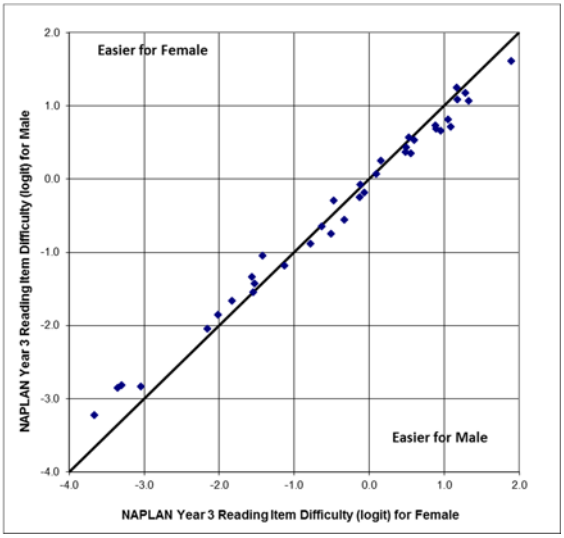
E.17 Year 3, 5, 7, 9 Writing Variable Map



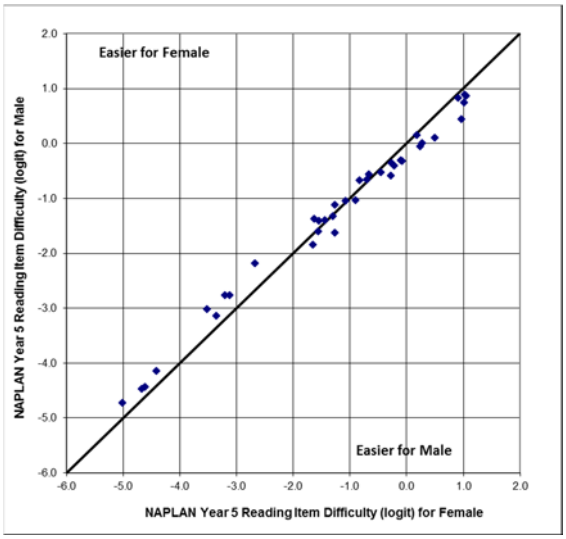
APPENDIX F. GENDER DIF ANALYSIS

F.1 Comparison of Male and Female Students in Reading (2017)

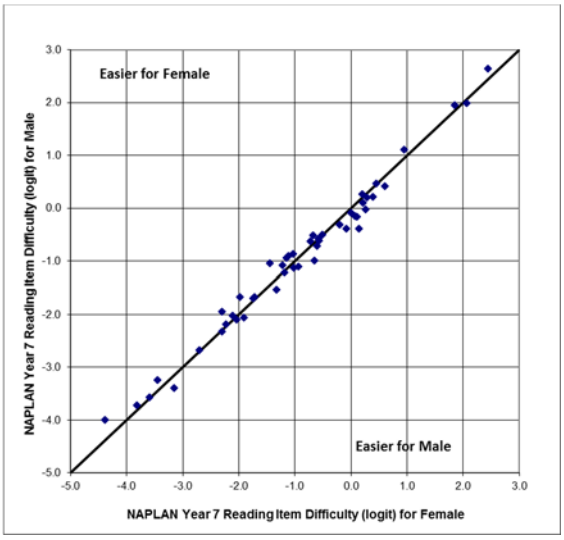
Year 3



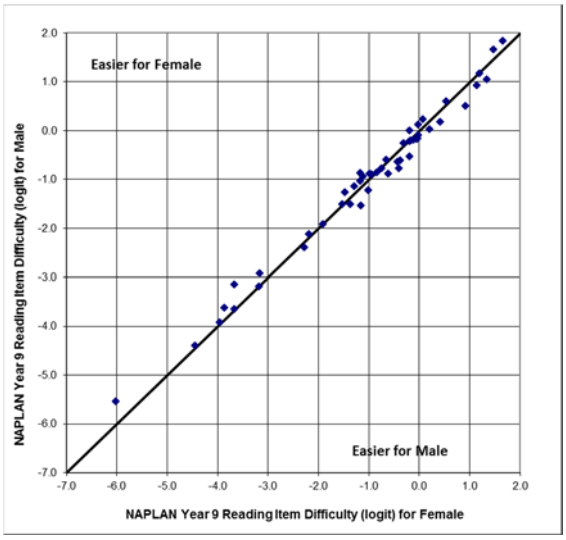
Year 5



Year 7

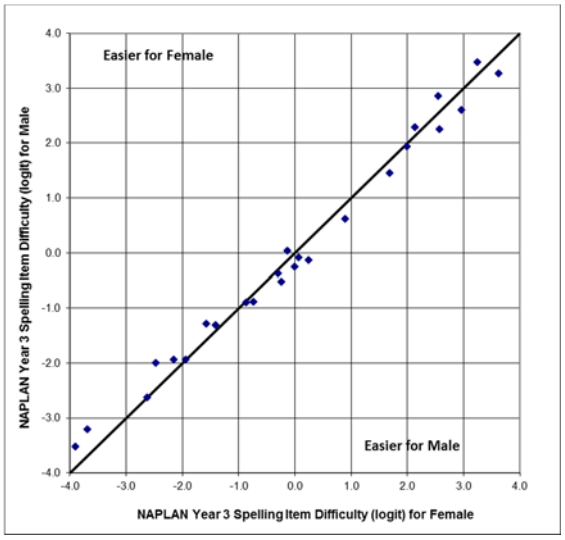


Year 9

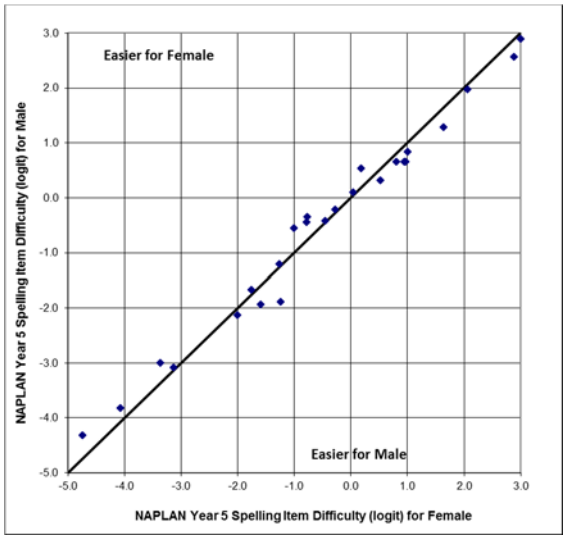


F.2 Comparison of Male and Female Students in Spelling (2017)

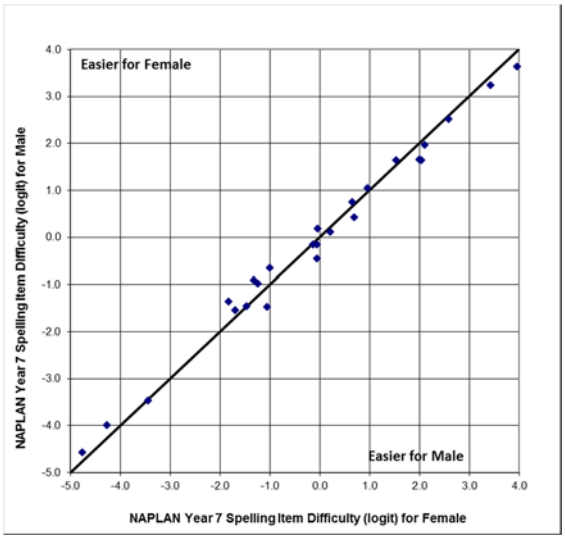
Year 3



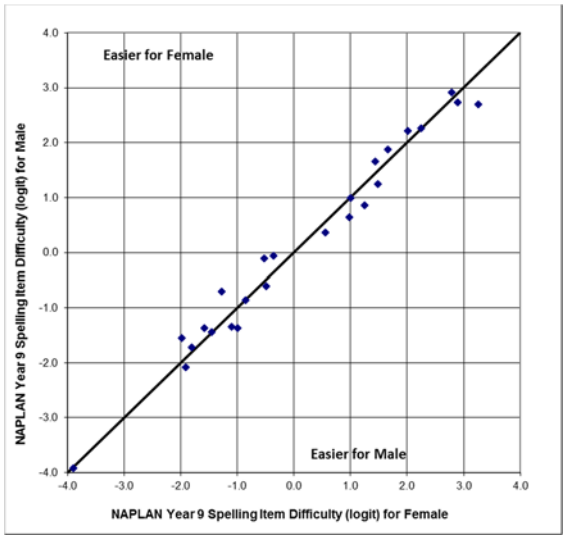
Year 5



Year 7

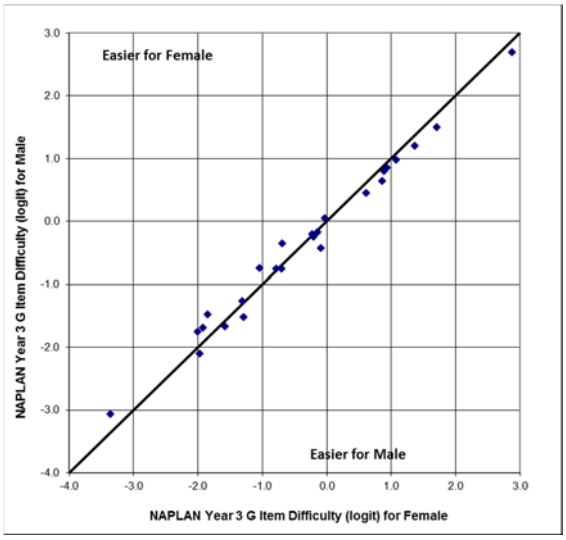


Year 9

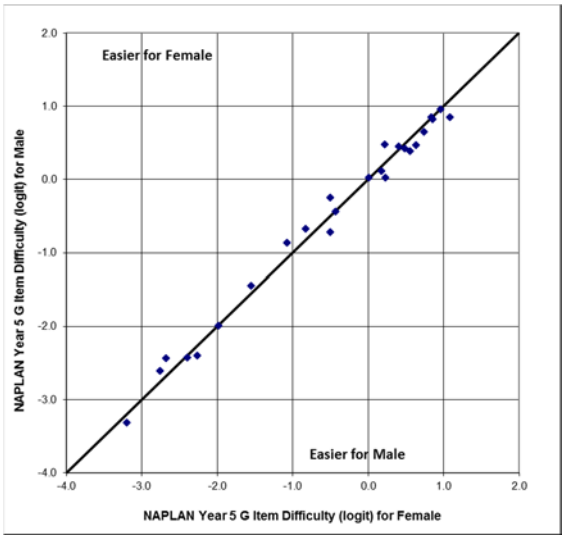


F.3 Comparison of Male and Female Students in Grammar and Punctuation (2017)

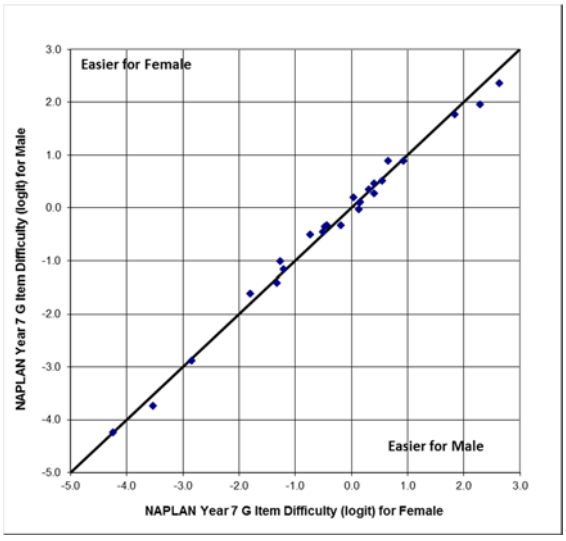
Year 3



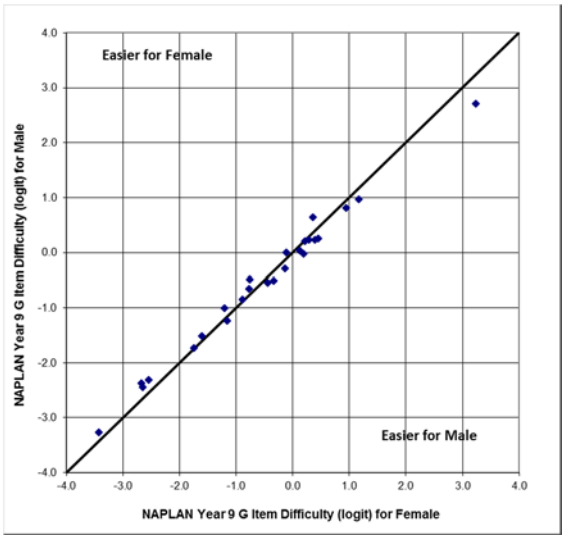
Year 5



Year 7

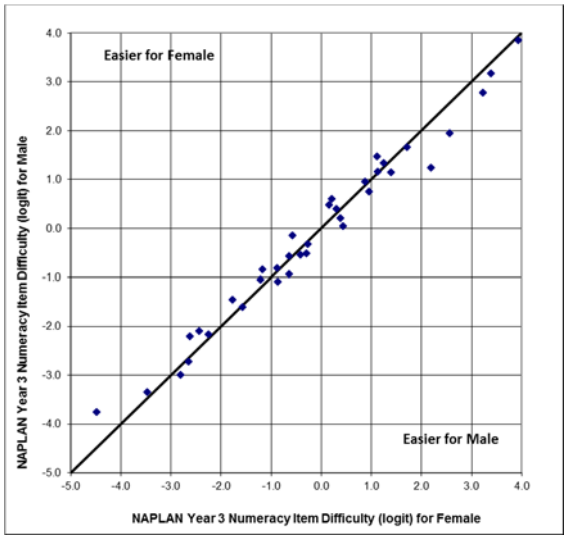


Year 9

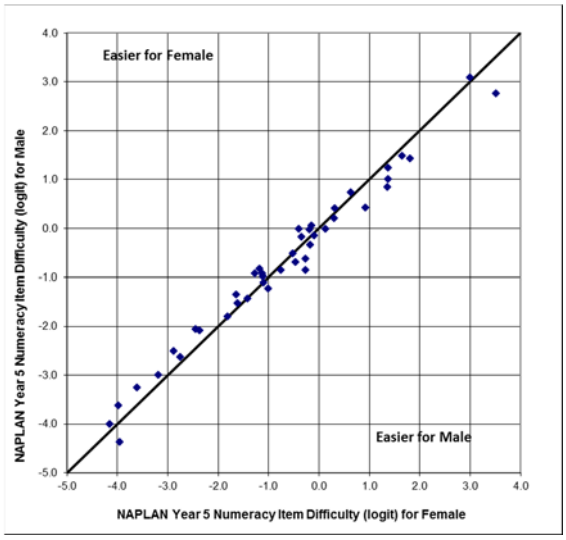


F.4 Comparison of Male and Female Students in Numeracy (2017)

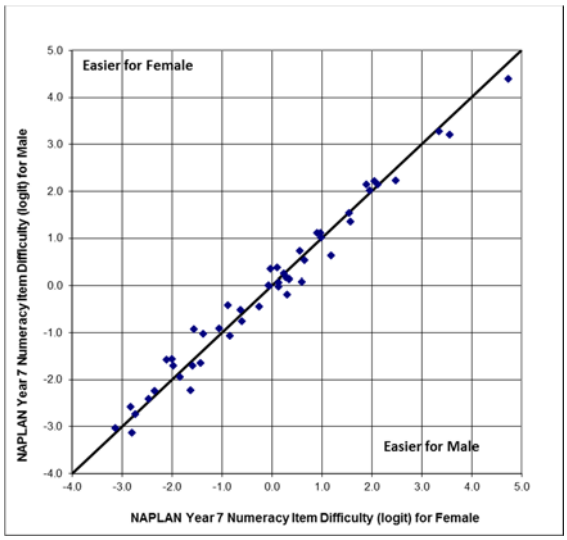
Year 3



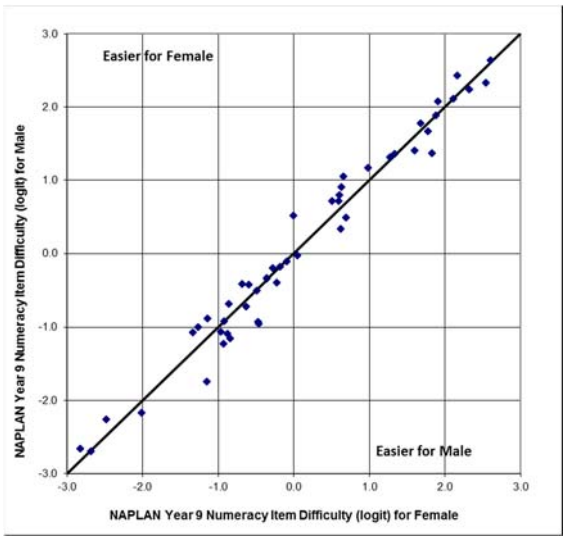
Year 5



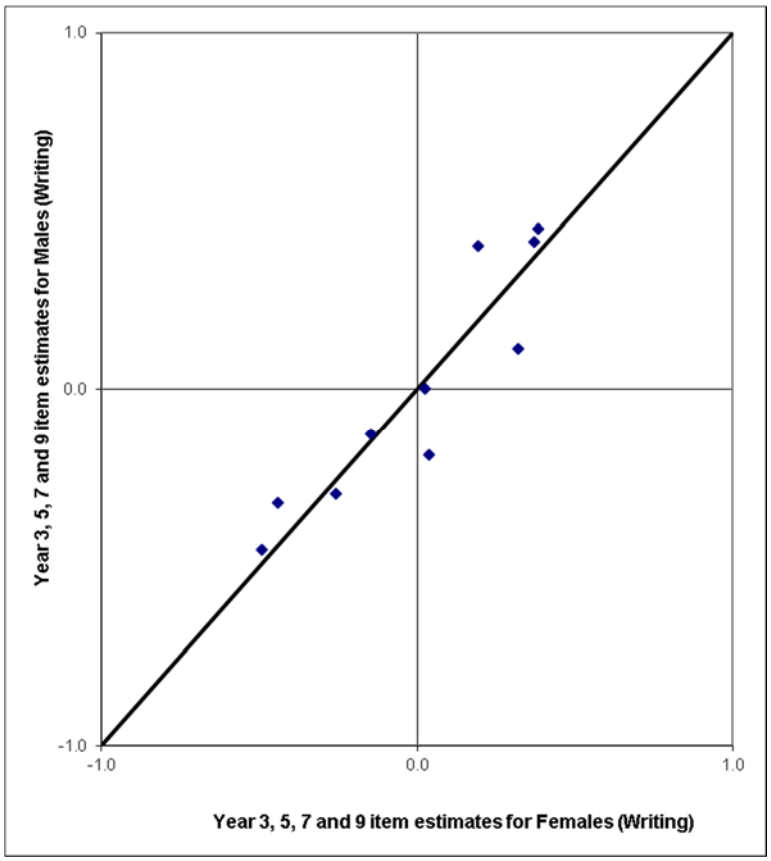
Year 7



Year 9

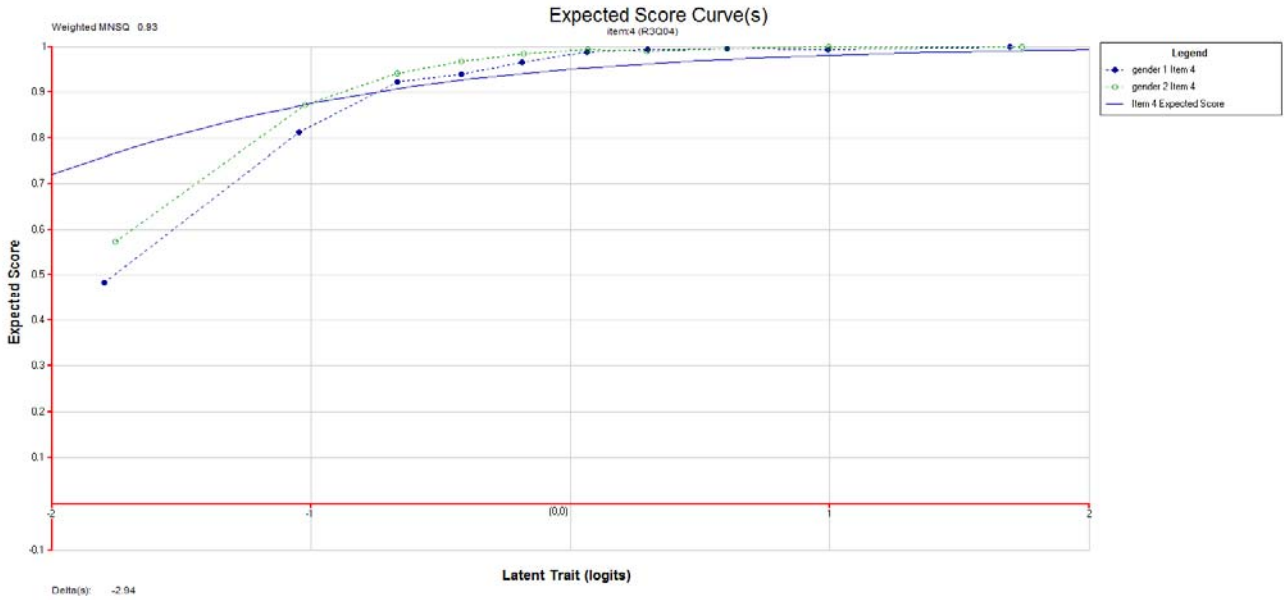


F.5 Comparison of Male and Female Students in Writing (2017)



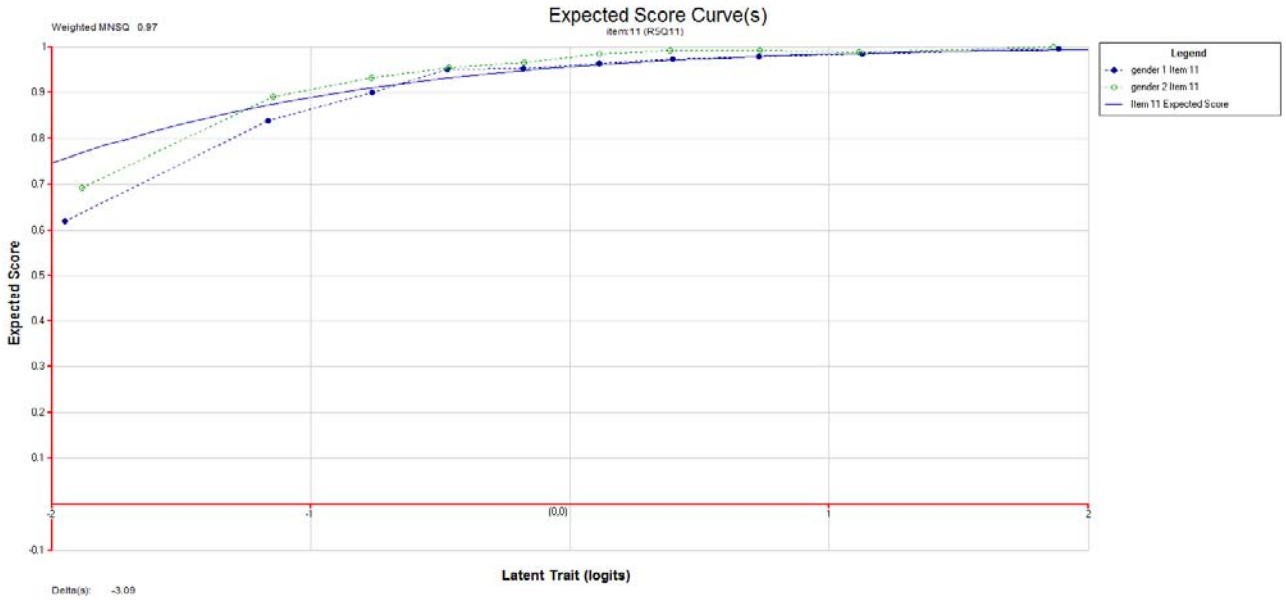
F.6 Item DIF Plots for Items Showing Gender DIF[1]

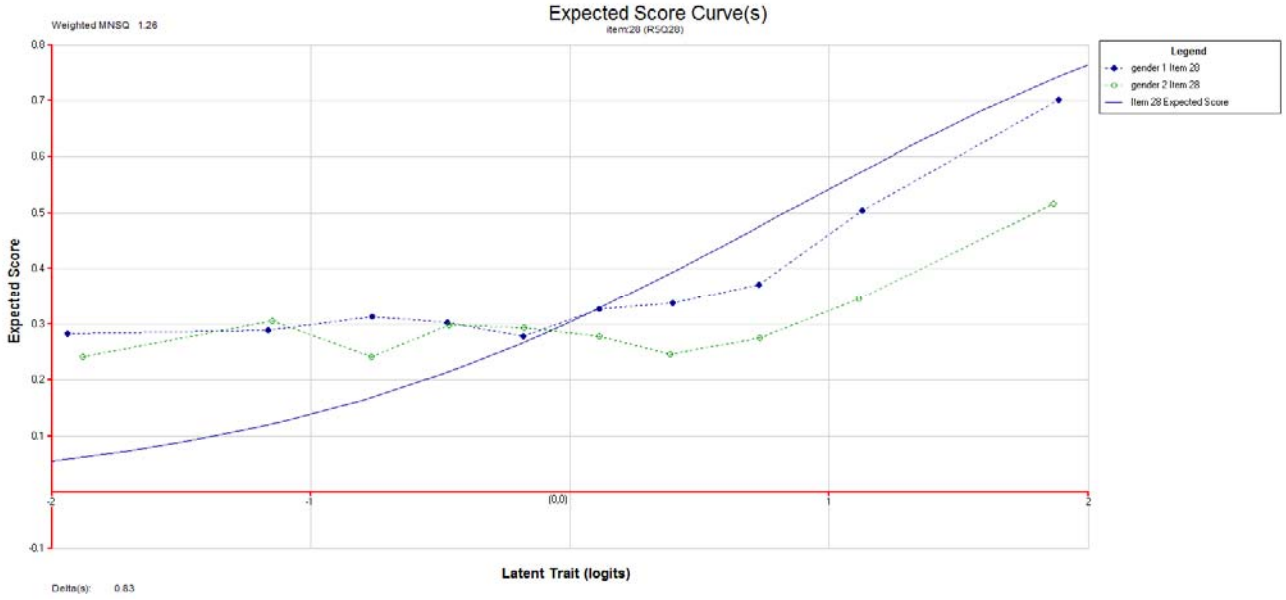
F.6.1. Year 3 Reading



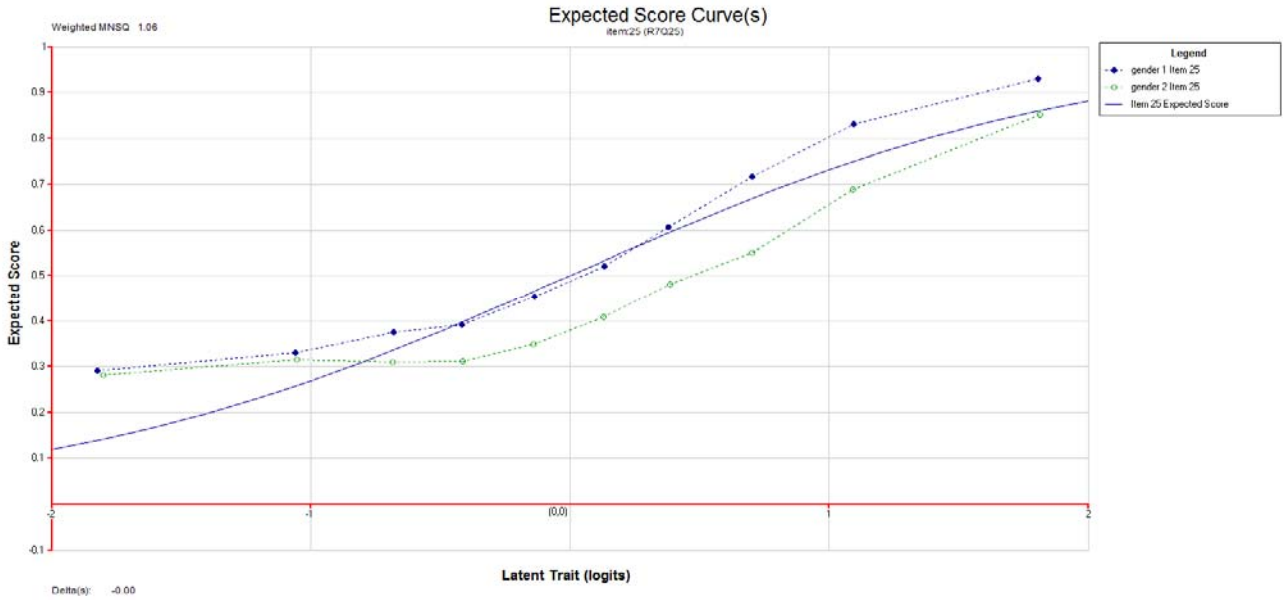
[1] 'gender 1' indicates 'Male' and 'gender 2' indicates 'Female'.

F.6.2. Year 5 Reading

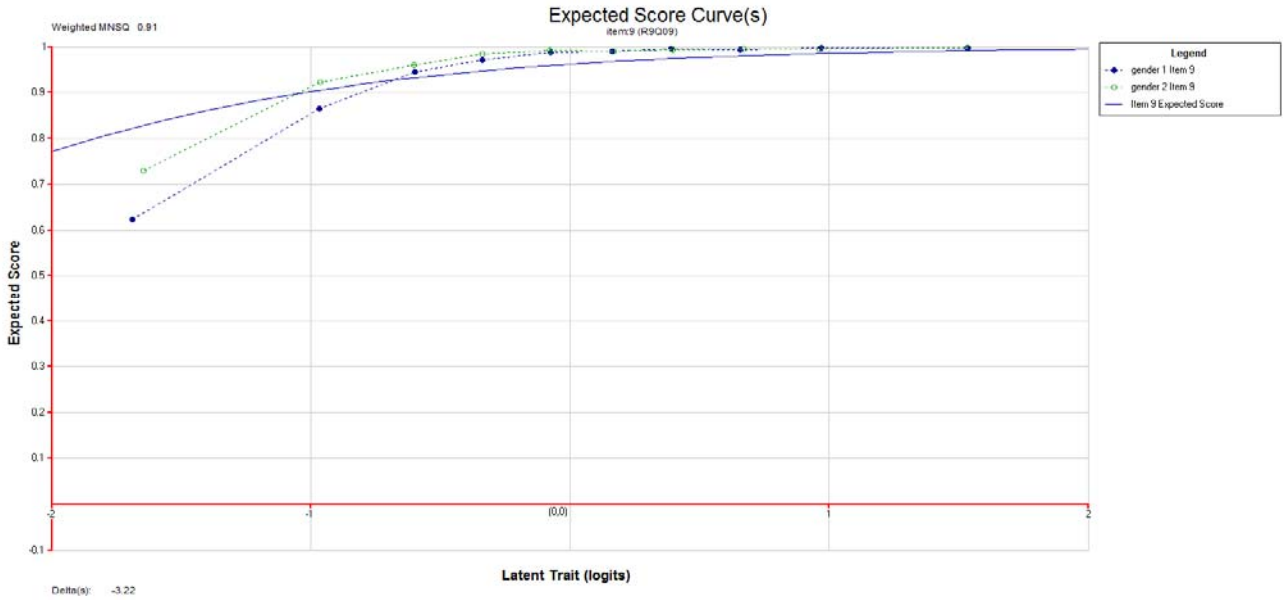




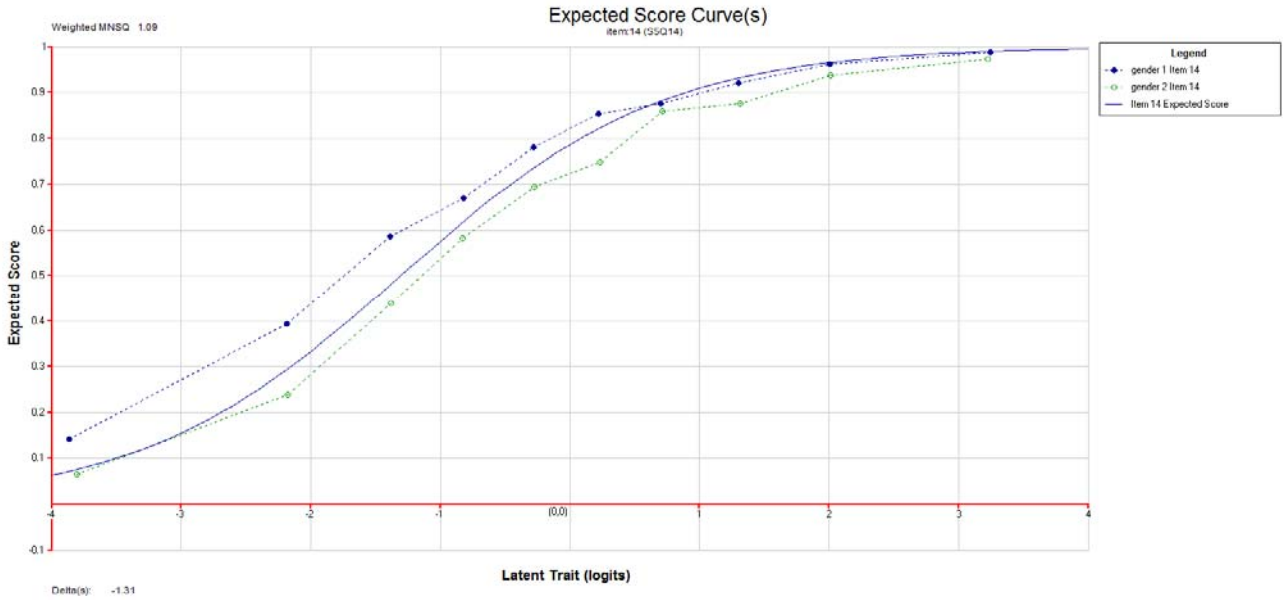
F.6.3. Year 7 Reading



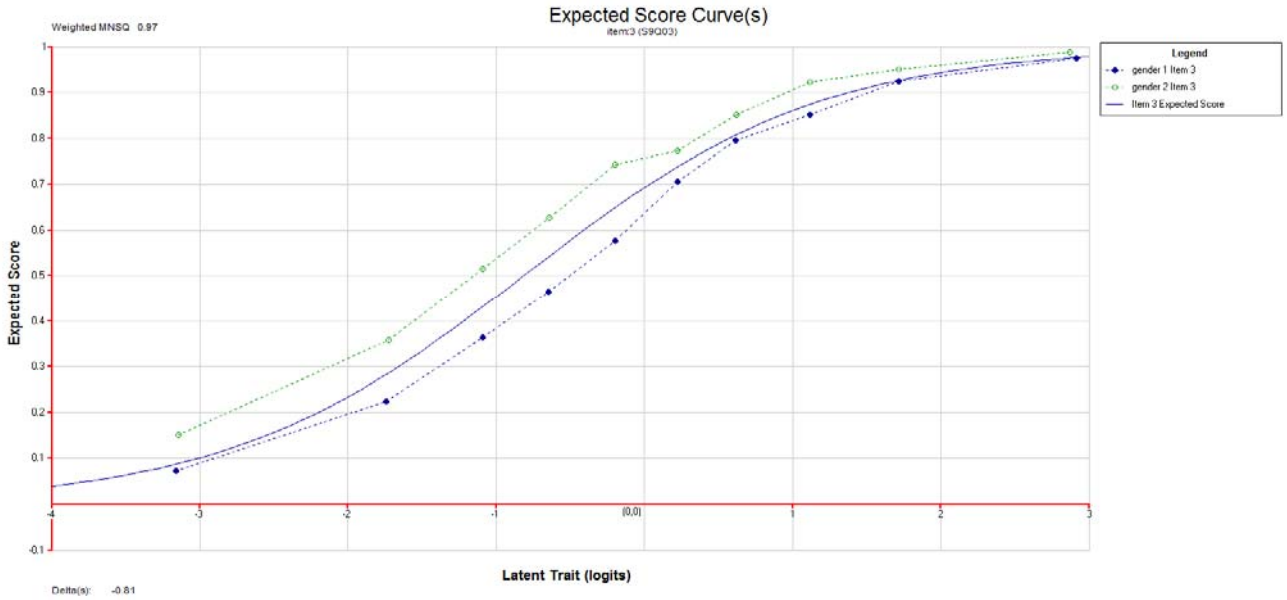
F.6.4. Year 9 Reading

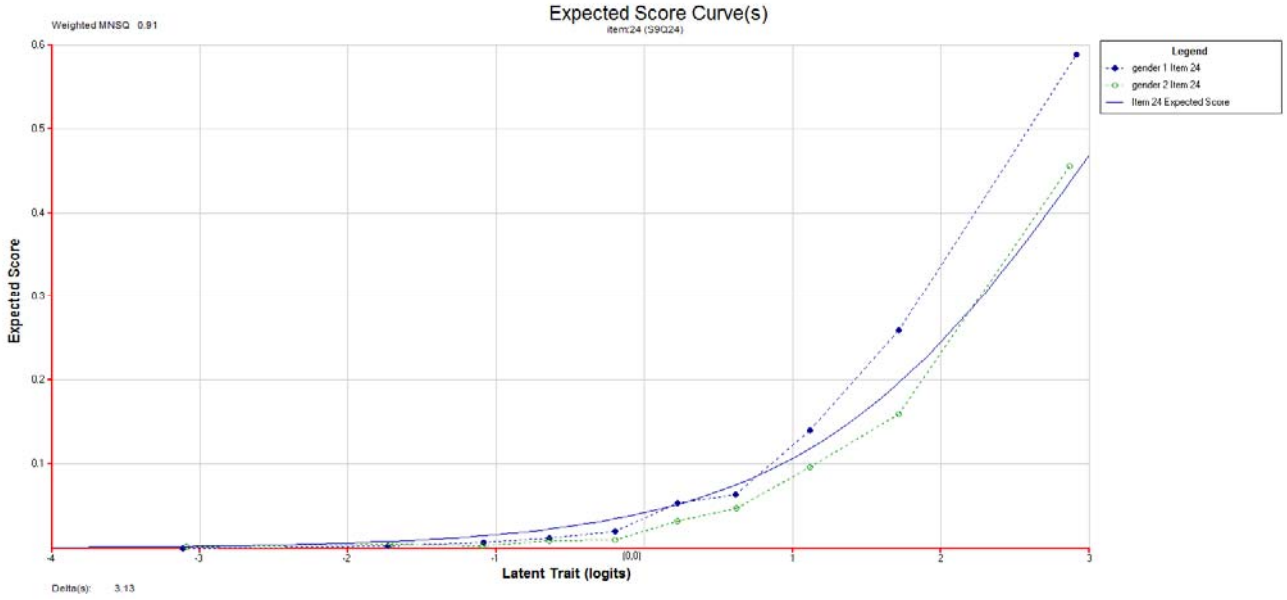


F.6.5. Year 5 Spelling

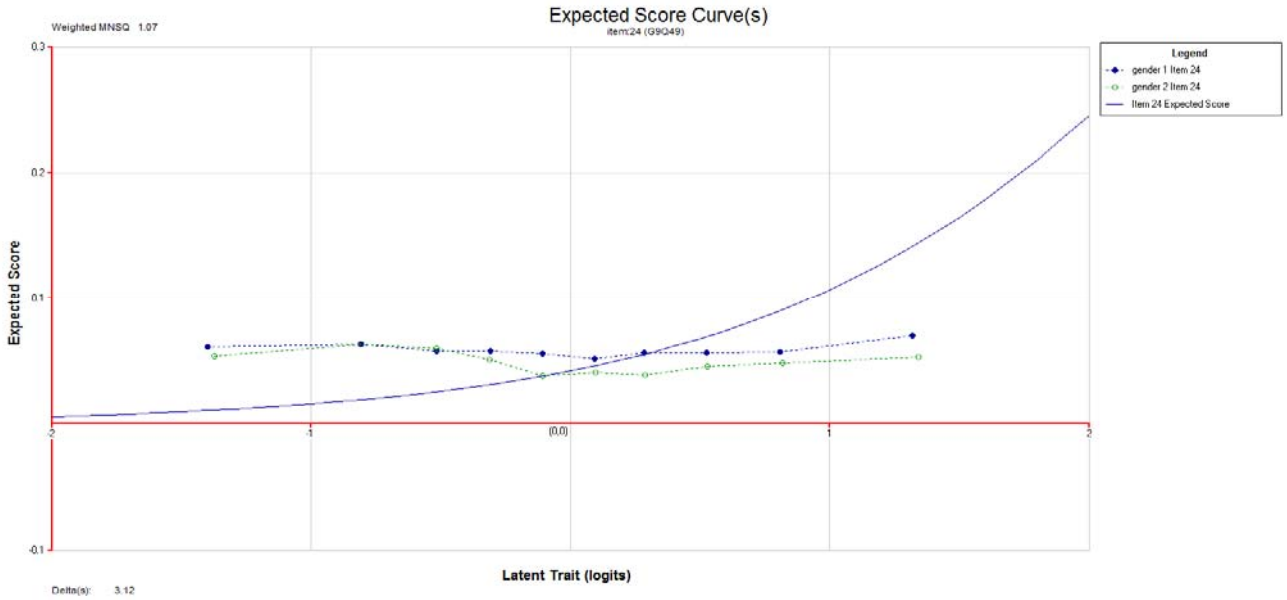


F.6.6. Year 9 Spelling

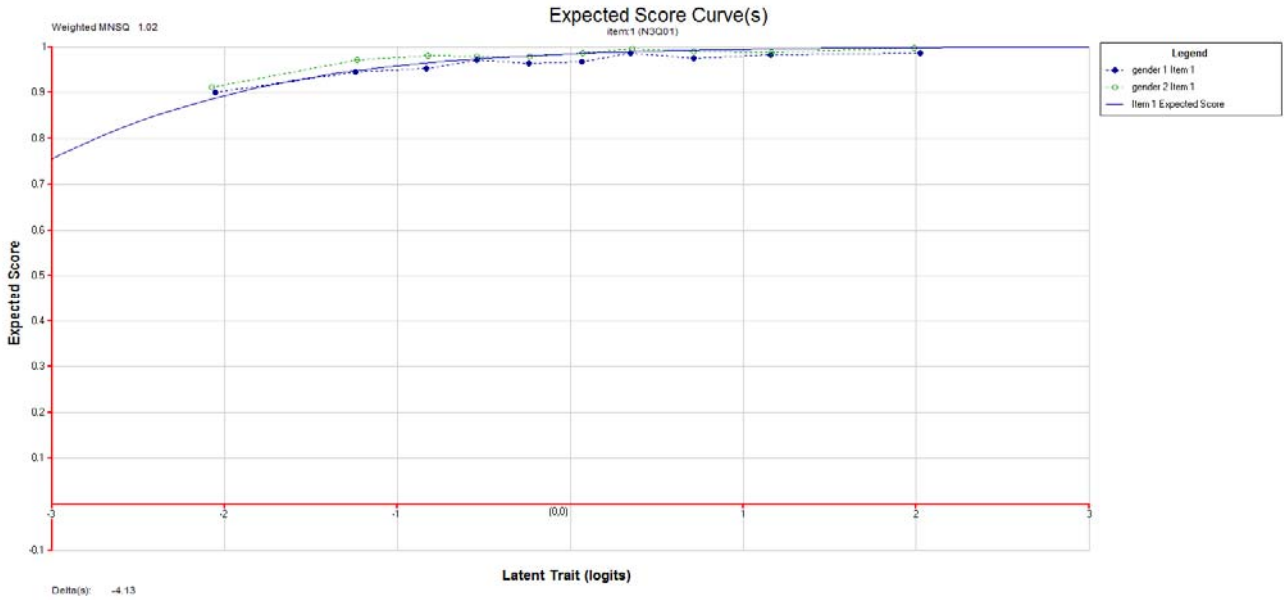


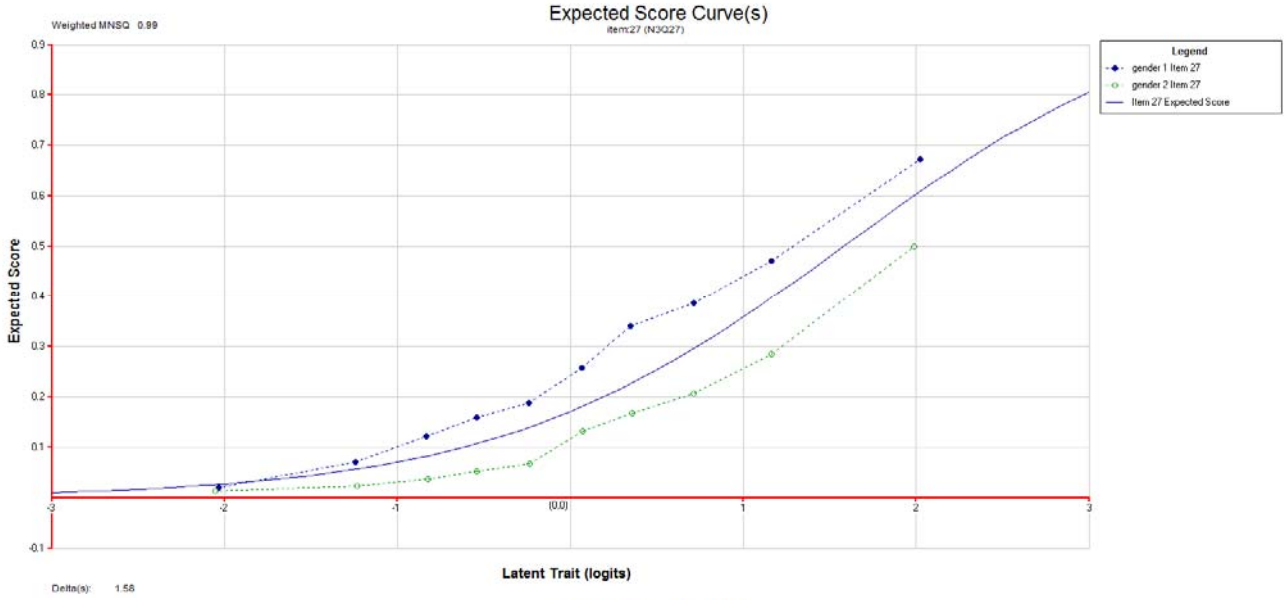


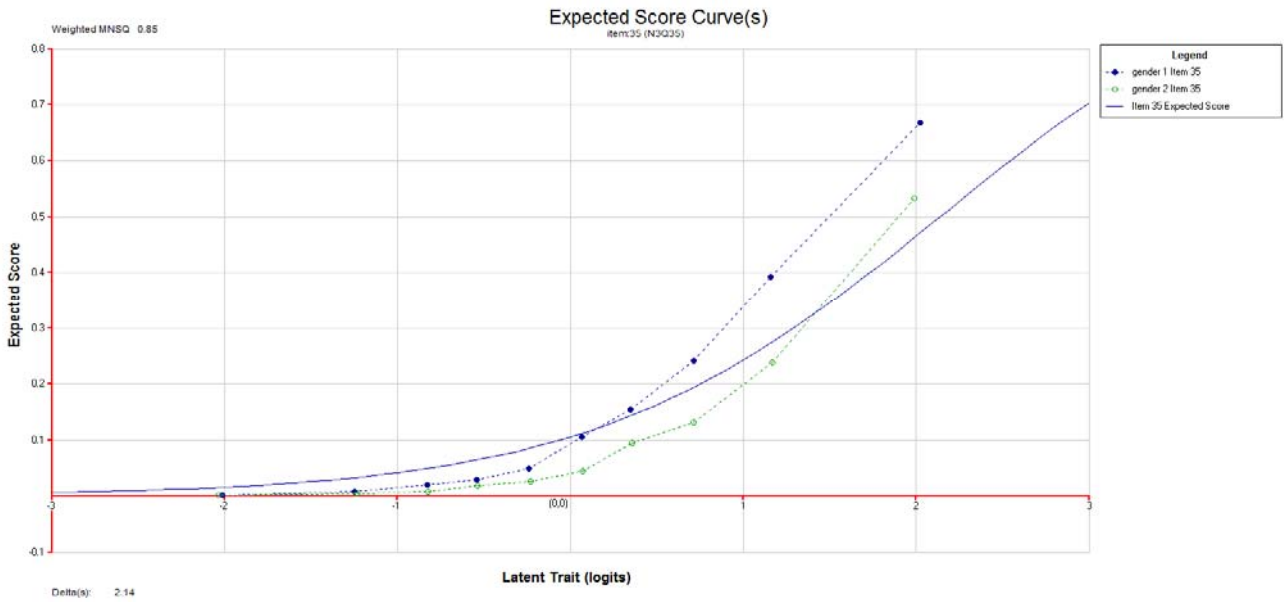
F.6.7. Year 9 Grammar and Punctuation



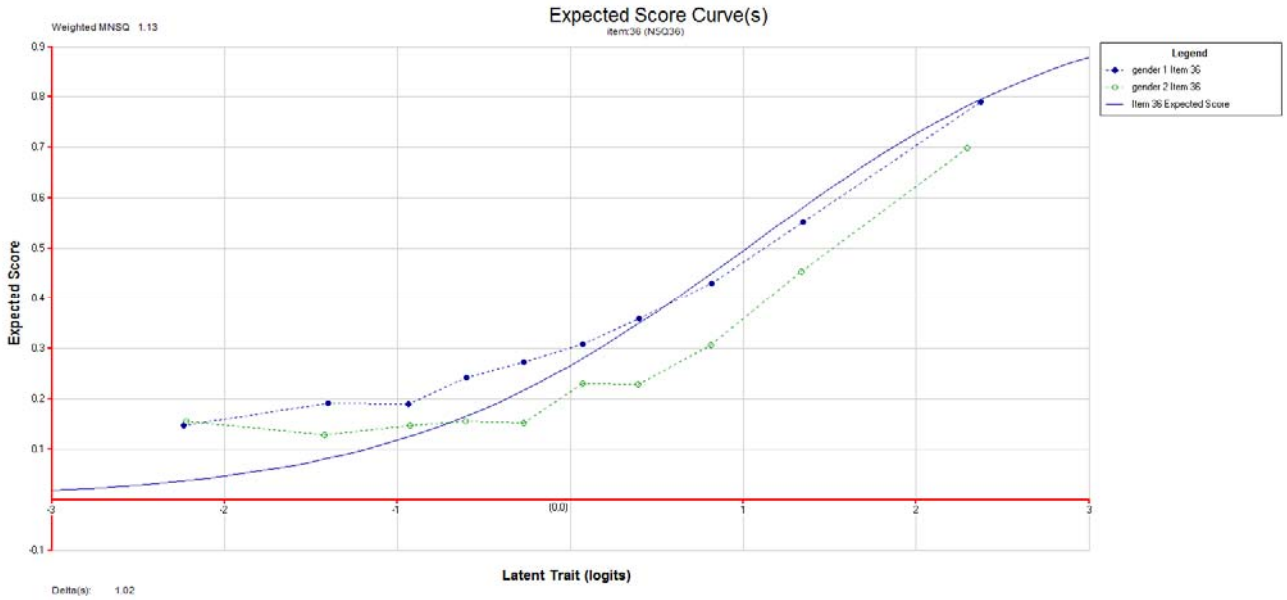
F.6.8. Year 3 Numeracy

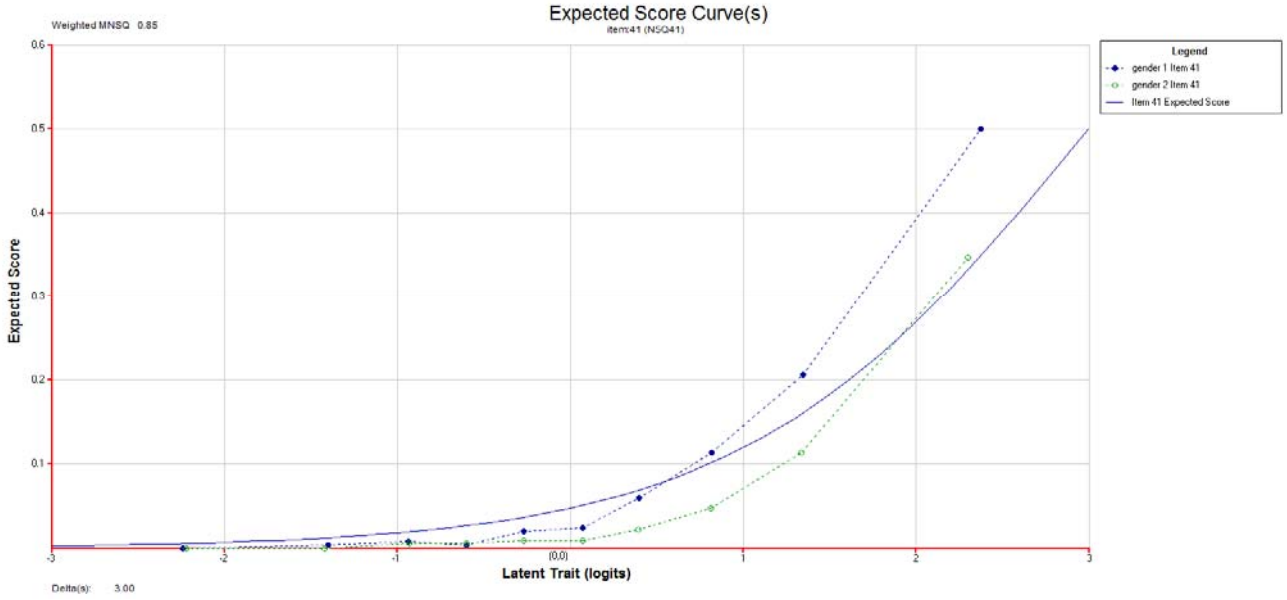




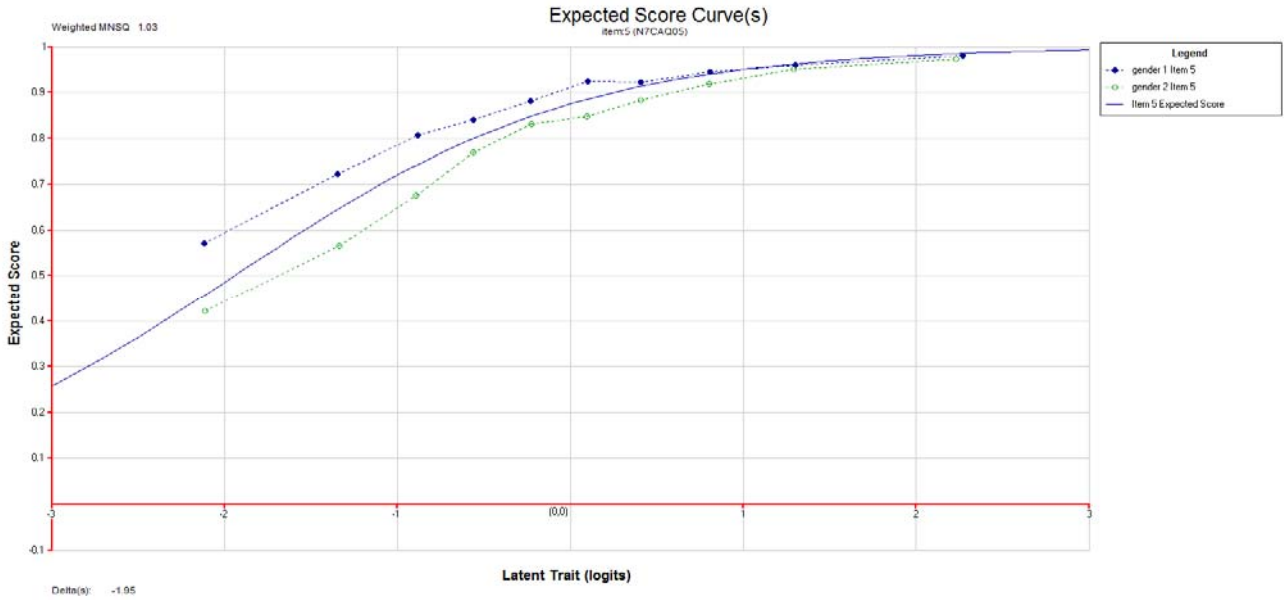


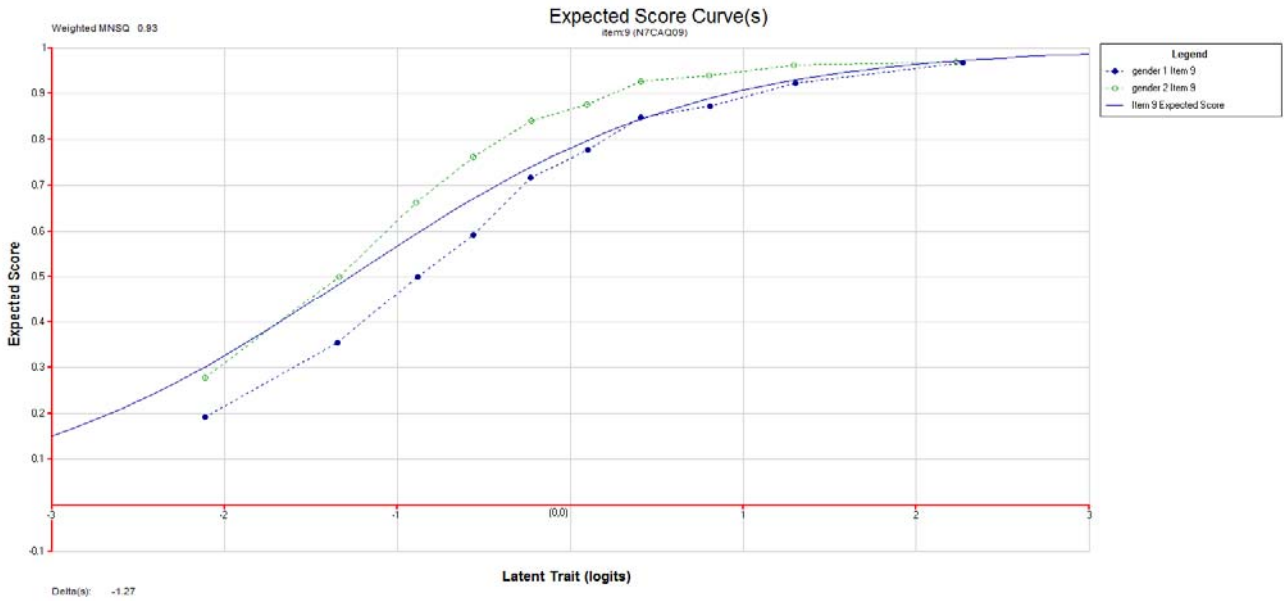
F.6.9. Year 5 Numeracy

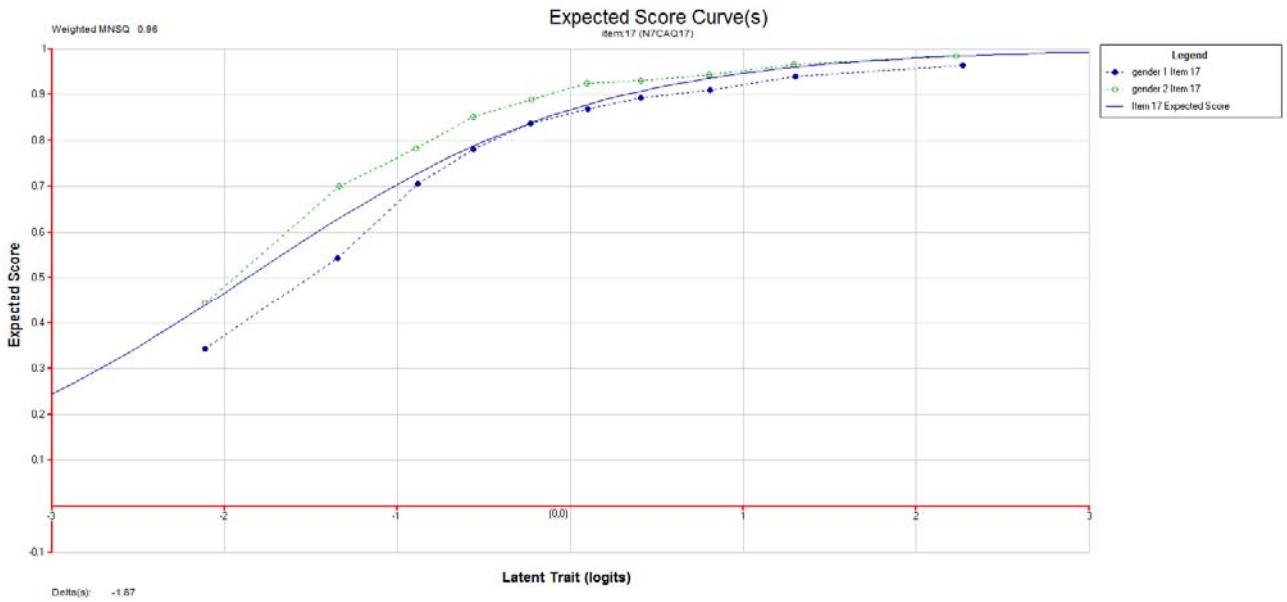


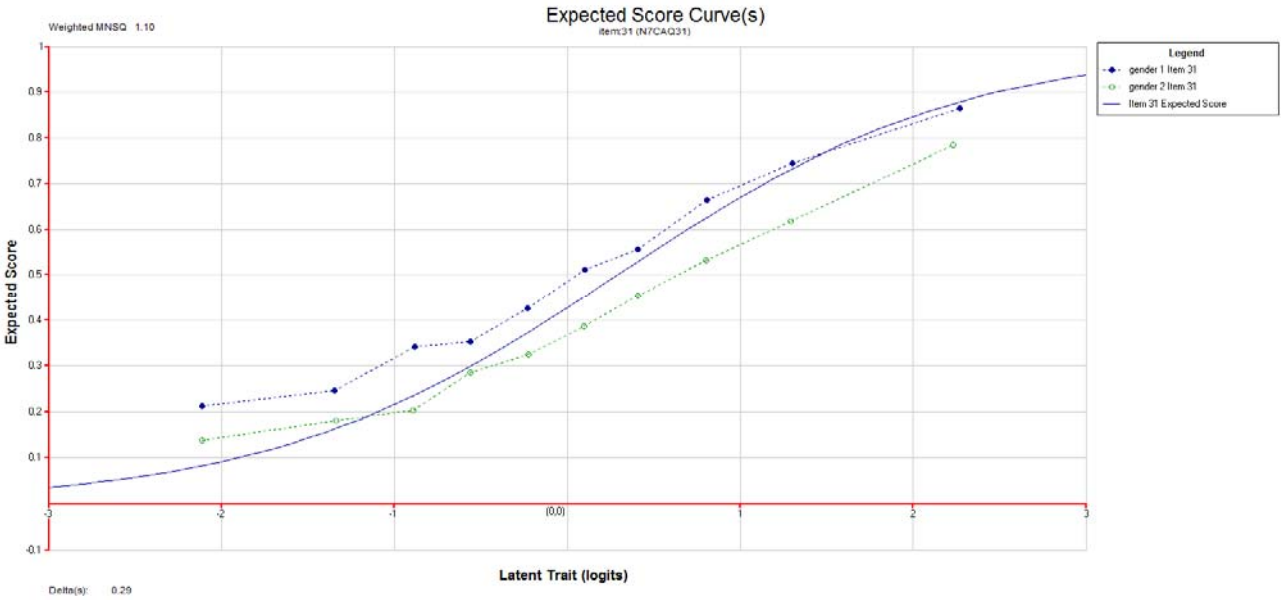


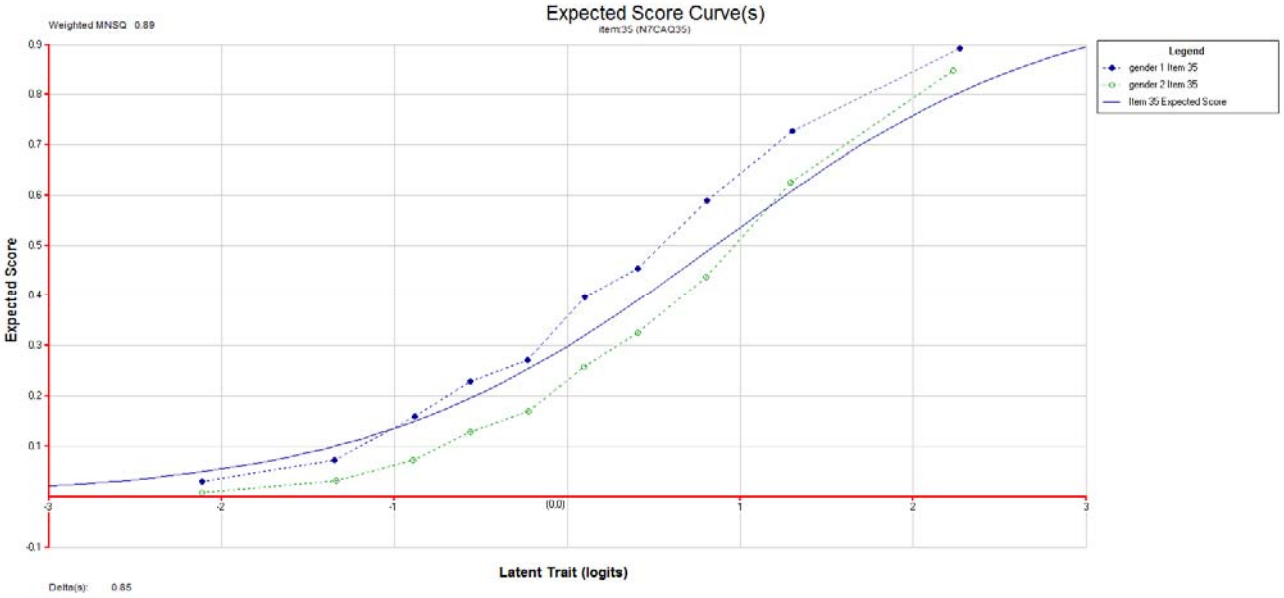
F.6.10. Year 7 Numeracy



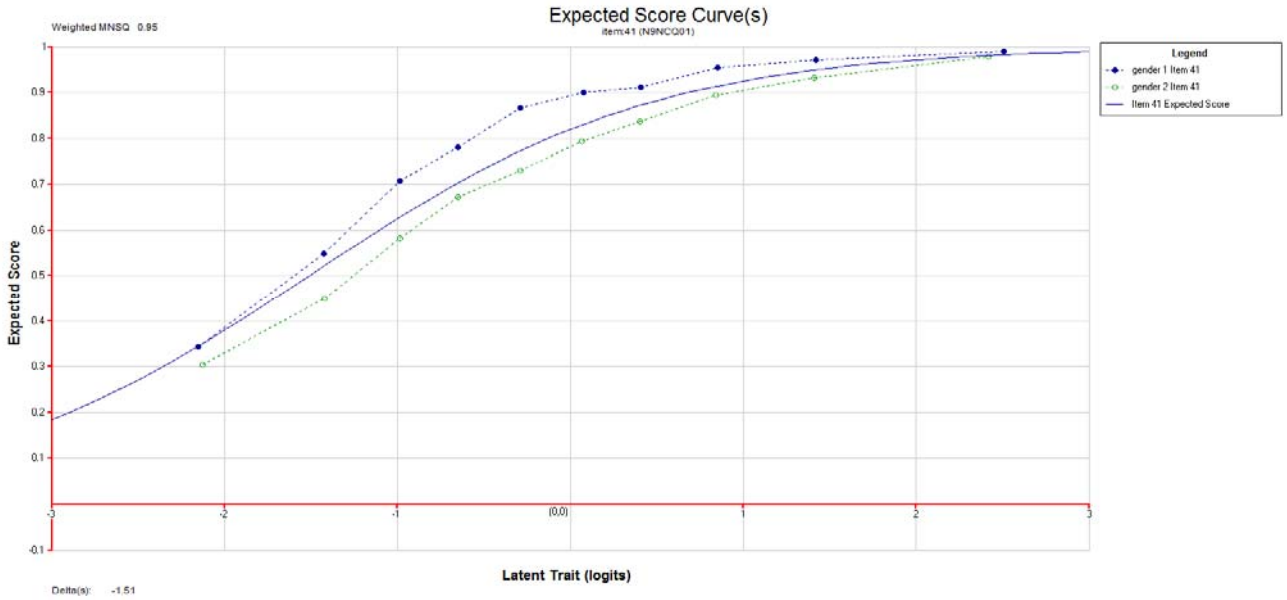


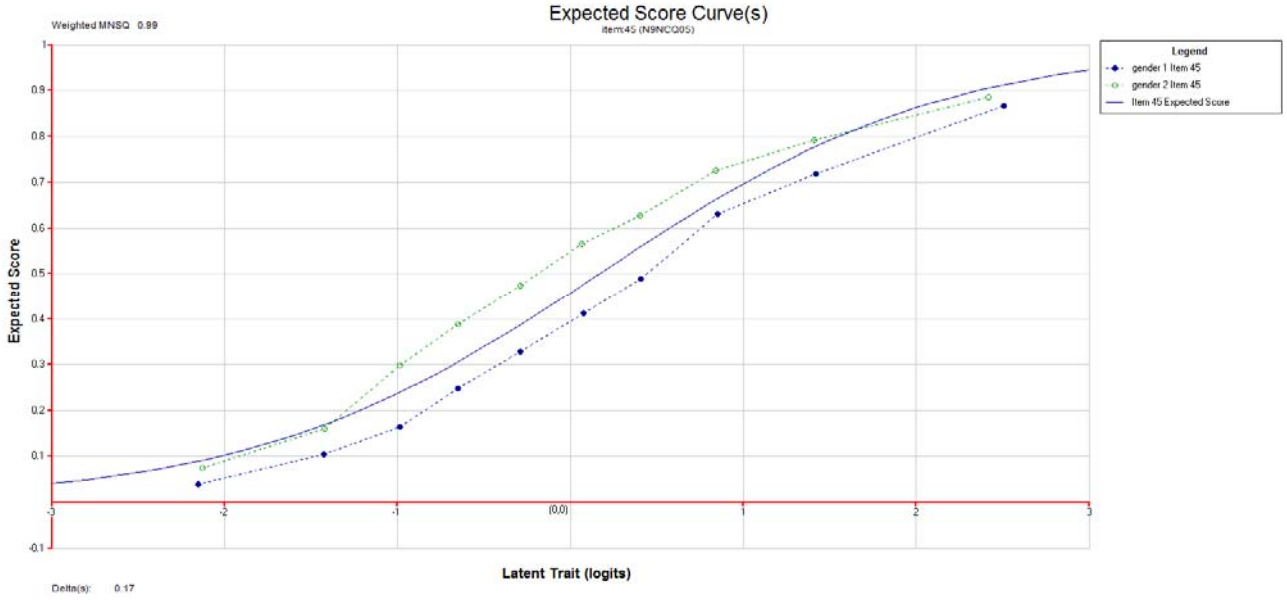



Expected Score Curve(s)
Item:31 (N7CAQ31)
Weighted MNSQ 1.10
Legend
gender 1 Item 31
gender 2 Item 31
Item 31 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 0.29


Expected Score Curve(s)
Item:35 (N7CAQ35)
Weighted MNSQ 0.89
Legend
gender 1 Item 35
gender 2 Item 35
Item 35 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 0.85

F.6.11. Year 9 Numeracy

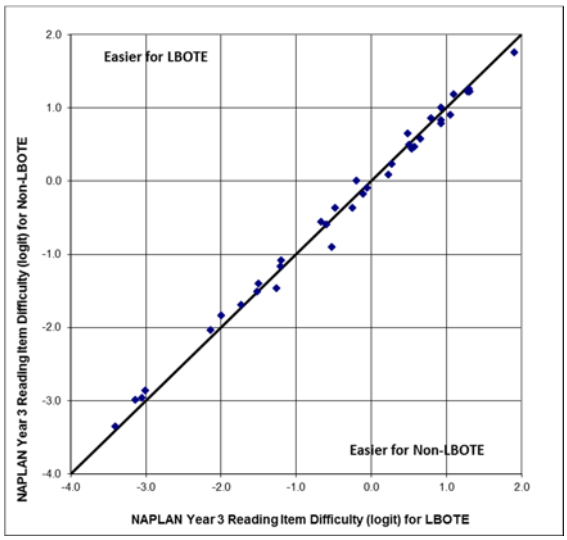




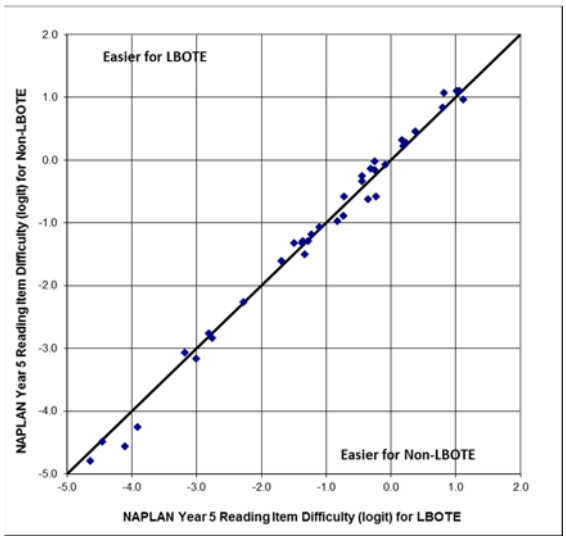
APPENDIX G. LBOTE DIF ANALYSIS

G.1 Comparison of LBOTE and Non-LBOTE Students in Reading (2017)

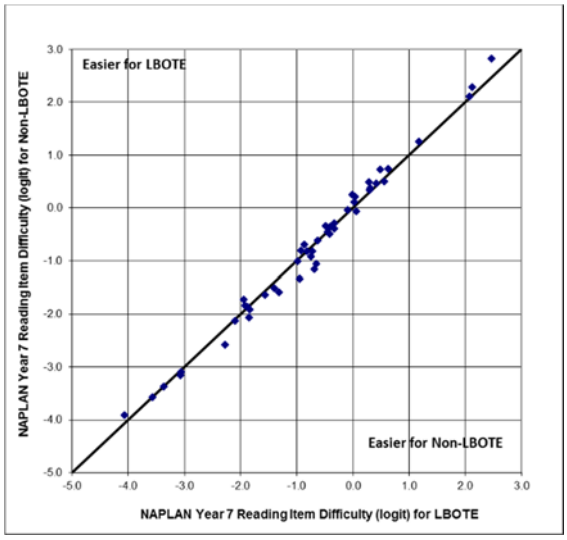
Year 3



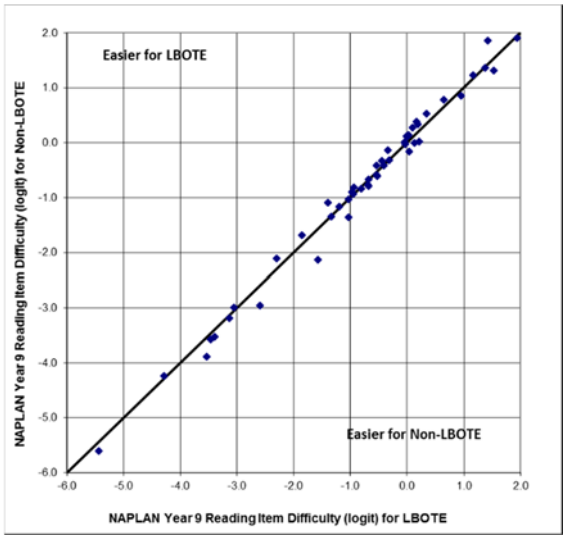
Year 5



Year 7

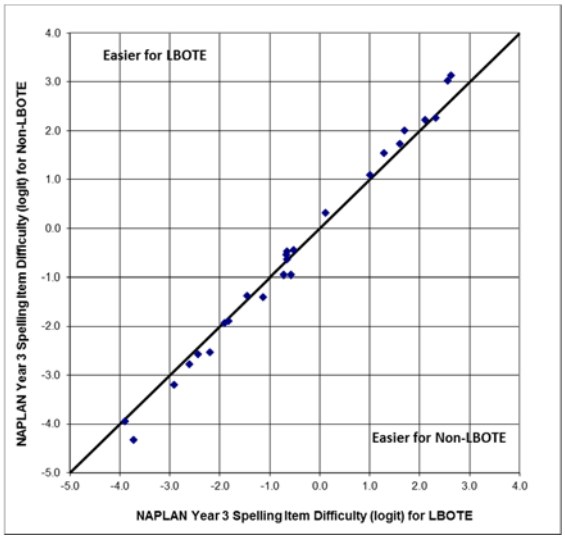


Year 9

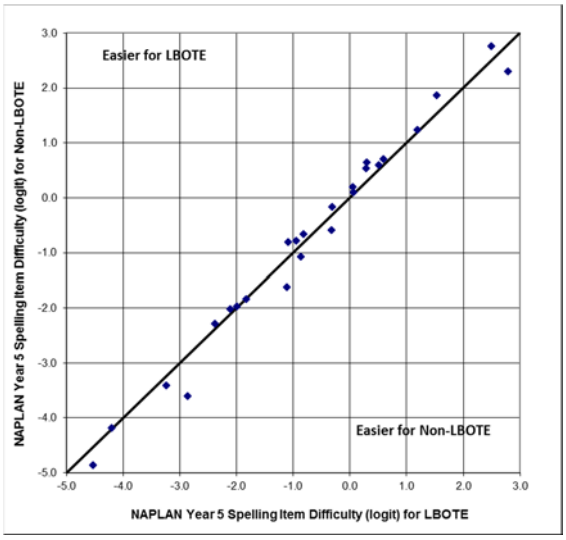


G.2 Comparison of LBOTE and Non-LBOTE Students in Spelling (2017)

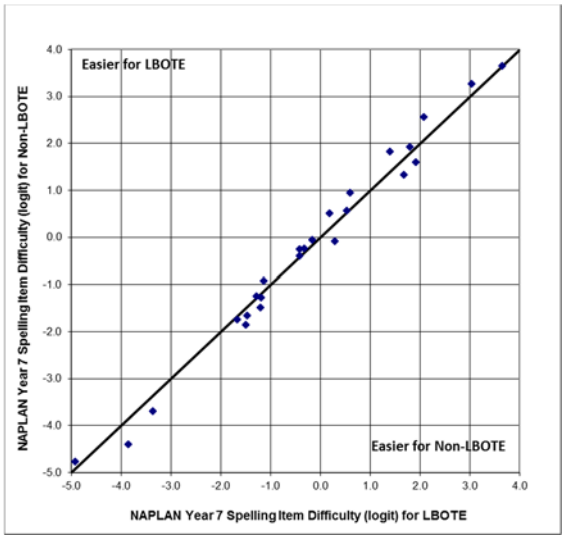
Year 3



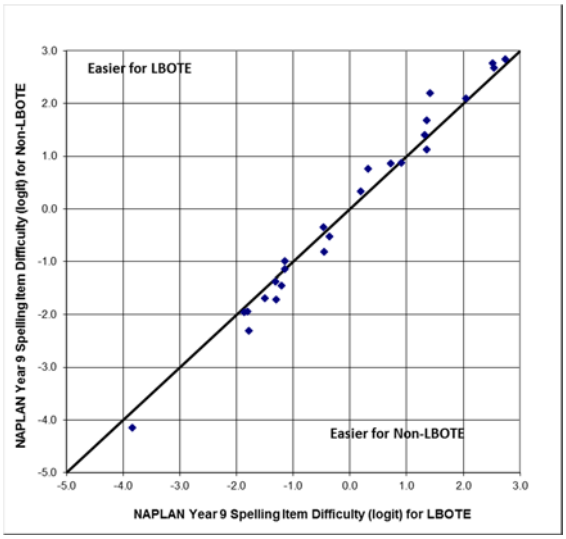
Year 5



Year 7

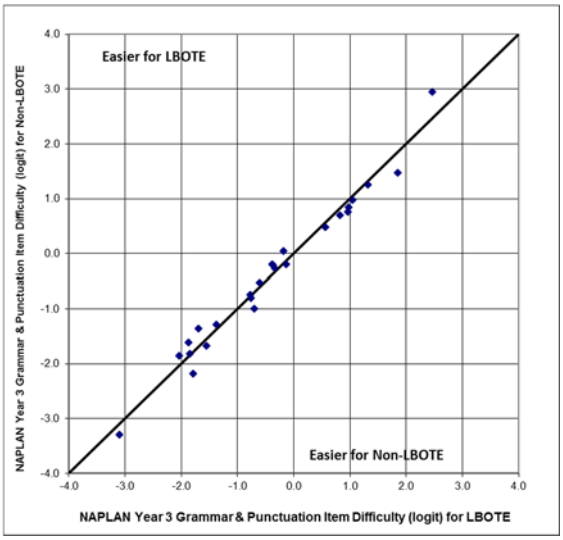


Year 9

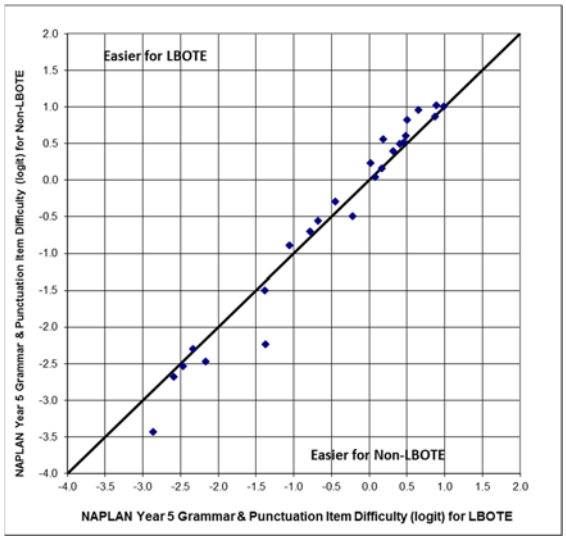


G.3 Comparison of LBOTE and Non-LBOTE Students in Grammar and Punctuation (2017)

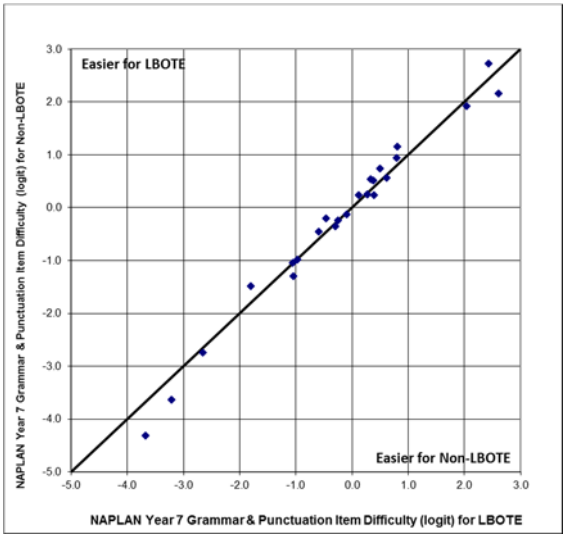
Year 3



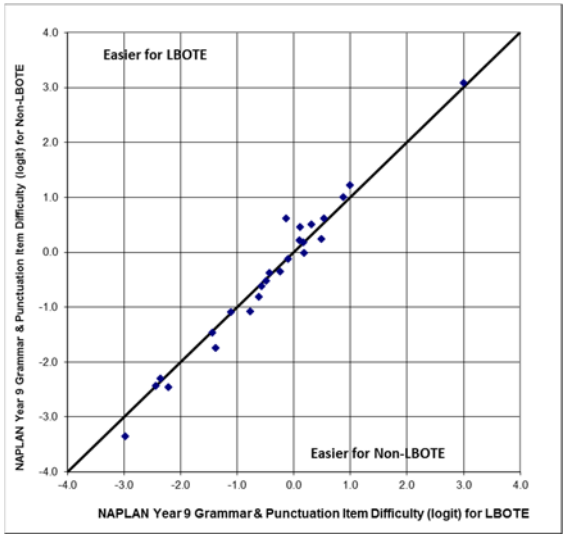
Year 5



Year 7

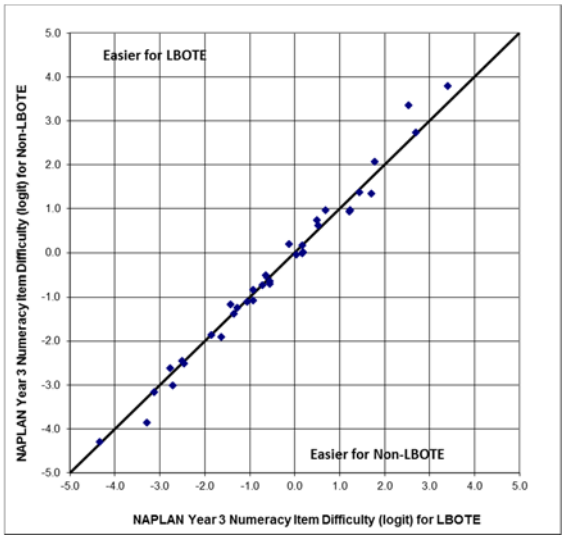


Year 9

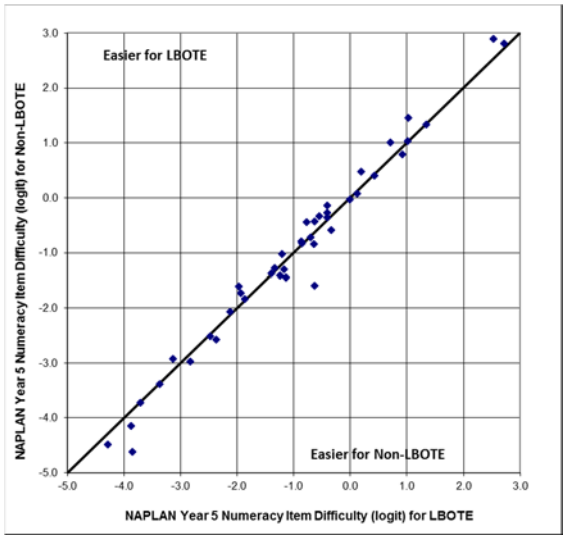


G.4 Comparison of LBOTE and Non-LBOTE Students in Numeracy (2017)

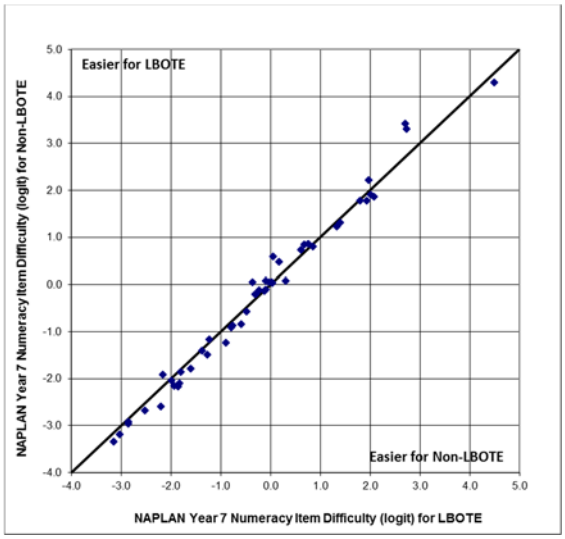
Year 3



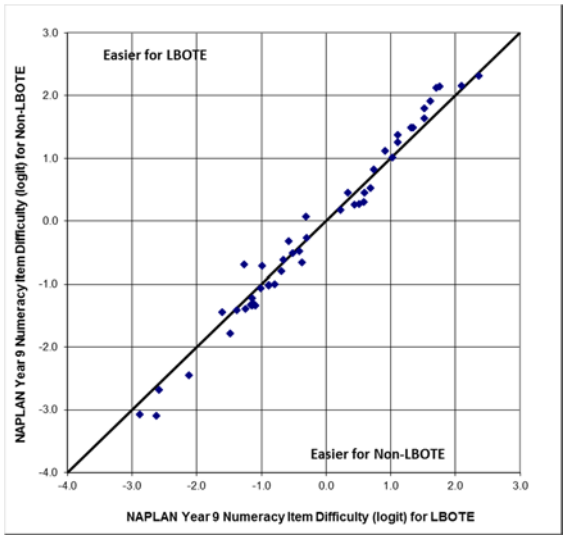
Year 5



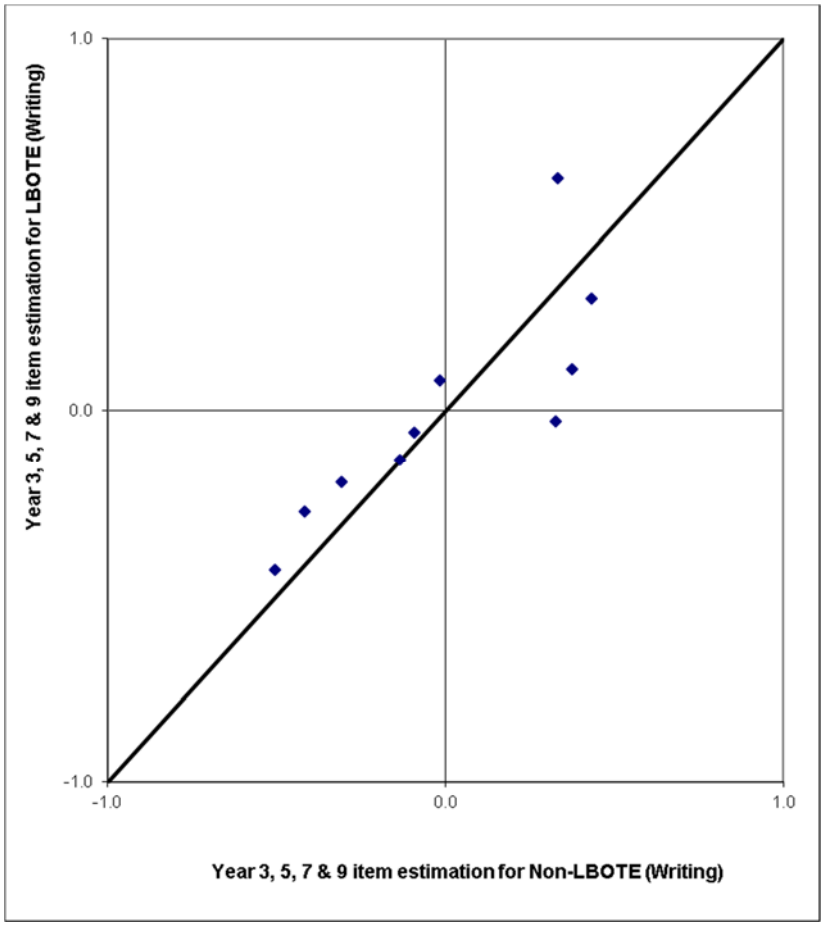
Year 7



Year 9

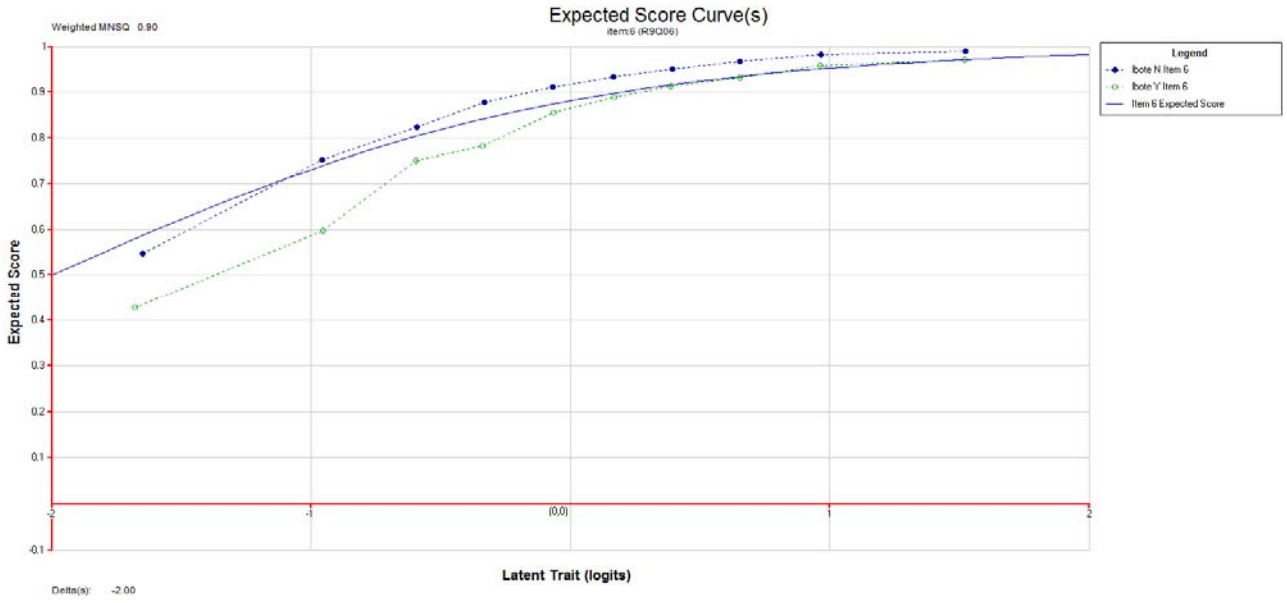


G.5 Comparison of LBOTE and Non-LBOTE Students in Writing (2017)



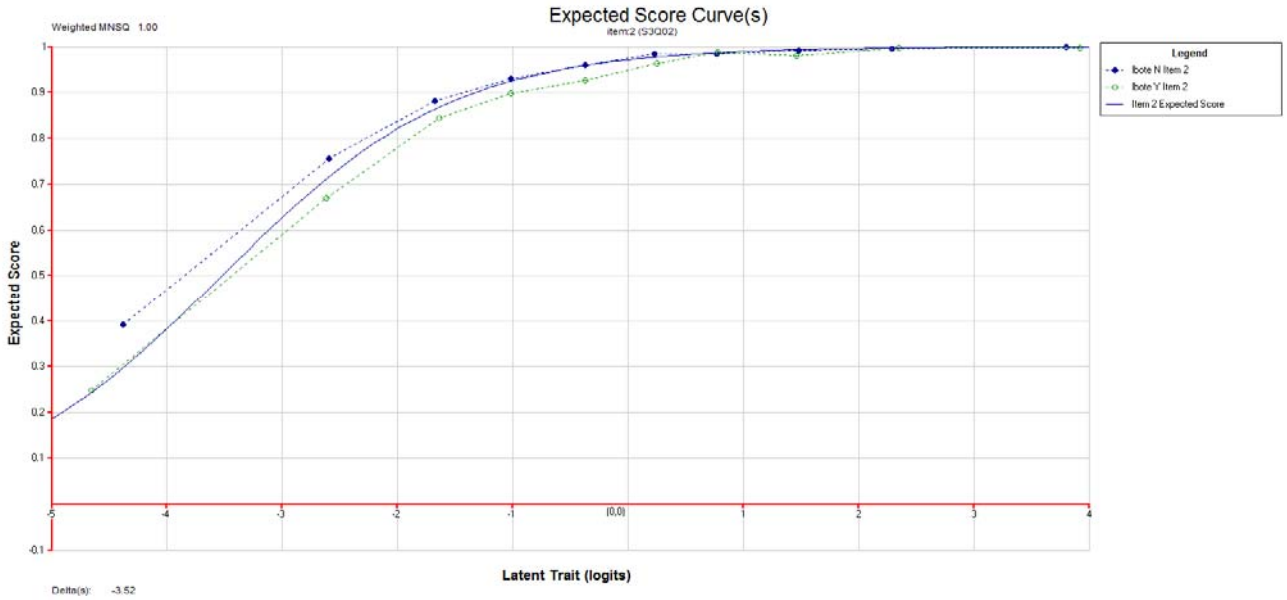
G.6 Item DIF Plots for Items Showing LBOTE DIF[2]

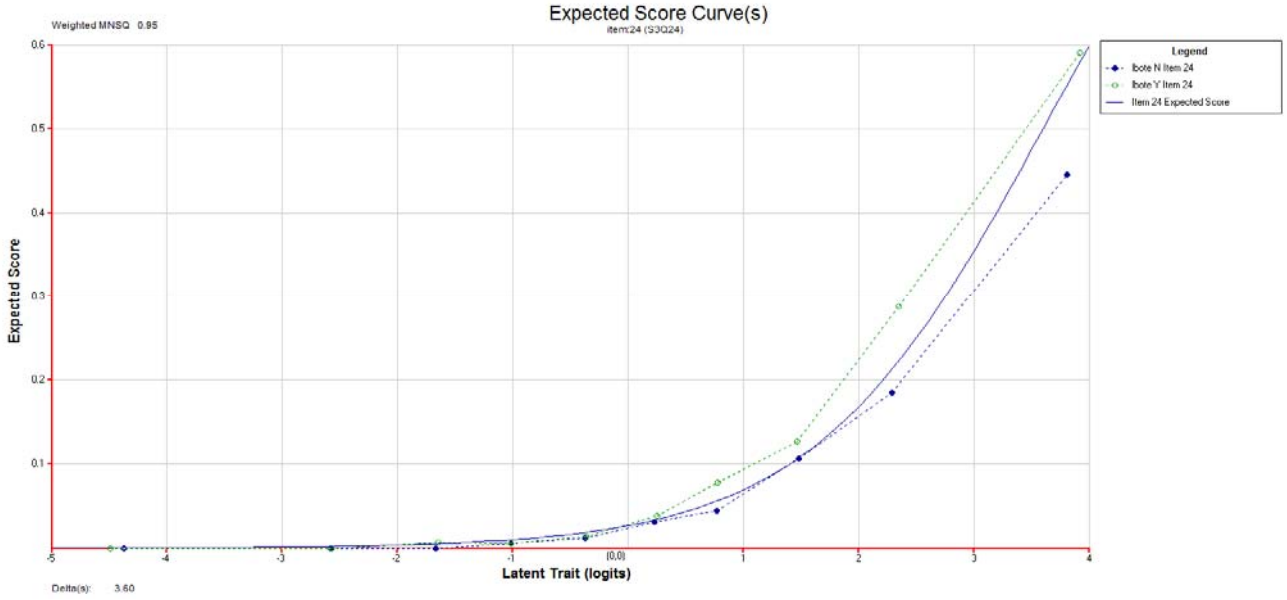
G.6.1. Year 9 Reading



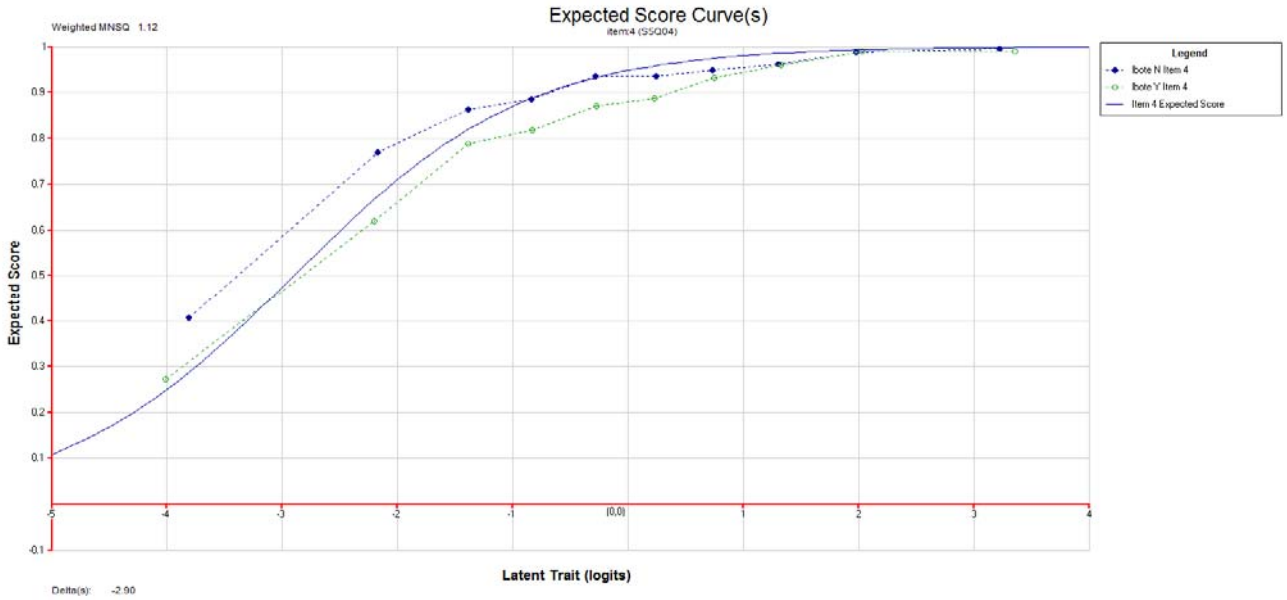
[2] 'lbote N' indicates 'Non-LBOTE group' and 'lbote Y' indicates 'LBOTE group'.

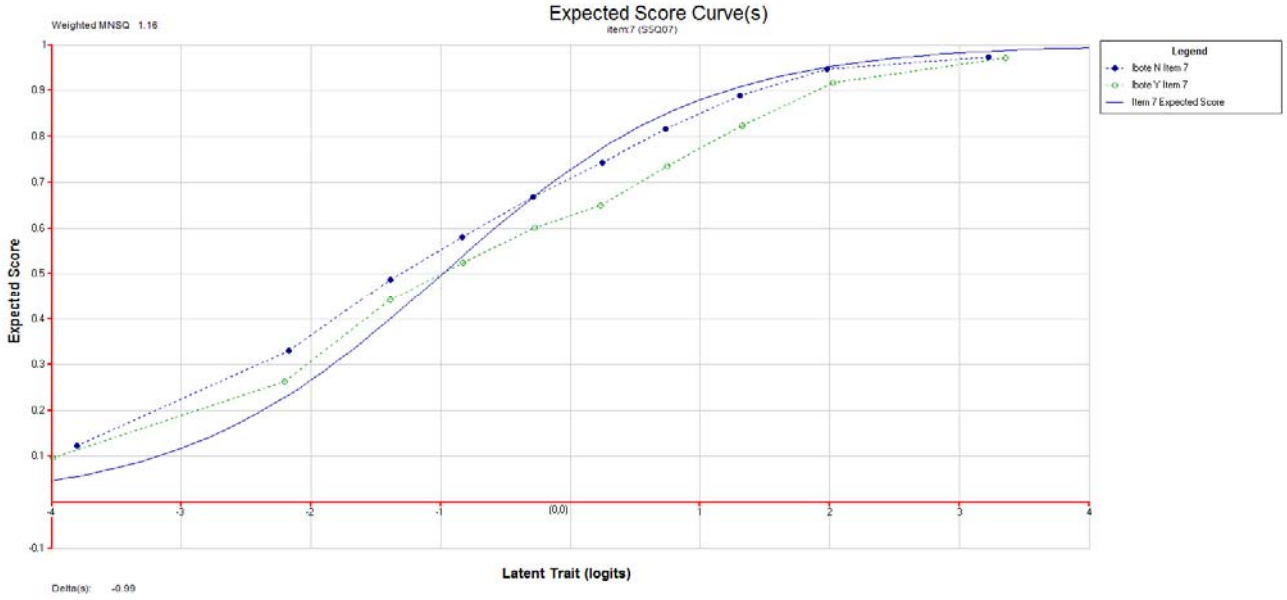
G.6.2. Year 3 Spelling



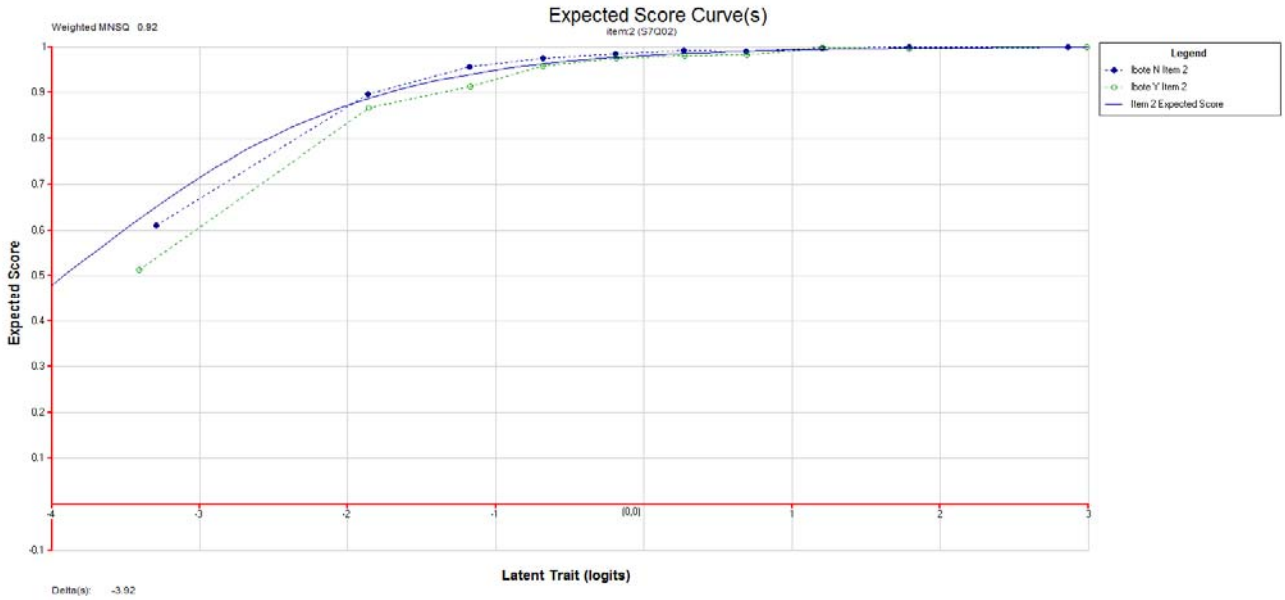


G.6.3. Year 5 Spelling

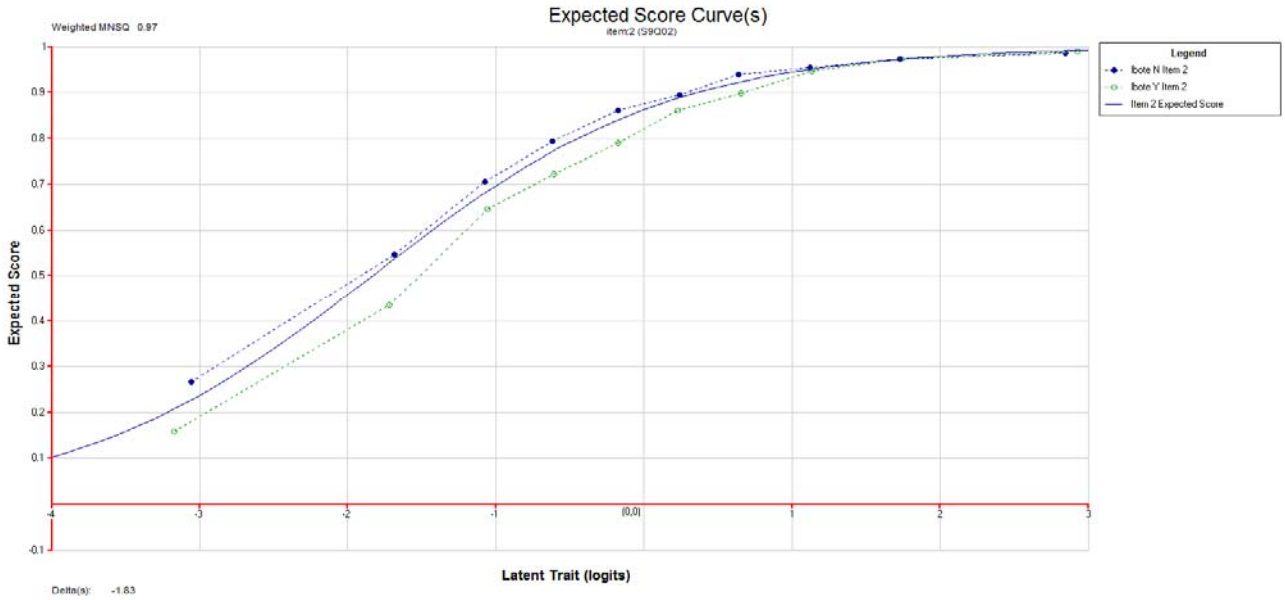


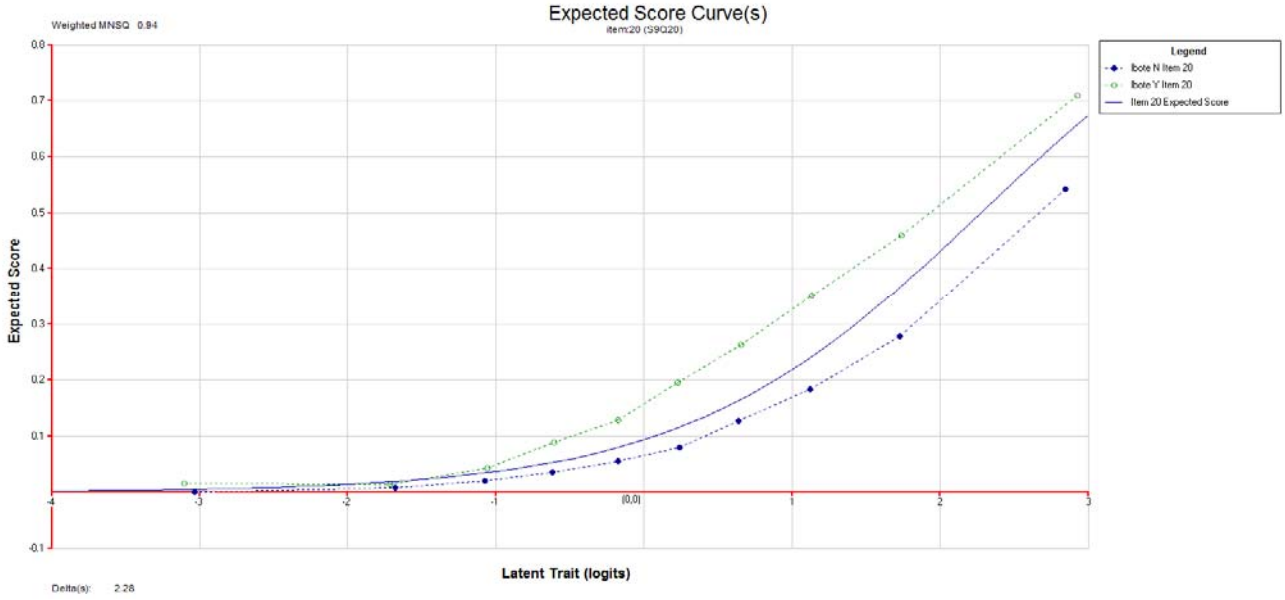


G.6.4. Year 7 Spelling

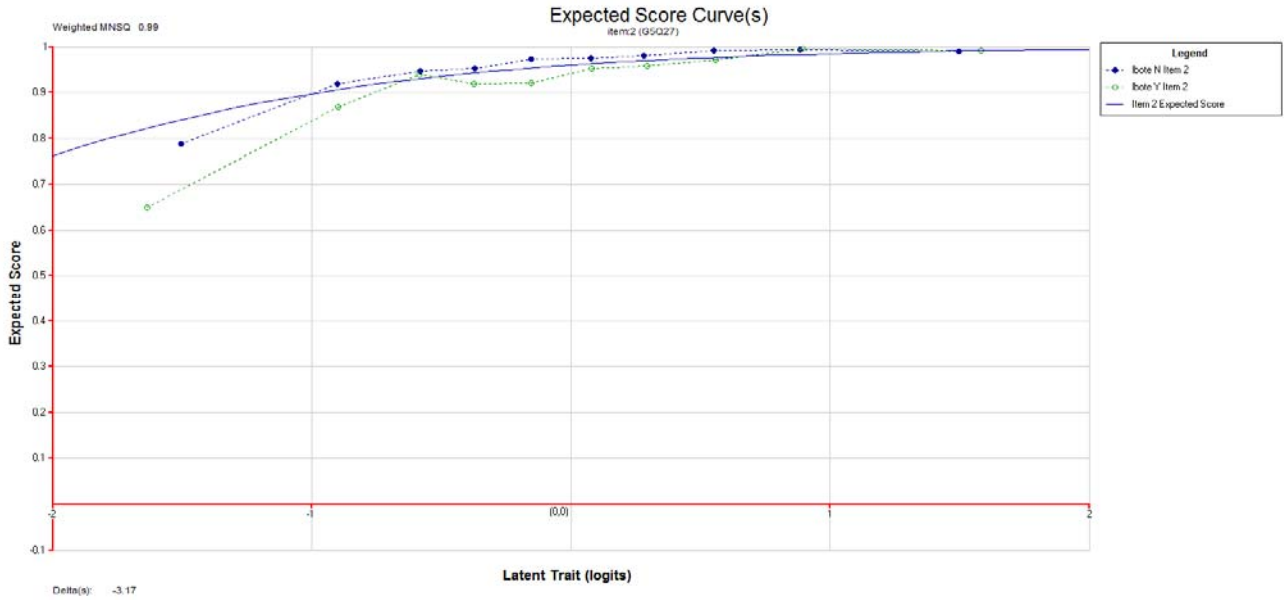


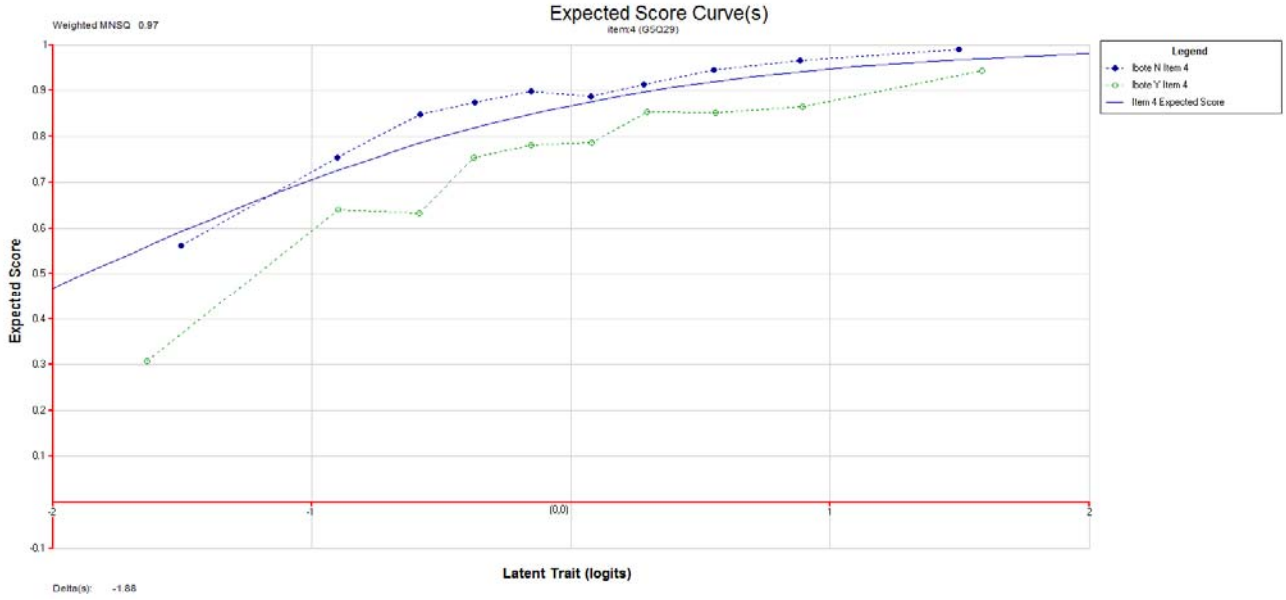
G.6.5. Year 9 Spelling



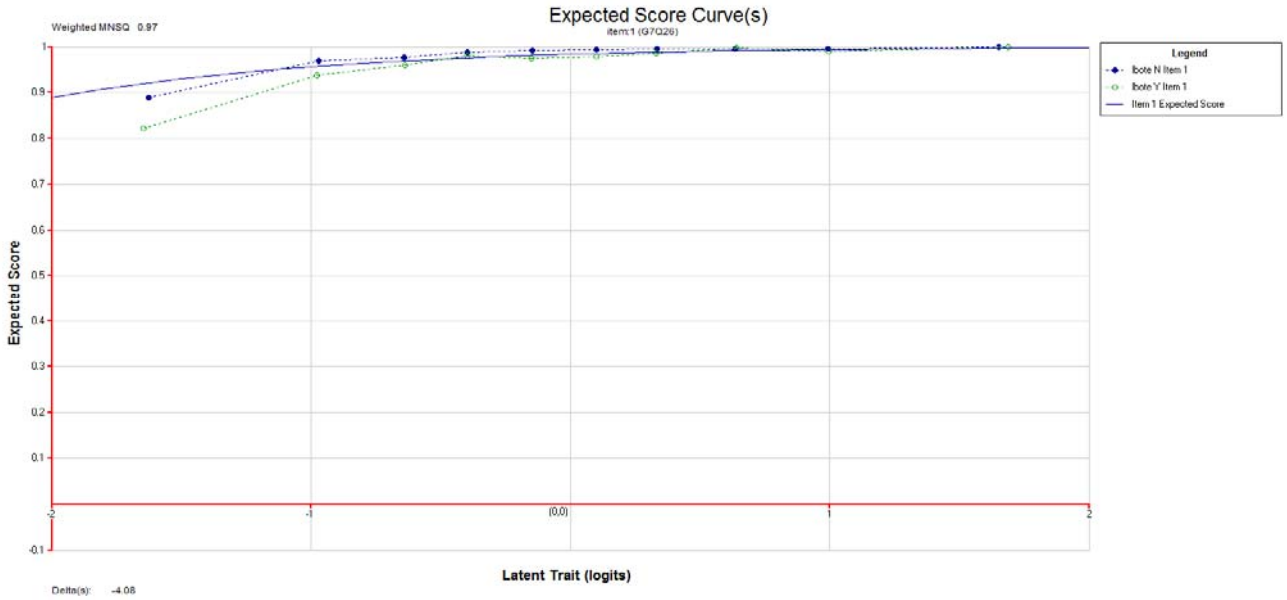


G.6.6. Year 5 Grammar and Punctuation

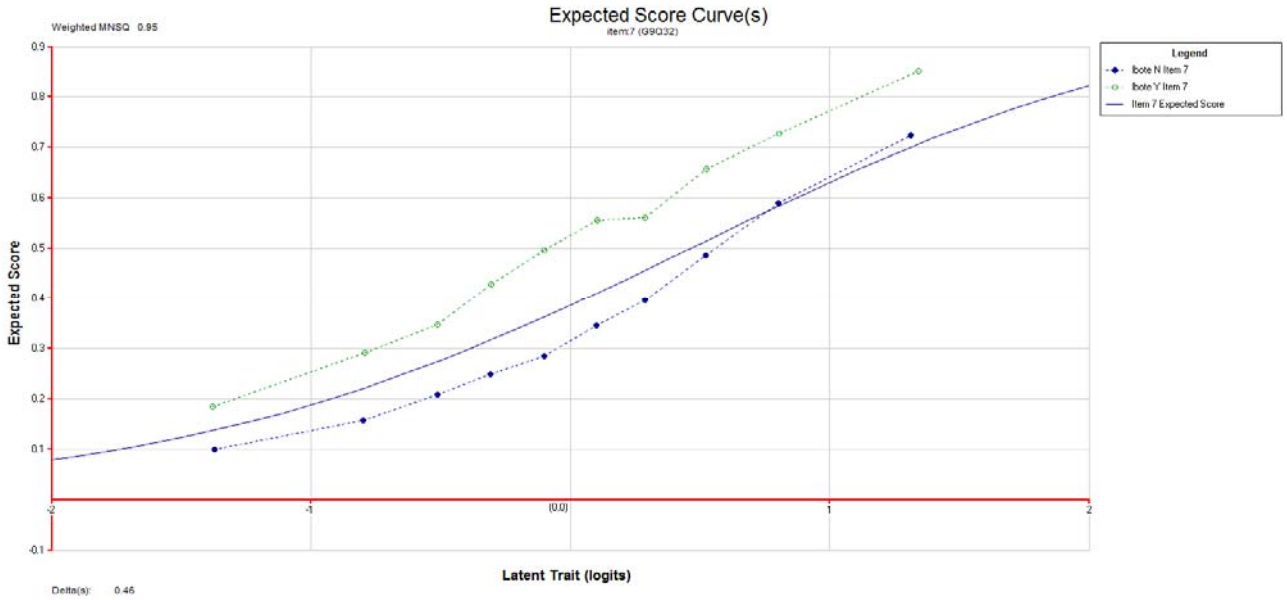




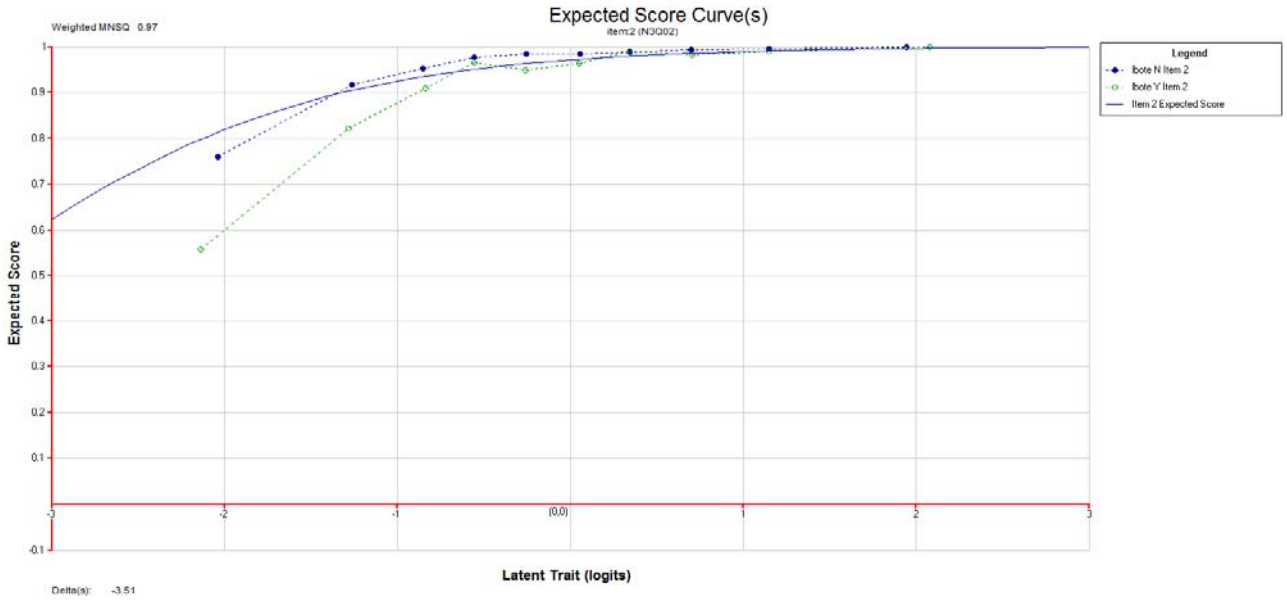
G.6.7. Year 7 Grammar and Punctuation

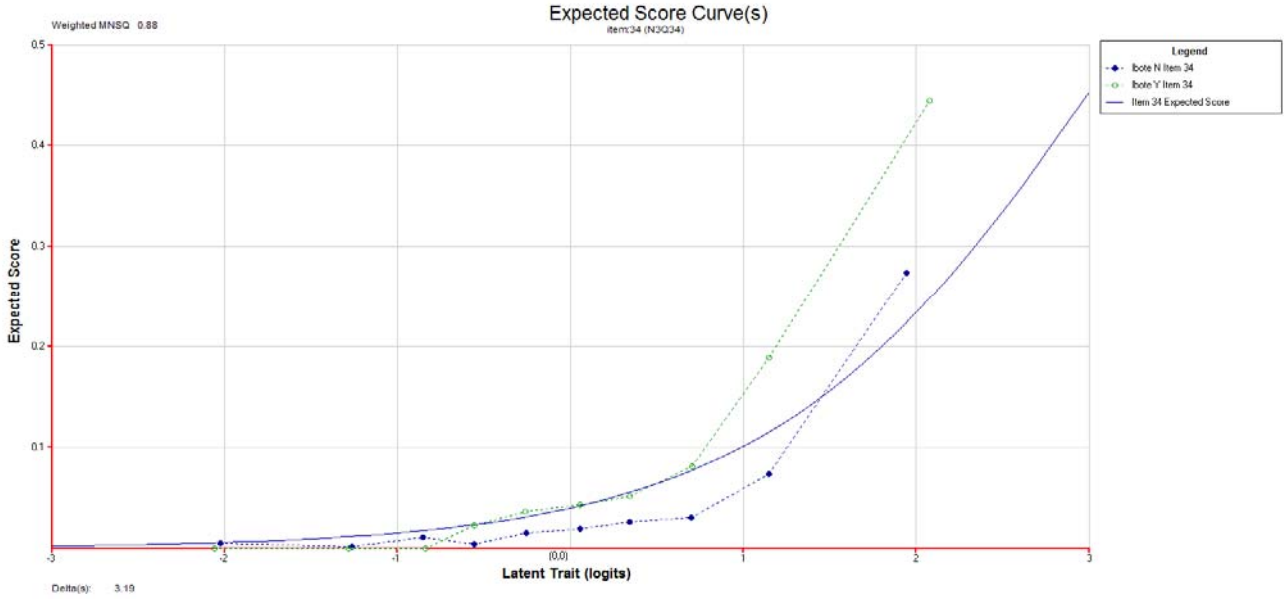


G.6.8. Year 9 Grammar and Punctuation

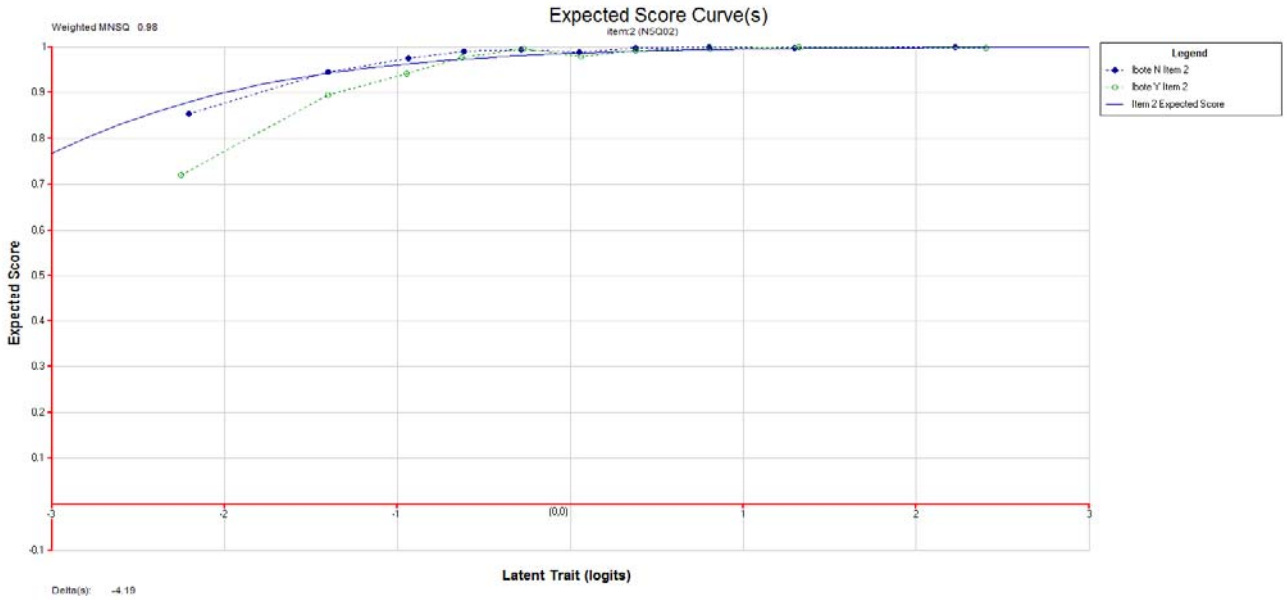


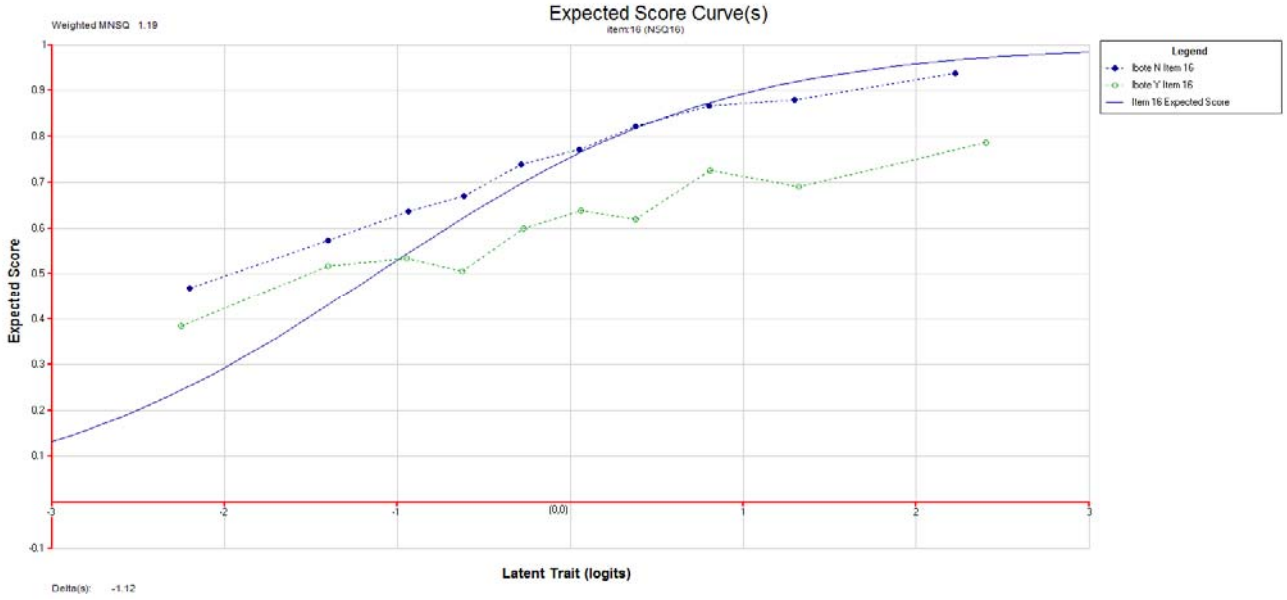
G.6.9. Year 3 Numeracy



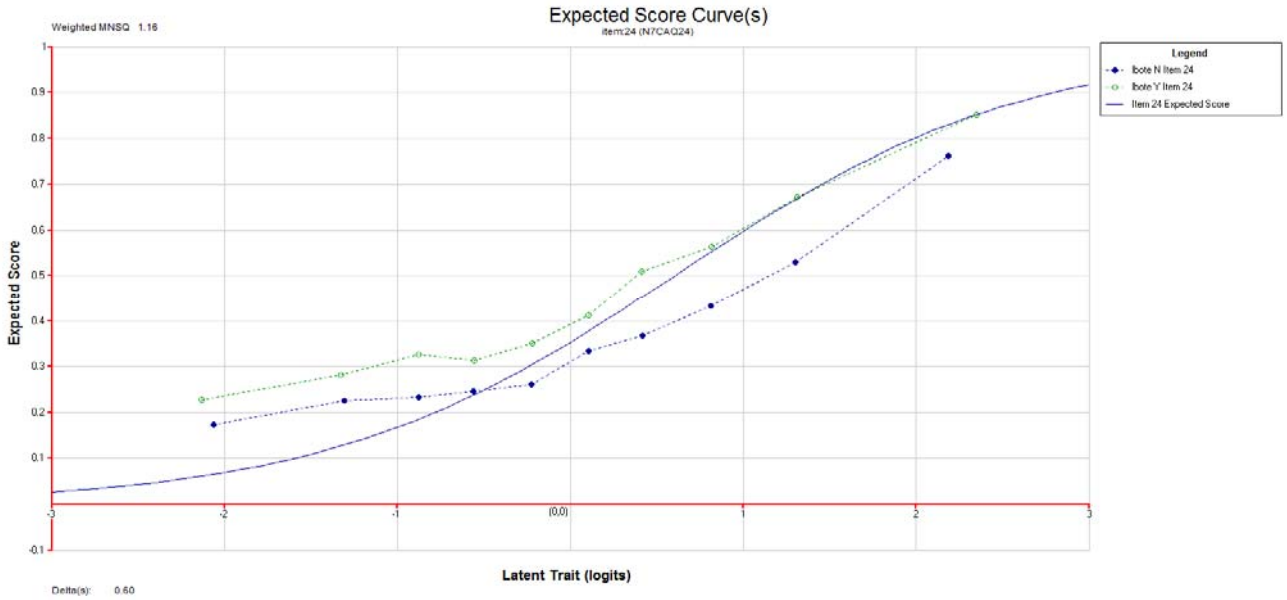


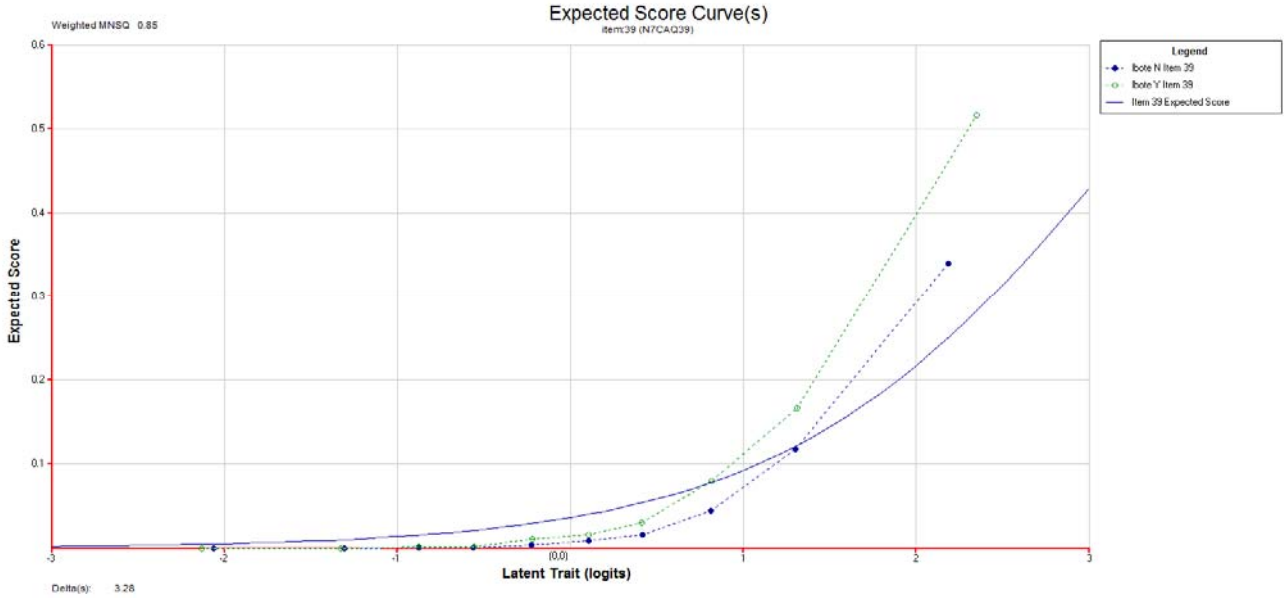
G.6.10. Year 5 Numeracy

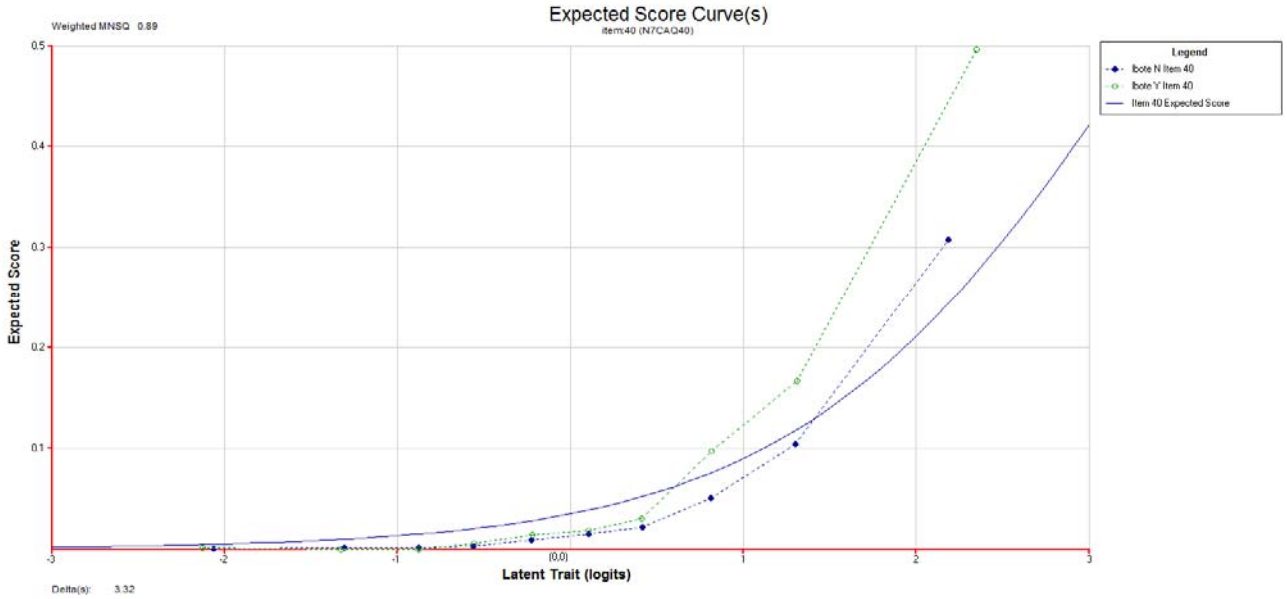




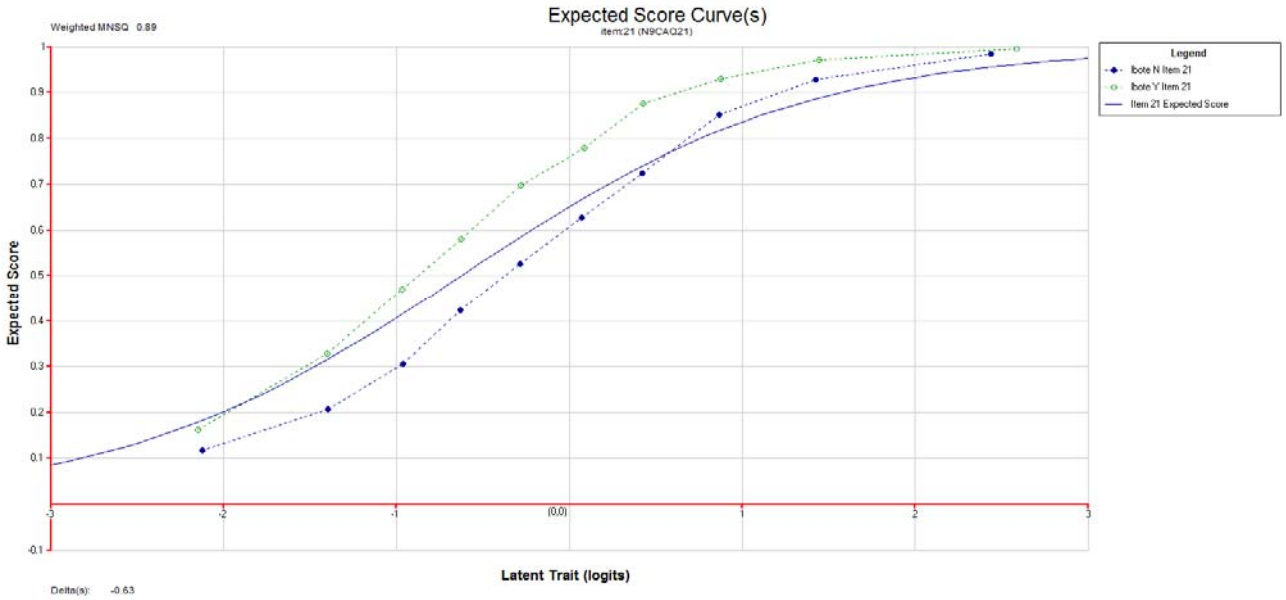
G.6.11. Year 7 Numeracy







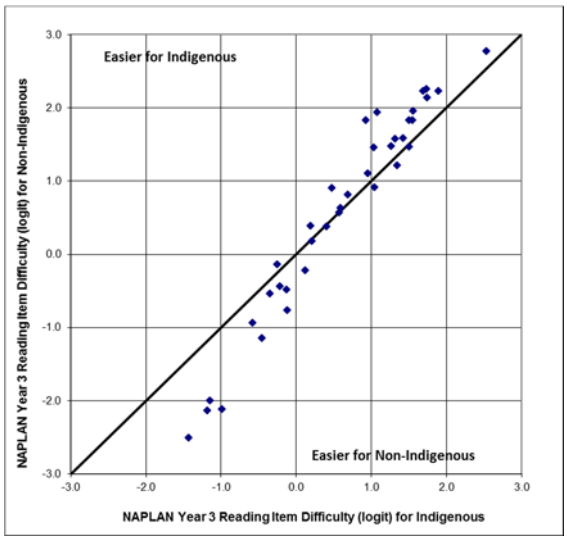
G.6.12. Year 9 Numeracy



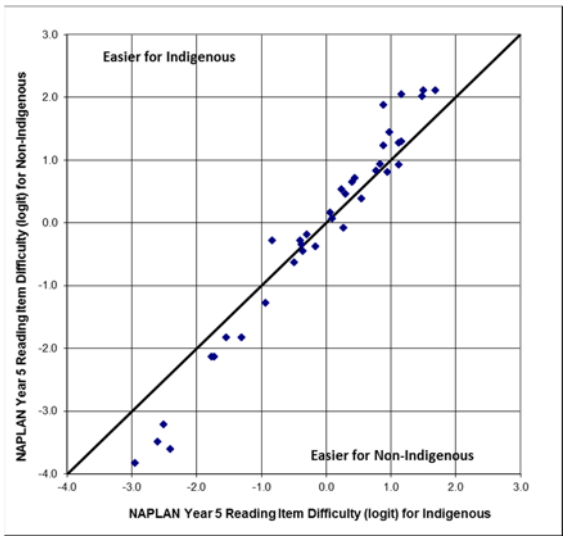
APPENDIX H. INDIGENOUS STATUS DIF ANALYSIS

H.1 Comparison of Indigenous and Non- Indigenous Students in Reading (2017)

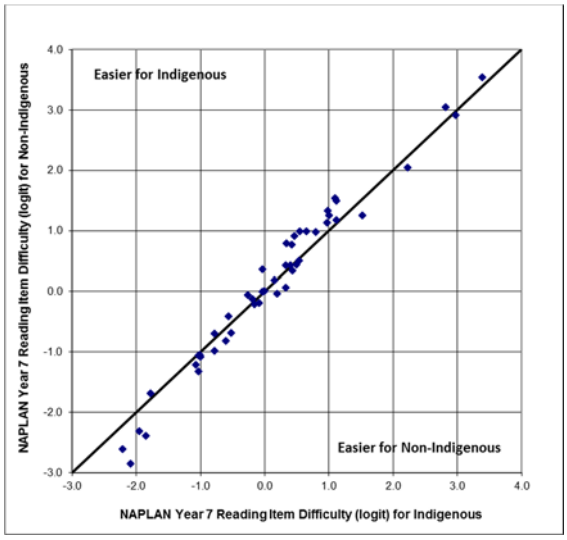
Year 3



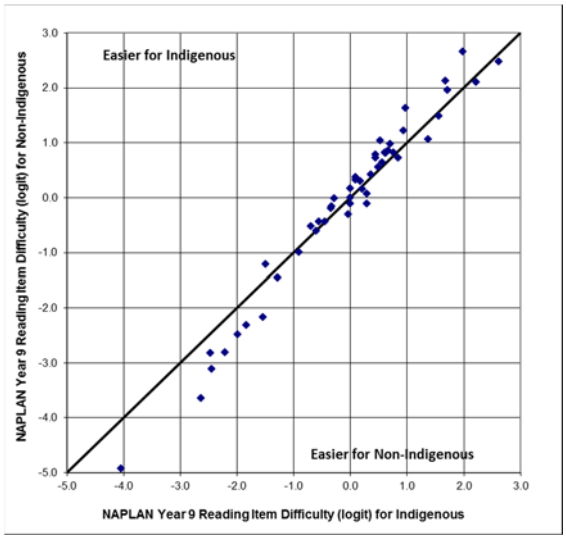
Year 5



Year 7

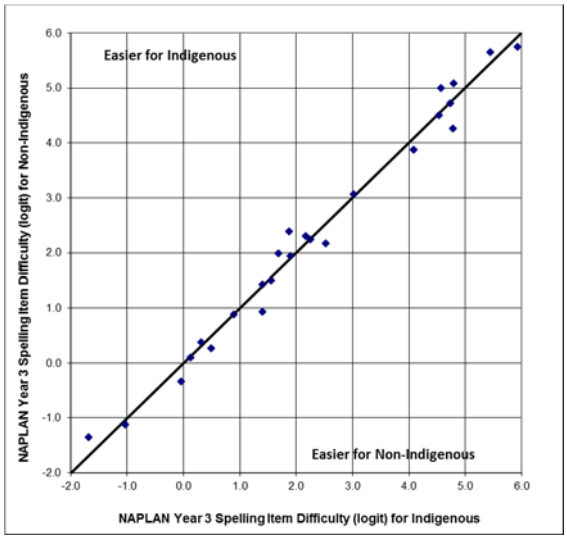


Year 9

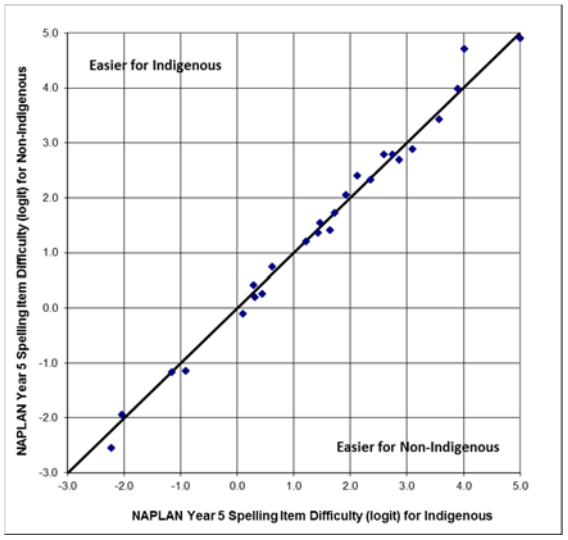


H.2 Comparison of Indigenous and Non- Indigenous Students in Spelling (2017)

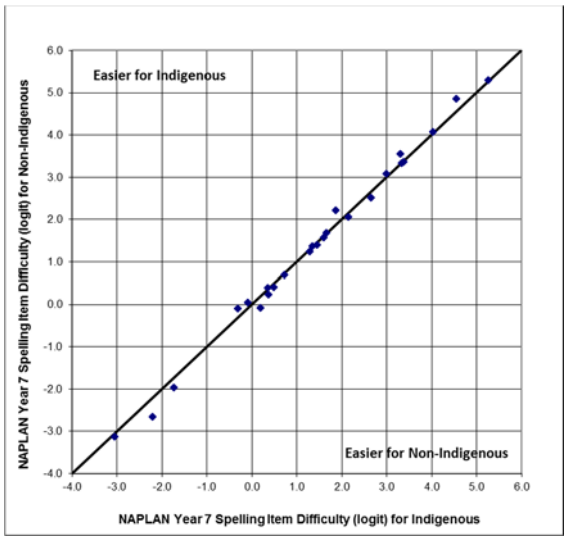
Year 3



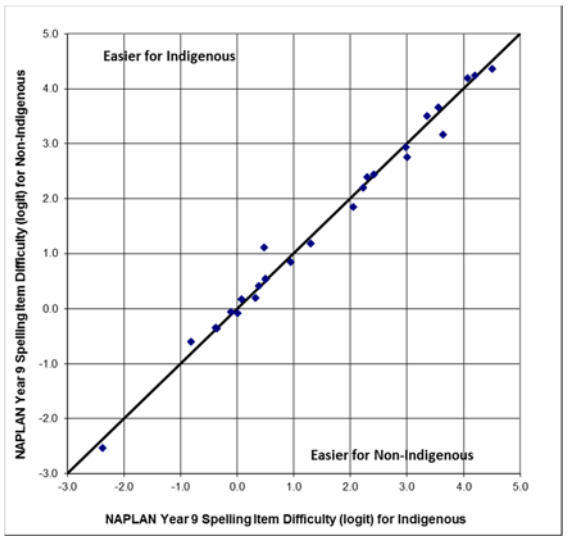
Year 5



Year 7

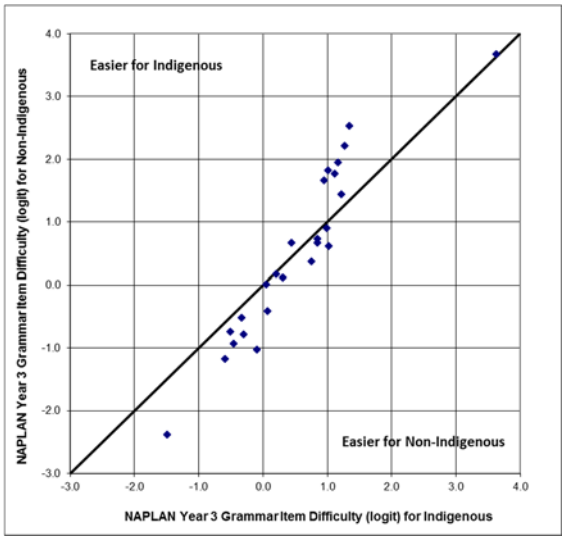


Year 9

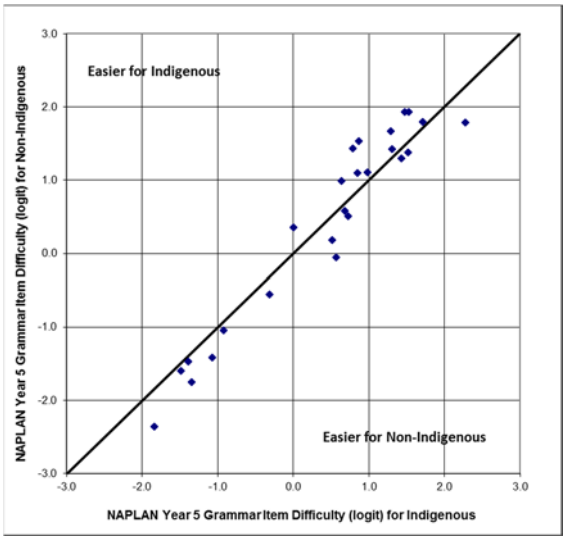


H.3 Comparison of Indigenous and Non- Indigenous Students in Grammar and Punctuation (2017)

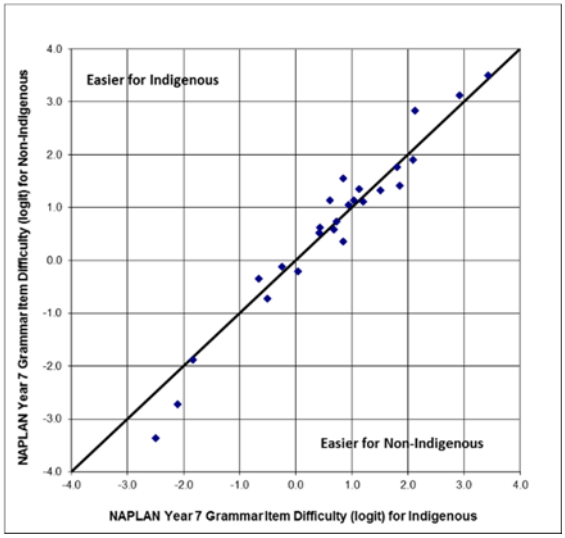
Year 3



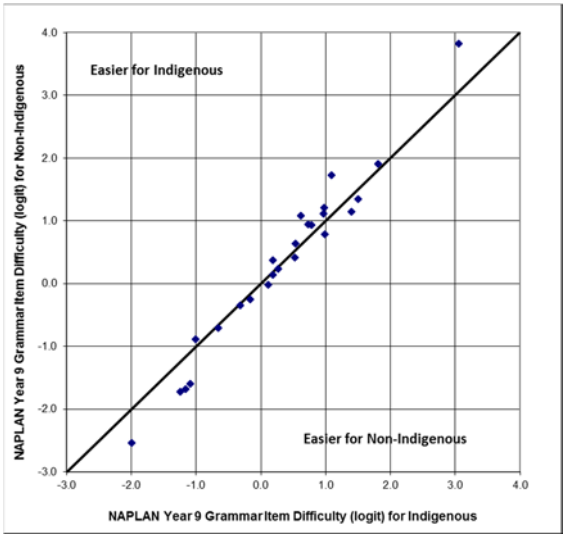
Year 5



Year 7

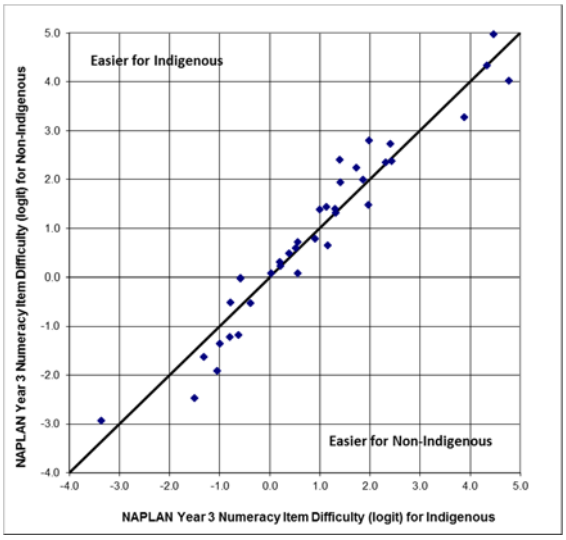


Year 9

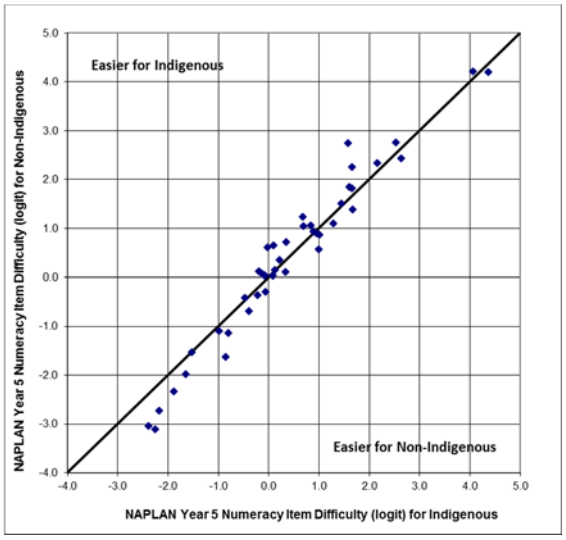


H.4 Comparison of Indigenous and Non- Indigenous Students in Numeracy (2017)

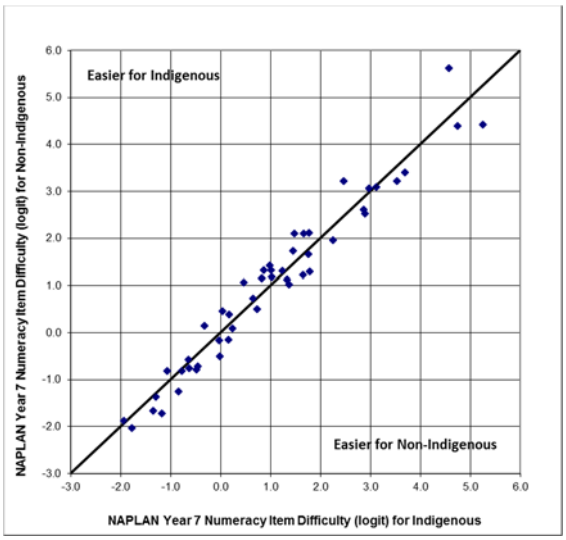
Year 3



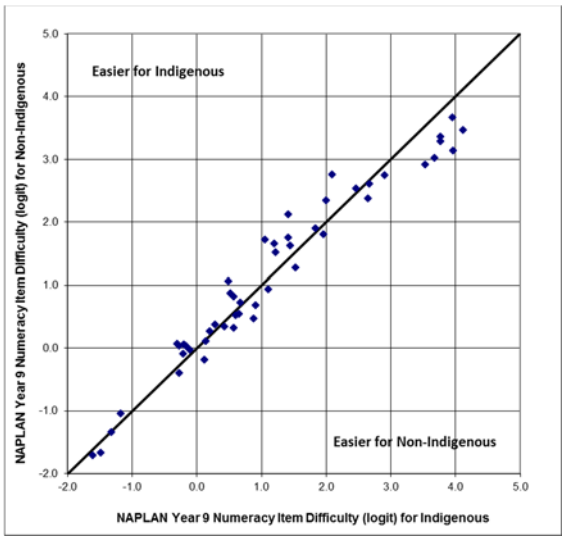
Year 5



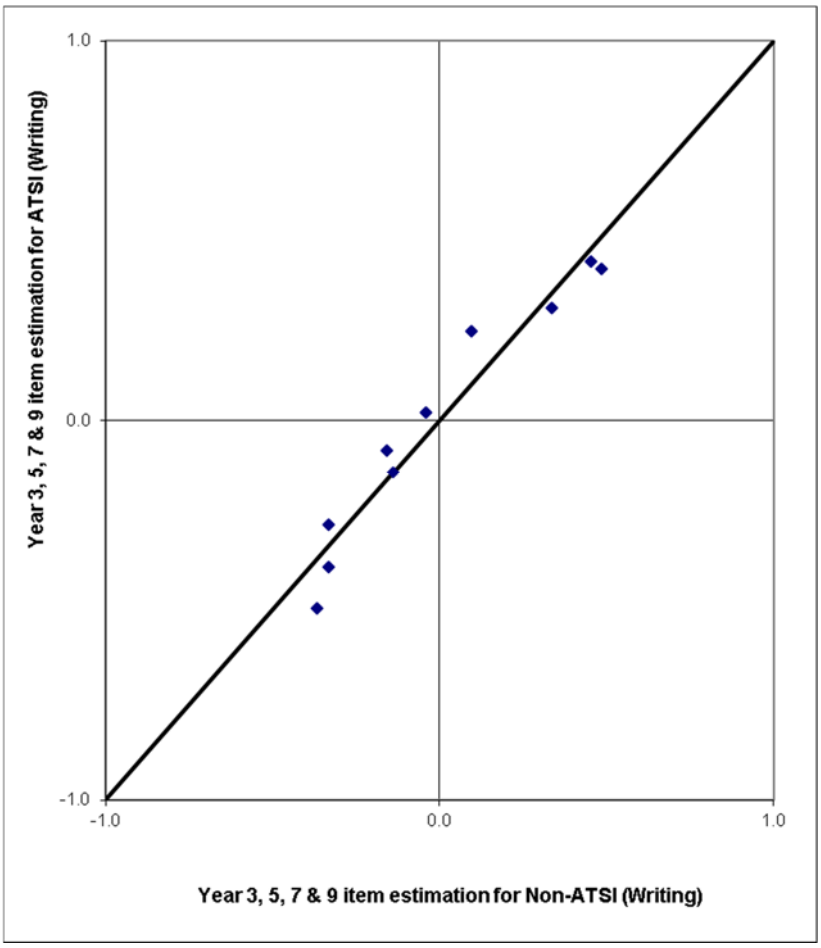
Year 7



Year 9

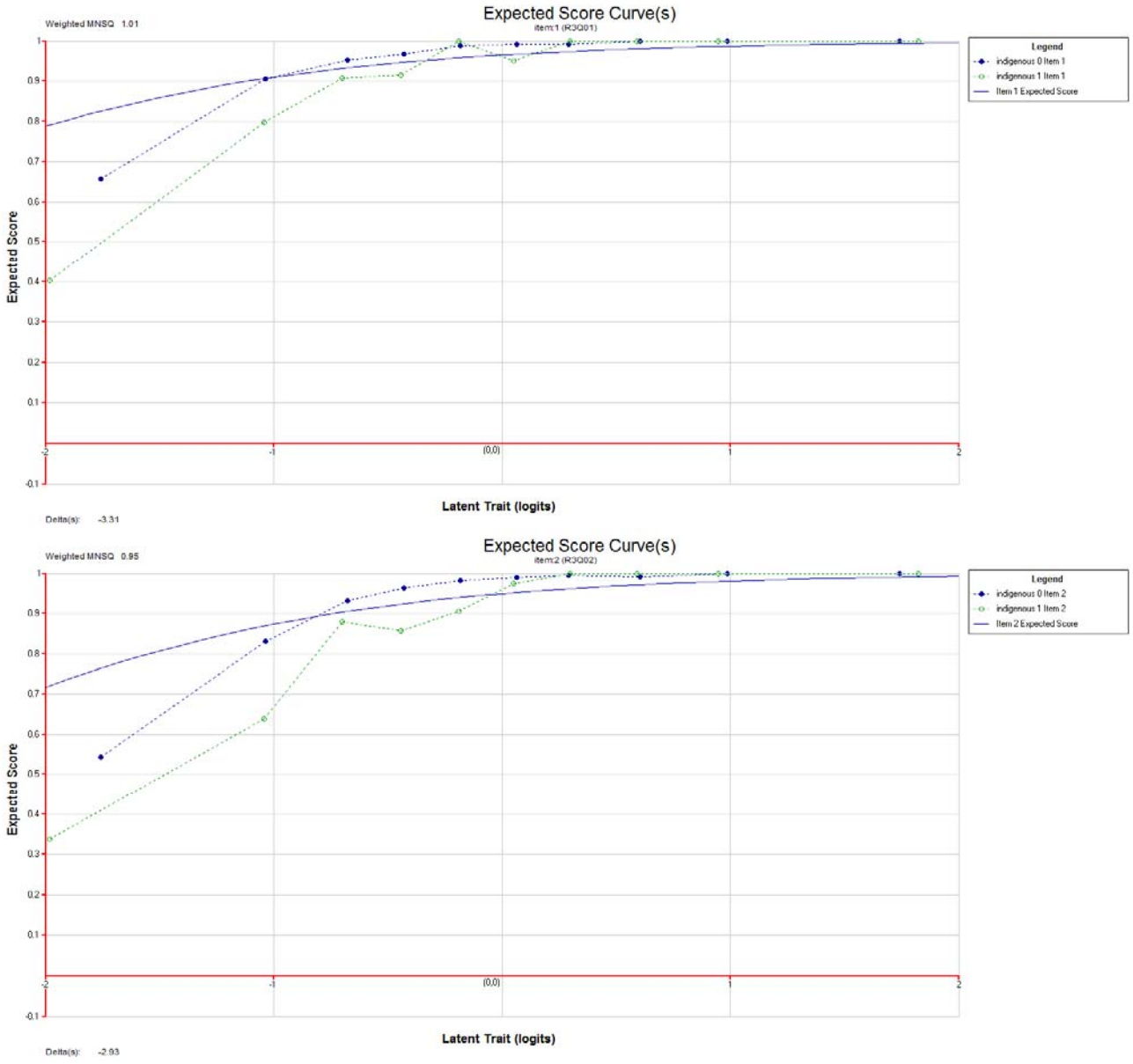


H.5 Comparison of Indigenous and Non- Indigenous Students in Writing (2017)

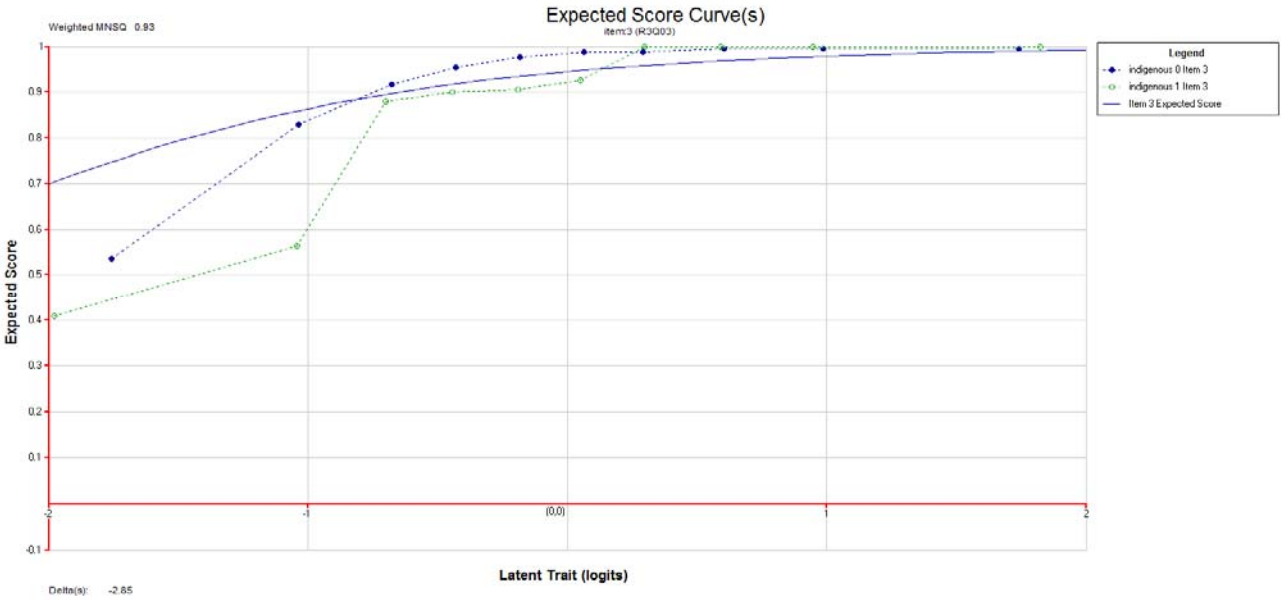


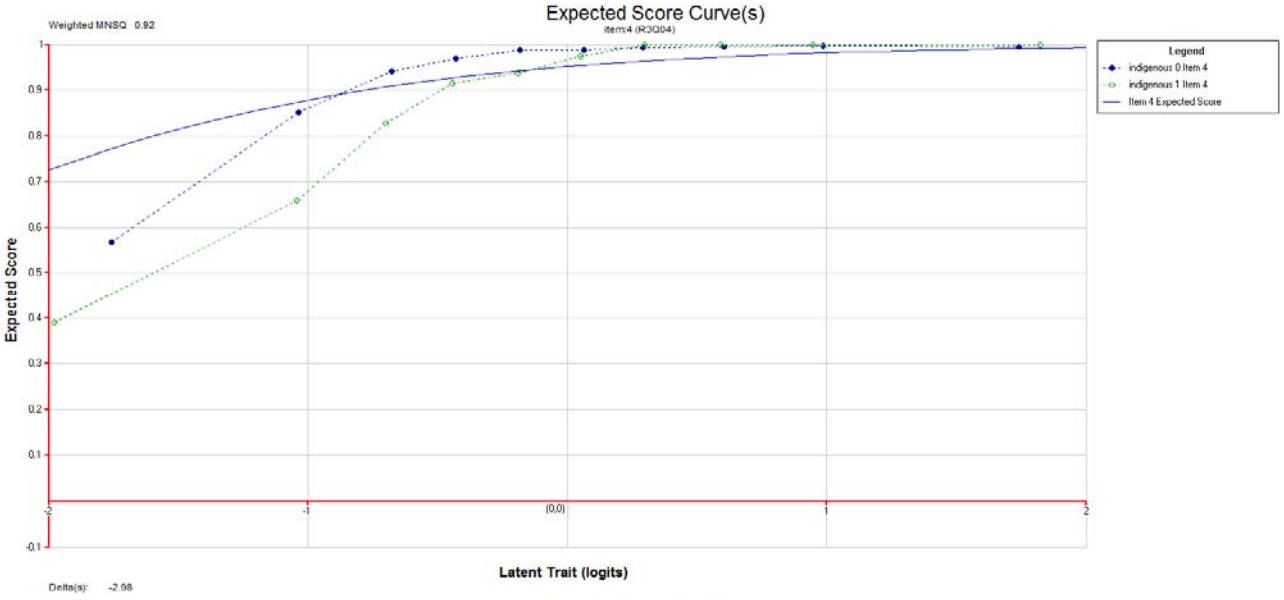
H.6 Item DIF Plots for Items Showing Indigenous Status DIF[3]

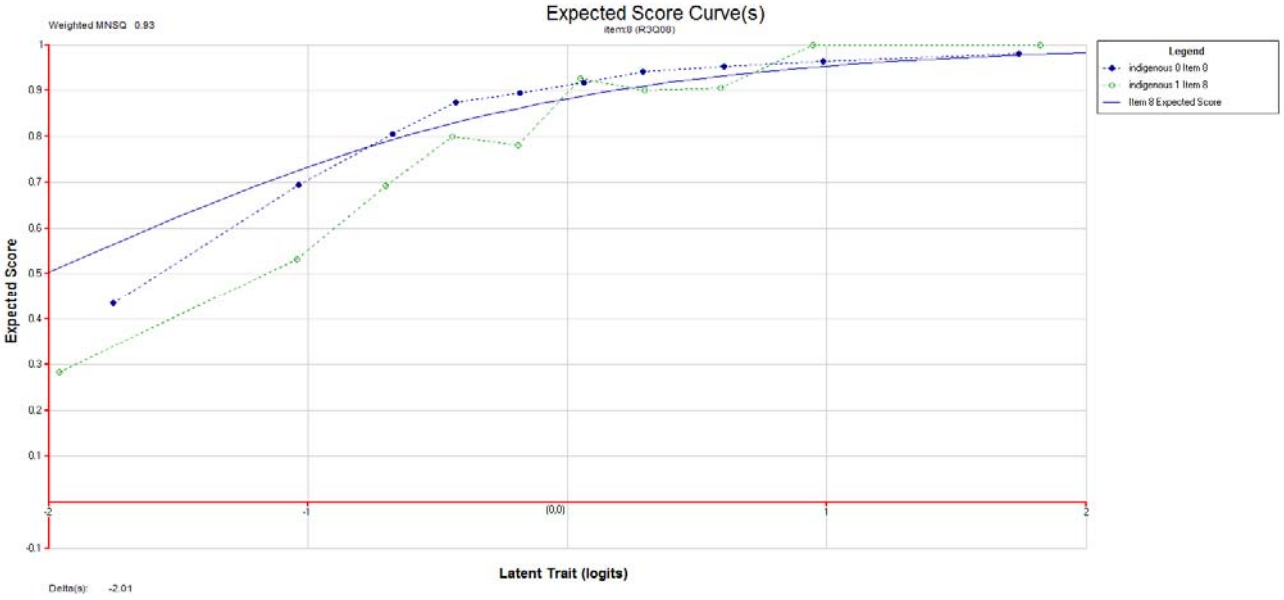
H.6.1. Year 3 Reading

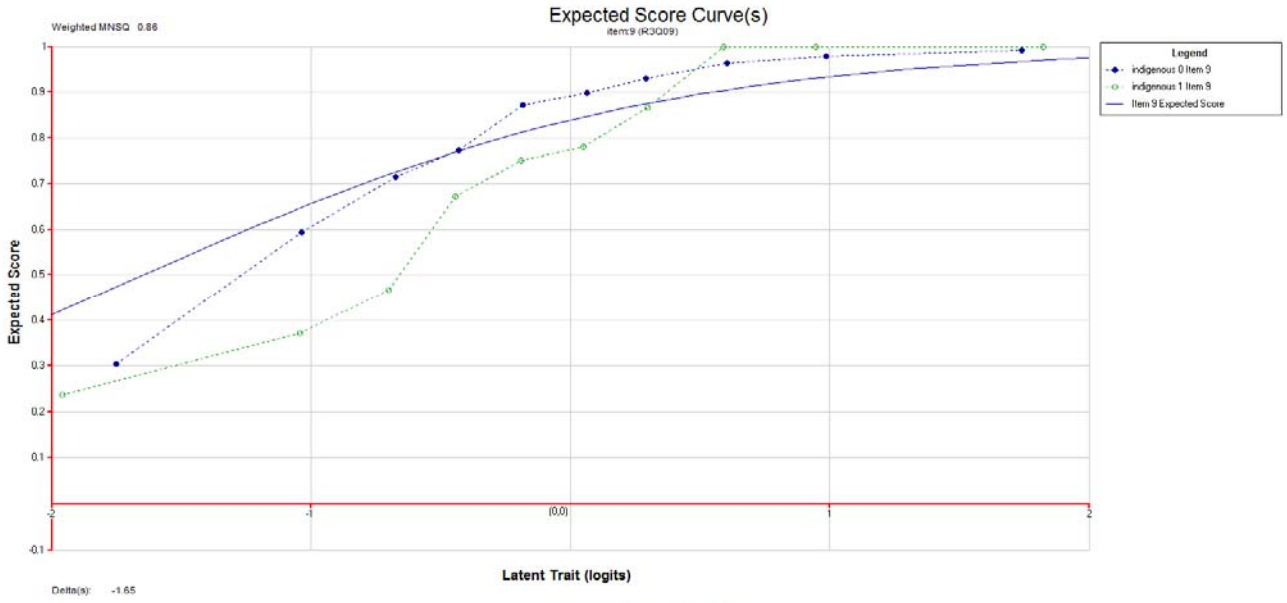


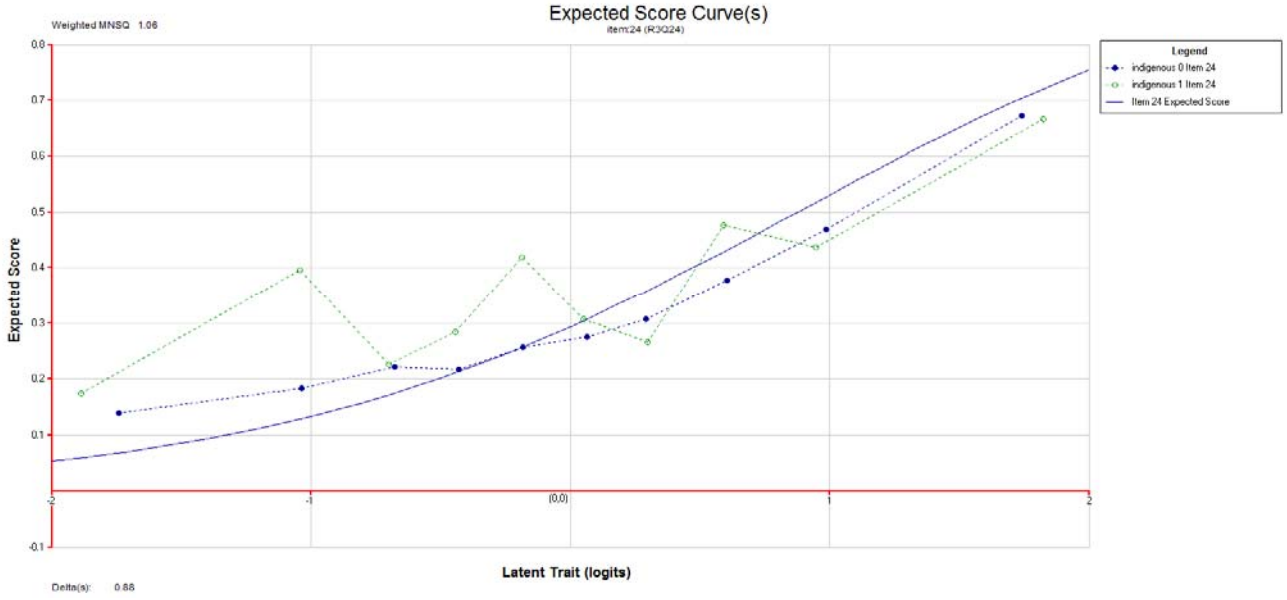
[3] 'indigenous 1' indicates 'Indigenous group' and 'indigenous 0' indicates 'Non-Indigenous group'.


Expected Score Curve(s)
item:3 (R3Q03)
Weighted MNSQ 0.93
Legend
indigenous 0 Item 3
indigenous 1 Item 3
Item 3 Expected Score
Expected Score
Latent Trait (logits)
(0,0)
Delta(s): -2.85

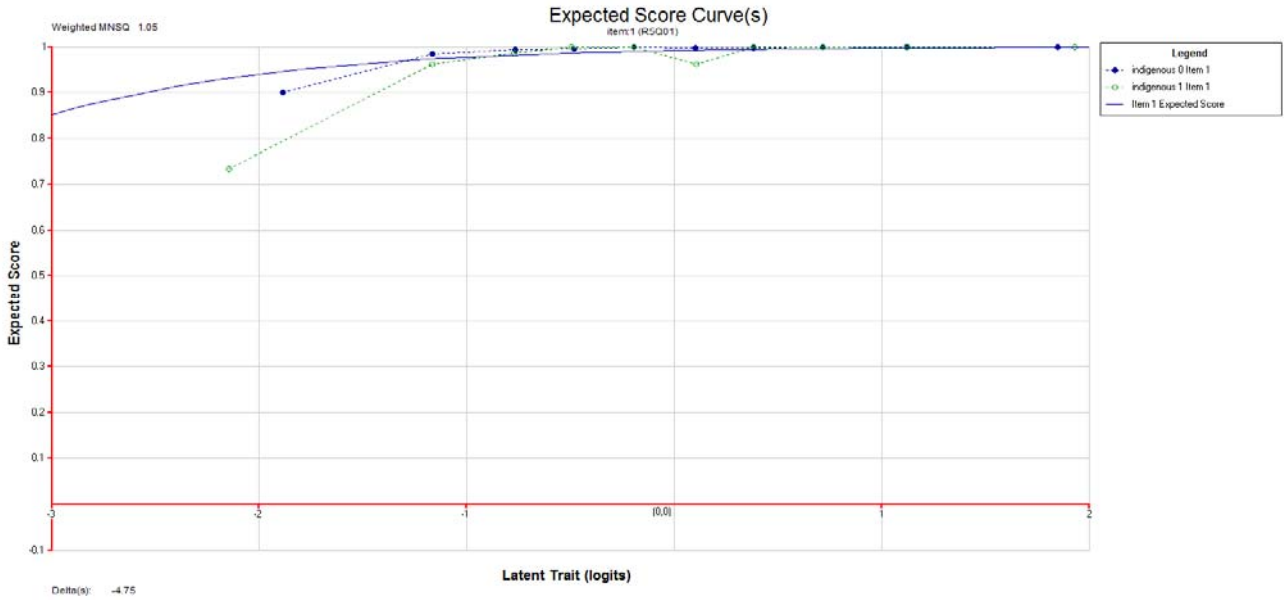

Expected Score Curve(s)
item:4 (R3Q04)
Weighted MNSQ 0.92
Legend
indigenous 0 Item 4
indigenous 1 Item 4
Item 4 Expected Score
Expected Score
Latent Trait (logits)
(0,0)
Delta(s): -2.98

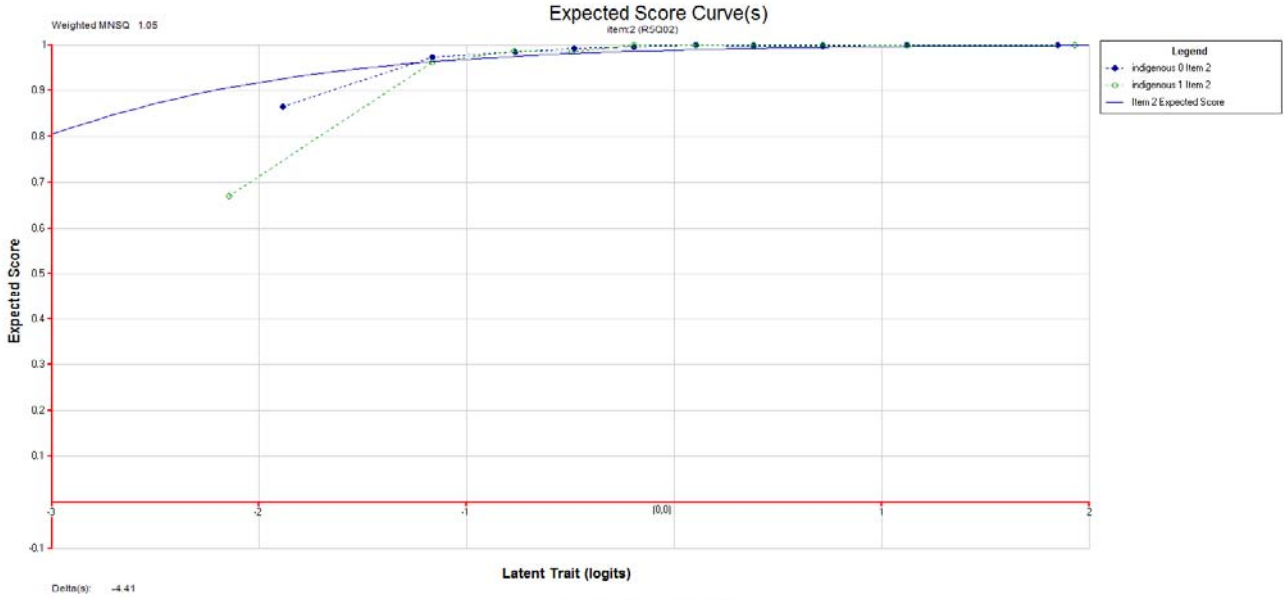

Expected Score Curve(s)
item:8 (R3Q08)
Weighted MNSQ 0.93
Legend
indigenous 0 Item 8
indigenous 1 Item 8
Item 8 Expected Score
Expected Score
Latent Trait (logits)
(0,0)
Delta(s): -2.01

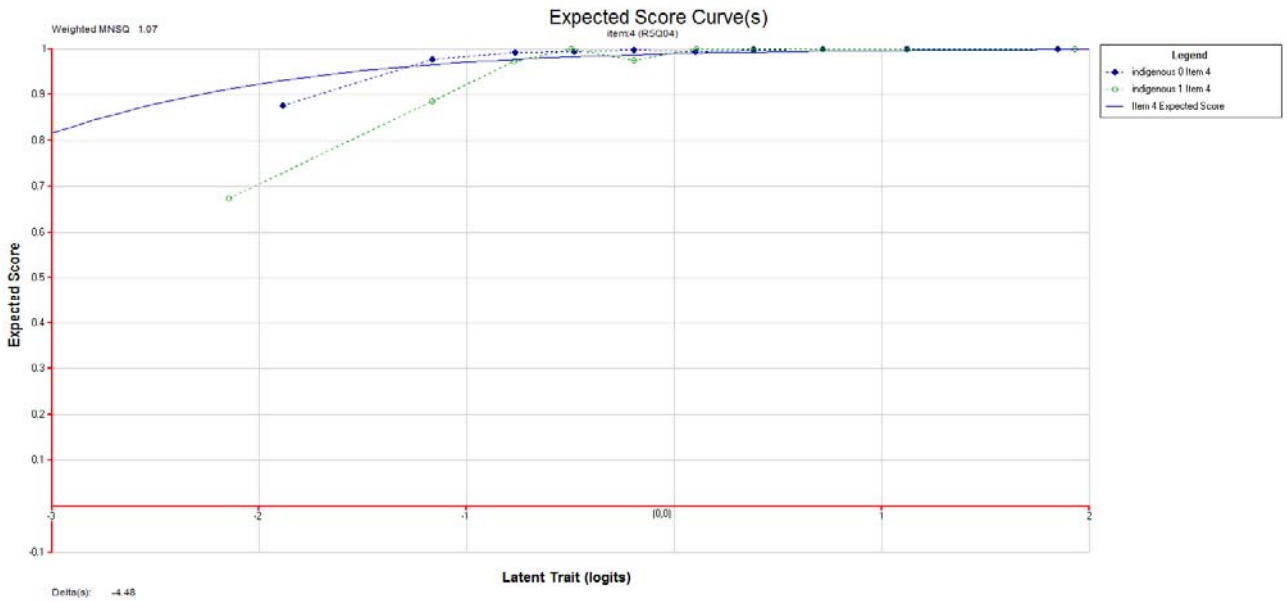

Expected Score Curve(s)
item:9 (R3Q09)
Weighted MNSQ 0.86
Legend
indigenous 0 Item 9
indigenous 1 Item 9
Item 9 Expected Score
Expected Score
Latent Trait (logits)
(0,0)
Delta(s): -1.65

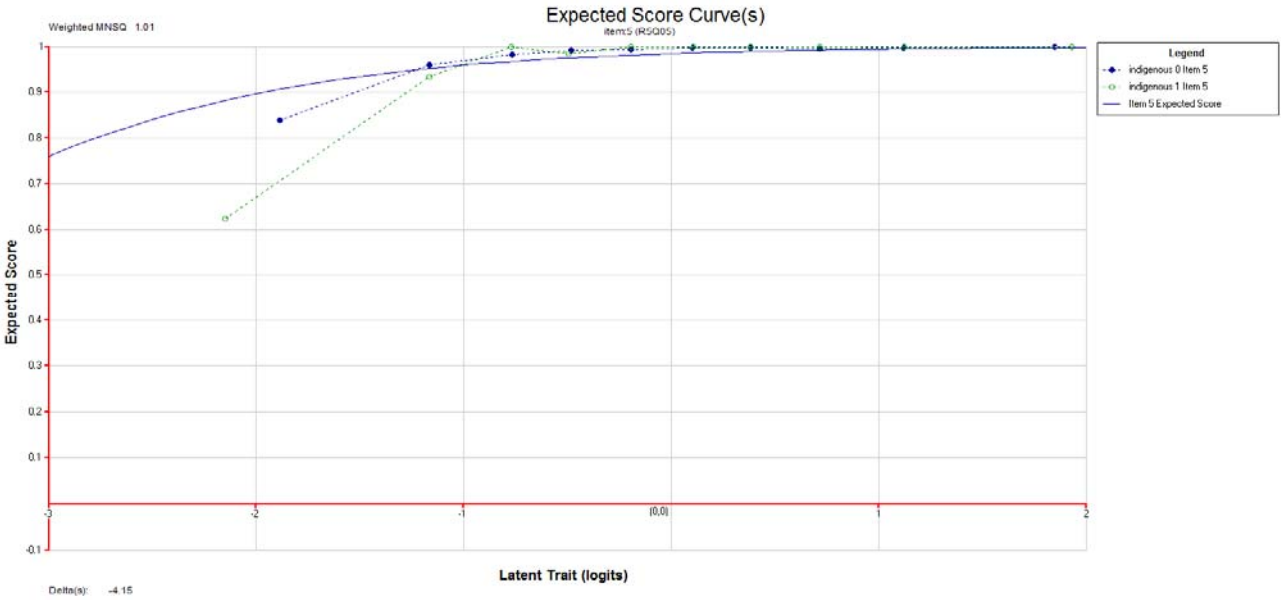

Expected Score Curve(s)
item:24 (R3Q24)
Weighted MNSQ 1.06
Legend
indigenous 0 Item 24
indigenous 1 Item 24
Item 24 Expected Score
Expected Score
Latent Trait (logits)
(0,0)
Delta(s): 0.88

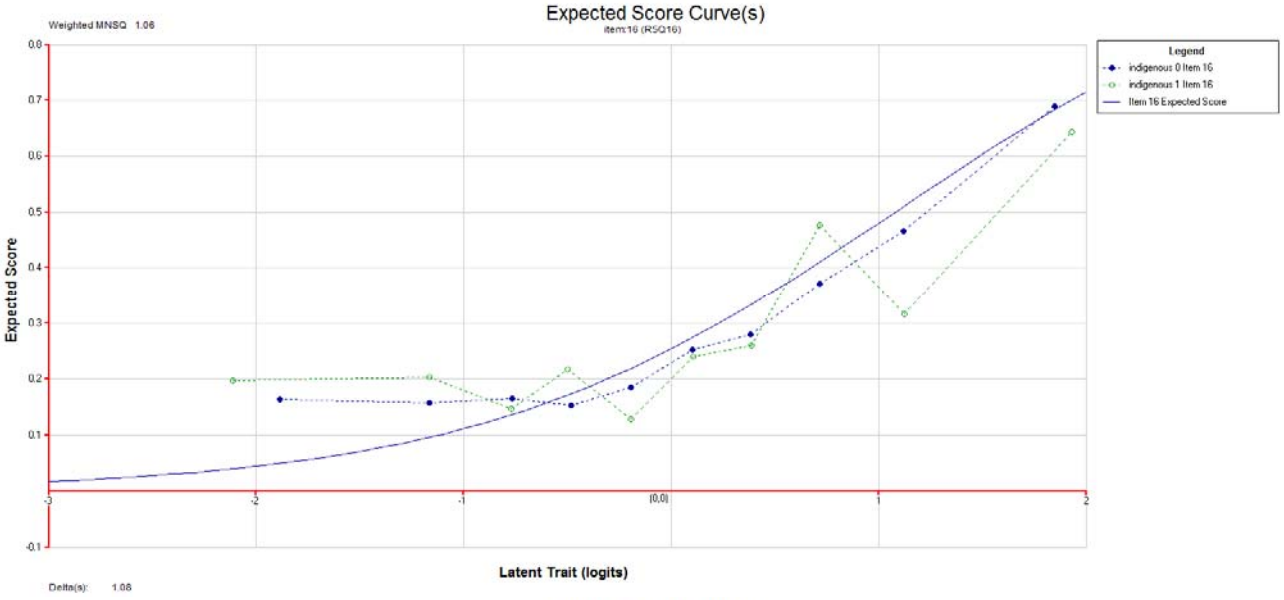
H.6.2. Year 5 Reading

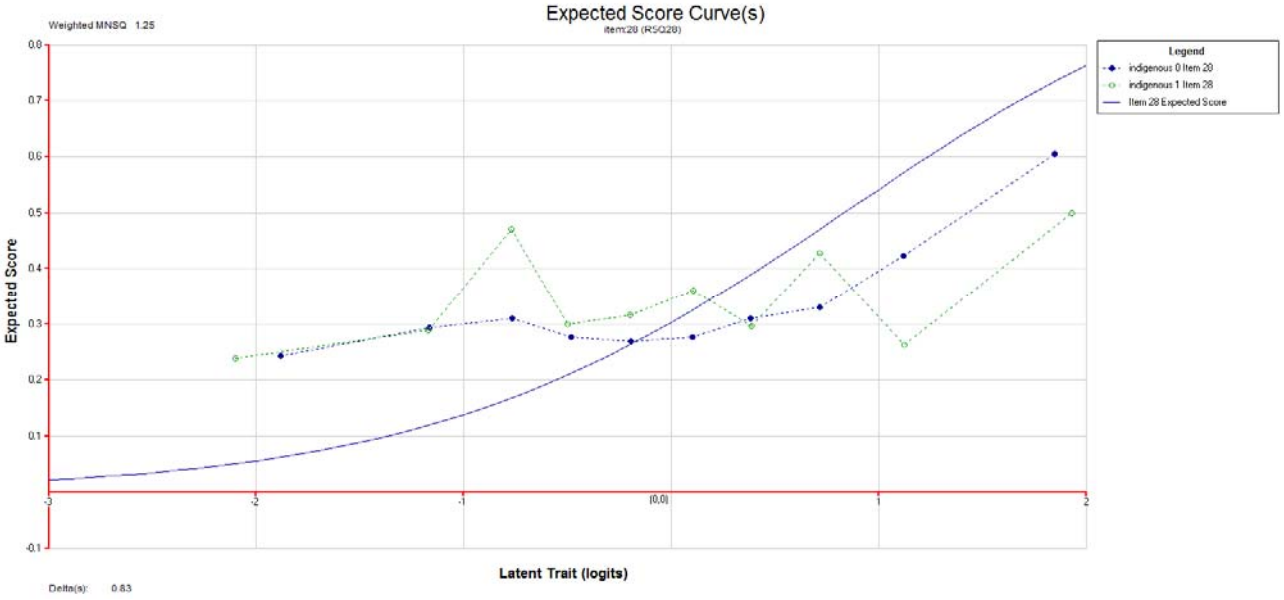


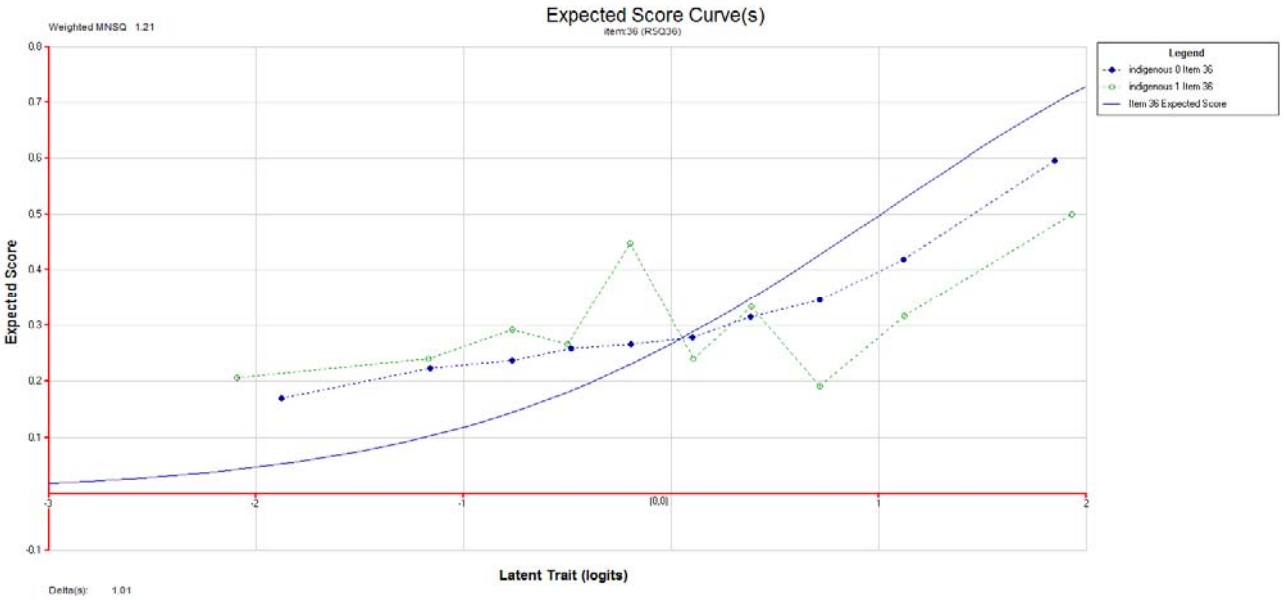




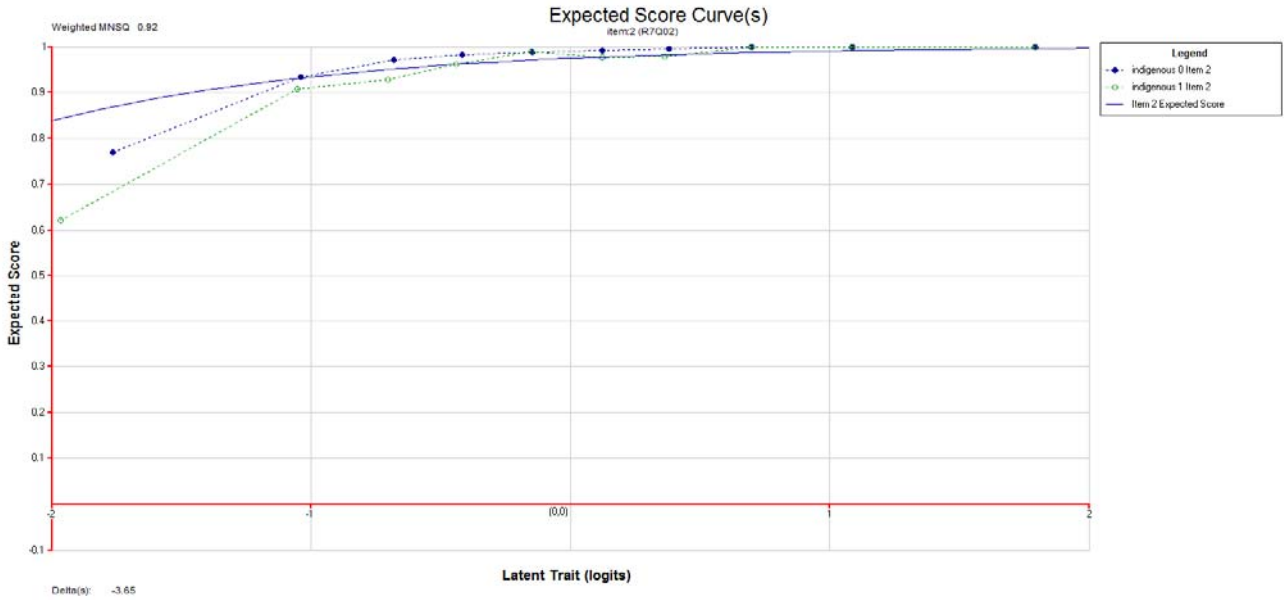

Expected Score Curve(s)
Item:5 (RSQ05)
Weighted MNSQ 1.01
Legend
indigenous 0 Item 5
indigenous 1 Item 5
Item 5 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): -4.15

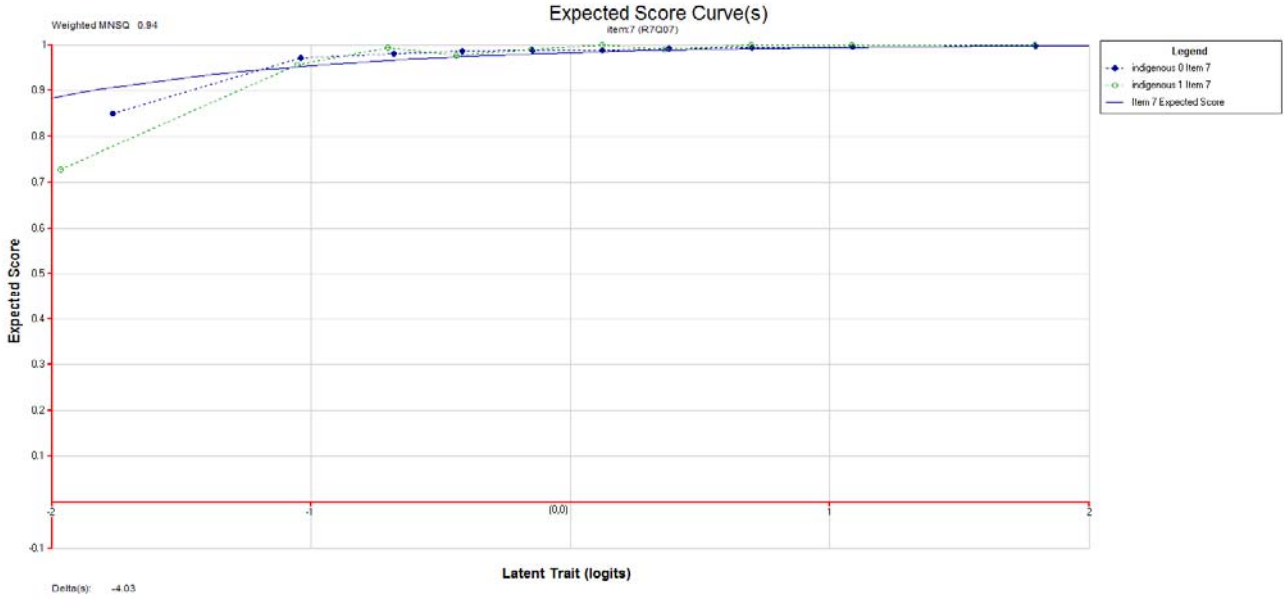

Expected Score Curve(s)
Item:16 (RSQ16)
Weighted MNSQ 1.06
Legend
indigenous 0 Item 16
indigenous 1 Item 16
Item 16 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 1.06


Expected Score Curve(s)
Item:28 (RSQ28)
Weighted MNSQ 1.25
Legend
indigenous 0 Item 28
indigenous 1 Item 28
Item 28 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 0.83

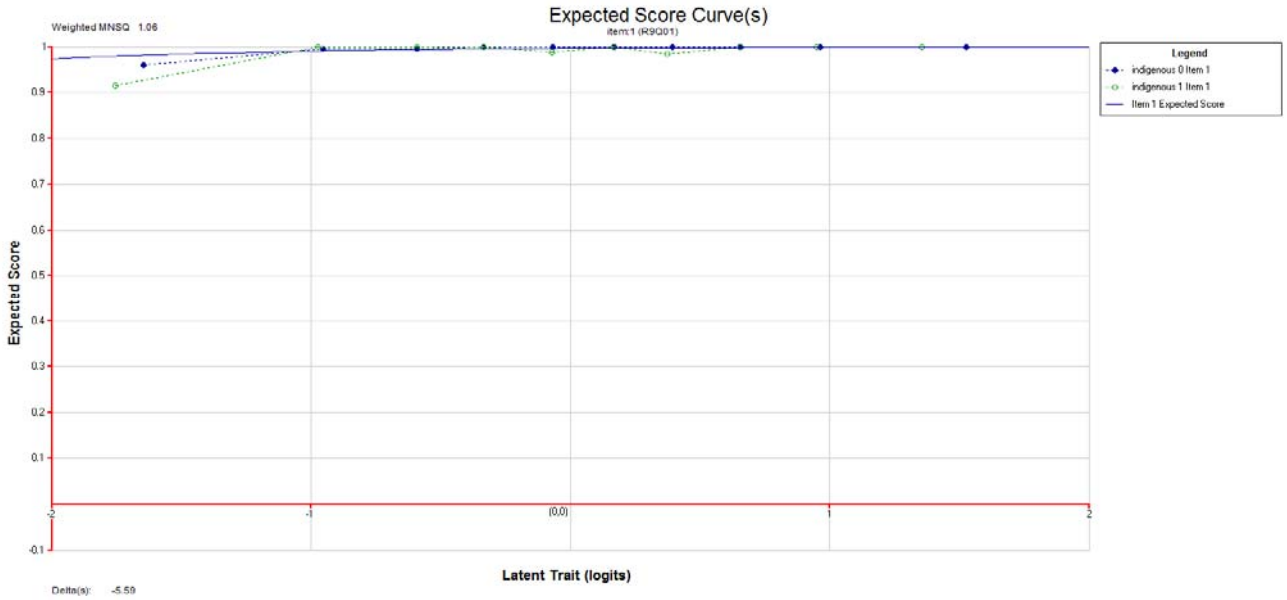

Expected Score Curve(s)
Item:36 (RSQ36)
Weighted MNSQ 1.21
Legend
indigenous 0 Item 36
indigenous 1 Item 36
Item 36 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 1.01

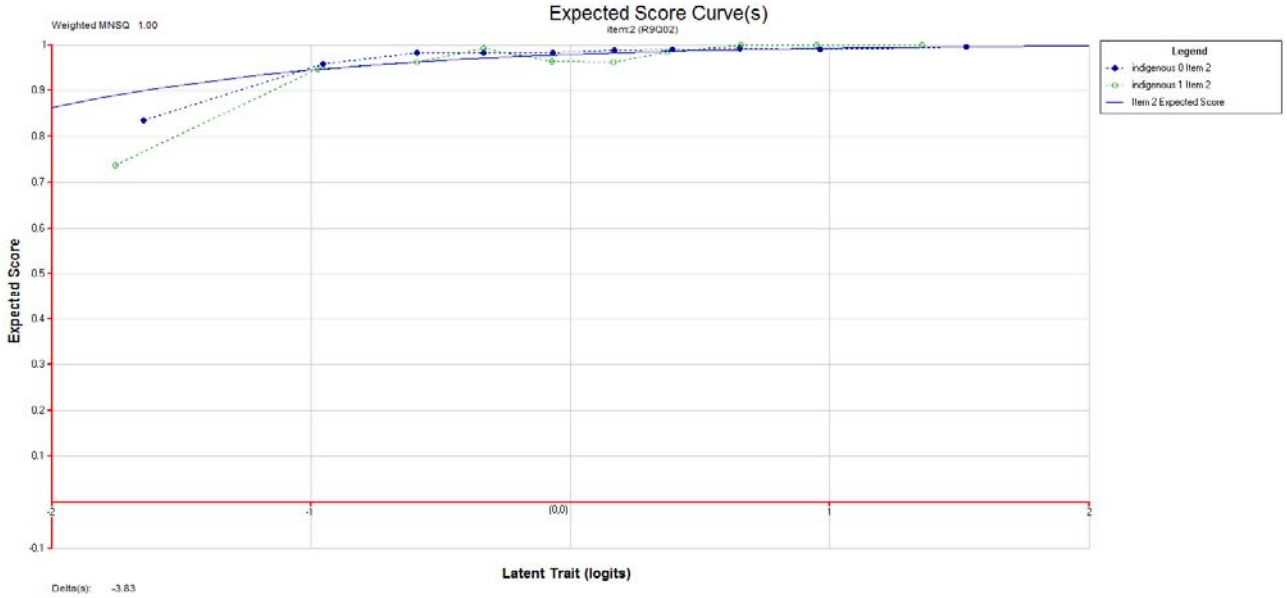
H.6.3. Year 7 Reading

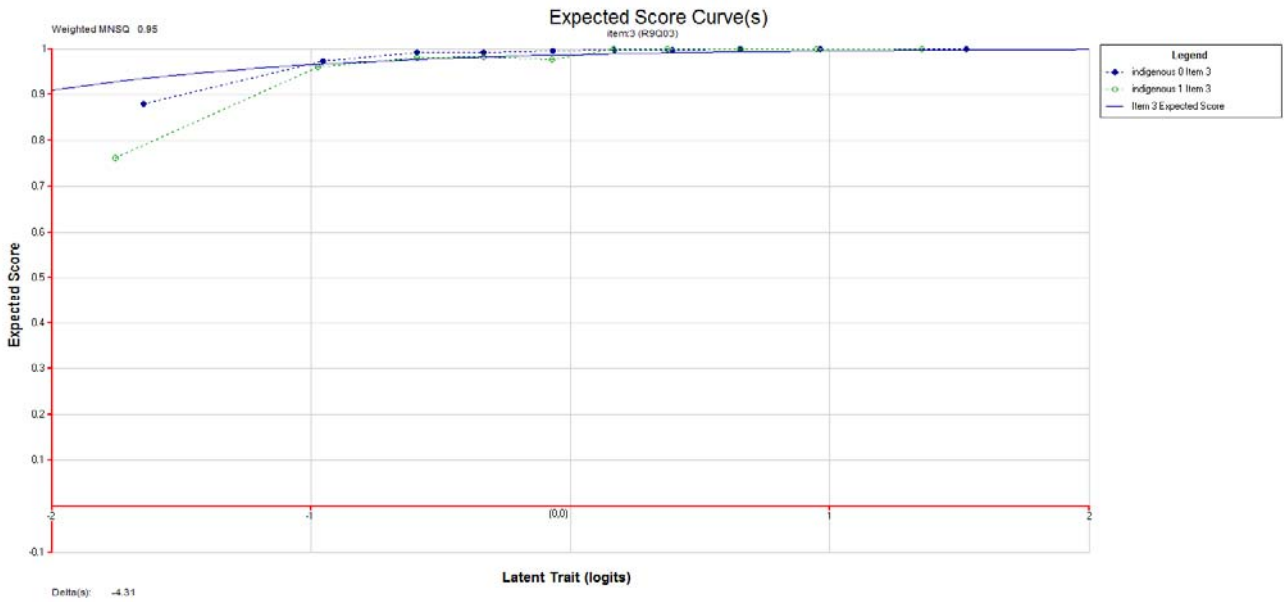


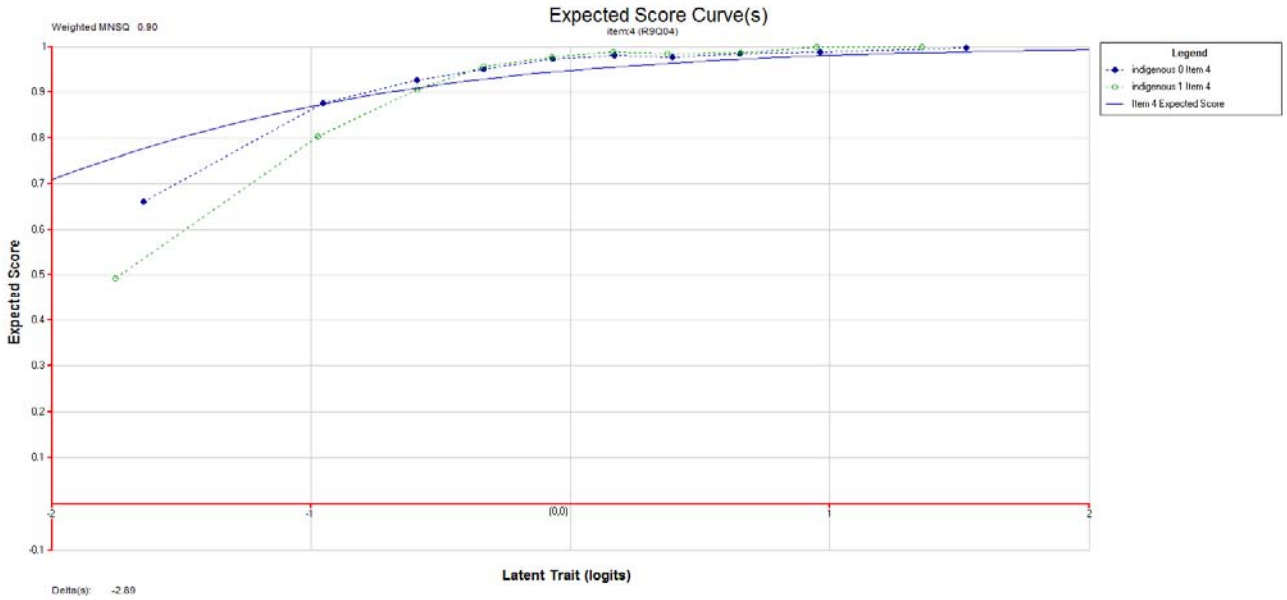


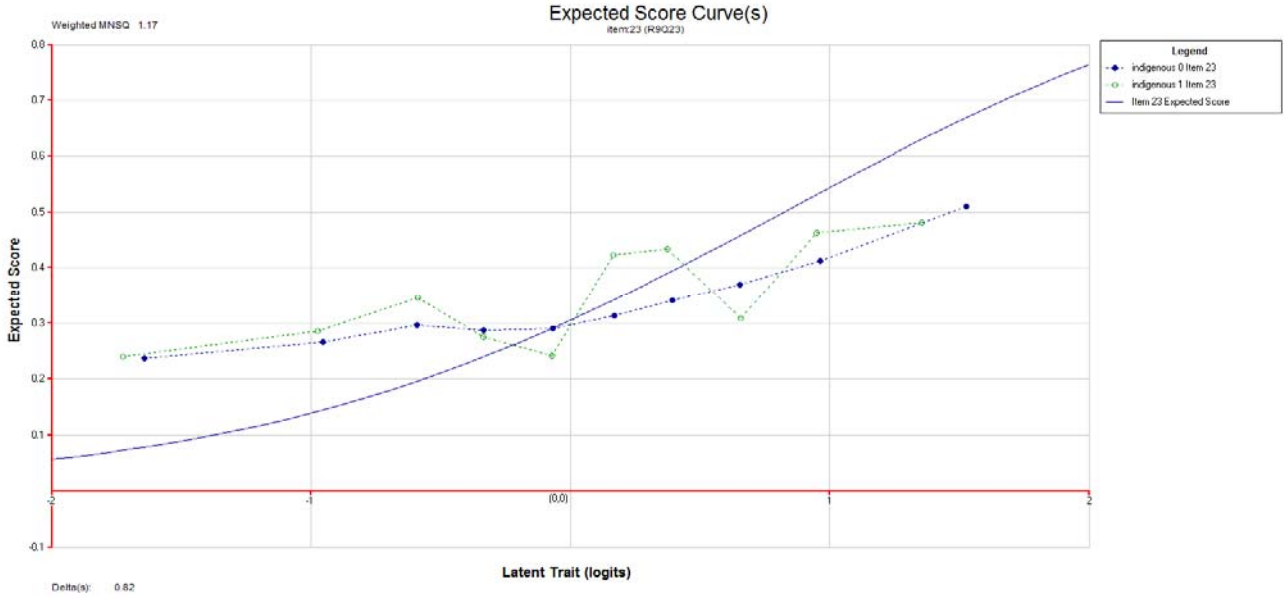
H.6.4. Year 9 Reading

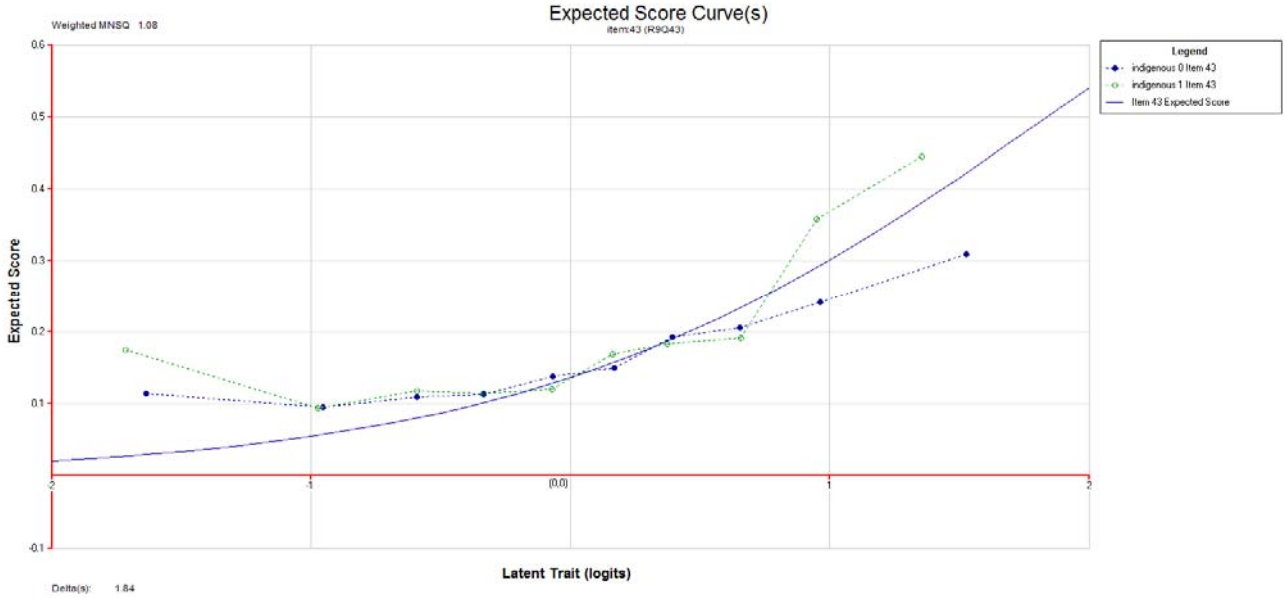




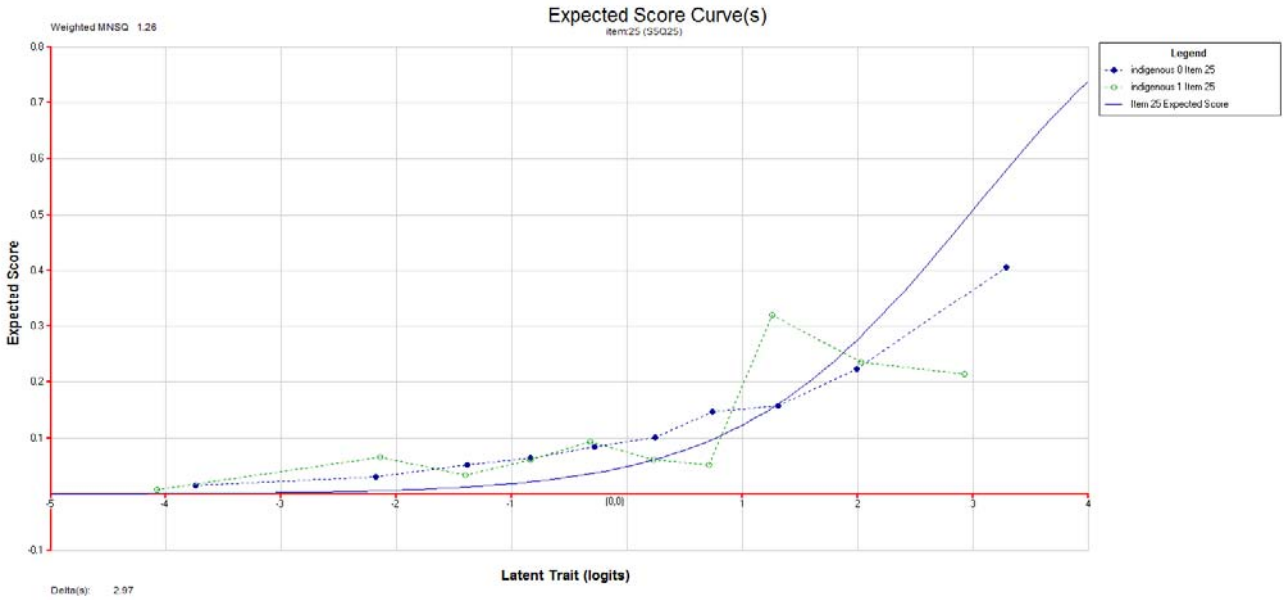



Expected Score Curve(s)
item:4 (R9Q04)
Weighted MNSQ 0.90
Legend
indigenous 0 Item 4
indigenous 1 Item 4
Item 4 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): -2.89

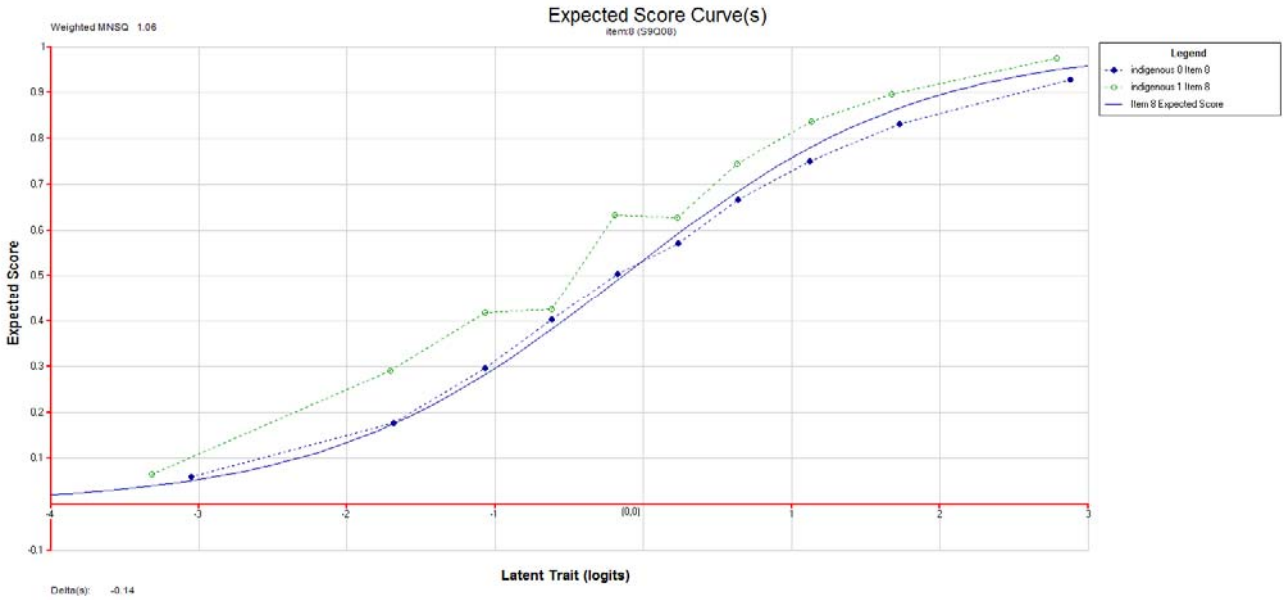

Expected Score Curve(s)
item:23 (R9Q23)
Weighted MNSQ 1.17
Legend
indigenous 0 Item 23
indigenous 1 Item 23
Item 23 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 0.82


Expected Score Curve(s)
item:43 (R9Q43)
Weighted MNSQ 1.08
Legend
indigenous 0 Item 43
indigenous 1 Item 43
Item 43 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 1.84

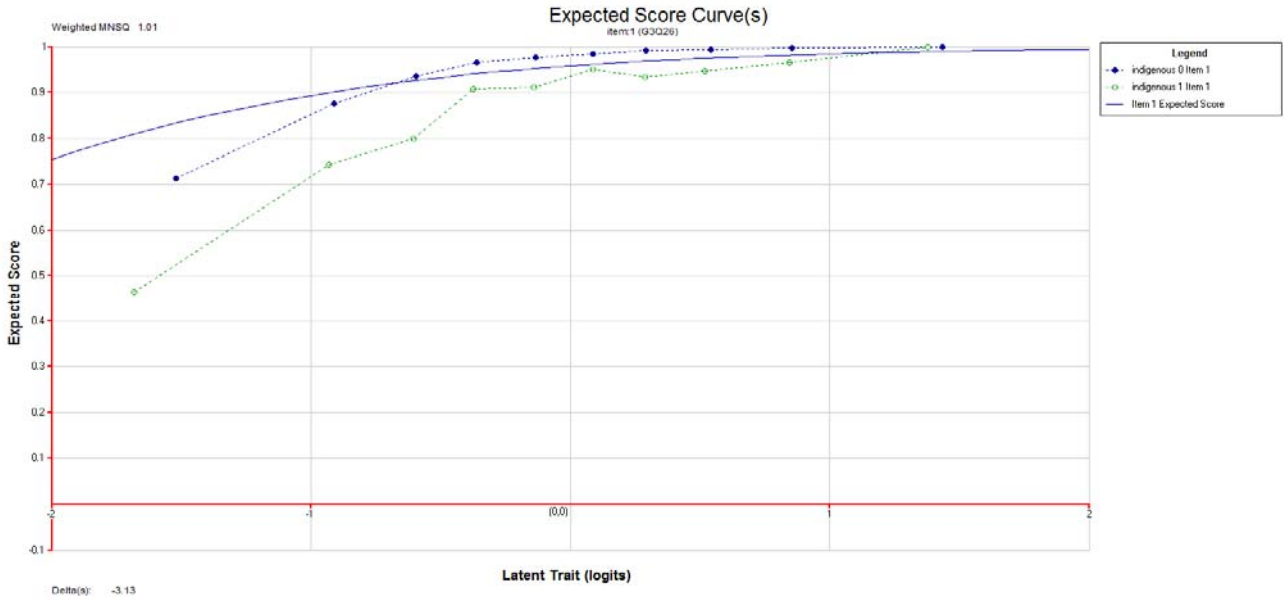
H.6.5. Year 5 Spelling

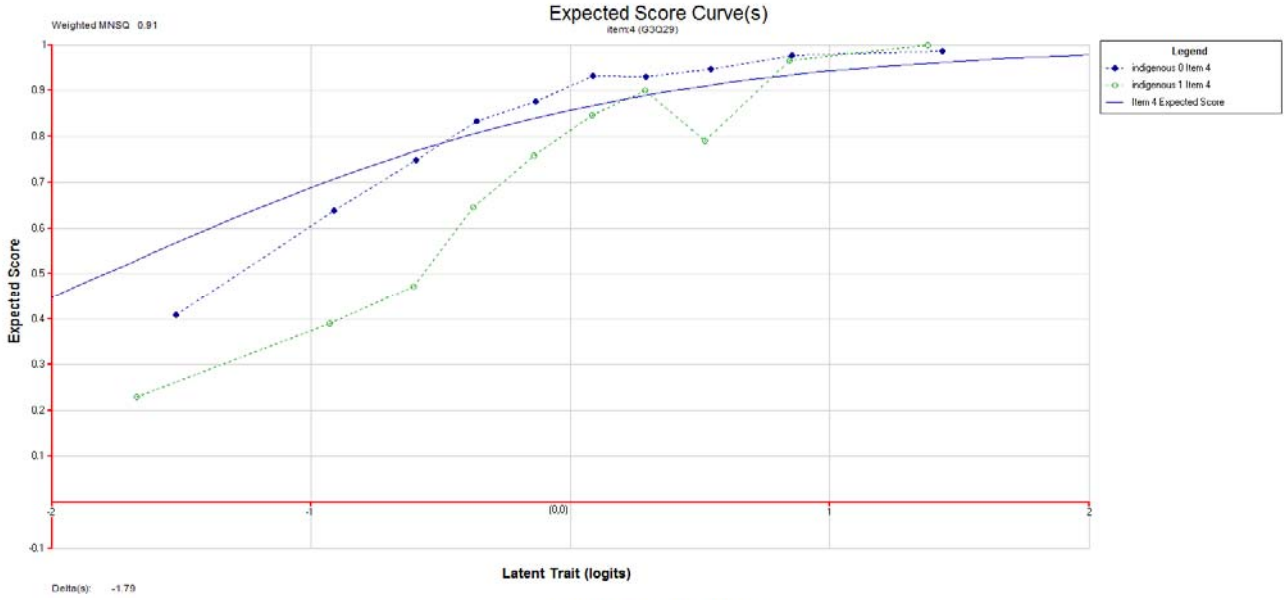


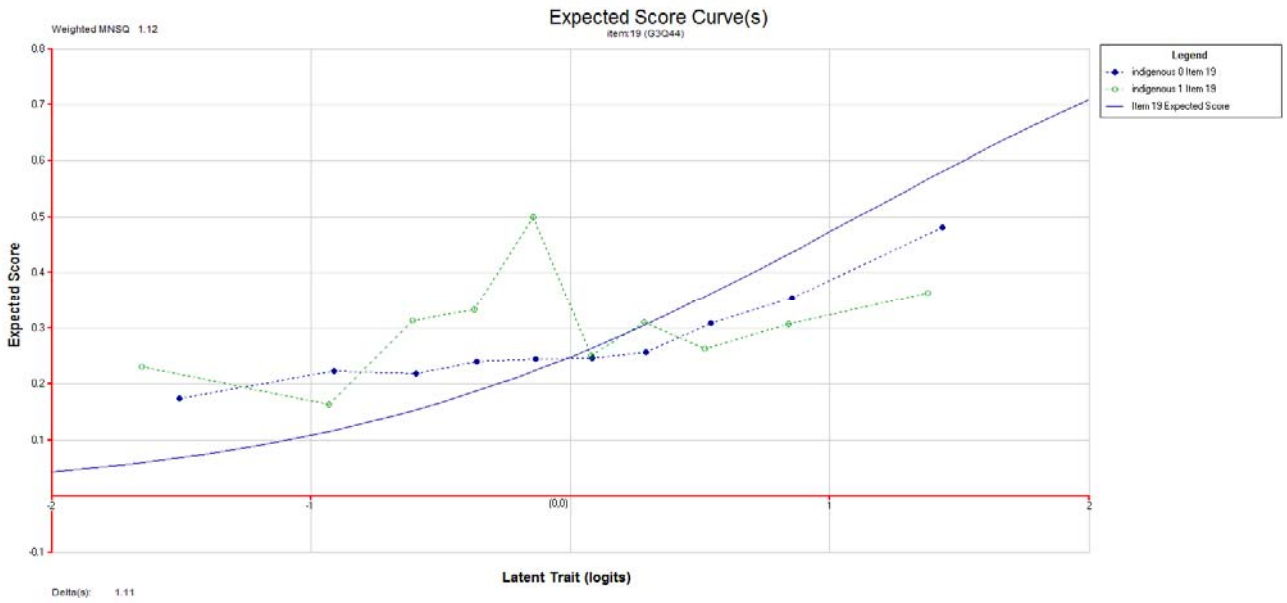
H.6.6. Year 9 Spelling

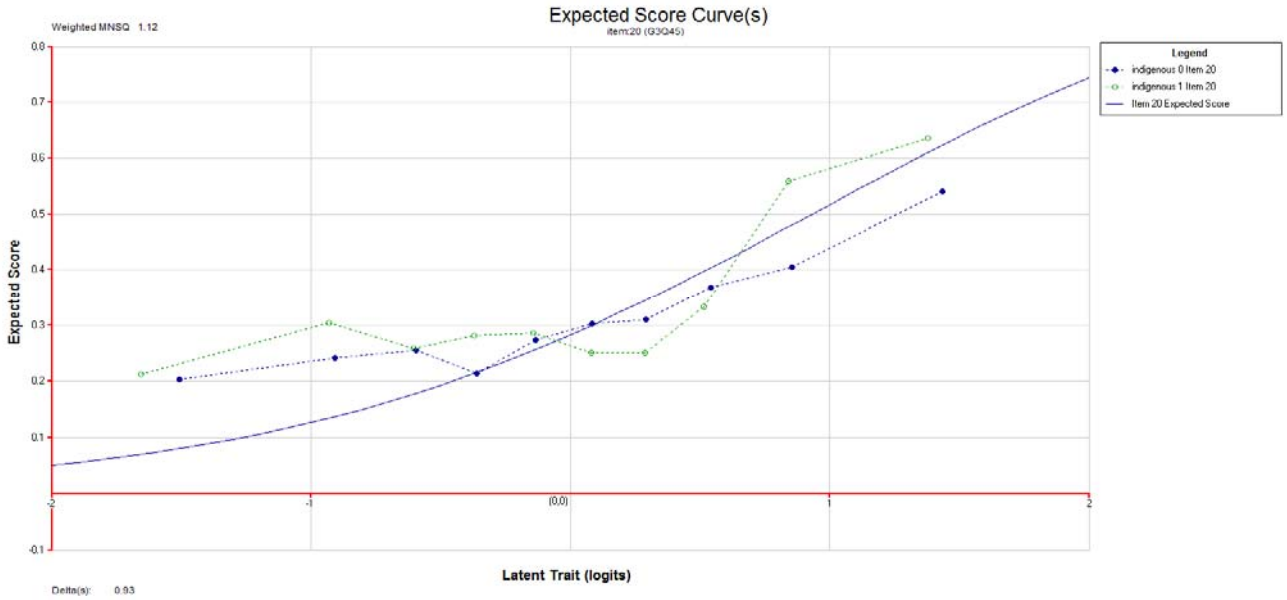


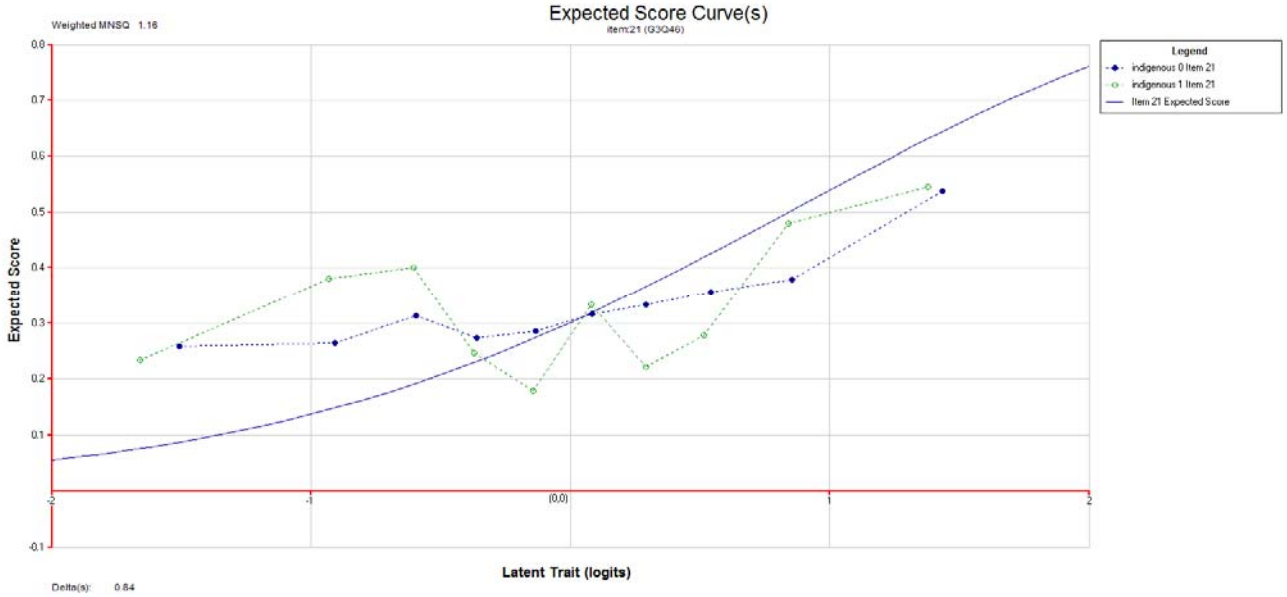
H.6.7. Year 3 Grammar and Punctuation

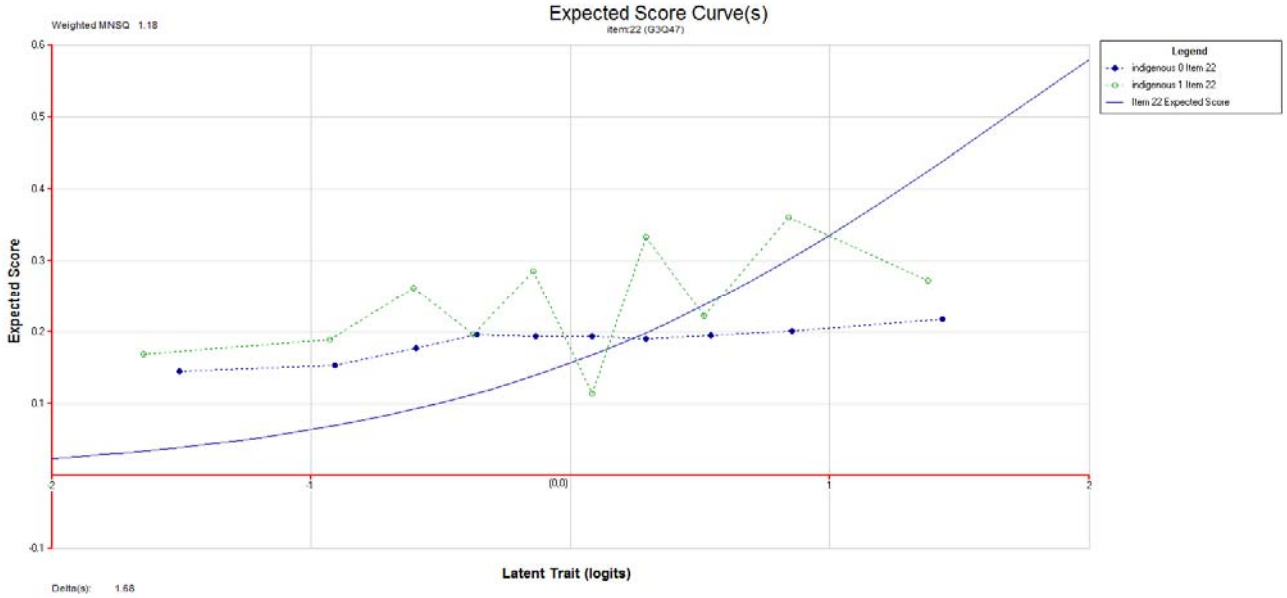


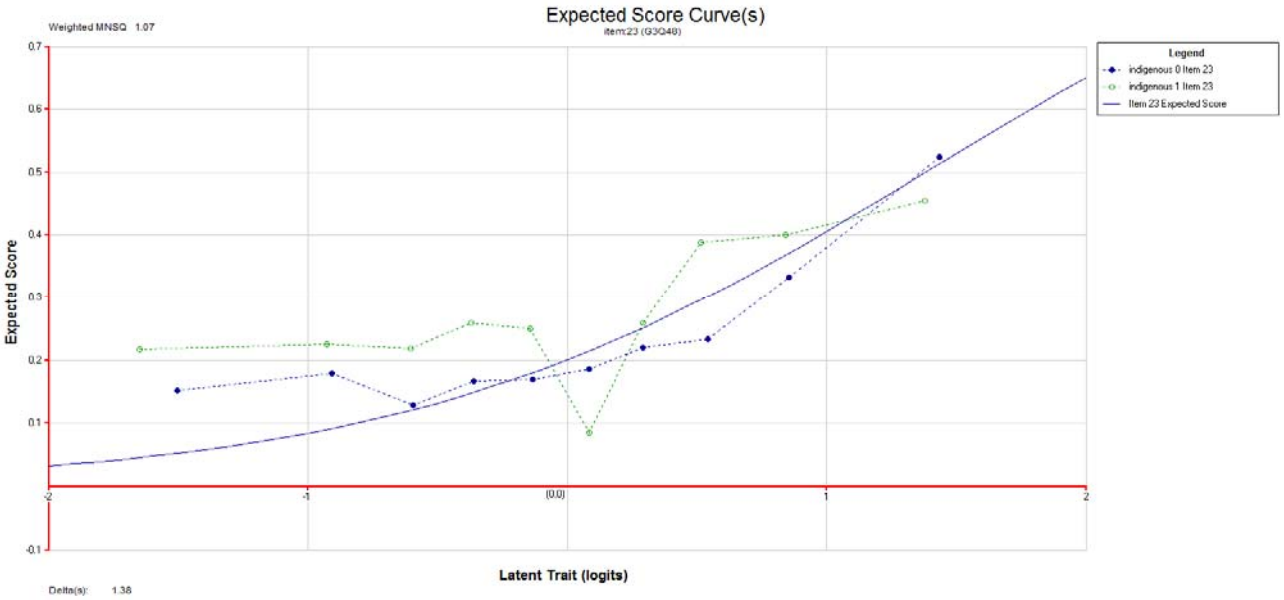


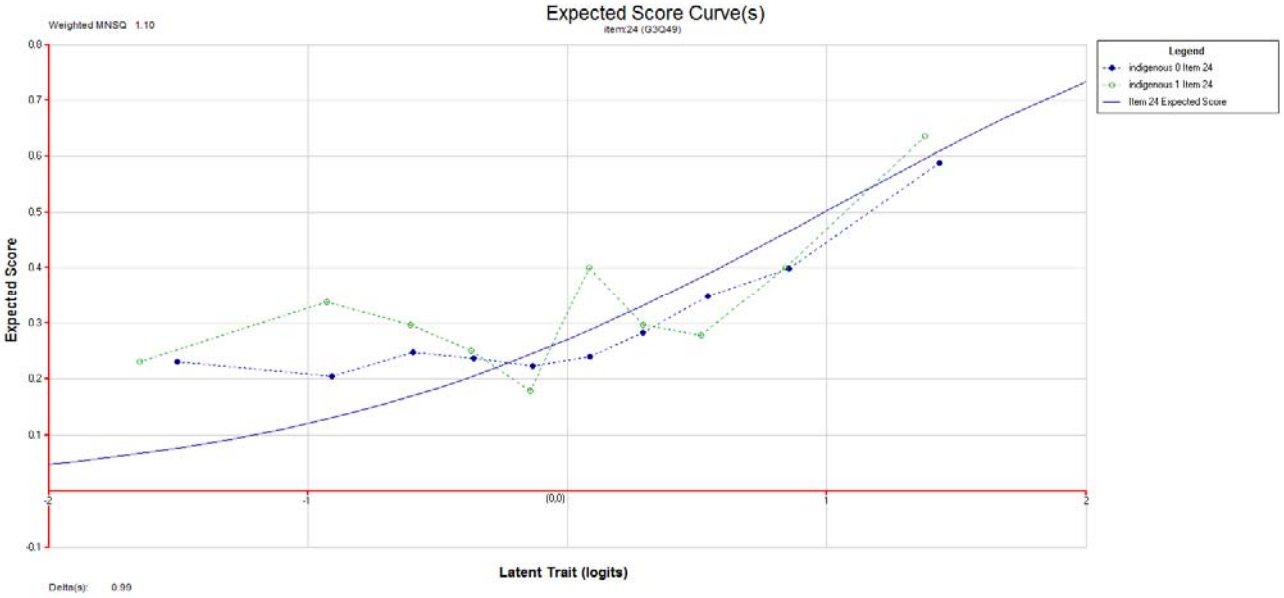



Expected Score Curve(s)
item:20 (G3Q45)
Weighted MNSQ 1.12
Legend
indigenous 0 Item 20
indigenous 1 Item 20
Item 20 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 0.93

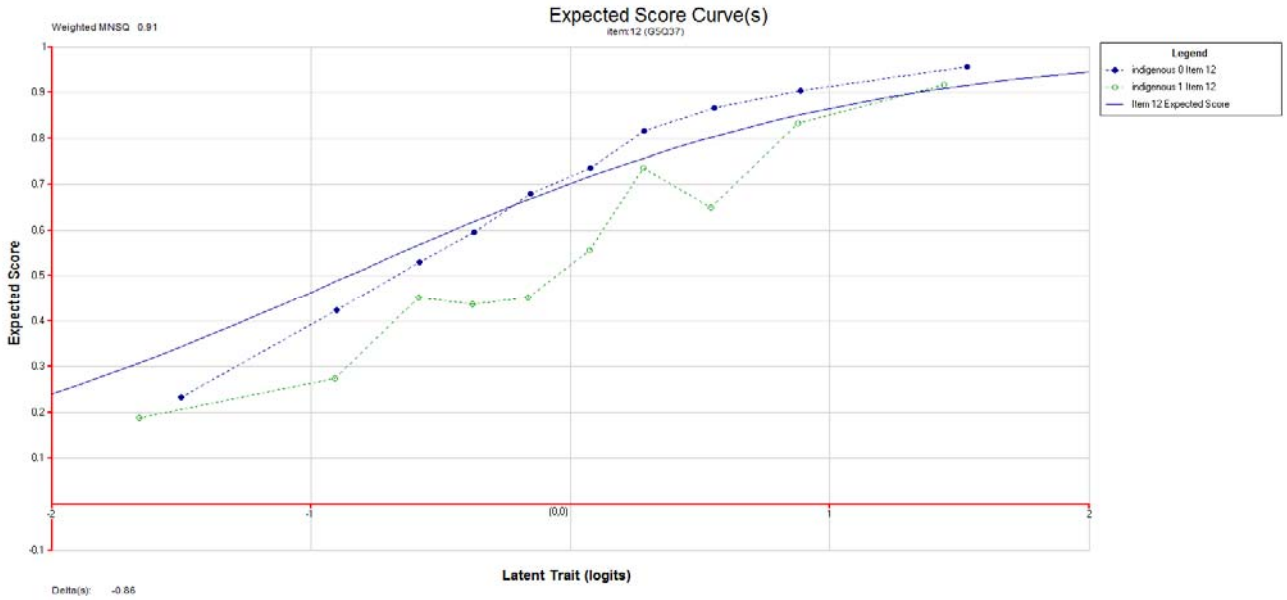

Expected Score Curve(s)
item:21 (G3Q46)
Weighted MNSQ 1.16
Legend
indigenous 0 Item 21
indigenous 1 Item 21
Item 21 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 0.84

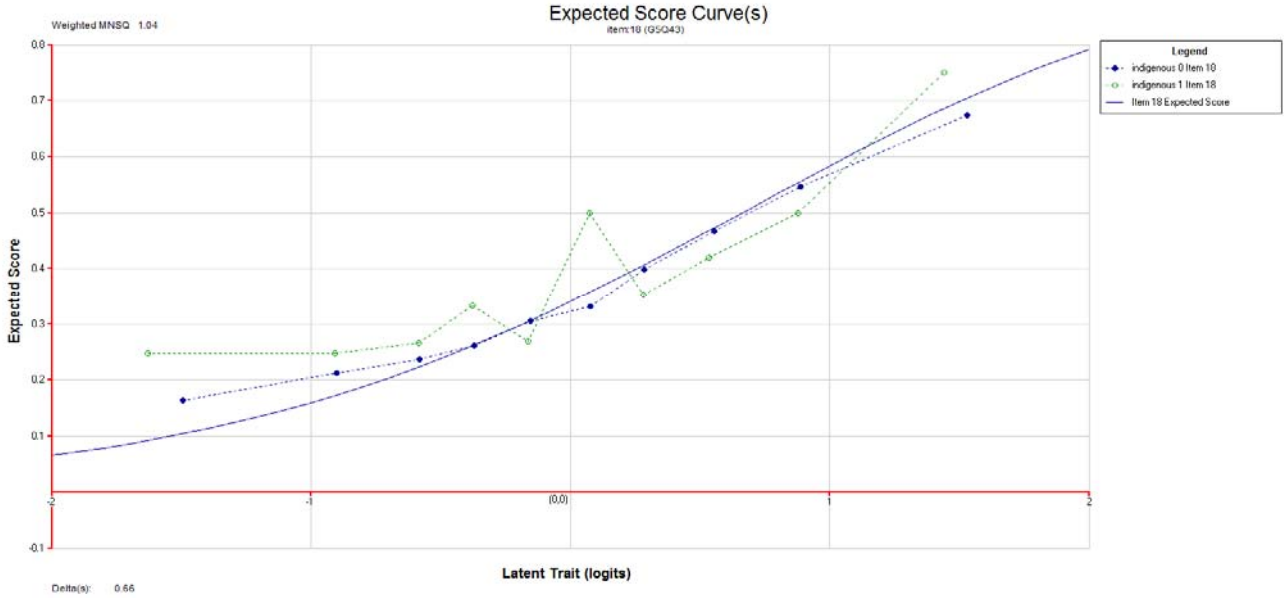

Expected Score Curve(s)
item:22 (G3Q47)
Weighted MNSQ 1.18
Legend
indigenous 0 Item 22
indigenous 1 Item 22
Item 22 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 1.68

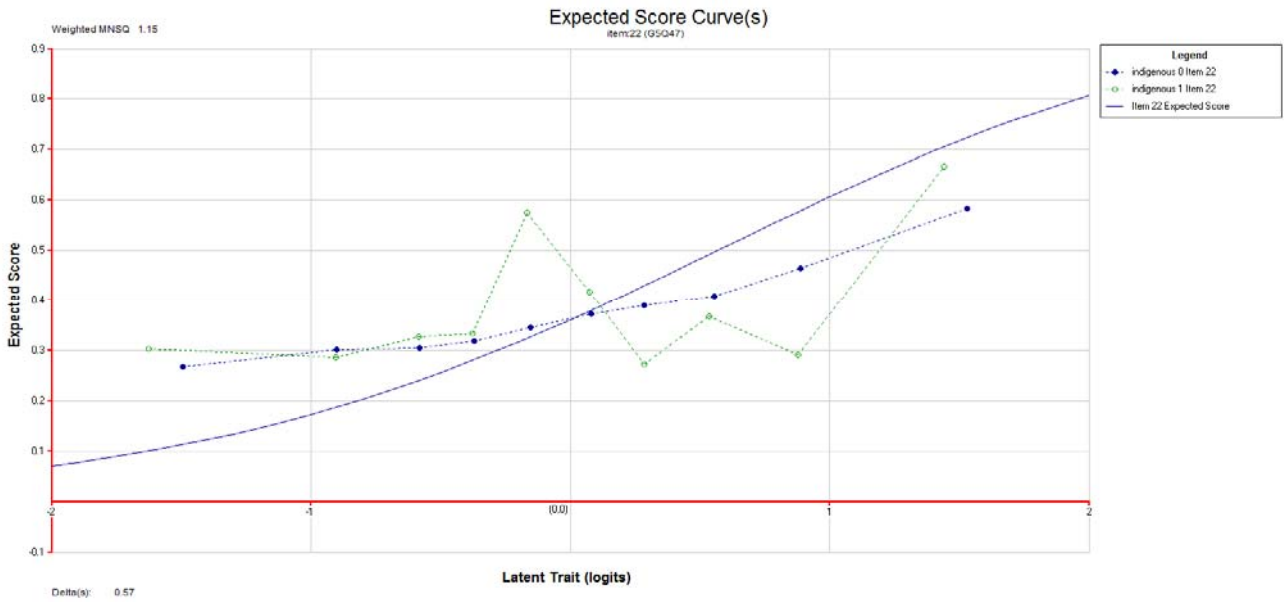

Expected Score Curve(s)
item:23 (G3Q48)
Weighted MNSQ 1.07
Legend
indigenous 0 Item 23
indigenous 1 Item 23
Item 23 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 1.38


Expected Score Curve(s)
item:24 (G3Q49)
Weighted MNSQ 1.10
Legend
indigenous 0 Item 24
indigenous 1 Item 24
Item 24 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 0.99

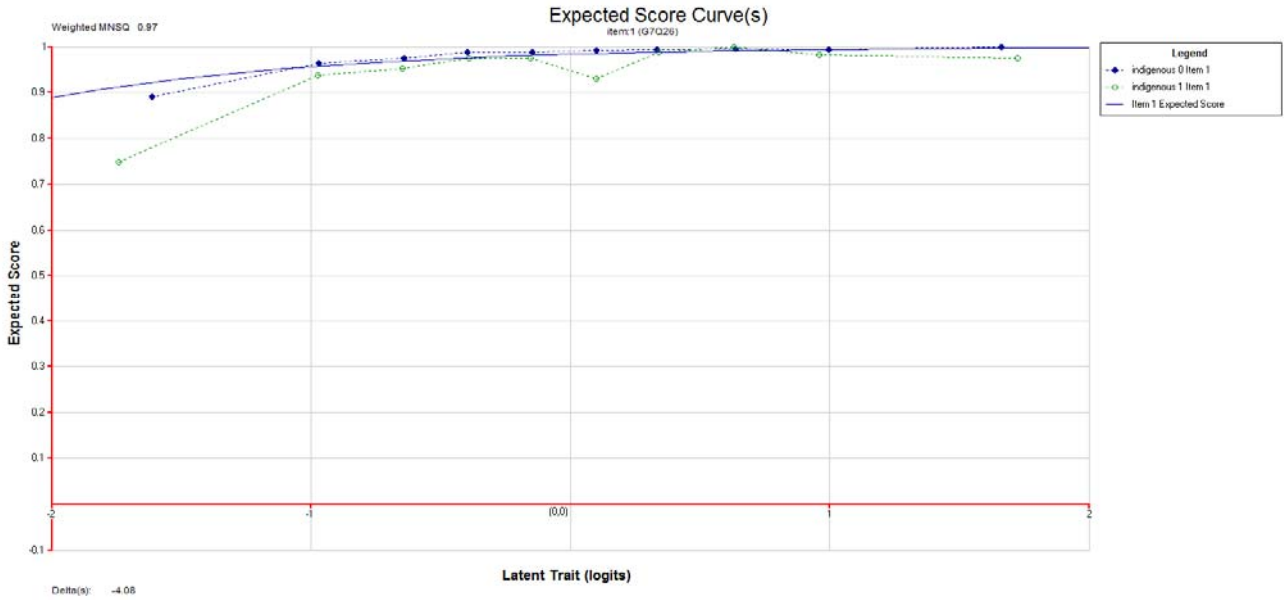
H.6.8. Year 5 Grammar and Punctuation

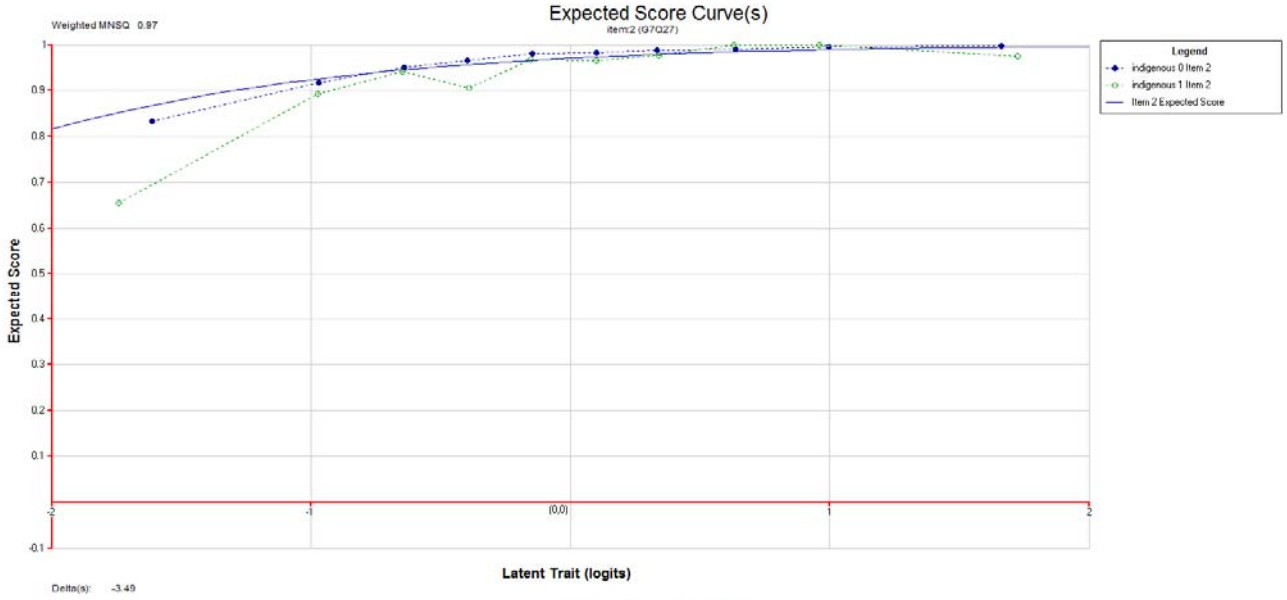


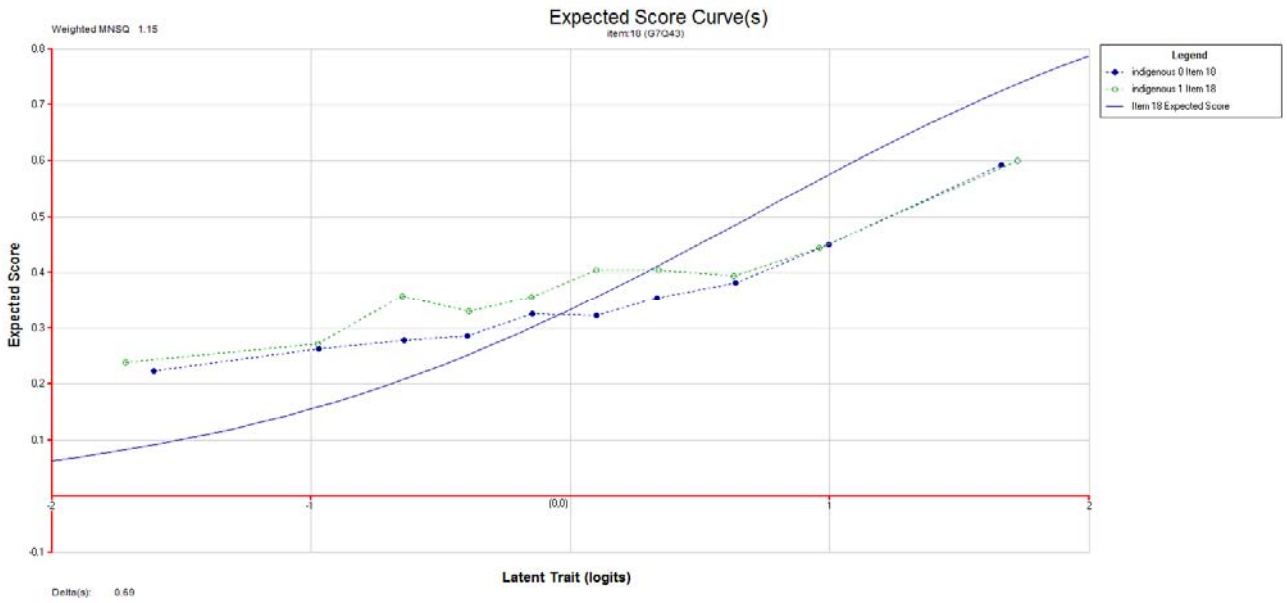


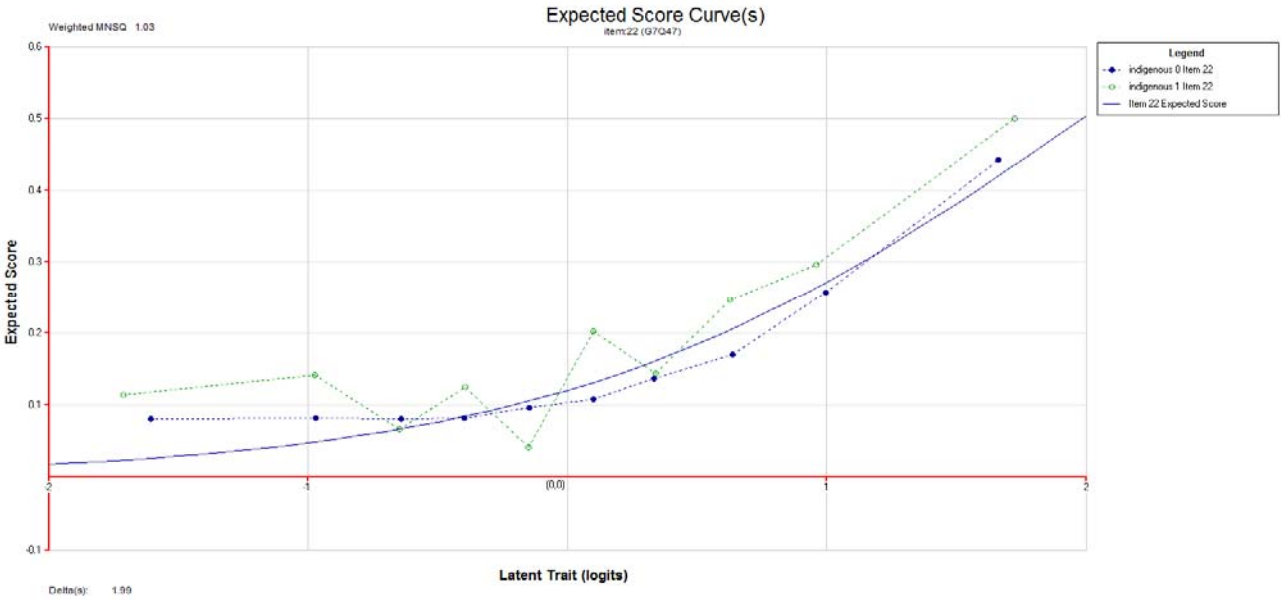


H.6.9. Year 7 Grammar and Punctuation

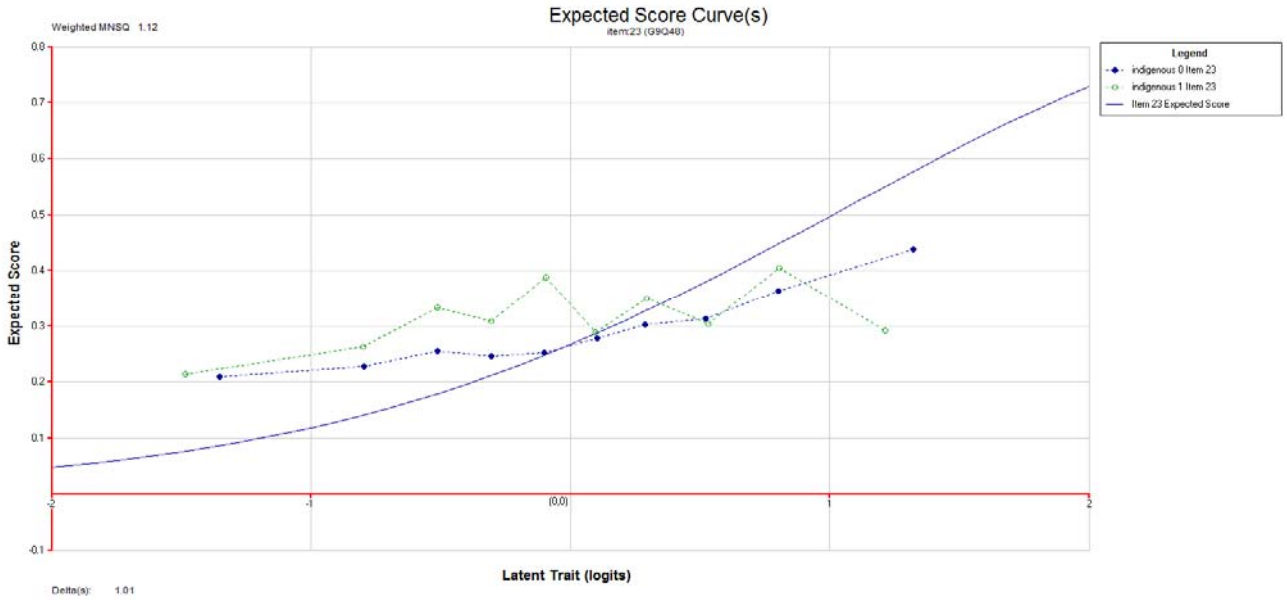


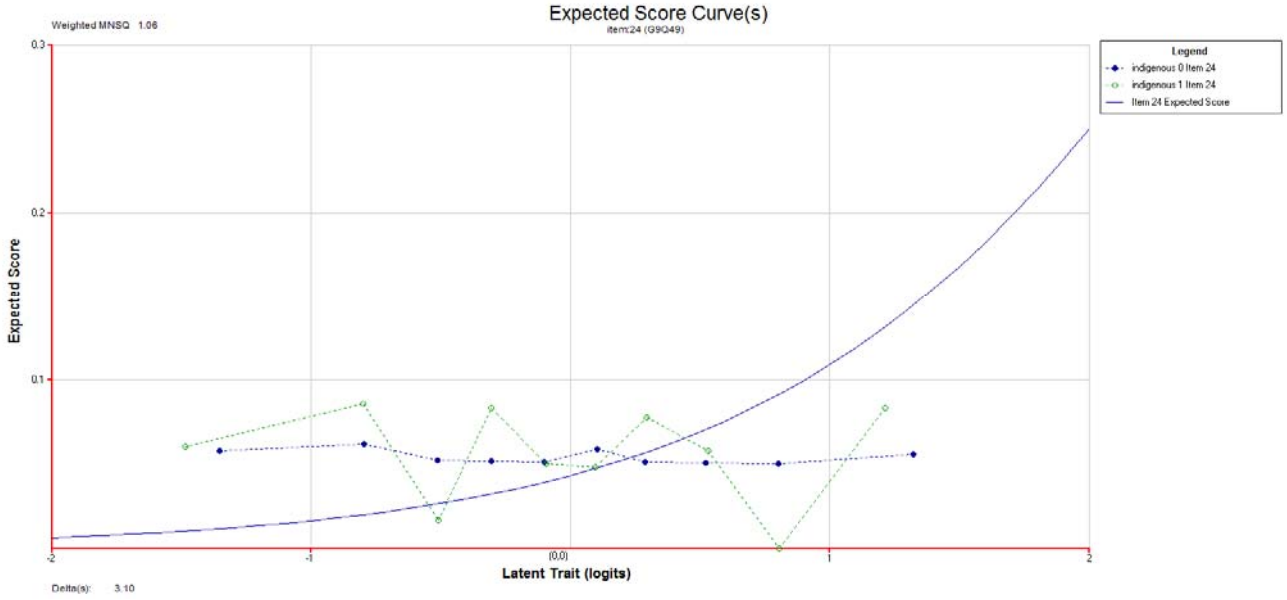




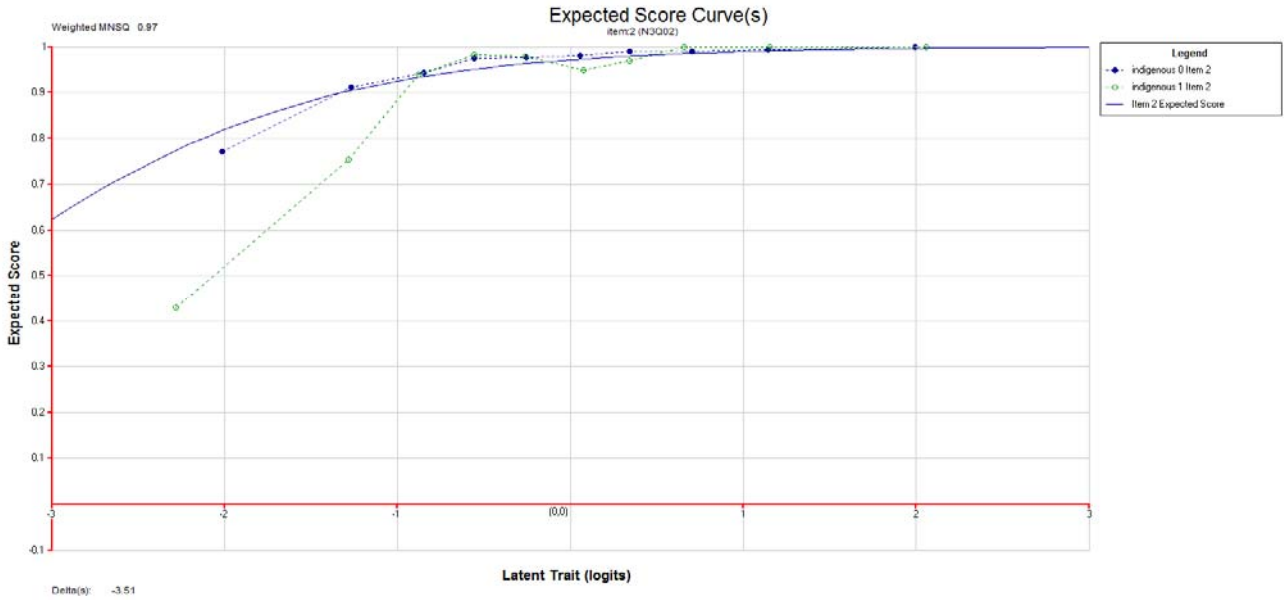

Expected Score Curve(s)
Item:22 (G7Q47)
Weighted MNSQ 1.03
Legend
indigenous 0 Item 22
indigenous 1 Item 22
Item 22 Expected Score
Expected Score
0.6
0.5
0.4
0.3
0.2
0.1
-0.1
-2
-1
(0,0)
1
2
Latent Trait (logits)
Delta(s): 1.99

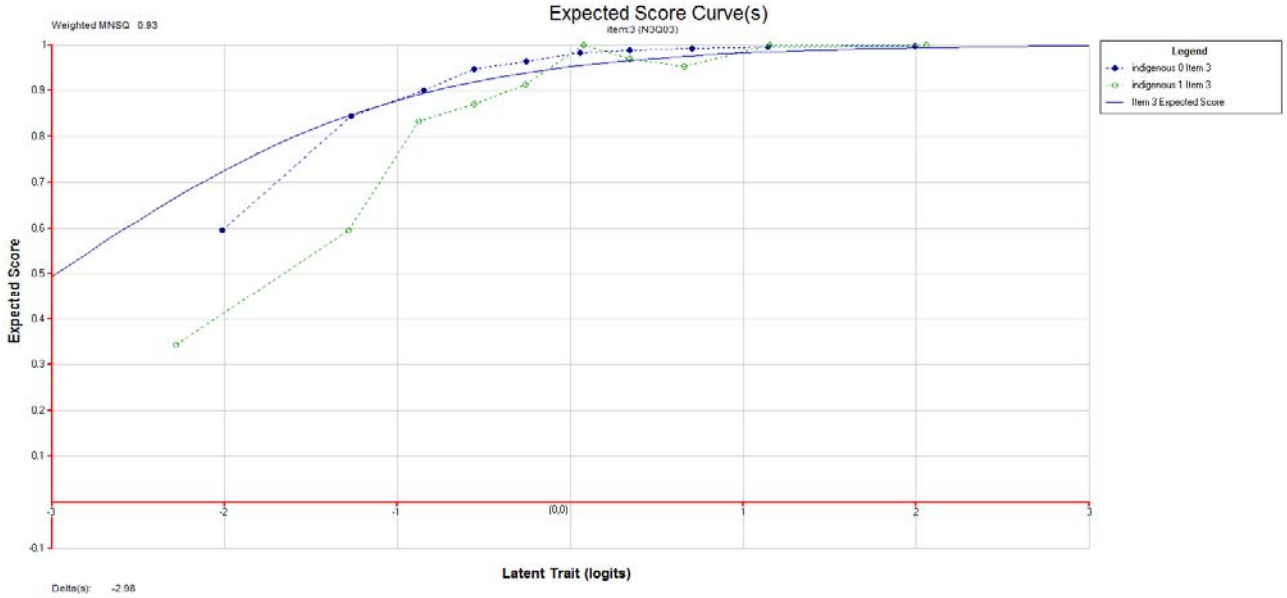
H.6.10. Year 9 Grammar and Punctuation

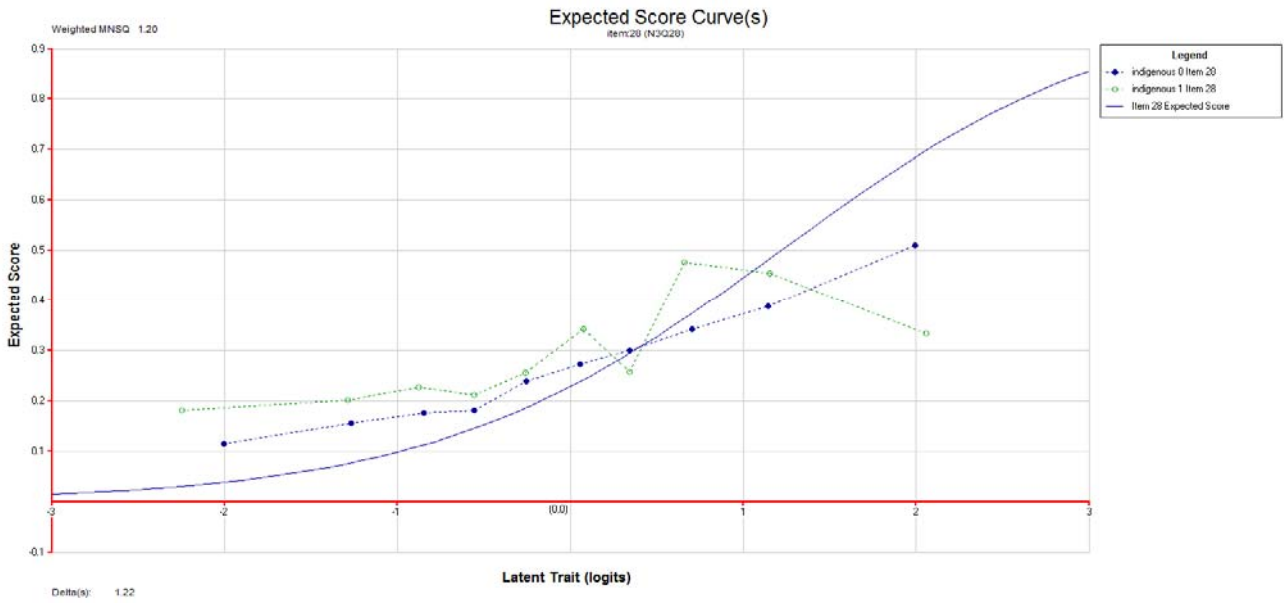


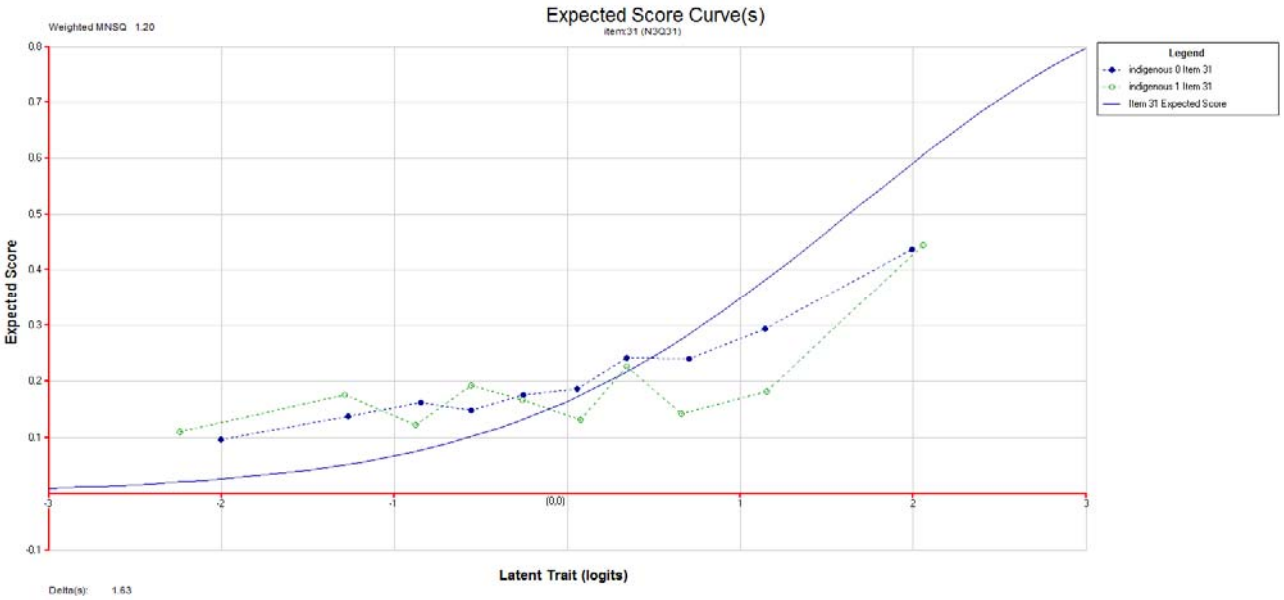


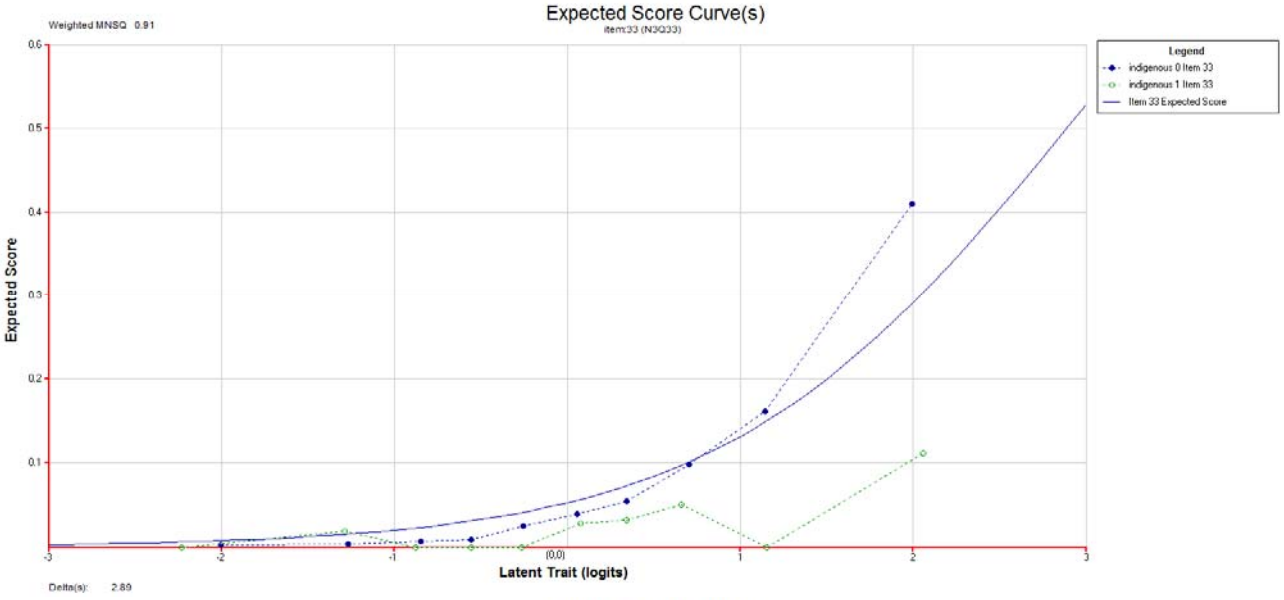
H.6.11. Year 3 Numeracy

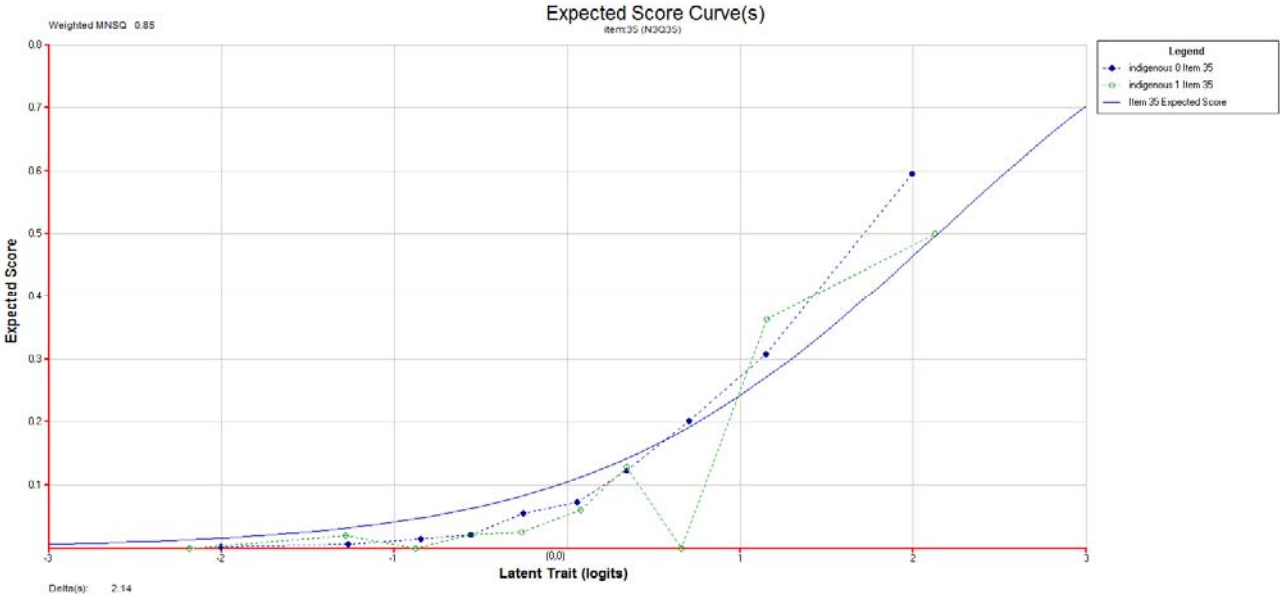




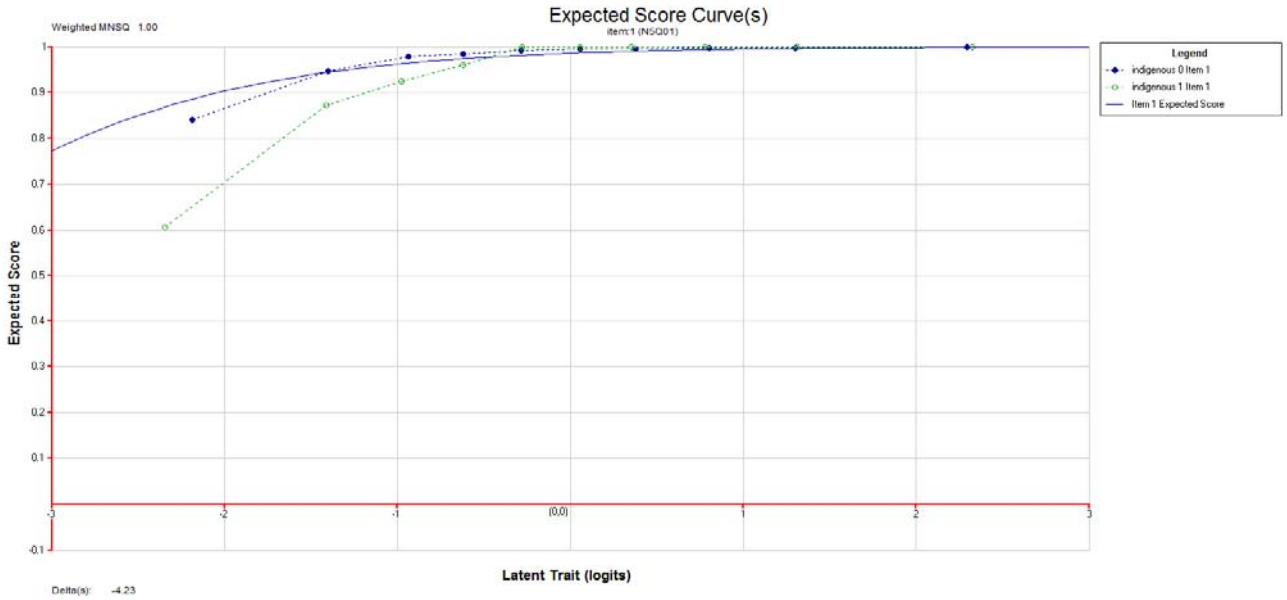


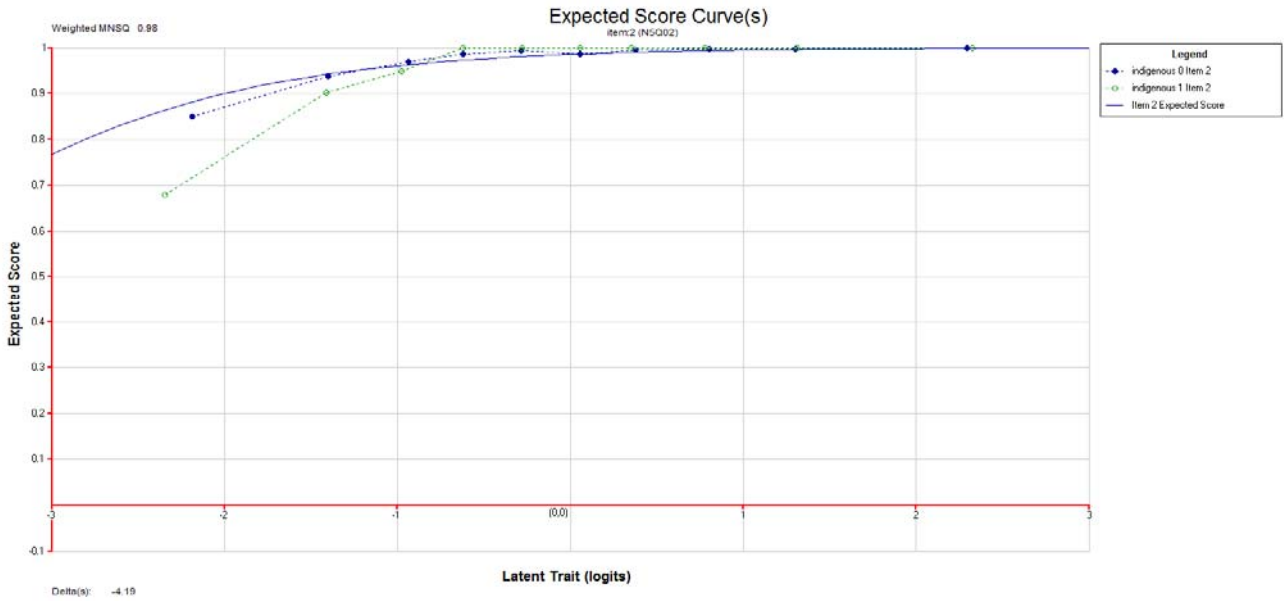

Expected Score Curve(s)
item:31 (N3Q31)
Weighted MNSQ 1.20
Legend
indigenous 0 Item 31
indigenous 1 Item 31
Item 31 Expected Score
Expected Score
Latent Trait (logits)
(0,0)
Delta(s): 1.63

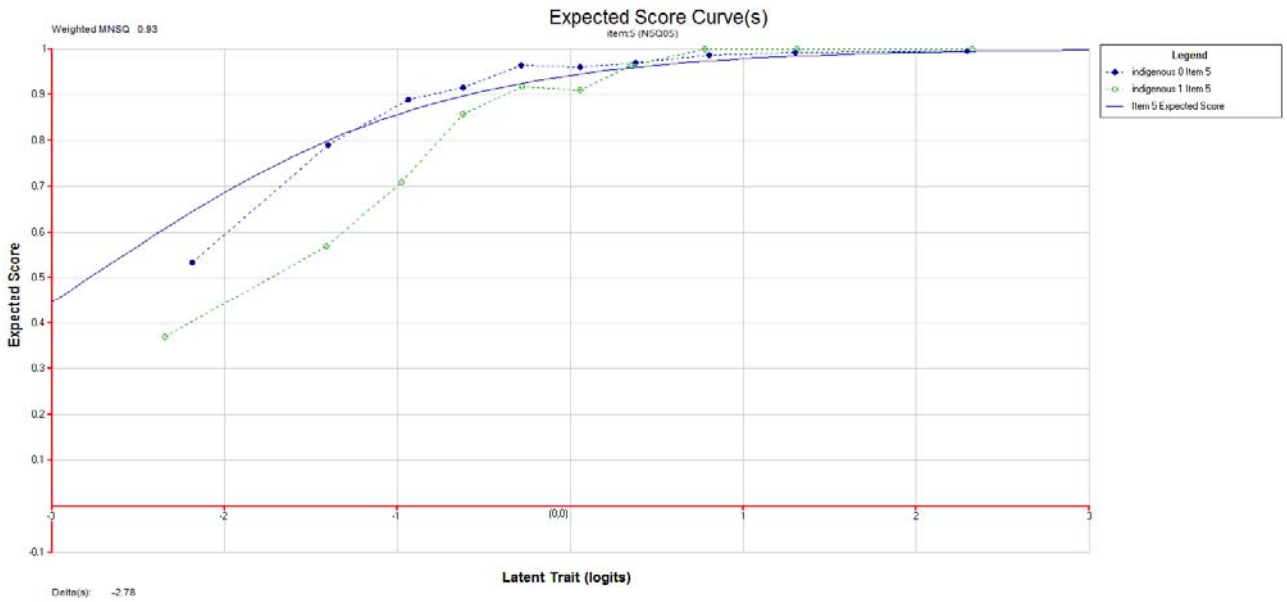

Expected Score Curve(s)
item:33 (N3Q33)
Weighted MNSQ 0.91
Legend
indigenous 0 Item 33
indigenous 1 Item 33
Item 33 Expected Score
Expected Score
Latent Trait (logits)
(0,0)
Delta(s): 2.89

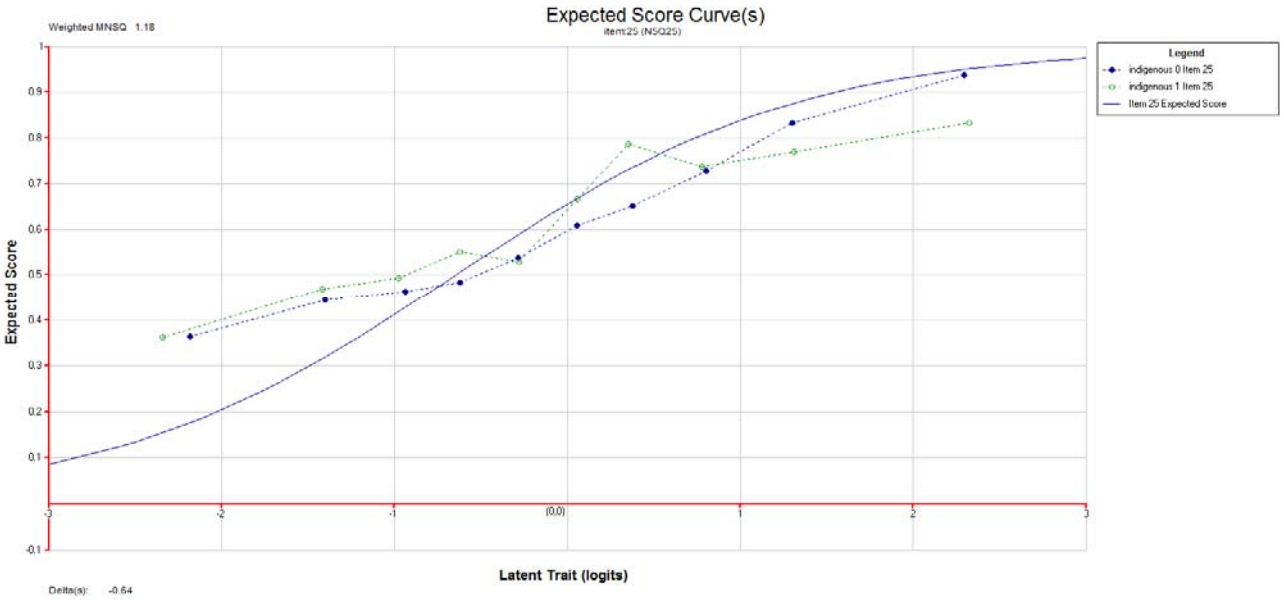

Expected Score Curve(s)
item:35 (N3Q35)
Weighted MNSQ 0.85
Legend
indigenous 0 Item 35
indigenous 1 Item 35
Item 35 Expected Score
Expected Score
Latent Trait (logits)
(0,0)
Delta(s): 2.14

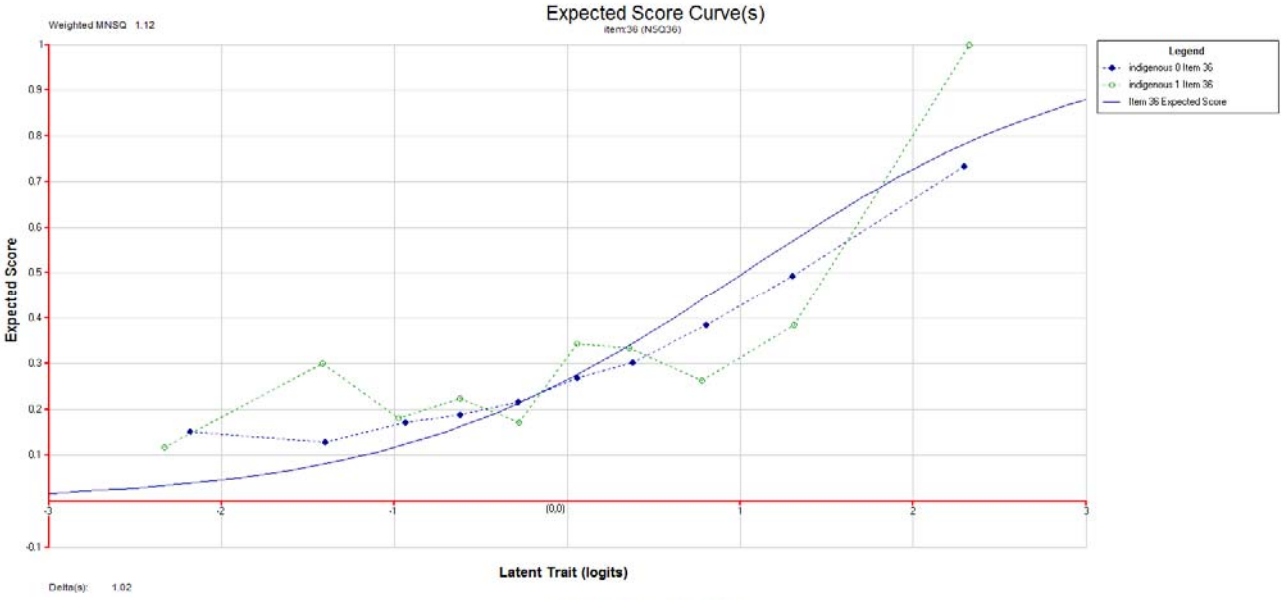
H.6.12. Year 5 Numeracy





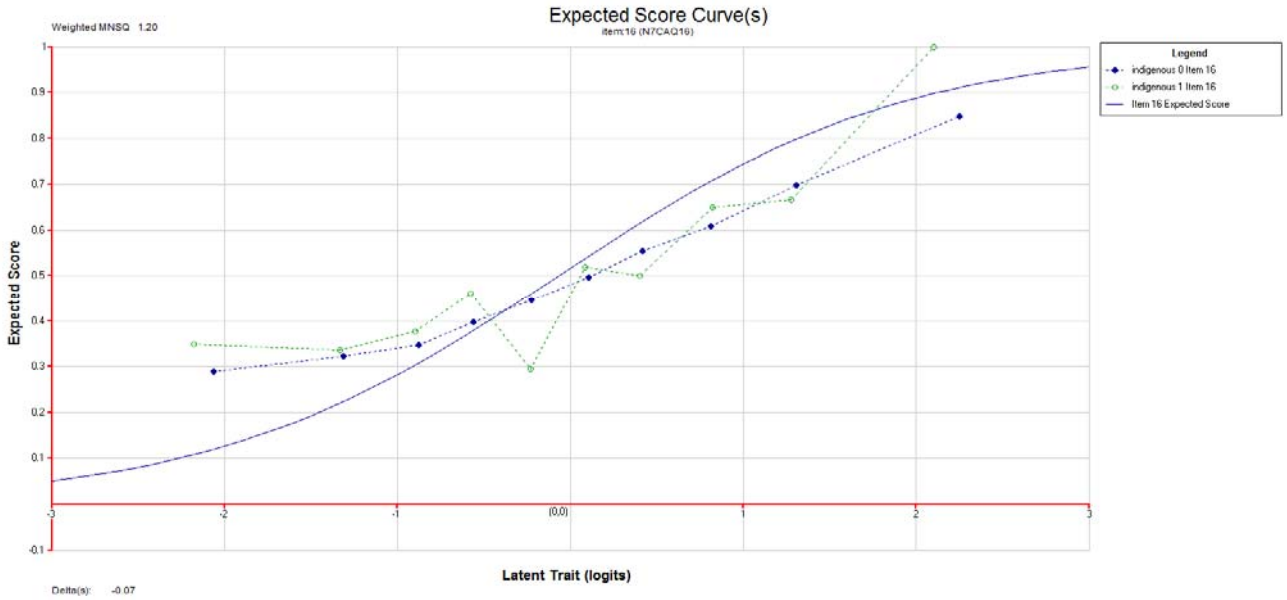


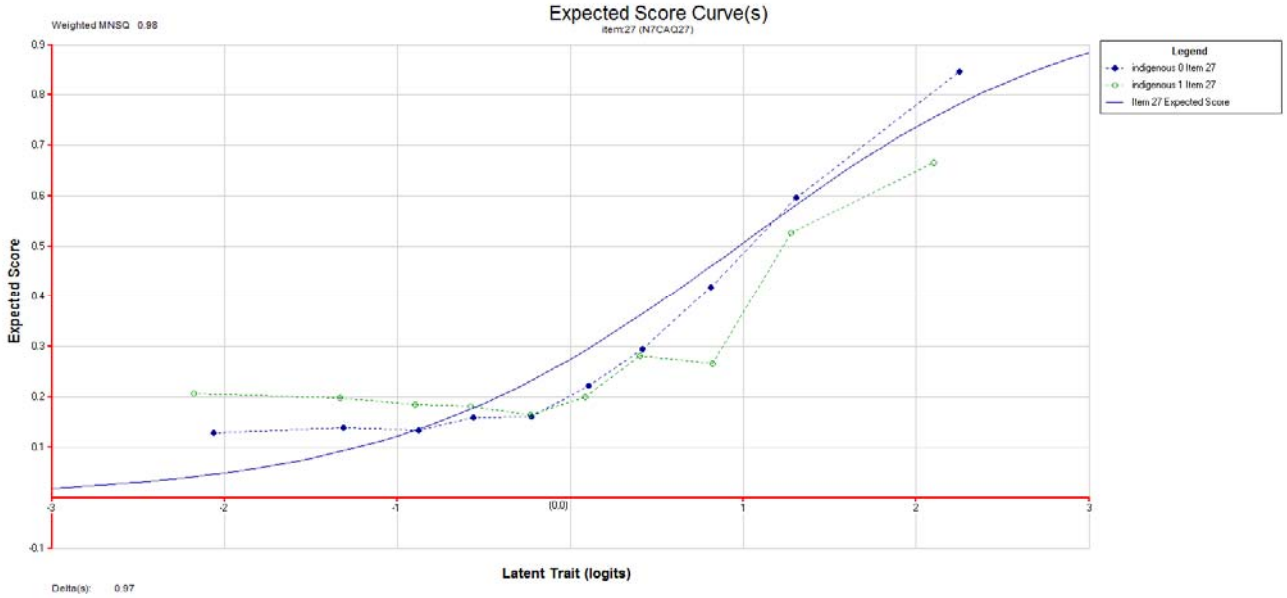

Expected Score Curve(s)
item:25 (NSQ25)
Weighted MNSQ 1.18
Legend
indigenous 0 Item 25
indigenous 1 Item 25
Item 25 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): -0.64

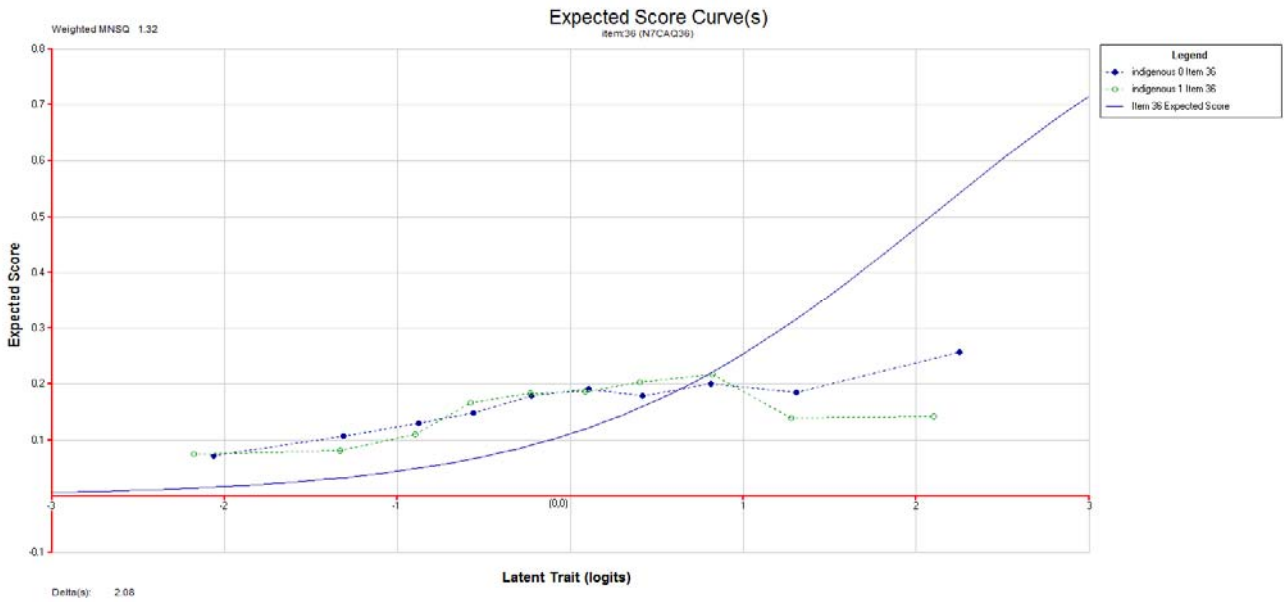

Expected Score Curve(s)
item:36 (NSQ36)
Weighted MNSQ 1.12
Legend
indigenous 0 Item 36
indigenous 1 Item 36
Item 36 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 1.02

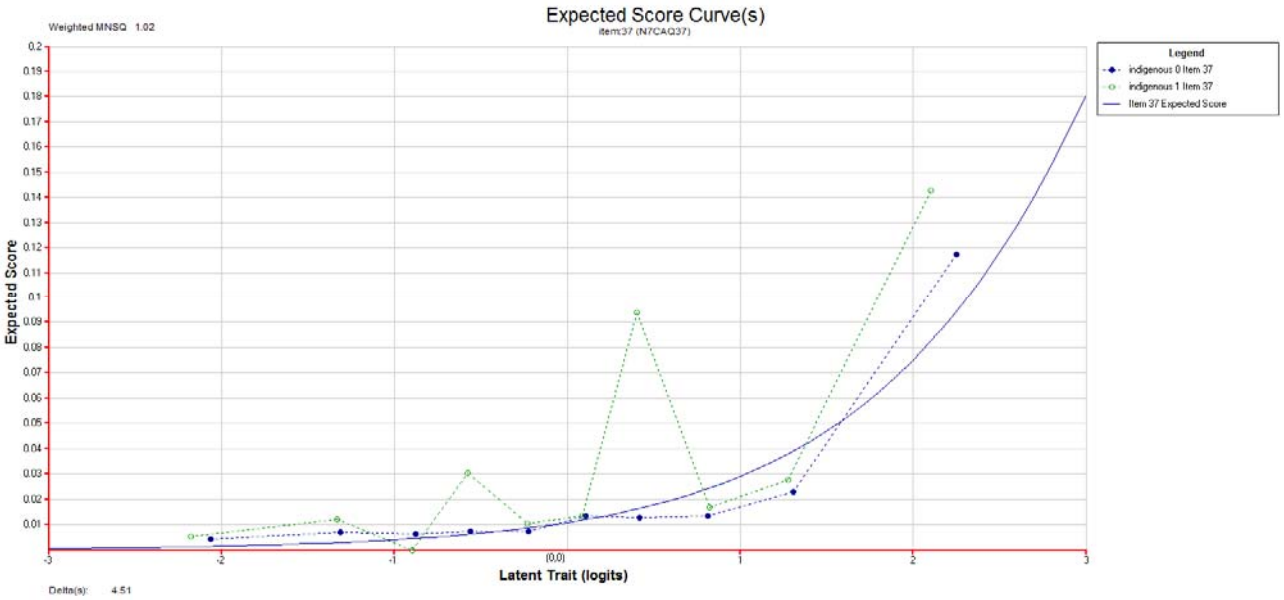
Expected Score Curve(s)
item:39 (NSQ39)
Weighted MNSQ 1.16
Legend
indigenous 0 Item 39
indigenous 1 Item 39
Item 39 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 1.51

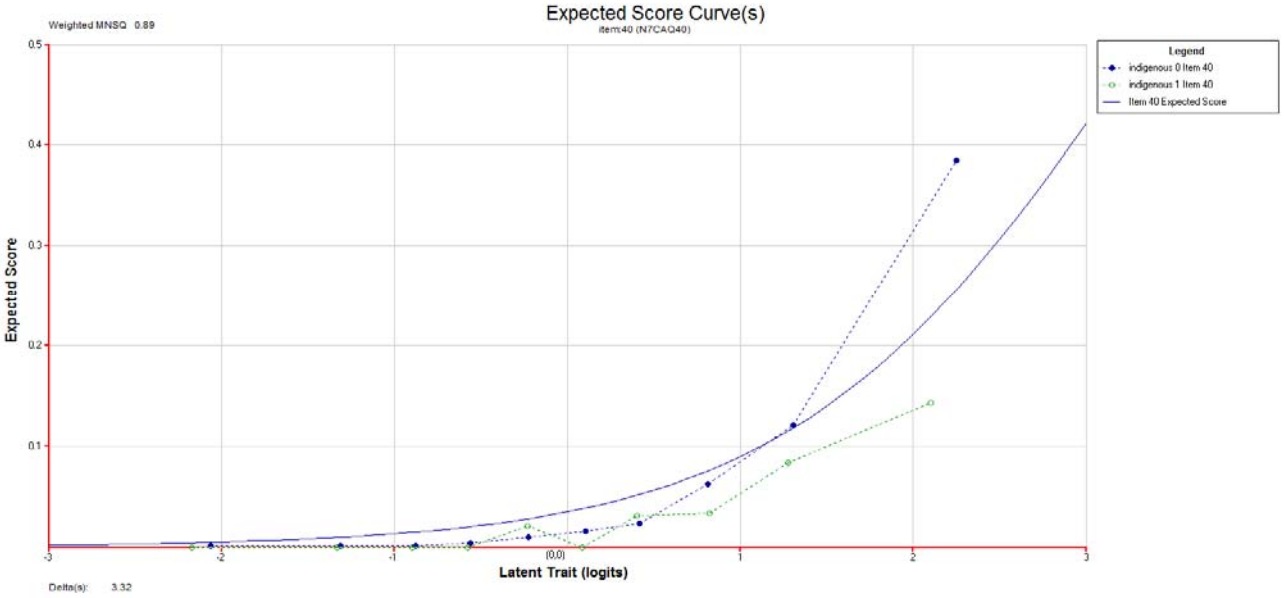
H.6.13. Year 7 Numeracy



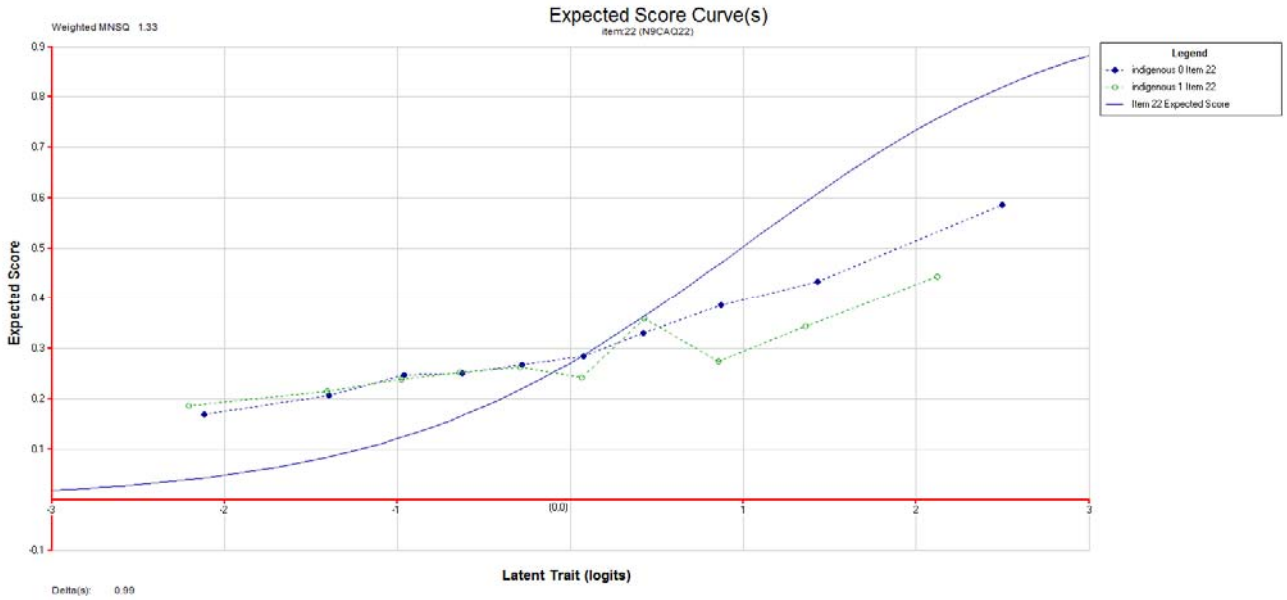


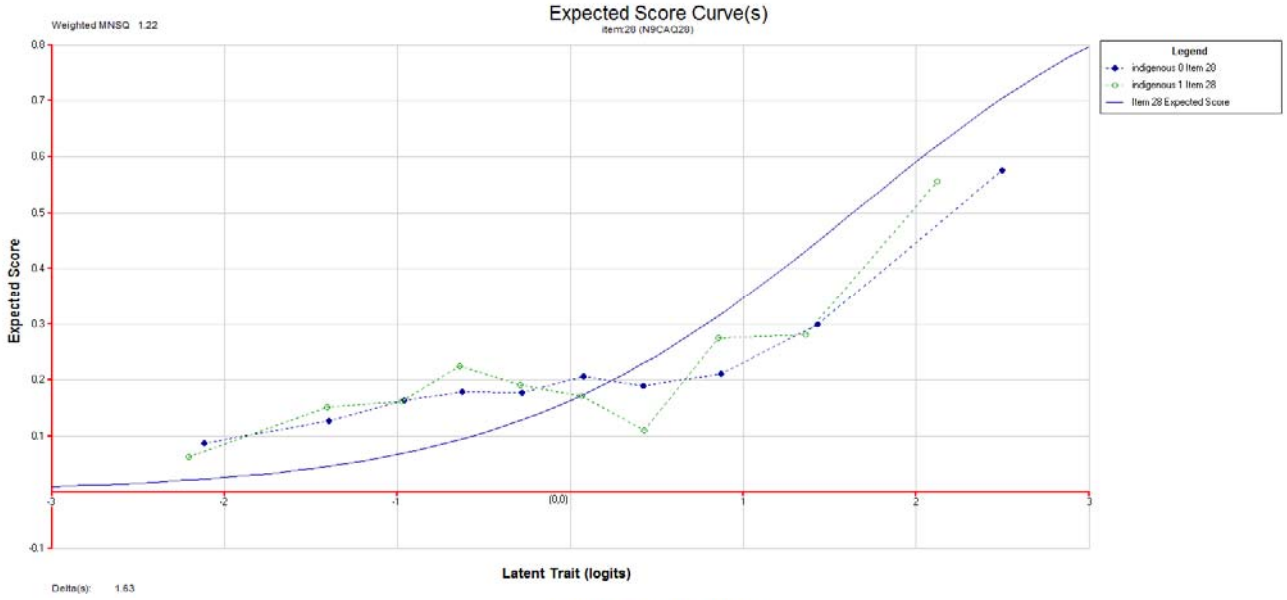


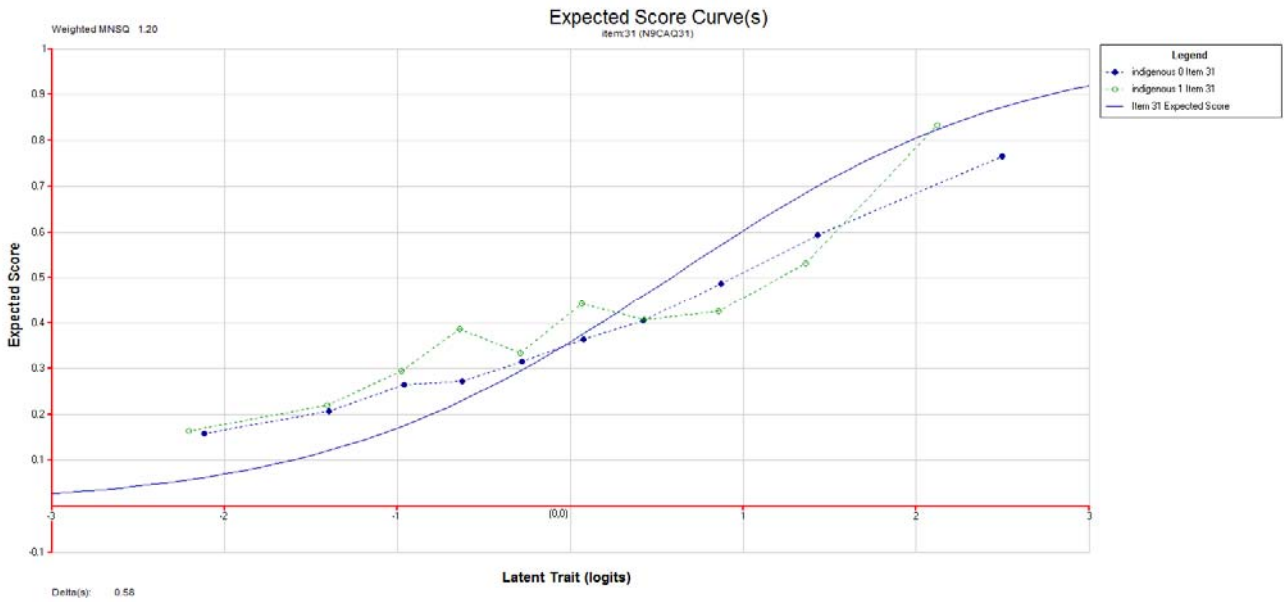

Expected Score Curve(s)
item:37 (N7CAQ37)
Weighted MNSQ 1.02
Expected Score
Latent Trait (logits)
Delta(s): 4.51
Legend
indigenous 0 Item 37
indigenous 1 Item 37
Item 37 Expected Score

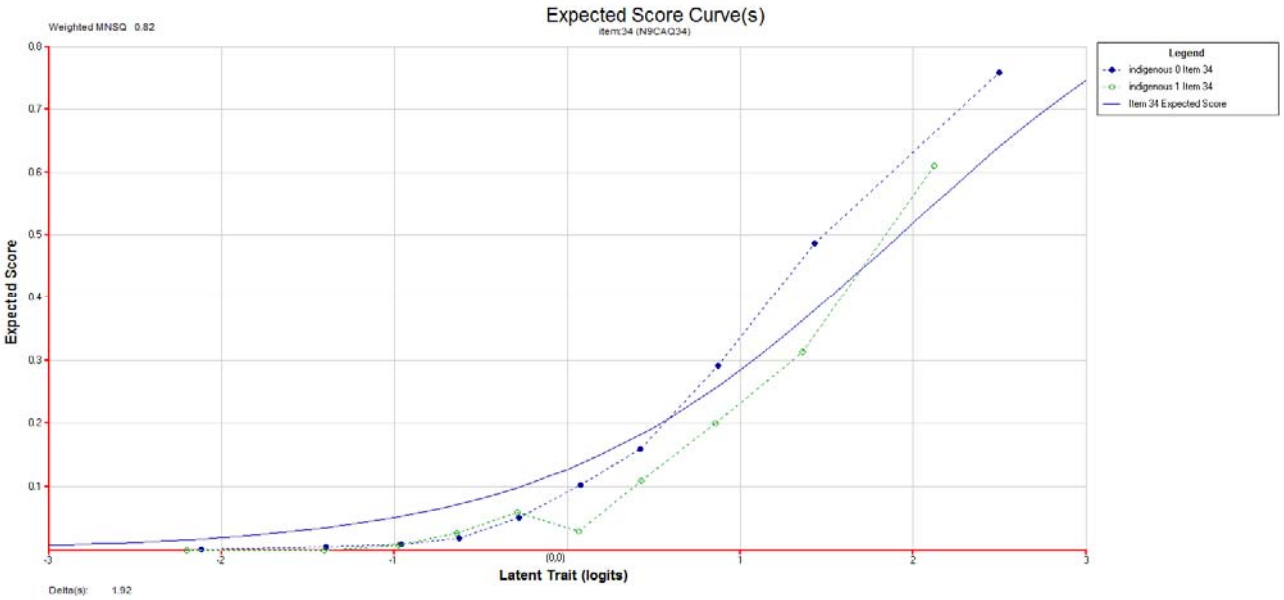

Expected Score Curve(s)
item:40 (N7CAQ40)
Weighted MNSQ 0.89
Expected Score
Latent Trait (logits)
Delta(s): 3.32
Legend
indigenous 0 Item 40
indigenous 1 Item 40
Item 40 Expected Score

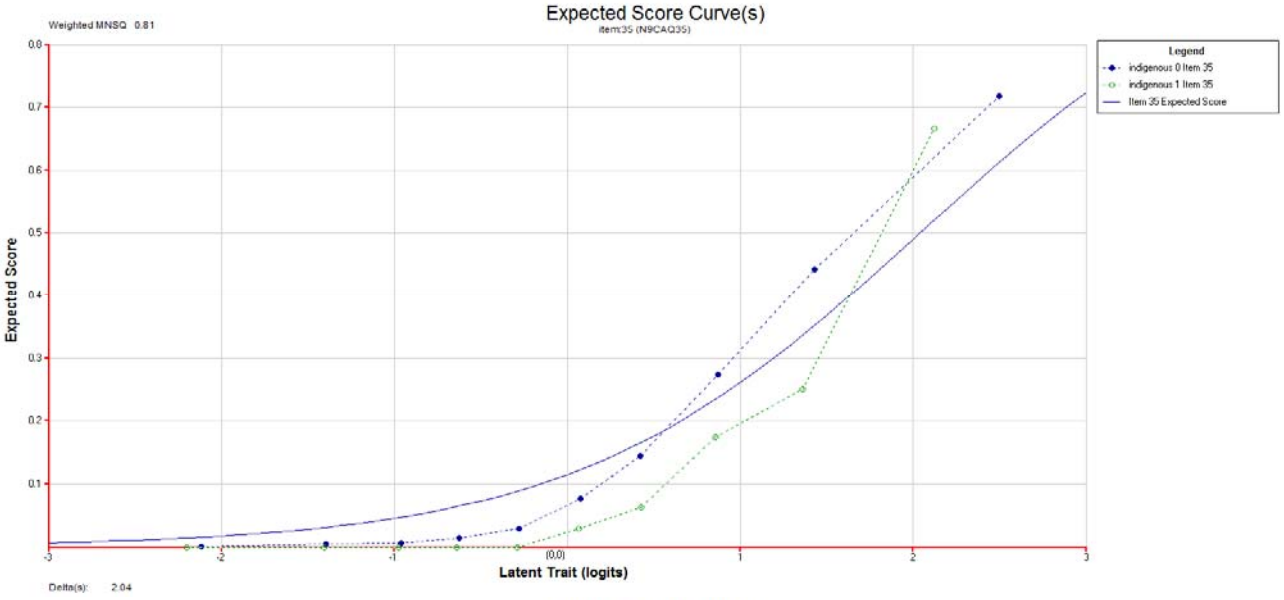
H.6.14. Year 9 Numeracy

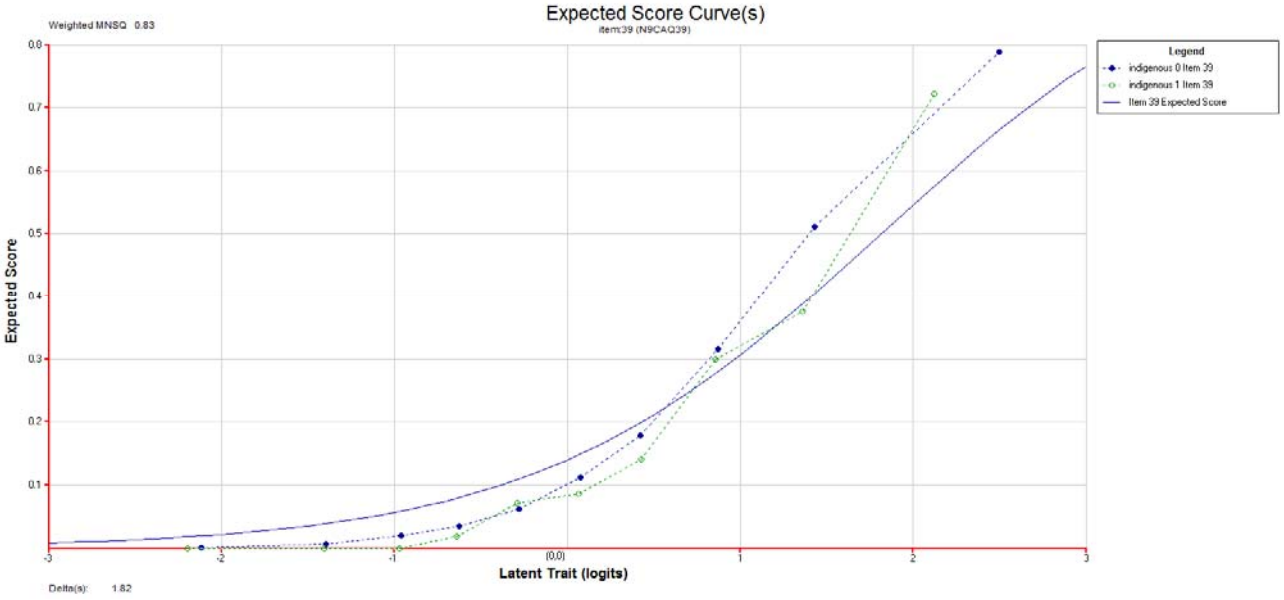


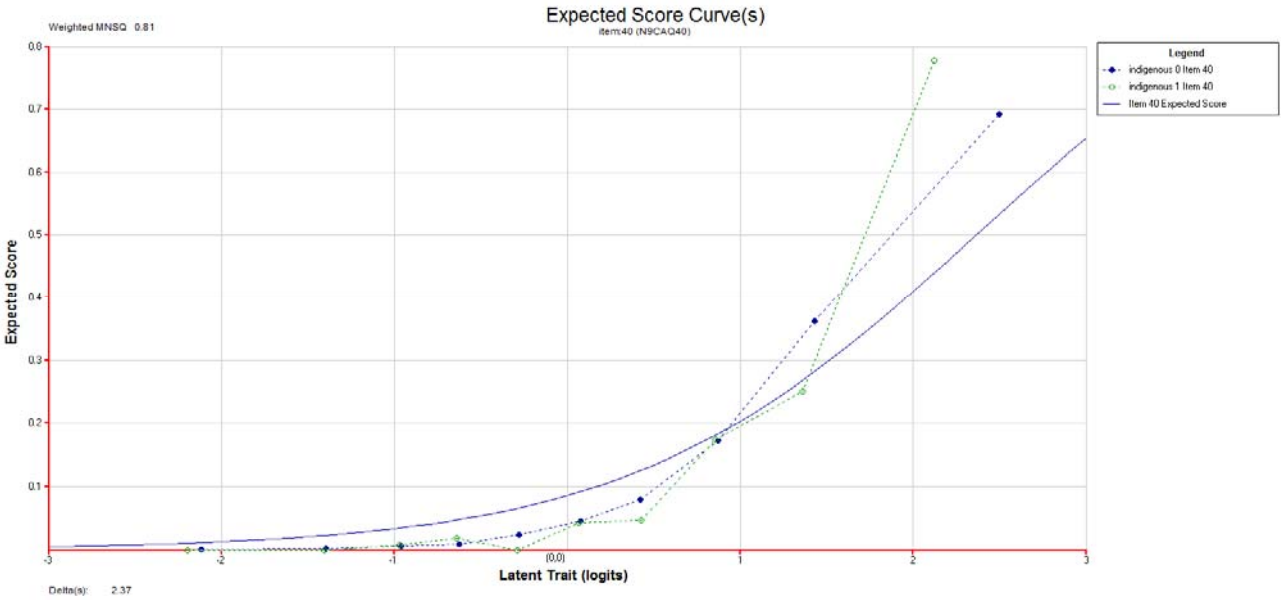





Expected Score Curve(s)
Item:34 (N9CAQ34)
Weighted MNSQ 0.82
Legend
indigenous 0 Item 34
indigenous 1 Item 34
Item 34 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 1.92


Expected Score Curve(s)
Item:35 (N9CAQ35)
Weighted MNSQ 0.81
Legend
indigenous 0 Item 35
indigenous 1 Item 35
Item 35 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 2.04


Expected Score Curve(s)
Item:39 (N9CAQ39)
Weighted MNSQ 0.83
Legend
indigenous 0 Item 39
indigenous 1 Item 39
Item 39 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 1.82


Expected Score Curve(s)
Item:40 (N9CAQ40)
Weighted MNSQ 0.81
Legend
indigenous 0 Item 40
indigenous 1 Item 40
Item 40 Expected Score
Expected Score
Latent Trait (logits)
Delta(s): 2.37

APPENDIX I. DIF BY DOMAIN BY YEAR LEVEL

I.1 Year 3 Reading Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
R3Q01	-0.438	-0.061	1.072
R3Q02	-0.488	-0.087	1.120
R3Q03	-0.208	-0.155	0.840
R3Q04	-0.508	-0.151	0.942
R3Q05	0.050	-0.123	-0.116
R3Q06	-0.008	-0.005	0.186
R3Q07	0.092	0.373	0.020
R3Q08	-0.116	-0.109	0.682
R3Q09	-0.166	-0.047	0.642
R3Q10	0.016	-0.009	-0.204
R3Q11	-0.186	0.113	-0.050
R3Q12	0.118	0.031	-0.436
R3Q13	-0.378	-0.045	0.332
R3Q14	0.018	0.135	-0.154
R3Q15	-0.102	0.031	0.126
R3Q16	-0.234	0.197	0.212
R3Q17	-0.108	-0.103	0.350
R3Q18	-0.166	-0.163	0.344
R3Q19	0.118	0.061	-0.132
R3Q20	0.062	-0.177	-0.170
R3Q21	0.254	0.057	-0.544
R3Q22	0.058	0.101	0.028
R3Q23	0.150	0.091	-0.286
R3Q24	0.198	0.145	-0.910
R3Q25	0.200	-0.001	-0.214
R3Q26	-0.044	-0.205	0.120
R3Q27	0.222	-0.119	0.004
R3Q28	0.106	0.087	-0.434
R3Q29	0.290	-0.061	-0.328
R3Q30	0.238	-0.113	0.022
R3Q31	0.234	-0.079	-0.402
R3Q32	0.368	0.141	-0.868
R3Q33	-0.080	0.081	-0.340
R3Q34	0.100	0.039	-0.530
R3Q35	0.086	-0.089	-0.404
R3Q36	0.278	0.137	-0.254
R3Q37	-0.044	0.079	-0.266

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.2 Year 3 Reading Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
R3Q01	-0.236	-0.180	1.272 *	-0.322	0.000	0.075	-0.607	-0.002
R3Q02	-0.184	-0.303	1.052 *	-0.212	-0.006	0.223	-0.518	-0.052
R3Q03	-0.206	-0.245	0.623	-0.097	0.087	0.208	-0.373	0.002
R3Q04	-0.217	-0.235	0.923 *	-0.105	-0.268	0.234	-0.416	0.085
R3Q05	0.025	0.054	-0.222	0.050	0.007	-0.145	0.243	-0.012
R3Q06	-0.103	-0.066	0.204	-0.035	0.056	0.028	-0.141	0.057
R3Q07	0.051	0.026	0.249	0.031	-0.001	-0.220	-0.101	-0.034
R3Q08	-0.239	-0.065	0.514	0.031	-0.189	0.196	-0.252	0.005
R3Q09	-0.198	-0.001	0.535	0.041	-0.151	-0.021	-0.157	-0.048
R3Q10	0.068	0.006	-0.298	0.031	0.078	0.064	0.032	0.019
R3Q11	0.146	0.129	-0.114	-0.002	-0.066	0.003	-0.043	-0.053
R3Q12	0.096	-0.108	-0.145	-0.093	-0.184	0.115	0.297	0.021
R3Q13	-0.070	-0.030	0.243	-0.133	-0.043	0.244	-0.164	-0.046
R3Q14	0.122	-0.036	-0.517	0.175	0.049	0.103	0.134	-0.030
R3Q15	-0.020	-0.060	-0.166	-0.141	0.211	-0.015	0.102	0.090
R3Q16	-0.092	0.040	0.326	-0.089	-0.178	-0.010	0.006	-0.003
R3Q17	-0.093	-0.026	-0.048	0.140	0.188	0.081	-0.093	-0.149
R3Q18	-0.026	-0.086	0.217	-0.018	0.104	0.043	-0.083	-0.152
R3Q19	0.143	-0.007	-0.373	0.091	0.049	-0.011	0.075	0.033
R3Q20	0.009	0.066	-0.269	0.023	0.007	0.054	0.055	0.056
R3Q21	0.064	-0.017	-0.471	0.068	0.136	0.008	0.176	0.036
R3Q22	0.164	0.084	-0.187	-0.013	-0.137	-0.057	0.066	0.081
R3Q23	-0.122	0.159	-0.300	-0.058	0.180	0.019	0.059	0.062
R3Q24	0.151	0.015	-0.342	0.013	-0.043	-0.039	0.111	0.134
R3Q2	0.122	0.074	-0.305	0.155	-0.029	-0.212	0.165	0.030

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R3Q26	-0.126	0.034	0.016	0.072	-0.149	0.049	-0.021	0.126
R3Q27	-0.203	0.042	-0.086	0.205	0.035	-0.100	0.091	0.015
R3Q28	0.118	0.210	-0.547	0.018	0.010	0.078	0.141	-0.028
R3Q29	0.179	-0.049	-0.426	-0.006	0.150	-0.004	0.115	0.042
R3Q30	0.035	-0.019	0.053	0.006	-0.132	-0.034	0.193	-0.102
R3Q31	0.041	0.136	-0.327	0.047	0.020	-0.032	0.225	-0.109
R3Q32	0.252	0.053	-0.302	-0.025	0.102	-0.140	0.146	-0.087
R3Q33	0.218	0.044	-0.013	0.081	-0.183	-0.284	0.063	0.073
R3Q34	-0.012	0.037	-0.260	-0.220	0.259	0.085	0.116	-0.005
R3Q35	0.120	0.071	-0.184	0.001	0.074	-0.124	0.082	-0.040
R3Q36	-0.007	0.147	-0.044	0.104	0.035	-0.237	0.078	-0.076
R3Q37	0.030	0.109	-0.279	0.188	-0.078	-0.228	0.197	0.061

Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant differences are denoted with *.

I.3 Year 5 Reading Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
R5Q01	-0.283	0.151	0.873
R5Q02	-0.187	0.451	0.885
R5Q03	-0.229	0.151	0.359
R5Q04	-0.215	0.031	1.197
R5Q05	-0.265	0.343	0.695
R5Q06	-0.495	-0.017	0.339
R5Q07	-0.053	0.271	-0.167
R5Q08	-0.147	-0.041	0.337
R5Q09	-0.441	0.077	0.279
R5Q10	-0.359	-0.053	0.511
R5Q11	-0.509	-0.121	0.397
R5Q12	0.019	-0.039	-0.123
R5Q13	-0.033	0.147	0.017
R5Q14	-0.111	0.347	-0.307
R5Q15	0.041	0.167	0.083
R5Q16	0.179	-0.053	-0.623
R5Q17	-0.139	-0.053	-0.049
R5Q18	-0.053	0.001	-0.131
R5Q19	0.203	-0.019	0.195
R5Q20	0.185	-0.079	0.133
R5Q21	0.067	-0.111	-0.249
R5Q22	0.189	-0.105	-0.061
R5Q23	0.357	-0.075	-0.555
R5Q24	0.235	-0.231	-0.111
R5Q25	0.393	-0.081	-0.477
R5Q26	0.019	-0.153	-0.141
R5Q27	0.129	0.151	-0.105
R5Q28	0.521	-0.047	-1.005
R5Q29	0.129	-0.103	-0.425
R5Q30	0.255	-0.051	-0.159
R5Q31	0.281	-0.039	-0.361
R5Q32	0.075	-0.257	-0.553
R5Q33	-0.167	-0.153	0.155
R5Q34	0.095	-0.175	0.121
R5Q35	-0.263	-0.185	0.205
R5Q36	0.263	0.143	-0.895
R5Q37	0.301	-0.191	-0.281

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.4 Year 5 Reading Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
R5Q01	-0.768	0.000	1.428 *	-0.660	-0.126	0.028	-0.029	0.127
R5Q02	-0.243	-0.180	1.119 *	-0.237	0.062	-0.061	-0.456	-0.004
R5Q03	-0.028	0.014	0.570	-0.320	-0.169	0.230	-0.149	-0.149
R5Q04	-0.630	-0.187	1.150 *	-0.241	-0.143	0.129	-0.289	0.211
R5Q05	-0.349	0.023	1.150 *	-0.193	-0.158	0.000	-0.425	-0.048
R5Q06	-0.074	-0.176	0.447	-0.085	0.090	0.091	-0.220	-0.073
R5Q07	0.251	-0.018	-0.162	0.002	-0.038	0.176	-0.041	-0.169
R5Q08	0.039	-0.125	0.139	-0.292	0.259	0.167	-0.203	0.017
R5Q09	-0.051	-0.023	0.407	-0.066	-0.115	-0.149	-0.115	0.112
R5Q10	-0.279	0.036	0.442	-0.096	0.040	0.137	-0.163	-0.117
R5Q11	0.118	-0.241	0.649	-0.023	-0.172	-0.075	-0.121	-0.135
R5Q12	0.107	-0.070	-0.376	0.056	0.154	0.168	-0.002	-0.036
R5Q13	0.126	0.056	0.102	-0.082	0.069	-0.176	-0.021	-0.074
R5Q14	0.055	0.084	-0.094	-0.018	-0.029	-0.104	0.082	0.025
R5Q15	-0.006	0.089	0.116	0.041	-0.056	0.022	-0.120	-0.088
R5Q16	0.297	0.115	-0.888 *	0.051	0.100	0.003	0.208	0.114
R5Q17	0.001	0.004	0.014	0.127	0.027	-0.196	0.080	-0.056
R5Q18	0.046	0.024	-0.313	0.205	0.026	-0.105	0.096	0.021
R5Q19	0.059	0.021	-0.154	0.033	0.169	-0.010	-0.019	-0.100
R5Q20	-0.019	0.045	0.174	-0.006	-0.075	-0.098	0.092	-0.112
R5Q21	0.060	0.103	-0.337	0.037	-0.022	0.063	0.100	-0.005
R5Q22	0.104	-0.053	-0.286	0.020	0.090	0.283	-0.051	-0.108
R5Q23	0.272	-0.038	-0.311	0.065	-0.111	0.002	0.172	-0.050
R5Q24	0.100	0.032	-0.359	0.060	-0.058	0.124	0.054	0.048

R5Q25	0.200	0.028	-0.677	0.010	0.131	0.015	0.293	-0.001
R5Q26	0.072	-0.026	-0.120	0.136	-0.187	-0.072	0.095	0.103
R5Q27	0.124	-0.034	-0.221	-0.004	-0.030	0.015	0.059	0.092
R5Q28	0.096	0.086	-0.528	0.126	0.025	-0.010	0.169	0.037
R5Q29	-0.003	0.019	-0.452	0.098	0.116	-0.015	0.144	0.093
R5Q30	-0.098	0.004	0.002	0.122	-0.078	-0.005	0.041	0.012
R5Q31	0.116	0.021	-0.391	0.157	0.080	-0.138	0.133	0.023
R5Q32	0.126	0.081	-0.751	0.178	0.093	-0.069	0.266	0.075
R5Q33	-0.109	0.004	0.045	0.125	-0.051	-0.043	0.043	-0.014
R5Q34	0.114	0.025	-0.420	0.085	0.158	0.096	0.027	-0.087
R5Q35	0.031	-0.050	-0.161	0.107	0.039	0.053	-0.020	0.000
R5Q36	0.172	0.221	-0.678	0.310	-0.181	-0.280	0.233	0.203
R5Q37	-0.030	0.087	-0.275	0.172	0.071	-0.197	0.058	0.115

Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant differences are denoted with *.

I.5 Year 7 Reading Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
R7Q01	0.244	0.030	0.362
R7Q02	-0.096	0.000	0.766
R7Q03	-0.210	0.086	0.532
R7Q04	0.202	0.384	-0.156
R7Q05	-0.218	0.092	-0.014
R7Q06	-0.034	0.296	-0.096
R7Q07	-0.394	-0.152	0.724
R7Q08	-0.026	-0.002	0.388
R7Q09	-0.362	0.068	0.086
R7Q10	-0.308	0.074	0.204
R7Q11	-0.404	0.466	0.048
R7Q12	-0.048	0.262	-0.094
R7Q13	-0.138	0.404	-0.072
R7Q14	0.048	-0.014	0.020
R7Q15	0.178	0.054	-0.354
R7Q16	-0.044	0.208	0.134
R7Q17	-0.088	-0.082	0.036
R7Q18	0.026	0.024	0.286
R7Q19	0.158	-0.224	0.202
R7Q20	-0.166	-0.184	0.262
R7Q21	-0.160	0.062	-0.106
R7Q22	0.038	0.020	0.100
R7Q23	0.038	-0.146	-0.034
R7Q24	-0.062	0.118	0.156
R7Q25	0.530	-0.092	-0.458
R7Q26	0.110	-0.074	-0.062
R7Q27	-0.006	-0.050	0.030
R7Q28	0.108	-0.002	0.080
R7Q29	-0.074	-0.210	-0.248
R7Q30	0.334	-0.014	-0.032
R7Q31	-0.098	0.064	-0.398
R7Q32	0.172	-0.008	-0.036
R7Q33	0.000	-0.056	0.052
R7Q34	-0.100	-0.050	0.058
R7Q35	-0.022	-0.242	-0.378
R7Q36	0.112	0.162	-0.214
R7Q37	0.086	-0.182	-0.180
R7Q38	-0.160	-0.094	0.176
R7Q39	-0.208	-0.374	-0.160
R7Q40	0.072	-0.058	0.266
R7Q41	0.068	-0.166	-0.234
R7Q42	0.184	-0.118	-0.446
R7Q43	0.222	-0.186	-0.444
R7Q44	0.292	-0.044	-0.170
R7Q45	-0.206	-0.120	0.228

R7Q46	0.104	-0.060	-0.356
R7Q47	0.302	0.116	-0.454
R7Q48	0.270	-0.268	-0.340

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.6 Year 7 Reading Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
R7Q01	-0.141	-0.005	0.579	-0.097	-0.071	-0.146	-0.097	-0.021
R7Q02	-0.188	-0.041	0.668	-0.108	-0.107	0.096	-0.250	-0.070
R7Q03	0.046	0.008	0.539	-0.007	-0.301	-0.039	-0.228	-0.018
R7Q04	0.083	0.111	-0.132	-0.210	-0.070	0.025	0.126	0.066
R7Q05	0.073	0.057	-0.147	-0.073	0.010	0.087	0.058	-0.065
R7Q06	-0.100	0.074	-0.025	-0.020	0.072	-0.078	-0.008	0.084
R7Q07	0.069	-0.233	0.716	0.185	-0.232	-0.246	-0.241	-0.017
R7Q08	0.044	-0.131	0.606	-0.059	-0.229	-0.137	-0.063	-0.031
R7Q09	0.193	-0.076	0.285	-0.195	-0.064	0.024	-0.084	-0.083
R7Q10	-0.039	-0.016	0.032	-0.178	0.186	0.031	-0.072	0.057
R7Q11	-0.027	-0.008	0.322	-0.158	0.000	-0.092	-0.094	0.056
R7Q12	0.129	0.029	-0.046	-0.132	0.048	-0.190	0.094	0.068
R7Q13	-0.094	-0.018	0.064	-0.100	0.079	-0.044	0.083	0.029
R7Q14	0.046	0.106	-0.072	0.095	-0.173	-0.053	0.027	0.024
R7Q15	0.085	0.110	-0.315	0.025	0.152	-0.114	0.019	0.038
R7Q16	0.018	-0.014	0.243	-0.163	-0.082	-0.052	0.038	0.011
R7Q17	-0.028	0.009	0.070	0.074	0.036	-0.117	-0.048	0.003
R7Q18	-0.174	-0.123	0.113	-0.191	0.172	0.259	-0.112	0.056
R7Q19	-0.245	-0.078	0.123	0.098	0.161	0.147	-0.159	-0.047
R7Q20	-0.166	-0.059	0.164	0.084	0.047	0.059	-0.085	-0.045
R7Q21	-0.218	0.124	-0.162	0.103	0.100	0.038	0.007	0.008
R7Q22	-0.054	0.041	-0.193	0.038	0.044	0.123	-0.035	0.036
R7Q23	0.127	-0.056	-0.048	0.046	-0.065	0.005	-0.021	0.011
R7Q24	-0.012	0.051	0.037	0.038	-0.122	0.018	0.053	-0.063
R7Q25	0.039	0.024	-0.010	0.093	-0.089	-0.044	-0.021	0.008
R7Q26	-0.038	-0.009	-0.371	0.143	0.098	0.138	0.003	0.037
R7Q27	0.004	0.007	-0.201	0.078	-0.003	0.051	0.024	0.041
R7Q28	0.009	0.110	-0.319	0.146	-0.138	0.026	0.107	0.059
R7Q29	-0.059	0.090	-0.166	0.081	0.009	-0.081	0.059	0.068
R7Q30	0.112	0.025	-0.249	-0.045	0.035	0.085	0.057	-0.021
R7Q31	0.077	0.050	-0.305	-0.145	0.121	0.055	0.061	0.085
R7Q32	-0.022	-0.059	-0.061	0.017	0.164	0.018	0.064	-0.121
R7Q33	-0.038	0.069	-0.086	0.096	0.072	-0.110	0.061	-0.066
R7Q34	0.093	-0.084	0.241	-0.080	0.088	-0.052	-0.073	-0.133
R7Q35	0.185	-0.040	-0.236	-0.113	-0.014	0.137	0.053	0.028
R7Q36	0.118	0.043	-0.102	0.023	-0.124	-0.048	0.190	-0.100
R7Q37	0.047	-0.019	-0.061	-0.039	-0.039	0.088	0.058	-0.034
R7Q38	-0.029	0.014	-0.069	-0.012	0.001	0.123	0.008	-0.035
R7Q39	0.109	-0.001	-0.275	0.167	-0.065	0.006	0.117	-0.059
R7Q40	-0.057	-0.019	0.337	0.020	-0.043	-0.080	-0.092	-0.065
R7Q41	0.055	-0.079	-0.246	-0.020	0.026	0.176	0.161	-0.074
R7Q42	0.026	0.040	-0.267	0.032	0.103	-0.044	0.061	0.048
R7Q43	0.191	0.004	-0.352	0.053	0.013	0.051	0.012	0.028
R7Q44	-0.157	0.027	-0.063	0.035	0.186	-0.035	0.032	-0.024
R7Q45	-0.102	-0.039	-0.025	0.142	-0.054	0.044	-0.027	0.062

R7Q46	0.024	0.035	-0.131	0.048	0.018	-0.094	0.100	0.001
R7Q47	0.031	0.001	-0.181	0.184	-0.013	-0.135	0.056	0.057
R7Q48	-0.047	-0.053	-0.222	0.002	0.062	0.119	0.021	0.118

Note. Positive value in this table indicates that the item is harder for the corresponding TAA.

I.7 Year 9 Reading Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
R9Q01	-0.485	0.163	0.871
R9Q02	-0.043	0.347	0.655
R9Q03	-0.065	-0.055	1.005
R9Q04	-0.239	0.361	0.609
R9Q05	-0.035	0.129	0.589
R9Q06	-0.067	0.553	-0.295
R9Q07	-0.251	0.107	0.343
R9Q08	0.001	-0.061	0.457
R9Q09	-0.535	0.053	0.479
R9Q10	0.133	0.201	-0.209
R9Q11	0.377	-0.037	-0.127
R9Q12	-0.001	-0.179	0.083
R9Q13	-0.211	-0.303	-0.023
R9Q14	0.117	-0.189	0.151
R9Q15	0.335	-0.199	-0.075
R9Q16	0.067	-0.115	-0.205
R9Q17	-0.157	-0.009	0.255
R9Q18	-0.151	-0.079	-0.187
R9Q19	0.019	0.079	0.043
R9Q20	-0.305	0.019	0.389
R9Q21	0.371	-0.001	-0.249
R9Q22	0.229	-0.187	-0.299
R9Q23	0.403	0.095	-0.681
R9Q24	0.211	-0.005	-0.159
R9Q25	-0.101	0.117	-0.285
R9Q26	-0.017	0.005	-0.009
R9Q27	-0.053	0.069	-0.007
R9Q28	0.163	-0.153	-0.533
R9Q29	0.015	0.001	-0.287
R9Q30	-0.153	-0.179	-0.291
R9Q31	0.131	0.321	-0.177
R9Q32	-0.061	-0.115	-0.137
R9Q33	-0.163	-0.227	0.299
R9Q34	-0.207	-0.441	0.129
R9Q35	0.001	-0.011	0.207
R9Q36	-0.077	-0.135	0.067
R9Q37	0.269	0.041	-0.175
R9Q38	0.283	0.211	-0.457
R9Q39	-0.061	0.201	-0.085
R9Q40	-0.201	-0.103	-0.079
R9Q41	-0.175	-0.125	0.103
R9Q42	0.203	-0.071	-0.261
R9Q43	-0.193	0.031	-0.689
R9Q44	0.209	-0.113	-0.303
R9Q45	0.229	0.005	-0.065

R9Q46	0.075	0.135	-0.349
R9Q47	0.033	-0.045	0.103
R9Q48	0.125	-0.119	-0.227
R9Q49	0.019	0.011	0.107

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.8 Year 9 Reading Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
R9Q01	-0.231	-0.260	1.156	-0.270	-0.041	0.065	-0.371	-0.048
R9Q02	-0.153	-0.376	1.146 *	-0.070	0.006	-0.211	-0.258	-0.084
R9Q03	-0.280	-0.158	1.086	-0.092	-0.066	0.139	-0.234	-0.394
R9Q04	-0.281	-0.088	0.647	-0.010	-0.058	-0.033	-0.143	-0.034
R9Q05	-0.161	-0.155	0.797	-0.100	-0.058	-0.096	-0.181	-0.047
R9Q06	-0.118	0.198	0.056	-0.260	-0.098	-0.152	0.412 *	-0.038
R9Q07	-0.143	-0.305	0.806	-0.039	0.070	0.017	0.044	-0.451
R9Q08	0.028	-0.252	0.594	-0.206	-0.076	0.034	0.014	-0.137
R9Q09	-0.164	-0.369	0.609	0.042	0.066	0.088	-0.083	-0.190
R9Q10	0.049	0.080	0.012	-0.027	-0.003	-0.151	-0.021	0.061
R9Q11	0.077	0.132	-0.198	-0.077	0.045	-0.042	-0.015	0.079
R9Q12	0.108	-0.087	0.200	-0.084	-0.010	0.108	-0.075	-0.158
R9Q13	0.053	0.007	-0.150	0.150	0.040	0.059	-0.047	-0.111
R9Q14	0.063	-0.019	-0.160	0.171	-0.116	0.212	-0.103	-0.048
R9Q15	-0.216	-0.032	-0.187	0.365 *	-0.088	0.057	0.030	0.072
R9Q16	0.034	0.065	-0.337	-0.105	0.217	0.143	-0.169	0.151
R9Q17	-0.008	0.000	0.109	-0.087	0.026	0.082	-0.109	-0.014
R9Q18	0.119	-0.084	-0.296	-0.156	0.182	0.043	0.095	0.098
R9Q19	-0.007	0.115	-0.012	-0.095	0.000	0.004	-0.028	0.023
R9Q20	-0.116	-0.116	0.183	-0.034	-0.028	0.116	-0.022	0.017
R9Q21	-0.009	0.109	-0.185	0.062	-0.030	-0.022	0.083	-0.009
R9Q22	0.037	0.155	-0.199	-0.022	0.022	-0.030	-0.023	0.059
R9Q23	0.274	0.202	-0.553	-0.068	0.028	-0.173	0.144	0.146
R9Q24	0.002	0.167	-0.247	-0.034	0.035	0.098	0.035	-0.056
R9Q2	0.122	0.062	-0.190	-0.218	0.185	-0.107	-0.027	0.173

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R9Q26	-0.088	0.000	0.015	0.110	-0.005	-0.030	0.048	-0.050
R9Q27	-0.032	0.016	0.036	0.099	-0.018	-0.156	0.115	-0.060
R9Q28	0.178	0.111	-0.351	0.036	-0.038	-0.108	0.070	0.102
R9Q29	-0.083	0.067	-0.100	0.082	-0.106	0.022	-0.024	0.141
R9Q30	0.078	-0.081	-0.258	-0.108	-0.015	0.104	0.162	0.119
R9Q31	-0.110	0.092	-0.132	0.150	-0.031	-0.197	0.129	0.099
R9Q32	0.066	0.005	-0.362	0.080	0.049	0.076	0.048	0.036
R9Q33	0.029	-0.155	0.071	0.129	0.006	0.019	0.081	-0.181
R9Q34	0.169	-0.089	-0.287	0.157	-0.029	0.015	0.113	-0.049
R9Q35	-0.106	0.000	0.045	0.134	-0.057	0.046	0.010	-0.072
R9Q36	0.079	-0.178	0.140	-0.010	0.034	0.056	0.092	-0.211
R9Q37	0.177	0.262 *	-0.337	-0.024	-0.117	-0.077	0.018	0.097
R9Q38	0.154	0.217	-0.434	-0.126	-0.059	-0.013	0.050	0.211
R9Q39	0.010	0.199	-0.342	0.025	-0.050	0.042	-0.040	0.156
R9Q40	0.217	0.054	-0.434	0.060	0.066	0.002	0.022	0.013
R9Q41	0.017	-0.125	-0.099	0.168	0.023	0.098	-0.062	-0.022
R9Q42	0.037	0.080	-0.147	0.014	-0.072	0.111	-0.170	0.147
R9Q43	0.149	0.257	-0.496	0.000	0.040	-0.191	-0.049	0.290 *
R9Q44	0.031	0.101	-0.379	0.029	0.015	0.075	0.034	0.094
R9Q45	-0.021	0.019	-0.171	0.071	0.002	0.041	0.067	-0.008
R9Q46	0.010	0.022	-0.061	-0.004	-0.004	-0.141	0.098	0.081
R9Q47	-0.088	0.054	-0.120	0.003	0.051	0.050	0.053	-0.003
R9Q48	0.072	0.007	-0.333	0.152	0.027	-0.035	0.154	-0.042
R9Q49	-0.024	0.075	-0.154	0.037	0.037	-0.056	0.031	0.054

Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant differences are denoted with *.

I.9 Year 3 Spelling Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
S3Q01	-0.490	0.042	0.087
S3Q02	-0.388	0.598	-0.327
S3Q03	-0.476	0.162	0.025
S3Q04	-0.302	0.028	0.009
S3Q05	0.002	0.276	0.295
S3Q06	0.150	-0.188	-0.135
S3Q07	0.074	0.374	-0.303
S3Q08	0.030	-0.088	-0.033
S3Q09	0.264	-0.204	-0.055
S3Q10	0.274	0.230	-0.049
S3Q11	0.232	-0.082	0.215
S3Q12	-0.008	0.334	-0.073
S3Q13	-0.222	0.142	0.217
S3Q14	0.144	0.270	0.051
S3Q15	-0.116	0.060	0.459
S3Q16	0.242	-0.022	0.353
S3Q17	0.378	-0.090	-0.513
S3Q18	-0.178	-0.130	0.003
S3Q19	0.056	-0.250	0.513
S3Q20	0.318	-0.302	0.013
S3Q21	-0.310	-0.114	-0.427
S3Q22	-0.164	-0.128	0.027
S3Q23	0.354	0.056	-0.295
S3Q24	0.354	-0.506	0.173
S3Q25	-0.224	-0.460	-0.221

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.10 Year 3 Spelling Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
S3Q01	-0.209	-0.146	-0.043	-0.230	0.202	0.108	0.207	0.109
S3Q02	-0.106	0.241	-0.490	0.233	-0.234	-0.216	0.480	0.091
S3Q03	0.007	-0.014	-0.263	0.152	-0.188	0.256	0.046	0.004
S3Q04	-0.136	0.064	0.093	0.108	-0.119	-0.073	-0.002	0.065
S3Q05	0.327	0.093	-0.043	0.207	-0.042	-0.267	-0.125	-0.150
S3Q06	0.191	-0.202	0.202	-0.236	0.134	-0.168	0.250	-0.172
S3Q07	0.114	0.254	0.217	-0.017	-0.100	-0.460	0.046	-0.054
S3Q08	0.269	0.049	-0.145	-0.004	-0.161	0.193	-0.058	-0.143
S3Q09	-0.029	-0.067	0.142	-0.316	0.349	0.043	0.092	-0.214
S3Q10	0.217	0.021	-0.202	-0.083	0.141	-0.001	0.171	-0.264
S3Q11	-0.055	0.089	0.109	-0.148	-0.074	0.160	-0.093	0.013
S3Q12	0.183	0.083	0.096	0.099	-0.269	-0.056	-0.018	-0.119
S3Q13	0.193	0.013	-0.002	0.078	-0.041	0.089	-0.104	-0.226
S3Q14	-0.471	-0.034	0.241	0.100	0.010	-0.172	0.022	0.304
S3Q15	-0.095	0.164	-0.152	0.072	0.113	-0.093	-0.028	0.019
S3Q16	0.126	0.023	-0.133	0.182	-0.073	-0.171	-0.009	0.056
S3Q17	-0.123	0.148	-0.287	0.054	0.018	-0.227	0.151	0.266
S3Q18	0.078	-0.177	0.159	0.274	-0.134	-0.008	-0.310	0.117
S3Q19	-0.119	-0.272	-0.065	0.059	0.005	0.384	-0.042	0.050
S3Q20	-0.126	-0.094	0.529	-0.072	0.180	-0.183	-0.173	-0.062
S3Q21	0.251	-0.079	-0.203	-0.330	0.074	0.091	-0.031	0.228
S3Q22	-0.166	-0.109	0.093	-0.138	0.087	0.224	-0.082	0.091
S3Q23	-0.066	0.286	-0.019	-0.123	-0.111	0.105	0.002	-0.074
S3Q24	-0.103	-0.393	0.456	0.060	0.105	0.191	-0.315	-0.001
S3Q25	-0.152	0.059	-0.291	0.018	0.128	0.250	-0.078	0.067

Note. Positive value in this table indicates that the item is harder for the corresponding TAA.

I.11 Year 5 Spelling Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
S5Q01	-0.249	-0.024	-0.101
S5Q02	0.119	-0.104	0.197
S5Q03	-0.435	0.326	0.317
S5Q04	-0.361	0.734	0.005
S5Q05	0.329	-0.096	0.115
S5Q06	-0.093	-0.030	0.179
S5Q07	-0.067	0.502	-0.135
S5Q08	-0.453	0.202	0.005
S5Q09	0.147	-0.252	0.165
S5Q10	-0.037	-0.162	-0.085
S5Q11	0.297	-0.084	-0.051
S5Q12	0.081	-0.346	-0.101
S5Q13	-0.047	0.168	0.227
S5Q14	0.639	0.012	-0.129
S5Q15	-0.347	-0.286	0.057
S5Q16	-0.067	0.256	-0.003
S5Q17	-0.069	-0.152	-0.133
S5Q18	-0.369	-0.044	0.023
S5Q19	-0.417	-0.174	0.223
S5Q20	0.203	-0.150	-0.279
S5Q21	0.155	-0.110	0.201
S5Q22	0.281	-0.354	-0.207
S5Q23	0.345	-0.050	0.121
S5Q24	0.105	-0.264	0.081
S5Q25	0.313	0.482	-0.699

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.12 Year 5 Spelling Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
S5Q01	-0.097	0.064	-0.251	0.349	-0.205	0.013	0.013	0.114
S5Q02	0.008	0.016	-0.025	-0.017	-0.044	0.117	0.113	-0.168
S5Q03	-0.134	-0.101	0.438	-0.192	0.097	-0.093	-0.388	0.373
S5Q04	-0.042	0.283	0.107	-0.194	-0.061	-0.250	0.168	-0.011
S5Q05	0.018	0.116	0.273	0.036	-0.169	-0.263	-0.101	0.089
S5Q06	-0.063	0.062	0.136	0.044	0.027	0.032	-0.202	-0.036
S5Q07	0.020	0.141	-0.023	0.100	-0.163	-0.282	0.096	0.112
S5Q08	-0.035	0.111	0.054	0.112	-0.246	-0.028	0.101	-0.068
S5Q09	-0.037	0.070	-0.129	0.088	0.100	0.142	-0.230	-0.004
S5Q10	0.211	0.123	-0.300	0.010	-0.171	-0.039	0.091	0.074
S5Q11	0.062	0.025	-0.211	0.043	-0.111	0.374	0.057	-0.240
S5Q12	0.037	-0.139	0.021	-0.281	0.280	0.329	0.117	-0.365
S5Q13	-0.395	-0.009	0.408	0.038	0.065	-0.118	-0.143	0.154
S5Q14	-0.118	-0.003	0.057	0.077	-0.082	0.050	-0.059	0.079
S5Q15	-0.201	-0.227	-0.018	-0.060	0.030	0.301	0.111	0.064
S5Q16	-0.117	-0.084	0.125	0.100	0.051	-0.067	-0.109	0.102
S5Q17	0.208	-0.211	0.039	0.062	0.114	-0.021	-0.050	-0.141
S5Q18	0.140	0.030	0.012	-0.017	-0.020	-0.118	-0.082	0.054
S5Q19	0.142	0.113	0.064	-0.149	-0.016	-0.055	-0.074	-0.025
S5Q20	0.022	-0.113	-0.063	-0.044	0.092	0.125	0.080	-0.099
S5Q21	0.369	-0.116	-0.028	-0.182	0.573	-0.250	0.093	-0.458
S5Q22	-0.168	-0.080	0.036	-0.163	0.079	0.263	0.183	-0.149
S5Q23	0.016	-0.075	-0.029	0.102	0.056	-0.008	0.088	-0.149
S5Q24	-0.084	-0.298	-0.362	0.270	-0.086	-0.109	0.020	0.649
S5Q2	0.238	0.301	-0.331	-0.130	-0.189	-0.047	0.107	0.052

Note. Positive value in this table indicates that the item is harder for the corresponding TAA.

I.13 Year 7 Spelling Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
S7Q01	0.021	0.319	0.226
S7Q02	-0.279	0.535	0.432
S7Q03	-0.359	-0.211	0.038
S7Q04	-0.469	0.063	0.270
S7Q05	0.403	0.273	0.138
S7Q06	-0.009	0.183	-0.150
S7Q07	-0.233	-0.111	0.028
S7Q08	0.019	-0.157	-0.022
S7Q09	-0.279	0.069	0.080
S7Q10	-0.103	-0.033	-0.354
S7Q11	-0.097	-0.365	0.128
S7Q12	0.391	-0.429	0.010
S7Q13	0.185	-0.227	-0.314
S7Q14	-0.199	-0.171	0.064
S7Q15	-0.155	0.365	-0.216
S7Q16	-0.425	-0.045	-0.042
S7Q17	0.385	-0.031	0.030
S7Q18	0.099	-0.093	0.050
S7Q19	0.269	-0.329	0.082
S7Q20	0.093	0.373	-0.030
S7Q21	-0.109	0.345	-0.104
S7Q22	0.329	0.309	0.004
S7Q23	0.071	-0.497	-0.046
S7Q24	0.143	-0.137	-0.260
S7Q25	0.313	0.001	-0.052

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.14 Year 7 Spelling Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
S7Q01	-0.036	0.235	0.111	0.009	-0.041	-0.405	-0.060	0.186
S7Q02	0.017	-0.021	0.556	0.048	-0.275	-0.199	-0.152	0.025
S7Q03	-0.087	0.005	-0.015	0.132	0.113	-0.145	-0.173	0.170
S7Q04	0.064	-0.002	0.171	-0.043	0.142	-0.265	-0.034	-0.033
S7Q05	-0.269	0.138	0.278	0.054	-0.125	-0.062	0.030	-0.045
S7Q06	-0.005	0.093	-0.080	0.037	-0.148	-0.091	-0.028	0.222
S7Q07	-0.206	0.054	0.088	0.256	-0.148	-0.024	-0.029	0.008
S7Q08	0.053	0.026	0.040	0.038	-0.007	-0.086	0.062	-0.125
S7Q09	0.078	-0.058	0.202	-0.068	0.022	-0.047	-0.032	-0.097
S7Q10	-0.184	-0.025	-0.173	-0.027	0.214	0.143	0.005	0.047
S7Q11	0.054	-0.064	-0.318	-0.054	0.200	0.311	-0.033	-0.097
S7Q12	0.025	-0.170	-0.242	0.147	-0.091	0.358	0.111	-0.138
S7Q13	0.346	-0.041	-0.339	0.107	-0.021	0.070	-0.012	-0.110
S7Q14	0.197	-0.116	0.063	-0.081	-0.283	-0.136	0.086	0.270
S7Q15	-0.035	-0.062	0.353	-0.061	-0.052	0.075	-0.222	0.004
S7Q16	0.168	0.042	-0.314	0.056	-0.041	0.054	0.022	0.014
S7Q17	-0.331	-0.116	0.055	0.287 *	0.120	0.003	-0.084	0.066
S7Q18	-0.146	0.001	0.000	-0.212	0.146	0.203	0.067	-0.059
S7Q19	0.029	0.017	0.006	-0.061	0.293	-0.064	-0.083	-0.137
S7Q20	0.054	-0.012	0.092	-0.067	-0.074	-0.098	0.145	-0.040
S7Q21	-0.161	-0.044	0.291	-0.036	-0.101	0.073	-0.070	0.047
S7Q22	-0.122	-0.069	0.168	0.086	-0.088	-0.069	0.116	-0.021
S7Q23	0.145	0.056	-0.742	-0.276	0.212	0.448	0.230	-0.073
S7Q24	0.183	-0.014	0.112	-0.093	-0.187	0.004	0.087	-0.091
S7Q2	0.168	0.145	-0.363	-0.178	0.222	-0.052	0.050	0.009

Note. Positive value in this table indicates that the item is harder for the corresponding TAA Significant differences are denoted with *..

I.15 Year 9 Spelling Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
S9Q01	0.034	0.308	0.154
S9Q02	0.174	0.530	-0.226
S9Q03	-0.584	0.006	-0.036
S9Q04	-0.216	0.182	0.086
S9Q05	-0.018	0.416	-0.058
S9Q06	0.016	-0.156	-0.036
S9Q07	-0.434	0.130	-0.040
S9Q08	-0.420	0.170	-0.638
S9Q09	0.124	0.354	0.096
S9Q10	0.328	-0.442	0.024
S9Q11	0.004	-0.150	-0.100
S9Q12	-0.216	-0.082	0.034
S9Q13	-0.092	0.086	0.004
S9Q14	0.246	0.236	-0.100
S9Q15	0.372	0.066	0.126
S9Q16	-0.300	-0.120	0.114
S9Q17	0.194	-0.138	0.210
S9Q18	0.400	0.032	-0.036
S9Q19	0.240	0.224	0.242
S9Q20	-0.200	-0.780	-0.162
S9Q21	-0.218	-0.338	0.478
S9Q22	-0.126	-0.244	-0.046
S9Q23	-0.012	-0.056	-0.102
S9Q24	0.548	-0.106	0.140
S9Q25	0.162	-0.130	-0.128

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.16 Year 9 Spelling Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
S9Q01	-0.170	0.112	0.055	0.116	-0.241	0.129	0.071	-0.072
S9Q02	-0.031	0.185	-0.089	0.073	-0.175	-0.090	-0.004	0.131
S9Q03	-0.208	0.107	-0.020	0.144	0.031	-0.144	-0.011	0.101
S9Q04	-0.154	0.079	0.055	0.071	0.056	-0.090	-0.068	0.051
S9Q05	-0.094	0.141	-0.026	0.049	0.017	0.009	-0.161	0.066
S9Q06	0.200	-0.035	-0.109	-0.074	-0.021	-0.005	0.102	-0.058
S9Q07	0.197	0.061	-0.140	0.010	0.010	-0.099	0.049	-0.088
S9Q08	0.047	-0.005	-0.777	-0.190	0.115	0.324	0.195	0.292 *
S9Q09	-0.114	0.258	-0.097	0.097	0.032	-0.022	-0.110	-0.045
S9Q10	0.063	-0.085	-0.070	-0.116	0.061	0.223	-0.077	0.001
S9Q11	0.096	-0.047	-0.106	0.171	0.131	-0.006	-0.065	-0.175
S9Q12	0.111	0.061	-0.156	0.123	0.124	-0.117	-0.002	-0.143
S9Q13	-0.098	-0.022	0.073	0.241	-0.146	-0.174	-0.143	0.271
S9Q14	-0.035	0.172	0.062	0.043	-0.112	-0.142	-0.103	0.115
S9Q15	-0.097	-0.011	0.005	0.118	-0.074	-0.012	-0.054	0.126
S9Q16	0.246	0.095	-0.189	0.026	-0.143	0.093	-0.080	-0.048
S9Q17	-0.214	-0.015	0.318	0.151	0.019	-0.118	-0.140	-0.002
S9Q18	-0.106	-0.012	0.504	0.056	-0.186	-0.359	0.100	0.003
S9Q19	-0.161	-0.133	0.446	-0.113	0.010	-0.149	0.038	0.062
S9Q20	0.513	-0.137	-0.908	-0.411 *	0.421	0.434	0.171	-0.084
S9Q21	-0.039	-0.115	0.570	-0.249	0.007	0.023	-0.104	-0.093
S9Q22	0.086	-0.166	0.092	0.083	0.055	0.230	-0.170	-0.211
S9Q23	0.059	-0.018	0.263	-0.203	-0.194	0.076	0.103	-0.086
S9Q24	-0.277	-0.171	0.275	0.052	0.070	0.041	0.191	-0.181
S9Q25	0.180	-0.299	-0.028	-0.269	0.133	-0.056	0.273	0.066

Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant differences are denoted with *.

I.17 Year 3 Grammar and Punctuation Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
G3Q26	-0.304	0.189	0.878
G3Q27	0.118	0.383	0.580
G3Q28	-0.242	-0.025	0.476
G3Q29	-0.250	-0.191	0.926
G3Q30	-0.378	-0.261	0.474
G3Q31	0.080	0.121	0.222
G3Q32	0.054	-0.031	0.036
G3Q33	-0.296	0.289	0.042
G3Q34	0.228	-0.337	0.186
G3Q35	-0.350	-0.083	0.382
G3Q36	0.028	0.057	0.104
G3Q37	-0.054	-0.087	0.484
G3Q38	-0.026	-0.183	0.178
G3Q39	-0.034	0.037	0.182
G3Q40	0.036	-0.169	-0.234
G3Q41	0.150	0.091	-0.220
G3Q42	-0.086	-0.223	0.088
G3Q43	0.330	-0.065	0.398
G3Q44	0.098	0.071	-0.794
G3Q45	0.088	0.203	-0.656
G3Q46	0.208	0.115	-0.726
G3Q47	0.200	0.377	-1.198
G3Q48	0.158	0.057	-0.950
G3Q49	0.080	0.139	-0.812
G3Q50	0.176	-0.479	-0.054

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.18 Year 3 Grammar and Punctuation Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
G3Q26	-0.317	-0.242	1.052 *	-0.221	-0.106	0.178	-0.406	0.061
G3Q27	-0.234	-0.079	0.587	-0.031	-0.205	-0.002	-0.047	0.011
G3Q28	-0.089	-0.217	0.537	-0.063	-0.020	0.091	-0.253	0.014
G3Q29	-0.257	-0.130	0.623	-0.036	-0.090	0.157	-0.328	0.061
G3Q30	0.074	-0.146	0.451	-0.207	0.140	-0.012	-0.171	-0.128
G3Q31	-0.092	0.006	0.058	0.071	-0.014	0.055	0.007	-0.091
G3Q32	0.066	-0.140	-0.100	0.101	0.024	-0.022	0.014	0.057
G3Q33	-0.098	0.148	-0.093	0.082	0.017	-0.081	0.033	-0.009
G3Q34	0.019	-0.145	0.095	-0.077	-0.054	0.187	0.003	-0.028
G3Q35	-0.104	-0.073	0.335	-0.029	0.023	0.201	-0.272	-0.082
G3Q36	0.097	0.020	-0.098	-0.011	-0.011	-0.166	0.205	-0.037
G3Q37	-0.207	-0.068	0.322	-0.070	0.029	0.089	-0.143	0.048
G3Q38	-0.064	-0.104	-0.035	-0.013	0.153	0.127	-0.116	0.052
G3Q39	-0.091	-0.002	0.139	0.052	-0.037	-0.086	0.014	0.011
G3Q40	0.343	-0.005	-0.226	0.115	-0.058	-0.169	0.002	-0.001
G3Q41	-0.058	0.054	-0.122	-0.025	-0.089	0.067	0.166	0.006
G3Q42	-0.126	-0.111	0.125	0.030	-0.028	0.149	-0.107	0.067
G3Q43	-0.153	0.028	0.165	0.043	0.102	-0.003	-0.121	-0.061
G3Q44	0.081	0.160	-0.572	0.161	0.021	-0.278	0.200	0.227
G3Q45	0.060	0.201	-0.563	0.039	-0.015	-0.095	0.204	0.168
G3Q46	0.244	0.257	-0.634	0.102	-0.165	-0.095	0.284	0.006
G3Q47	0.223	0.255	-0.630	-0.019	0.027	-0.125	0.366	-0.097
G3Q48	0.265	0.241	-0.519	-0.068	0.192	-0.178	0.310	-0.243
G3Q49	0.172	0.283	-0.422	0.018	0.104	-0.308	0.142	0.010
G3Q50	0.245	-0.192	-0.474	0.055	0.060	0.315	0.013	-0.021

Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant differences are denoted with *.

I.19 Year 5 Grammar and Punctuation Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
G5Q26	-0.243	0.063	0.110
G5Q27	0.111	0.565	0.526
G5Q28	0.033	0.303	0.078
G5Q29	0.003	0.861	0.124
G5Q30	0.135	-0.041	0.346
G5Q31	-0.153	0.087	0.406
G5Q32	0.199	-0.213	-0.242
G5Q33	-0.157	-0.079	0.326
G5Q34	-0.111	0.115	0.236
G5Q35	0.211	-0.125	-0.352
G5Q36	0.009	0.267	0.216
G5Q37	-0.205	-0.167	0.620
G5Q38	-0.257	-0.161	0.100
G5Q39	0.055	0.009	-0.130
G5Q40	-0.051	-0.375	0.138
G5Q41	-0.023	0.033	-0.352
G5Q42	0.157	-0.059	-0.124
G5Q43	0.163	-0.125	-0.670
G5Q44	0.081	-0.327	-0.376
G5Q45	-0.017	-0.309	0.490
G5Q46	0.235	-0.017	-0.404
G5Q47	0.055	-0.095	-0.644
G5Q48	-0.261	-0.085	0.126
G5Q49	0.027	0.001	-0.084
G5Q50	0.005	-0.131	-0.464

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.20 Year 5 Grammar and Punctuation Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
G5Q26	0.215	-0.314	0.389	-0.091	0.002	-0.036	-0.119	-0.046
G5Q27	-0.263	0.009	0.695	0.123	-0.323	-0.004	-0.399	0.162
G5Q28	-0.051	-0.004	0.578	-0.174	-0.187	-0.175	0.006	0.007
G5Q29	-0.039	0.182	0.472	-0.076	-0.001	-0.162	-0.328	-0.048
G5Q30	0.001	-0.012	0.348	-0.192	-0.171	0.154	-0.011	-0.118
G5Q31	-0.107	-0.122	0.811 *	-0.248	-0.117	-0.083	-0.144	0.011
G5Q32	-0.067	0.234	-0.254	0.246	-0.029	-0.009	0.027	-0.149
G5Q33	-0.036	0.019	0.157	-0.051	0.018	0.049	-0.118	-0.037
G5Q34	-0.218	-0.089	0.345	0.035	0.031	-0.119	-0.032	0.047
G5Q35	-0.064	0.018	-0.438	0.021	0.103	0.304	0.061	-0.004
G5Q36	-0.084	0.022	0.335	-0.010	0.027	-0.200	-0.182	0.091
G5Q37	-0.094	-0.053	0.288	-0.004	0.086	0.101	-0.169	-0.155
G5Q38	-0.038	0.025	0.056	-0.097	0.076	0.030	-0.008	-0.045
G5Q39	0.012	0.004	-0.064	-0.231	-0.012	0.044	0.138	0.109
G5Q40	0.058	-0.223	0.025	0.050	0.122	0.212	-0.066	-0.178
G5Q41	0.247	0.084	-0.169	0.031	-0.070	-0.271	0.150	-0.001
G5Q42	-0.114	-0.004	-0.223	0.128	0.011	0.024	0.050	0.129
G5Q43	-0.008	-0.066	-0.535	0.223	-0.174	0.101	0.296	0.162
G5Q44	0.353	0.118	-1.129 *	0.133	0.132	0.115	0.209	0.069
G5Q45	0.078	-0.190	-0.062	0.038	0.141	0.016	0.070	-0.091
G5Q46	0.103	-0.122	-0.225	-0.094	0.181	-0.091	0.222	0.026
G5Q47	0.199	0.056	-0.418	-0.058	0.022	0.003	0.159	0.038
G5Q48	-0.268	0.096	-0.121	0.077	0.037	0.088	0.067	0.024
G5Q49	0.160	0.211	-0.399	0.103	0.130	-0.140	0.026	-0.091
G5Q50	0.027	0.124	-0.462	0.117	-0.036	0.046	0.096	0.087

Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant differences are denoted with *.

I.21 Year 7 Grammar and Punctuation Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
G7Q26	-0.003	0.643	0.858
G7Q27	0.203	0.427	0.610
G7Q28	0.037	0.087	0.044
G7Q29	0.079	0.245	-0.318
G7Q30	-0.183	-0.323	0.218
G7Q31	-0.255	0.009	-0.132
G7Q32	-0.053	-0.009	0.236
G7Q33	-0.057	0.057	-0.110
G7Q34	-0.233	-0.141	0.482
G7Q35	-0.237	-0.153	0.036
G7Q36	0.163	-0.121	-0.108
G7Q37	-0.121	-0.267	0.096
G7Q38	-0.117	-0.021	-0.200
G7Q39	0.139	0.027	-0.016
G7Q40	-0.049	-0.135	0.184
G7Q41	0.041	0.157	-0.110
G7Q42	0.037	0.009	-0.530
G7Q43	0.025	-0.249	-0.718
G7Q44	0.133	-0.219	-0.224
G7Q45	0.041	-0.343	0.182
G7Q46	-0.179	0.015	0.086
G7Q47	0.055	0.103	-0.710
G7Q48	0.323	0.445	-0.206
G7Q49	-0.055	0.055	0.432
G7Q50	0.257	-0.303	-0.074

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.22 Year 7 Grammar and Punctuation Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
G7Q26	-0.319	-0.195	0.761	0.021	-0.326	0.150	-0.036	-0.056
G7Q27	-0.219	-0.109	0.687	-0.048	-0.019	-0.071	-0.331	0.109
G7Q28	-0.060	0.020	0.303	-0.118	-0.108	-0.087	0.031	0.019
G7Q29	-0.022	-0.011	-0.093	0.096	-0.101	-0.169	0.165	0.135
G7Q30	0.023	-0.069	0.066	-0.012	0.092	0.146	-0.145	-0.101
G7Q31	0.023	0.144	-0.152	-0.024	0.017	0.083	0.010	-0.101
G7Q32	-0.169	-0.048	0.147	0.055	0.010	0.037	-0.086	0.054
G7Q33	-0.020	-0.027	-0.084	0.084	0.000	0.019	0.033	-0.006
G7Q34	-0.258	0.135	0.069	0.206	-0.103	0.131	-0.395 *	0.215
G7Q35	0.128	-0.116	-0.081	-0.129	0.119	0.005	0.231 *	-0.157
G7Q36	0.022	0.104	-0.296	0.144	0.038	0.120	-0.052	-0.080
G7Q37	0.103	-0.094	-0.160	-0.036	0.124	0.154	-0.020	-0.071
G7Q38	0.132	-0.021	-0.092	-0.071	0.048	-0.015	0.067	-0.049
G7Q39	0.001	0.030	-0.204	-0.051	0.151	-0.040	0.066	0.046
G7Q40	0.167	0.030	-0.047	-0.017	-0.024	0.042	0.056	-0.207
G7Q41	-0.109	0.026	-0.183	0.030	-0.005	-0.036	0.112	0.167
G7Q42	0.226	-0.053	-0.186	0.000	0.023	-0.103	0.041	0.052
G7Q43	0.358 *	0.042	-0.591	-0.203	0.081	0.066	0.195	0.051
G7Q44	-0.097	0.010	-0.227	0.053	0.093	0.089	0.067	0.012
G7Q45	0.212	0.051	-0.135	-0.052	0.015	0.083	-0.028	-0.146
G7Q46	-0.040	-0.038	0.069	-0.022	-0.020	-0.037	0.062	0.025
G7Q47	0.158	0.091	-0.209	0.194	0.011	-0.386 *	0.086	0.055
G7Q48	-0.144	0.086	0.191	-0.042	-0.119	-0.109	0.078	0.059
G7Q49	-0.087	0.053	0.134	0.010	-0.098	-0.030	-0.052	0.071
G7Q50	-0.007	-0.042	0.312	-0.068	0.101	-0.044	-0.155	-0.096

Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant differences are denoted with *.

I.23 Year 9 Grammar and Punctuation Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
G9Q26	-0.150	0.366	0.540
G9Q27	-0.210	-0.006	0.482
G9Q28	-0.016	0.354	-0.116
G9Q29	-0.310	0.246	0.522
G9Q30	-0.096	0.018	0.050
G9Q31	-0.234	-0.056	0.502
G9Q32	0.160	-0.758	0.250
G9Q33	0.100	-0.060	-0.184
G9Q34	0.068	-0.020	0.028
G9Q35	-0.198	0.304	0.086
G9Q36	-0.124	0.052	0.048
G9Q37	-0.288	-0.084	0.154
G9Q38	0.178	0.100	0.106
G9Q39	0.154	0.024	-0.098
G9Q40	0.052	-0.354	-0.144
G9Q41	0.012	0.242	-0.464
G9Q42	-0.032	0.194	0.140
G9Q43	0.080	-0.014	-0.214
G9Q44	0.186	-0.204	-0.230
G9Q45	-0.268	0.022	0.030
G9Q46	0.210	-0.114	-0.160
G9Q47	0.198	-0.228	-0.106
G9Q48	0.132	-0.128	-0.644
G9Q49	0.520	-0.086	-0.776
G9Q50	-0.122	0.192	0.204

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.24 Year 9 Grammar and Punctuation Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
G9Q26	-0.443	-0.141	0.728	-0.061	-0.165	0.156	-0.108	0.035
G9Q27	0.088	-0.184	0.400	0.021	0.075	0.006	-0.274	-0.133
G9Q28	-0.087	0.177	-0.036	0.117	-0.088	-0.252	0.089	0.080
G9Q29	-0.204	0.053	0.461	-0.079	-0.042	-0.011	-0.174	-0.005
G9Q30	-0.059	0.077	-0.010	-0.019	-0.028	-0.081	0.091	0.029
G9Q31	-0.003	-0.039	0.372	0.076	-0.005	-0.019	-0.270	-0.113
G9Q32	0.038	-0.074	-0.326	0.050	0.114	0.529 *	-0.153	-0.178
G9Q33	0.113	0.097	-0.361	0.310 *	-0.030	-0.166	-0.060	0.097
G9Q34	-0.070	-0.079	0.131	0.123	-0.093	0.065	0.028	-0.104
G9Q35	-0.238	0.054	0.322	0.116	-0.057	-0.124	-0.125	0.052
G9Q36	0.009	-0.044	0.086	0.068	-0.085	0.015	-0.037	-0.011
G9Q37	0.012	-0.061	0.166	-0.192	0.150	0.089	-0.032	-0.131
G9Q38	-0.165	0.121	-0.010	-0.072	-0.019	0.051	0.113	-0.020
G9Q39	0.167	-0.073	-0.075	-0.145	0.148	-0.059	0.110	-0.072
G9Q40	-0.070	0.088	-0.107	0.046	0.028	0.071	-0.008	-0.047
G9Q41	0.202	0.034	-0.408	0.049	0.016	-0.115	0.122	0.100
G9Q42	-0.210	-0.022	0.338	0.106	-0.019	-0.164	-0.002	-0.026
G9Q43	0.100	0.015	-0.083	0.018	0.041	-0.154	0.086	-0.022
G9Q44	0.012	-0.044	-0.211	0.234 *	0.100	-0.044	0.023	-0.069
G9Q45	-0.085	-0.080	0.178	0.059	-0.086	0.079	0.018	-0.083
G9Q46	0.175	-0.137	-0.113	0.132	-0.040	-0.017	0.060	-0.061
G9Q47	0.560 *	-0.337 *	-0.301	-1.010 *	0.155	0.213	0.419 *	0.301 *
G9Q48	0.070	0.265 *	-0.586	0.007	0.019	-0.051	0.036	0.239 *
G9Q49	0.175	0.322	-0.813	0.069	-0.057	0.040	0.015	0.249
G9Q50	-0.085	0.012	0.257	-0.024	-0.033	-0.056	0.033	-0.105

Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant differences are denoted with *.

I.25 Year 3 Numeracy Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
N3Q01	-0.738	-0.035	-0.435
N3Q02	-0.130	0.575	0.961
N3Q03	0.172	0.037	0.859
N3Q04	0.210	-0.265	0.473
N3Q05	-0.090	-0.055	0.539
N3Q06	0.074	0.295	0.309
N3Q07	-0.416	-0.153	0.361
N3Q08	-0.348	0.055	0.417
N3Q09	0.394	0.073	-0.001
N3Q10	-0.318	-0.007	-0.277
N3Q11	0.302	0.137	-0.105
N3Q12	-0.322	0.161	-0.105
N3Q13	-0.076	-0.093	-0.099
N3Q14	-0.074	0.053	-0.023
N3Q15	0.052	-0.131	0.113
N3Q16	-0.170	0.019	-0.577
N3Q17	0.032	0.269	0.129
N3Q18	0.112	0.005	-0.087
N3Q19	-0.328	-0.047	-0.065
N3Q20	0.218	0.151	0.497
N3Q21	-0.092	-0.329	-0.313
N3Q22	-0.390	0.005	0.483
N3Q23	-0.426	0.073	-0.163
N3Q24	-0.034	-0.283	-0.517
N3Q25	0.168	0.181	-0.393
N3Q26	0.238	0.275	-0.037
N3Q27	0.936	0.067	-0.323
N3Q28	-0.096	0.273	-1.009
N3Q29	-0.364	0.259	0.057
N3Q30	0.204	-0.097	-0.533
N3Q31	0.050	0.355	-0.813
N3Q32	-0.092	-0.253	-0.141
N3Q33	0.444	-0.055	0.739
N3Q34	0.210	-0.831	-0.005
N3Q35	0.612	-0.293	0.607
N3Q36	0.072	-0.397	-0.511

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.26 Year 3 Numeracy Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
N3Q01	0.257	0.000	-0.776	0.138	0.149	-0.225	0.252	0.205
N3Q02	-0.034	-0.086	1.016 *	-0.145	-0.348	-0.166	-0.332	0.096
N3Q03	-0.148	-0.119	0.646	0.055	0.141	0.029	-0.563	-0.040
N3Q04	-0.160	-0.189	0.001	0.014	0.327	0.233	-0.215	-0.012
N3Q05	0.150	-0.132	0.434	-0.008	0.120	-0.129	-0.291	-0.144
N3Q06	0.006	0.087	-0.028	-0.190	0.286	0.305	-0.140	-0.327
N3Q07	0.018	-0.057	0.116	-0.045	-0.018	0.134	-0.157	0.009
N3Q08	-0.276	-0.079	0.298	-0.020	0.025	0.155	0.004	-0.107
N3Q09	-0.035	-0.038	0.172	-0.047	-0.012	-0.109	0.017	0.053
N3Q10	0.094	-0.066	0.110	-0.024	-0.151	-0.026	0.188	-0.124
N3Q11	0.011	0.110	0.022	0.062	-0.011	-0.192	0.060	-0.062
N3Q12	0.208	0.133	-0.256	-0.107	-0.027	-0.089	0.149	-0.012
N3Q13	0.080	-0.138	-0.090	0.030	-0.005	0.016	0.110	-0.003
N3Q14	-0.026	0.012	-0.048	0.009	0.065	-0.085	0.020	0.053
N3Q15	0.079	-0.043	-0.111	0.092	-0.108	0.073	-0.030	0.048
N3Q16	0.077	0.113	-0.390	-0.024	-0.079	-0.116	0.246	0.174
N3Q17	0.042	-0.071	0.153	-0.044	-0.061	0.022	0.092	-0.133
N3Q18	-0.122	0.049	-0.158	-0.012	0.158	0.103	-0.004	-0.015
N3Q19	0.069	-0.021	-0.137	-0.039	-0.077	0.106	0.166	-0.068
N3Q20	-0.274	0.102	0.286	0.062	-0.076	0.038	-0.194	0.056
N3Q21	0.132	-0.125	-0.235	0.078	0.078	-0.018	0.094	-0.003
N3Q22	0.098	0.048	0.210	-0.098	-0.068	-0.062	-0.070	-0.058
N3Q23	0.023	0.072	-0.164	0.072	-0.053	0.089	-0.054	0.013
N3Q24	0.084	0.123	-0.527	0.030	0.033	0.098	0.060	0.098
N3Q25	0.010	0.137	-0.075	0.012	-0.148	-0.179	0.089	0.154
N3Q26	-0.078	0.181	-0.036	0.175	-0.171	-0.212	0.132	0.009
N3Q27	0.125	0.096	-0.093	0.083	-0.071	-0.160	-0.063	0.083
N3Q28	0.155	0.234	-0.504	-0.028	-0.119	-0.141	0.250	0.153
N3Q29	-0.080	-0.026	0.191	0.034	-0.162	-0.030	-0.038	0.110
N3Q30	0.117	0.000	-0.126	0.063	-0.062	-0.143	0.040	0.111
N3Q31	0.064	0.375	-0.553	-0.049	-0.118	0.066	0.142	0.074
N3Q32	0.089	-0.068	-0.165	-0.031	0.114	0.086	0.032	-0.058
N3Q33	-0.219	0.081	0.402	-0.030	0.006	0.037	-0.243	-0.034
N3Q34	-0.150	-0.490	0.303	-0.186	0.361	0.265	0.061	-0.164
N3Q35	-0.196	-0.137	0.542	0.021	0.086	0.004	-0.160	-0.160
N3Q36	-0.188	-0.068	-0.431	0.096	-0.006	0.223	0.350	0.025

Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant differences are denoted with *.

I.27 Year 5 Numeracy Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
N5Q01	0.405	0.197	0.859
N5Q02	-0.149	0.767	0.649
N5Q03	-0.367	0.277	0.559
N5Q04	-0.359	0.019	0.453
N5Q05	-0.127	-0.217	0.771
N5Q06	-0.387	0.151	-0.001
N5Q07	-0.191	0.013	0.329
N5Q08	-0.293	0.035	0.113
N5Q09	-0.099	-0.031	-0.059
N5Q10	-0.295	-0.213	0.135
N5Q11	-0.027	-0.049	0.287
N5Q12	-0.401	0.209	0.325
N5Q13	-0.355	0.317	-0.225
N5Q14	0.005	-0.363	0.227
N5Q15	0.587	-0.075	0.423
N5Q16	-0.141	0.963	-0.317
N5Q17	-0.001	0.165	0.045
N5Q18	0.001	0.197	-0.553
N5Q19	0.095	-0.175	-0.137
N5Q20	0.209	-0.027	-0.115
N5Q21	-0.175	-0.325	0.135
N5Q22	0.163	0.249	0.069
N5Q23	-0.403	-0.201	-0.051
N5Q24	0.093	0.023	0.277
N5Q25	0.215	-0.019	-0.635
N5Q26	0.491	-0.283	-0.163
N5Q27	0.351	0.021	-0.371
N5Q28	0.143	-0.263	-0.551
N5Q29	-0.211	-0.059	0.219
N5Q30	-0.213	-0.133	0.191
N5Q31	-0.347	0.133	-0.017
N5Q32	0.049	-0.207	-0.351
N5Q33	-0.097	0.051	-0.061
N5Q34	-0.165	-0.051	-0.217
N5Q35	0.353	-0.311	-0.175
N5Q36	0.503	0.123	-0.609
N5Q37	-0.123	0.021	-0.243
N5Q38	0.363	0.009	-0.233
N5Q39	0.157	-0.431	-1.181
N5Q40	0.127	-0.015	0.191
N5Q41	0.735	-0.101	-0.157
N5Q42	-0.099	-0.373	0.163

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.28 Year 5 Numeracy Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
N5Q01	-0.519	-0.313	1.169 *	0.093	-0.209	-0.061	-0.302	0.141
N5Q02	-0.405	0.074	0.694	-0.063	0.061	-0.145	-0.180	-0.038
N5Q03	-0.226	0.037	0.680	-0.018	-0.257	-0.115	-0.118	0.017
N5Q04	-0.074	-0.142	0.836 *	-0.032	-0.221	-0.169	-0.121	-0.077
N5Q05	0.066	-0.160	0.649	0.006	-0.274	-0.080	-0.199	-0.008
N5Q06	0.073	0.066	-0.114	0.042	0.055	-0.032	0.119	-0.208
N5Q07	-0.121	0.039	0.236	-0.147	0.140	-0.059	-0.212	0.124
N5Q08	0.099	-0.074	0.195	0.086	-0.073	-0.065	-0.225	0.056
N5Q09	-0.037	0.064	-0.382	-0.035	0.253	0.086	0.019	0.032
N5Q10	0.091	-0.180	-0.115	-0.137	-0.020	0.339	0.040	-0.017
N5Q11	-0.111	-0.091	0.237	-0.060	0.057	-0.048	-0.076	0.091
N5Q12	-0.014	0.040	0.551	-0.310	-0.033	0.140	-0.242	-0.134
N5Q13	-0.160	0.236	-0.188	0.060	-0.119	-0.101	0.148	0.124
N5Q14	0.073	-0.243	0.036	-0.128	0.094	0.184	0.005	-0.021
N5Q15	0.061	0.107	-0.002	0.094	0.154	0.118	-0.290	-0.241
N5Q16	-0.102	0.366	-0.204	0.048	-0.200	-0.408	0.158	0.342
N5Q17	0.100	-0.053	-0.239	0.159	-0.099	0.052	0.048	0.032
N5Q18	0.200	0.292	-0.573	0.158	-0.012	-0.257	0.113	0.079
N5Q19	0.202	-0.007	-0.216	-0.018	0.021	-0.096	0.064	0.050
N5Q20	0.123	0.104	-0.219	-0.126	0.086	0.191	-0.031	-0.127
N5Q21	-0.116	0.000	0.003	0.060	0.035	0.181	-0.010	-0.152
N5Q22	-0.108	0.171	-0.001	0.105	-0.143	-0.201	0.057	0.121
N5Q23	0.161	-0.135	-0.312	0.144	0.083	0.029	0.043	-0.013
N5Q24	-0.135	-0.007	0.073	0.002	-0.006	0.043	-0.089	0.120
N5Q25	0.267	0.034	-0.195	-0.006	-0.067	-0.104	0.158	-0.086
N5Q26	-0.139	0.131	-0.400	-0.027	0.241	0.272	0.013	-0.090
N5Q27	-0.163	0.094	-0.252	0.143	-0.048	-0.007	0.058	0.175
N5Q28	0.255	0.028	-0.612	0.134	-0.027	0.072	0.119	0.032
N5Q29	-0.062	-0.158	0.237	-0.106	0.062	0.173	-0.030	-0.116
N5Q30	0.032	-0.022	0.015	0.147	-0.130	-0.014	-0.021	-0.007
N5Q31	0.009	0.138	-0.216	0.036	-0.066	-0.011	0.060	0.050
N5Q32	0.377	-0.361	-0.147	-0.031	0.196	0.052	0.124	-0.210
N5Q33	-0.254	0.043	0.008	0.125	0.006	0.029	0.008	0.036
N5Q34	0.196	0.043	-0.415	0.098	0.012	0.012	0.080	-0.025
N5Q35	-0.052	0.032	0.099	0.071	0.042	-0.116	0.047	-0.123
N5Q36	0.159	0.108	-0.411	0.237	-0.111	-0.087	0.100	0.005
N5Q37	-0.069	0.070	-0.066	-0.199	0.198	-0.123	0.150	0.039
N5Q38	-0.094	-0.076	-0.015	-0.093	0.030	0.069	0.119	0.060
N5Q39	0.442	0.368	-1.506 *	-0.118	0.387	0.470	0.223	-0.266
N5Q40	-0.114	-0.104	0.260	0.162	-0.003	-0.004	-0.128	-0.069
N5Q41	0.102	-0.313	1.068	-0.665 *	-0.323	-0.026	0.114	0.043

N5Q42	-0.014	-0.247	-0.245	0.111	0.230	-0.182	0.089	0.259

Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant differences are denoted with *.

I.29 Year 7 Numeracy Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
N7CAQ01	-0.108	0.185	0.252
N7CAQ02	-0.056	0.147	0.078
N7CAQ03	0.320	0.157	-0.050
N7CAQ04	-0.002	0.101	0.550
N7CAQ05	0.582	0.215	-0.260
N7CAQ06	0.204	0.179	0.484
N7CAQ07	-0.288	0.047	0.300
N7CAQ08	0.092	0.321	0.032
N7CAQ09	-0.644	0.209	0.134
N7CAQ10	-0.102	0.389	0.408
N7CAQ11	-0.464	0.101	-0.422
N7CAQ12	0.186	0.089	-0.082
N7CAQ13	0.218	0.333	-0.468
N7CAQ14	-0.360	0.021	0.296
N7CAQ15	-0.088	-0.115	0.332
N7CAQ16	-0.062	-0.101	-0.616
N7CAQ17	-0.538	0.263	0.132
N7CAQ18	-0.112	0.243	0.228
N7CAQ19	0.150	0.109	-0.230
N7CAQ20	0.106	0.049	-0.076
N7CAQ21	0.490	0.003	-0.328
N7CAQ22	-0.278	-0.187	0.496
N7CAQ23	0.096	-0.097	-0.076
N7CAQ24	-0.176	-0.551	-0.274
N7CAQ25	0.054	-0.003	-0.154
N7CAQ26	-0.022	-0.033	-0.324
N7CAQ27	-0.030	-0.165	-0.620
N7CAQ28	0.108	-0.307	0.096
N7CAQ29	-0.200	0.053	-0.432
N7CAQ30	0.236	-0.247	0.278
N7CAQ31	0.524	0.221	-0.434
N7CAQ32	-0.256	0.137	0.024
N7CAQ33	-0.060	0.015	-0.086
N7CAQ34	0.214	0.099	0.366
N7CAQ35	0.554	-0.131	0.290
N7CAQ36	-0.032	0.205	-0.756
N7CAQ37	0.334	0.181	-1.048
N7CAQ38	0.008	0.077	0.260
N7CAQ39	0.074	-0.585	0.352
N7CAQ40	0.342	-0.721	0.832
N7NCQ01	-0.252	0.061	0.308
N7NCQ02	-0.434	-0.247	0.254
N7NCQ03	-0.144	-0.075	0.142
N7NCQ04	-0.386	-0.427	0.436

N7NCQ05	0.142	-0.107	0.208
N7NCQ06	-0.144	-0.107	-0.352
N7NCQ07	0.204	-0.011	-0.460
N7NCQ08	-0.176	0.101	0.312

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.30 Year 7 Numeracy Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
N7CAQ01	0.014	0.012	0.520	-0.104	-0.260	-0.248	-0.095	0.161
N7CAQ02	-0.115	-0.070	0.203	0.016	-0.073	-0.005	-0.001	0.046
N7CAQ03	-0.118	0.027	0.137	0.334*	-0.335	-0.017	-0.097	0.069
N7CAQ04	-0.111	-0.033	0.502	0.014	-0.045	0.091	-0.324	-0.096
N7CAQ05	-0.027	-0.118	0.059	-0.006	0.189	-0.028	0.102	-0.224
N7CAQ06	-0.146	0.061	0.285	-0.007	-0.081	0.016	-0.143	0.015
N7CAQ07	-0.021	-0.023	-0.054	0.017	0.065	0.008	-0.001	-0.033
N7CAQ08	0.000	0.142	-0.052	0.018	-0.064	-0.105	-0.073	0.135
N7CAQ09	-0.083	0.056	0.132	-0.072	-0.048	0.001	0.012	0.001
N7CAQ10	-0.181	-0.097	0.318	-0.018	-0.085	0.027	-0.135	0.172
N7CAQ11	-0.156	-0.064	-0.189	-0.010	0.195	-0.119	0.104	-0.073
N7CAQ12	-0.017	0.019	-0.291	0.045	0.092	0.042	0.014	0.096
N7CAQ13	-0.061	0.064	-0.084	0.084	-0.088	-0.325	0.199	0.212
N7CAQ14	-0.160	0.026	0.251	0.027	-0.116	0.040	-0.063	-0.005
N7CAQ15	0.047	0.225*	-0.089	-0.292*	0.071	0.115	0.106	-0.183
N7CAQ16	-0.059	-0.063	-0.538	-0.053	0.158	0.165	0.156	0.235
N7CAQ17	-0.225	0.097	0.155	0.010	-0.219	0.119	-0.021	0.084
N7CAQ18	-0.214	0.143	0.045	0.030	-0.056	-0.007	0.058	0.002
N7CAQ19	-0.011	0.107	-0.051	0.141	-0.124	-0.126	0.066	-0.001
N7CAQ20	-0.026	-0.199	0.084	-0.013	0.069	-0.054	0.082	0.058
N7CAQ21	-0.154	0.176	-0.329	0.016	0.199	-0.270	0.055	-0.001
N7CAQ22	-0.047	-0.010	0.158	-0.117	0.010	0.026	-0.058	-0.056
N7CAQ23	-0.047	-0.014	0.234	0.035	-0.054	-0.143	-0.065	0.053
N7CAQ24	-0.041	-0.265	-0.462	0.034	0.652*	-0.068	0.092	-0.025

N7CAQ25	-0.099	-0.260*	0.032	0.000	0.203	-0.105	0.081	0.149
N7CAQ26	-0.103	-0.013	-0.108	-0.100	-0.203	-0.020	-0.071	-0.045
N7CAQ27	-0.148	-0.226	-0.221	-0.164	-0.368	-0.058	-0.131	-0.095
N7CAQ28	-0.063	-0.006	-0.397	-0.053	-0.161	-0.254	-0.221	-0.243*
N7CAQ29	-0.029	-0.101	-0.331	-0.038	-0.093	-0.054	-0.219	-0.091
N7CAQ30	-0.114	-0.038	-0.259	-0.018	-0.363	-0.108	-0.053	-0.096
N7CAQ31	-0.079	-0.199	-0.354	-0.035	-0.054	-0.189	-0.137	-0.147
N7CAQ32	-0.018	-0.159	-0.164	-0.113	-0.279	-0.070	-0.212	-0.048
N7CAQ33	-0.007	-0.005	-0.170	-0.058	-0.154	-0.138	-0.130	-0.051
N7CAQ34	-0.011	-0.119	-0.028	-0.115	-0.120	-0.206	-0.088	-0.021
N7CAQ35	-0.037	-0.015	-0.087	-0.078	-0.039	-0.119	-0.137	-0.236
N7CAQ36	-0.038	-0.002	-0.226	-0.153	-0.157	-0.131	-0.190	-0.207
N7CAQ37	-0.289	-0.436	-0.546	-0.283	-0.050	-0.278	-0.433	-0.257
N7CAQ38	-0.101	-0.023	-0.111	-0.017	-0.058	-0.062	-0.021	-0.012
N7CAQ39	-0.260	-0.337	-0.502	-0.072	-0.025	-0.024	-0.017	-0.384*
N7CAQ40	-0.017	-0.220	-0.063	-0.012	-0.456	-0.315	-0.158	-0.326
N7NCQ01	-0.023	-0.038	-0.524	-0.014	-0.222	-0.001	-0.267	-0.014
N7NCQ02	-0.068	-0.143	-0.112	-0.007	-0.193	-0.217	-0.096	-0.027
N7NCQ03	-0.037	-0.134	-0.003	-0.040	-0.071	-0.115	-0.055	-0.009
N7NCQ04	-0.072	-0.349*	-0.301	-0.194	-0.032	-0.378*	-0.183	-0.007
N7NCQ05	-0.021	-0.086	-0.189	-0.067	-0.058	-0.051	-0.084	-0.022
N7NCQ06	-0.010	-0.124	-0.144	-0.182	-0.171	-0.176	-0.081	-0.053
N7NCQ07	-0.166	-0.403*	-0.737	-0.307*	-0.352	-0.132	-0.042	-0.050
N7NCQ08	-0.117	-0.010	-0.093	-0.030	-0.022	-0.190	-0.097	-0.056

Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant

differences are denoted with *.

I.31 Year 9 Numeracy Item DIF: Gender, LBOTE, and Indigenous

	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
N9CAQ01	-0.168	0.193	0.094
N9CAQ02	0.314	0.239	-0.372
N9CAQ03	-0.220	0.097	0.018
N9CAQ04	0.016	0.479	0.184
N9CAQ05	0.000	0.079	0.020
N9CAQ06	0.090	0.167	-0.318
N9CAQ07	-0.258	-0.163	0.300
N9CAQ08	-0.266	0.023	-0.122
N9CAQ09	0.158	0.329	-0.132
N9CAQ10	0.020	-0.265	0.164
N9CAQ11	0.490	0.137	0.246
N9CAQ12	0.452	0.117	0.078
N9CAQ13	0.204	0.205	-0.262
N9CAQ14	-0.176	0.051	-0.074
N9CAQ15	-0.020	-0.049	0.218
N9CAQ16	-0.086	0.001	-0.258
N9CAQ17	-0.256	0.193	-0.212
N9CAQ18	0.286	0.045	-0.300
N9CAQ19	-0.006	0.061	-0.358
N9CAQ20	-0.176	-0.269	0.072
N9CAQ21	-0.270	-0.579	0.394
N9CAQ22	-0.188	-0.087	-0.718
N9CAQ23	0.196	0.173	-0.182
N9CAQ24	-0.394	0.151	-0.064
N9CAQ25	0.082	0.211	-0.092
N9CAQ26	0.462	-0.267	0.058
N9CAQ27	-0.210	0.237	-0.470
N9CAQ28	-0.096	-0.147	-0.670
N9CAQ29	0.160	0.285	-0.062
N9CAQ30	-0.276	0.139	0.152
N9CAQ31	-0.124	0.275	-0.670
N9CAQ32	-0.038	0.015	-0.348
N9CAQ33	-0.032	-0.217	0.270
N9CAQ34	-0.168	-0.285	0.646
N9CAQ35	-0.012	-0.309	0.814
N9CAQ36	0.100	-0.181	0.144
N9CAQ37	-0.270	-0.389	0.404
N9CAQ38	-0.038	0.045	0.272
N9CAQ39	-0.002	-0.123	0.616
N9CAQ40	0.210	-0.063	0.646
N9NCQ01	0.596	0.303	0.120
N9NCQ02	0.074	-0.033	-0.574
N9NCQ03	0.014	0.109	0.104
N9NCQ04	0.294	0.143	-0.084

N9NCQ05	-0.520	-0.381	0.244
N9NCQ06	-0.200	-0.119	-0.338
N9NCQ07	0.192	-0.151	-0.072
N9NCQ08	0.078	-0.425	0.472

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

I.32 Year 9 Numeracy Item DIF: TAA

	Difference in Item Difficulty (after Adjustment)							
Item Label	**ACT**	**NSW**	**NT**	**QLD**	**SA**	**TAS**	**VIC**	**WA**
N9CAQ01	-0.205	0.018	0.453	-0.110	0.013	-0.157	-0.106	0.093
N9CAQ02	-0.036	0.196	-0.155	-0.086	0.034	-0.287	0.110	0.152
N9CAQ03	-0.092	0.126	0.296	0.018	0.192	0.047	-0.268	-0.320
N9CAQ04	-0.219	0.170	0.588	0.048	-0.170	-0.203	-0.229	0.014
N9CAQ05	-0.135	-0.010	-0.123	0.119	0.060	-0.066	-0.008	0.163
N9CAQ06	-0.067	0.030	-0.050	0.011	-0.042	-0.035	0.003	0.150
N9CAQ07	-0.016	0.147	0.259	-0.210	-0.077	0.081	-0.020	-0.164
N9CAQ08	-0.252	0.125	-0.146	-0.116	0.184	0.143	0.128	-0.067
N9CAQ09	-0.131	0.044	0.074	-0.092	-0.065	-0.189	0.194	0.165
N9CAQ10	-0.012	-0.216	0.167	0.028	0.014	0.164	-0.131	-0.015
N9CAQ11	-0.007	-0.020	0.210	-0.133	-0.065	-0.014	0.073	-0.045
N9CAQ12	-0.014	0.133	-0.067	0.080	0.015	-0.081	-0.138	0.074
N9CAQ13	0.087	0.097	-0.196	0.008	-0.072	-0.105	0.080	0.102
N9CAQ14	0.009	-0.003	-0.070	0.005	-0.080	0.046	0.170	-0.077
N9CAQ15	0.227	-0.258*	0.172	-0.345*	0.059	0.124	0.176	-0.155
N9CAQ16	-0.003	0.056	-0.159	0.030	0.014	-0.089	0.084	0.067
N9CAQ17	-0.018	-0.120	0.022	-0.025	0.011	-0.057	0.121	0.065
N9CAQ18	0.189	0.033	-0.263	0.057	-0.045	-0.063	-0.144	0.236
N9CAQ19	0.223	-0.010	-0.312	0.042	0.022	-0.108	0.002	0.141
N9CAQ20	-0.063	-0.337*	0.239	-0.072	-0.026	0.251	0.117	-0.109
N9CAQ21	0.190	-0.250*	0.187	-0.099	0.110	0.406*	-0.289*	-0.255
N9CAQ22	0.198	0.303*	-0.614	-0.077	0.187	0.021	-0.171	0.154
N9CAQ23	0.094	0.077	-0.197	0.109	-0.052	-0.249	0.092	0.125

N9CAQ24	-0.061	0.214	-0.092	-0.006	0.006	-0.040	-0.058	0.037
N9CAQ25	-0.087	-0.056	0.215	0.020	-0.131	-0.144	0.132	0.050
N9CAQ26	-0.011	-0.086	-0.038	0.128	0.083	-0.050	0.009	-0.058
N9CAQ27	-0.064	0.157	-0.234	-0.001	-0.075	-0.154	0.239	0.003
N9CAQ28	-0.363	0.191	-0.423	-0.077	-0.141	-0.254	0.244	0.097
N9CAQ29	-0.125	-0.026	0.212	0.115	-0.139	-0.026	0.004	-0.015
N9CAQ30	-0.083	0.020	0.105	-0.092	-0.045	-0.079	0.139	0.035
N9CAQ31	-0.018	-0.112	-0.133	0.133	-0.044	-0.212	0.120	0.267*
N9CAQ32	-0.067	0.085	-0.196	-0.015	0.031	-0.004	0.125	0.040
N9CAQ33	-0.316	-0.430*	0.276	-0.004	0.176	0.059	0.163	0.075
N9CAQ34	-0.137	-0.191	-0.070	0.058	0.021	0.591*	-0.007	-0.263
N9CAQ35	-0.213	-0.490*	0.485	0.054	-0.003	0.227	0.088	-0.149
N9CAQ36	-0.010	-0.237	0.276	0.033	-0.073	0.257	-0.063	-0.184
N9CAQ37	0.259	-0.236	0.405	-0.055	0.123	-0.106	-0.091	-0.299*
N9CAQ38	-0.003	-0.096	-0.273	0.207	0.117	0.176	-0.134	0.001
N9CAQ39	-0.028	-0.017	0.258	0.037	-0.062	-0.029	0.089	-0.248
N9CAQ40	-0.057	-0.149	-0.029	0.073	-0.040	0.304	0.009	-0.112
N9NCQ01	-0.194	0.064	0.304	0.248	-0.164	-0.189	-0.146	0.077
N9NCQ02	0.295	0.439*	-0.715	-0.102	-0.043	0.005	0.107	0.014
N9NCQ03	-0.043	0.107	0.139	0.092	-0.138	-0.100	-0.148	0.091
N9NCQ04	0.015	0.057	0.064	0.009	0.023	-0.132	-0.013	-0.023
N9NCQ05	0.140	-0.038	-0.105	-0.023	-0.027	0.261	-0.302*	0.095
N9NCQ06	0.025	0.241	-0.295	-0.105	0.233	-0.036	-0.031	-0.033
N9NCQ07	0.015	0.027	-0.261	0.035	0.088	0.040	-0.010	0.066
N9NCQ08	0.230	0.232	-0.193	0.046	0.001	0.058	-0.315*	-0.058

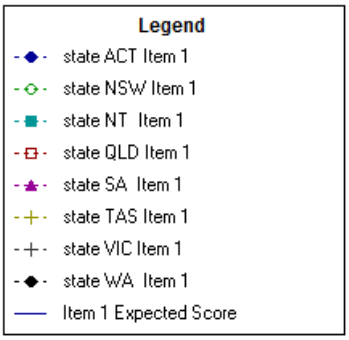
Note. Positive value in this table indicates that the item is harder for the corresponding TAA. Significant differences are denoted with *.

I.33 Writing Item DIF: Gender, LBOTE, and Indigenous

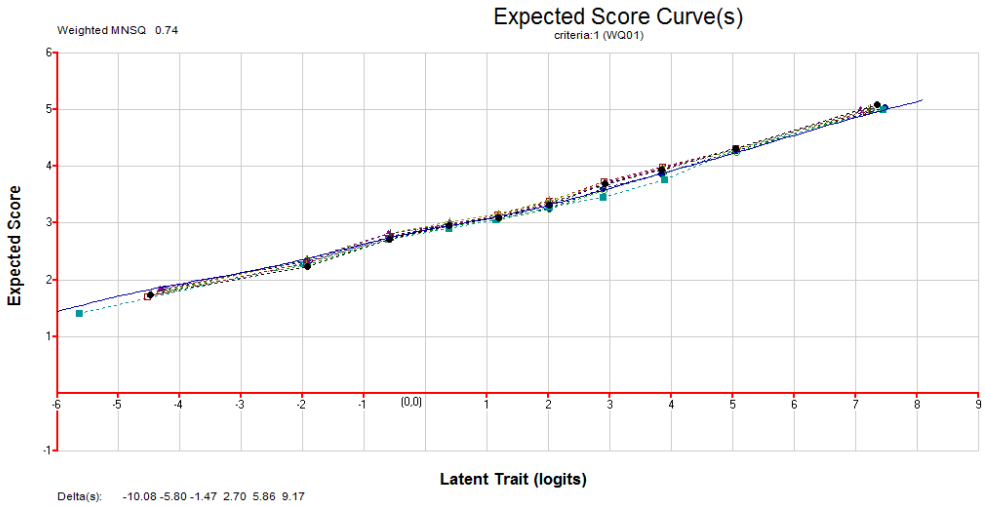
	Difference in Item Difficulty (after Adjustment)		
Item Label	**Gender**	**LBOTE**	**Indigenous**
WQ01	0.038	-0.073	-0.129
WQ02	0.019	0.001	0.004
WQ03	-0.040	-0.112	0.054
WQ04	-0.023	-0.097	0.062
WQ05	-0.226	-0.033	0.080
WQ06	0.120	-0.142	-0.056
WQ07	0.043	0.130	-0.084
WQ08	0.067	-0.292	-0.036
WQ09	0.210	0.261	-0.037
WQ10	-0.205	0.356	0.140

Note. Negative value in the table indicates that the item is easier for female/LBOTE/Indigenous groups.

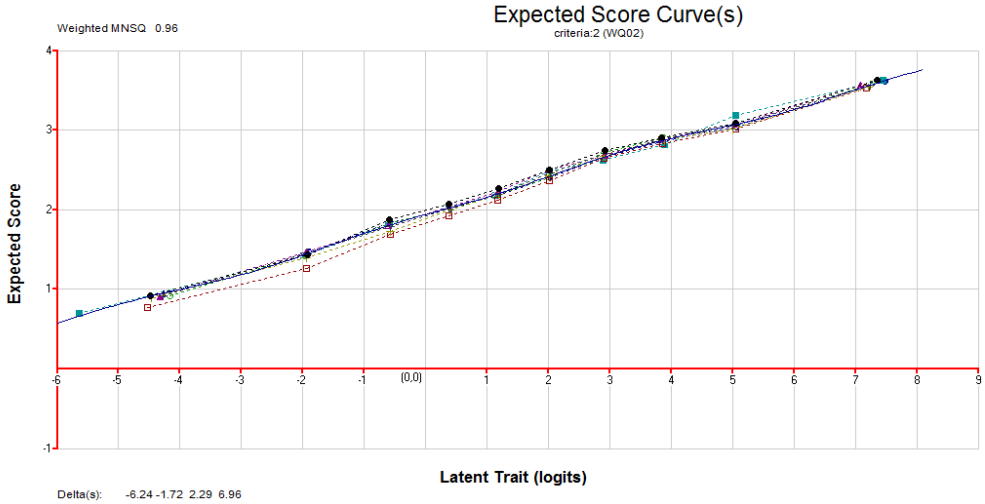
APPENDIX J. EXPECTED SCORE CURVES OF WRITING CRITERIA



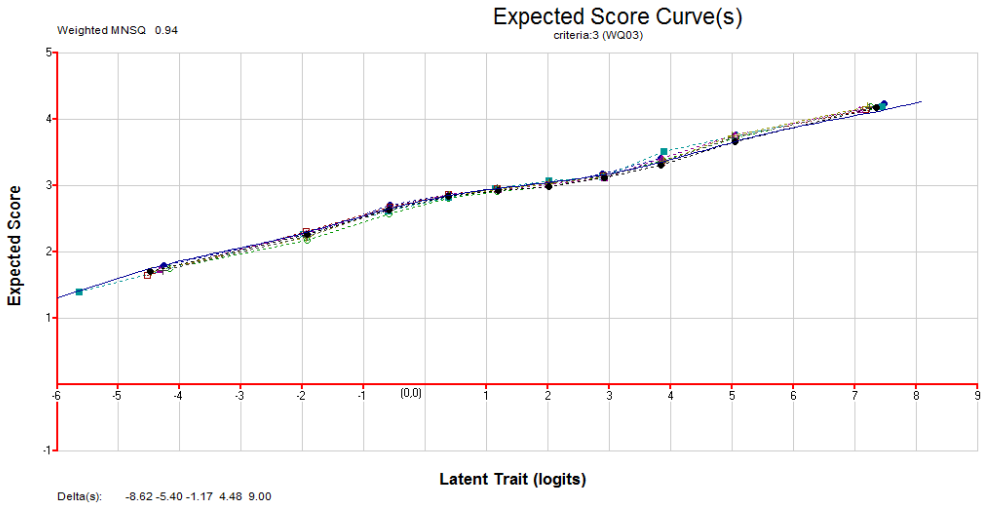
J.1 Criterion 1: Audience



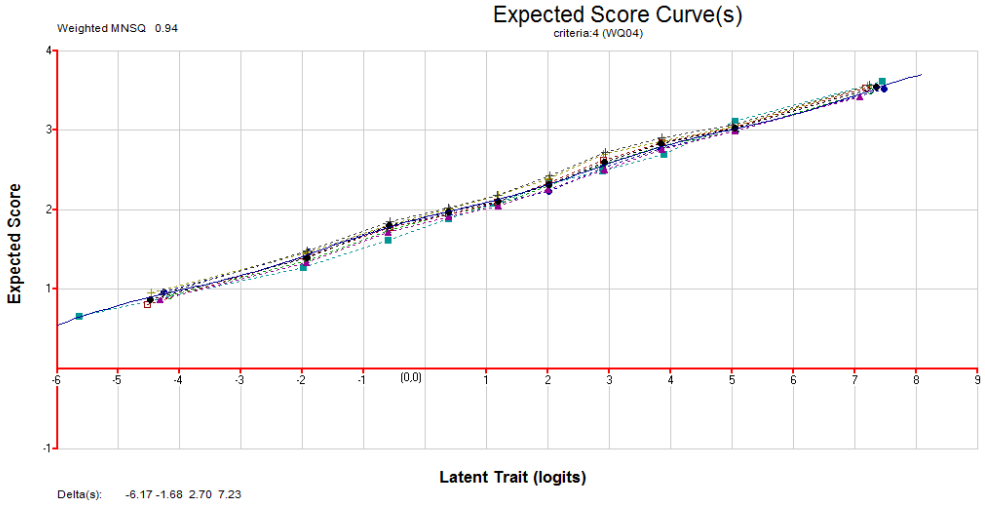
J.2 Criterion 2: Text Structure



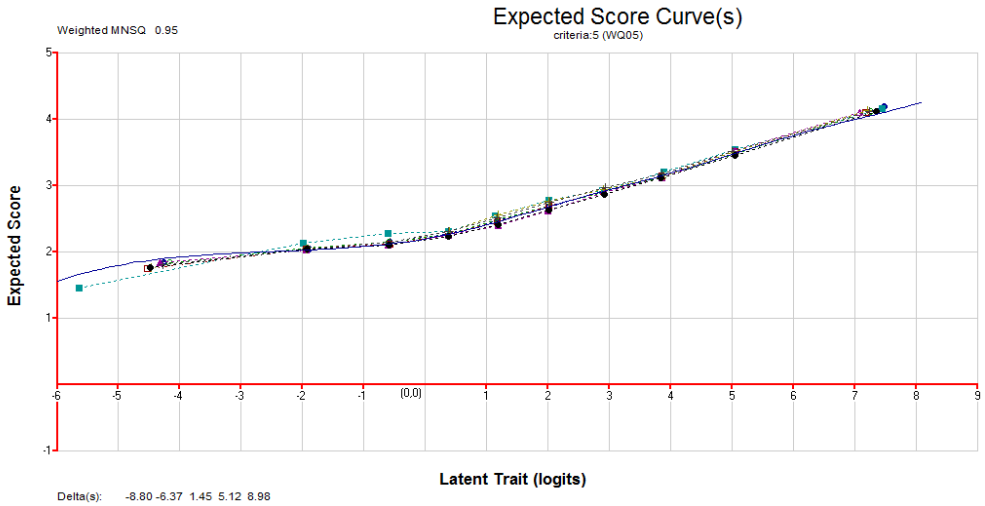
J.3 Criterion 3: Ideas



J.4 Criterion 4: Persuasive Devices

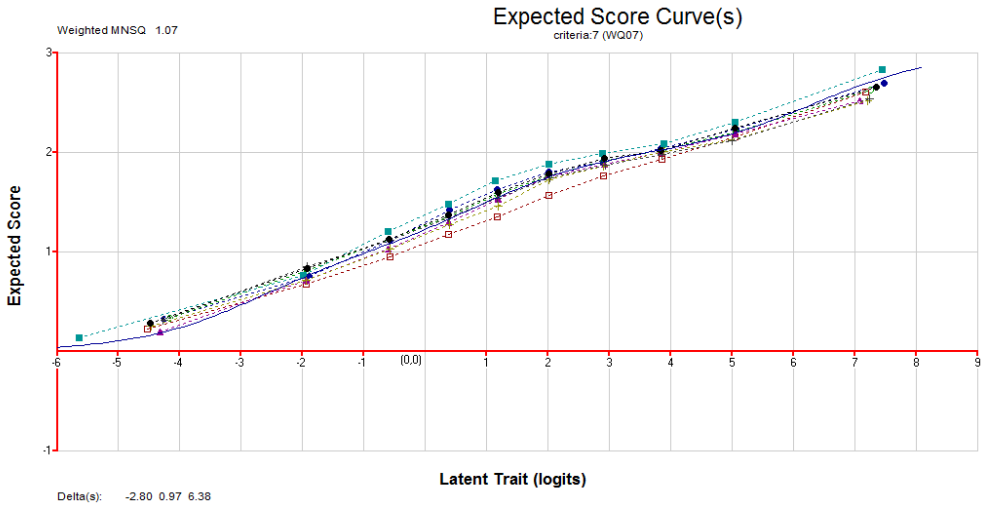


J.5 Criterion 5: Vocabulary

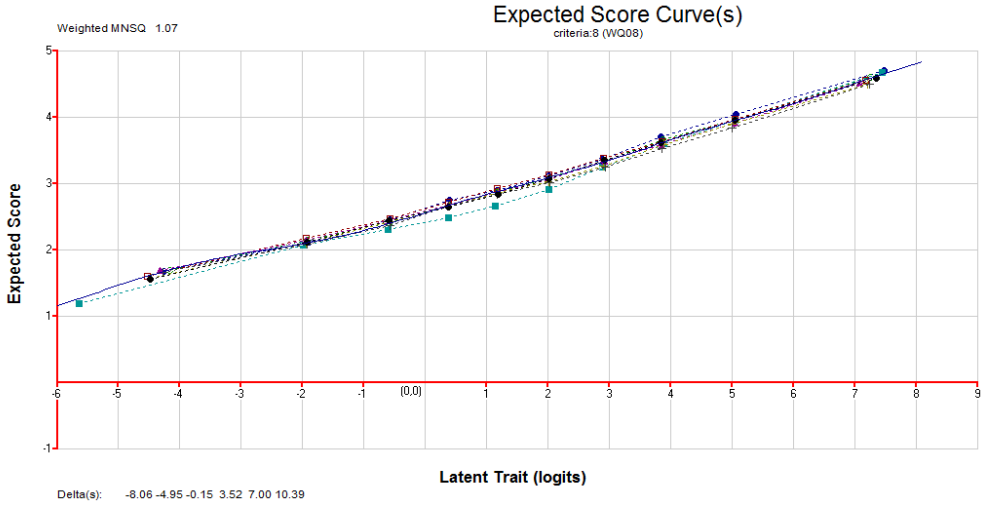


J.6 Criterion 6: Cohesion

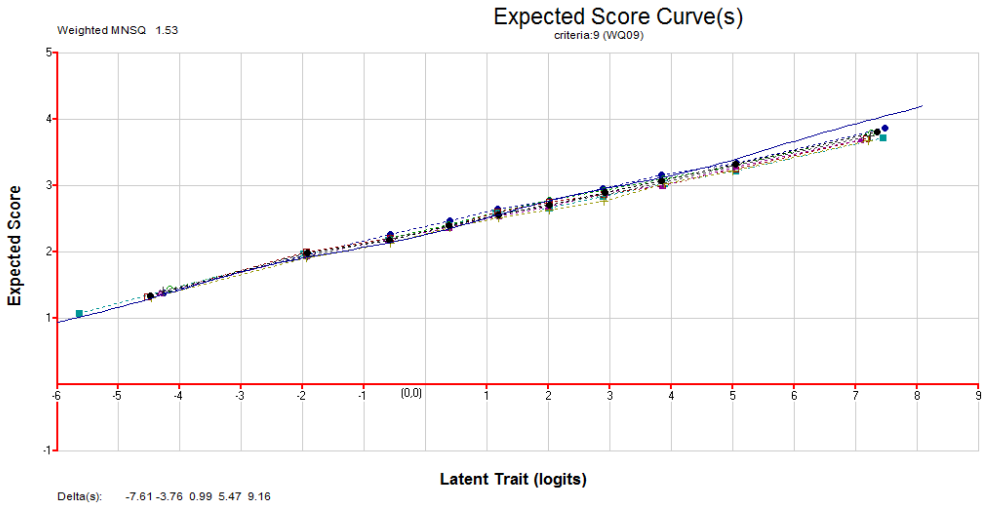
J.7 Criterion 7: Paragraphing



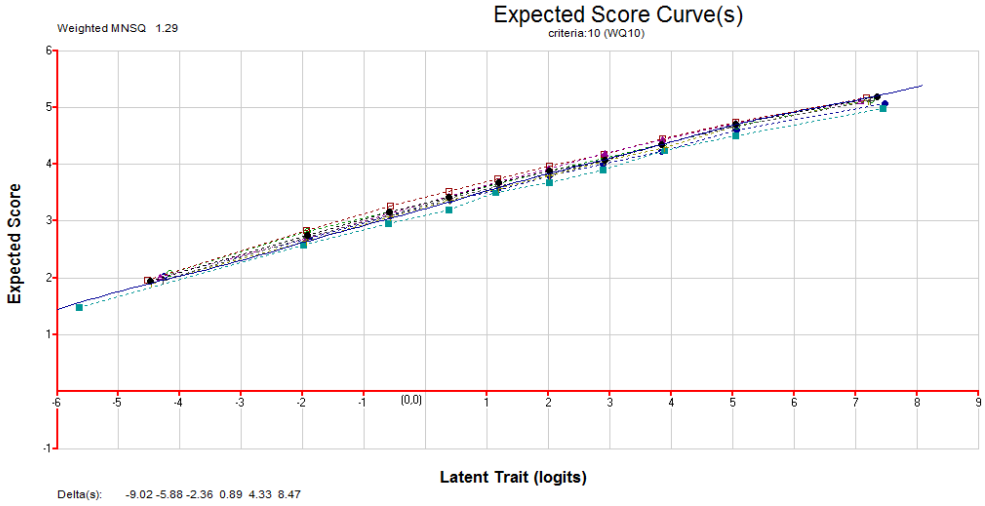
J.8 Criterion 8: Sentence Structure



J.9 Criterion 9: Punctuation



J.10 Criterion 10: Spelling



APPENDIX K. SCORE EQUIVALENCE TABLES

K.1 Year 3 Reading Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
3	Reading	0	-5.221	1.501	-6.939	-45.0	100.9	1
3	Reading	1	-4.033	0.897	-5.387	59.4	60.3	1
3	Reading	2	-3.432	0.718	-4.601	112.3	48.3	1
3	Reading	3	-3.004	0.626	-4.043	149.9	42.1	1
3	Reading	4	-2.662	0.569	-3.595	180.0	38.3	1
3	Reading	5	-2.370	0.529	-3.214	205.6	35.6	1
3	Reading	6	-2.113	0.499	-2.878	228.2	33.6	1
3	Reading	7	-1.880	0.476	-2.574	248.6	32.0	1
3	Reading	8	-1.666	0.458	-2.295	267.4	30.8	1
3	Reading	9	-1.467	0.443	-2.034	285.0	29.8	2
3	Reading	10	-1.279	0.431	-1.788	301.5	29.0	2
3	Reading	11	-1.100	0.421	-1.555	317.2	28.3	2
3	Reading	12	-0.929	0.412	-1.331	332.2	27.7	3
3	Reading	13	-0.765	0.405	-1.117	346.7	27.2	3
3	Reading	14	-0.606	0.399	-0.909	360.7	26.8	3
3	Reading	15	-0.451	0.394	-0.706	374.3	26.5	4
3	Reading	16	-0.300	0.390	-0.509	387.6	26.2	4
3	Reading	17	-0.151	0.386	-0.315	400.6	26.0	4
3	Reading	18	-0.005	0.384	-0.123	413.5	25.8	4
3	Reading	19	0.140	0.383	0.066	426.2	25.7	5
3	Reading	20	0.284	0.382	0.254	438.9	25.7	5
3	Reading	21	0.428	0.382	0.442	451.5	25.7	5
3	Reading	22	0.572	0.384	0.630	464.1	25.8	5
3	Reading	23	0.717	0.386	0.820	476.9	26.0	5
3	Reading	24	0.864	0.389	1.012	489.9	26.2	6
3	Reading	25	1.014	0.394	1.208	503.0	26.5	6
3	Reading	26	1.169	0.400	1.410	516.6	26.9	6
3	Reading	27	1.328	0.408	1.618	530.6	27.5	6
3	Reading	28	1.494	0.419	1.835	545.2	28.2	6
3	Reading	29	1.670	0.432	2.065	560.7	29.0	6
3	Reading	30	1.858	0.448	2.310	577.2	30.2	6
3	Reading	31	2.062	0.470	2.577	595.1	31.6	6
3	Reading	32	2.288	0.499	2.873	615.0	33.5	6
3	Reading	33	2.547	0.538	3.211	637.7	36.2	6
3	Reading	34	2.855	0.596	3.613	664.8	40.1	6
3	Reading	35	3.247	0.689	4.125	699.2	46.3	6
3	Reading	36	3.812	0.868	4.864	748.9	58.4	6
3	Reading	37	4.965	1.468	6.369	850.2	98.8	6

K.2 Year 5 Reading Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
5	Reading	0	-5.619	1.535	-5.963	20.7	103.3	3
5	Reading	1	-4.392	0.929	-4.630	110.4	62.5	3
5	Reading	2	-3.748	0.752	-3.931	157.3	50.6	3
5	Reading	3	-3.277	0.661	-3.420	191.7	44.4	3
5	Reading	4	-2.892	0.604	-3.002	219.9	40.6	3
5	Reading	5	-2.560	0.563	-2.641	244.1	37.9	3
5	Reading	6	-2.265	0.532	-2.320	265.7	35.8	3
5	Reading	7	-1.998	0.507	-2.031	285.2	34.1	3
5	Reading	8	-1.754	0.486	-1.765	303.0	32.7	3
5	Reading	9	-1.528	0.469	-1.520	319.5	31.5	3
5	Reading	10	-1.317	0.454	-1.291	334.9	30.5	3
5	Reading	11	-1.119	0.441	-1.076	349.4	29.6	3
5	Reading	12	-0.932	0.430	-0.873	363.1	28.9	3
5	Reading	13	-0.754	0.420	-0.680	376.1	28.3	4
5	Reading	14	-0.583	0.412	-0.494	388.5	27.7	4
5	Reading	15	-0.418	0.405	-0.315	400.6	27.3	4
5	Reading	16	-0.259	0.400	-0.142	412.2	26.9	4
5	Reading	17	-0.103	0.395	0.027	423.6	26.6	4
5	Reading	18	0.049	0.392	0.192	434.7	26.4	5
5	Reading	19	0.199	0.390	0.355	445.7	26.2	5
5	Reading	20	0.348	0.389	0.517	456.5	26.1	5
5	Reading	21	0.496	0.389	0.678	467.4	26.1	5
5	Reading	22	0.645	0.389	0.839	478.2	26.2	6
5	Reading	23	0.794	0.392	1.001	489.1	26.3	6
5	Reading	24	0.946	0.395	1.166	500.2	26.6	6
5	Reading	25	1.100	0.399	1.333	511.5	26.9	6
5	Reading	26	1.258	0.406	1.505	523.0	27.3	6
5	Reading	27	1.422	0.414	1.683	535.0	27.8	7
5	Reading	28	1.593	0.424	1.869	547.5	28.5	7
5	Reading	29	1.774	0.437	2.065	560.7	29.4	7
5	Reading	30	1.967	0.454	2.274	574.8	30.5	7
5	Reading	31	2.176	0.475	2.502	590.0	32.0	8
5	Reading	32	2.408	0.504	2.753	607.0	33.9	8
5	Reading	33	2.672	0.544	3.040	626.3	36.6	8
5	Reading	34	2.985	0.601	3.380	649.2	40.4	8
5	Reading	35	3.383	0.693	3.812	678.2	46.6	8
5	Reading	36	3.953	0.873	4.431	719.9	58.7	8
5	Reading	37	5.110	1.473	5.688	804.4	99.1	8

K.3 Year 7 Reading Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
7	Reading	0	-5.576	1.495	-4.393	126.3	100.6	4
7	Reading	1	-4.393	0.890	-3.242	203.7	59.9	4
7	Reading	2	-3.799	0.709	-2.665	242.5	47.7	4
7	Reading	3	-3.381	0.615	-2.259	269.9	41.4	4
7	Reading	4	-3.051	0.555	-1.937	291.5	37.3	4
7	Reading	5	-2.773	0.513	-1.667	309.6	34.5	4
7	Reading	6	-2.531	0.482	-1.432	325.5	32.4	4
7	Reading	7	-2.314	0.457	-1.221	339.6	30.8	4
7	Reading	8	-2.118	0.437	-1.030	352.5	29.4	4
7	Reading	9	-1.936	0.421	-0.853	364.4	28.3	4
7	Reading	10	-1.767	0.407	-0.689	375.4	27.4	4
7	Reading	11	-1.609	0.395	-0.535	385.8	26.6	4
7	Reading	12	-1.458	0.385	-0.389	395.6	25.9	4
7	Reading	13	-1.315	0.376	-0.250	405.0	25.3	4
7	Reading	14	-1.178	0.369	-0.117	413.9	24.8	4
7	Reading	15	-1.047	0.362	0.012	422.6	24.4	4
7	Reading	16	-0.919	0.357	0.136	430.9	24.0	5
7	Reading	17	-0.795	0.352	0.256	439.0	23.7	5
7	Reading	18	-0.674	0.348	0.374	446.9	23.4	5
7	Reading	19	-0.556	0.345	0.489	454.7	23.2	5
7	Reading	20	-0.440	0.342	0.602	462.2	23.0	5
7	Reading	21	-0.325	0.339	0.713	469.7	22.8	5
7	Reading	22	-0.212	0.338	0.823	477.1	22.7	5
7	Reading	23	-0.100	0.337	0.932	484.5	22.6	6
7	Reading	24	0.012	0.336	1.040	491.8	22.6	6
7	Reading	25	0.123	0.336	1.149	499.0	22.6	6
7	Reading	26	0.234	0.337	1.257	506.3	22.6	6
7	Reading	27	0.346	0.338	1.366	513.7	22.7	6
7	Reading	28	0.459	0.339	1.475	521.0	22.8	6
7	Reading	29	0.573	0.341	1.586	528.5	23.0	6
7	Reading	30	0.688	0.344	1.699	536.0	23.1	7
7	Reading	31	0.806	0.348	1.813	543.7	23.4	7
7	Reading	32	0.927	0.352	1.930	551.6	23.7	7
7	Reading	33	1.050	0.357	2.051	559.7	24.0	7
7	Reading	34	1.178	0.363	2.175	568.1	24.4	7
7	Reading	35	1.311	0.371	2.304	576.7	24.9	7
7	Reading	36	1.449	0.380	2.438	585.8	25.5	8
7	Reading	37	1.594	0.390	2.580	595.3	26.2	8
7	Reading	38	1.749	0.402	2.730	605.4	27.0	8
7	Reading	39	1.913	0.417	2.890	616.1	28.0	8
7	Reading	40	2.091	0.434	3.063	627.8	29.2	8
7	Reading	41	2.286	0.455	3.252	640.5	30.6	9
7	Reading	42	2.502	0.482	3.462	654.6	32.4	9
7	Reading	43	2.746	0.516	3.700	670.6	34.7	9
7	Reading	44	3.030	0.560	3.975	689.2	37.7	9
7	Reading	45	3.370	0.623	4.307	711.5	41.9	9
7	Reading	46	3.804	0.720	4.728	739.8	48.4	9
7	Reading	47	4.419	0.904	5.327	780.1	60.8	9
7	Reading	48	5.630	1.515	6.504	859.2	101.9	9

K.4 Year 9 Reading Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
9	Reading	0	-6.069	1.572	-4.428	123.9	105.7	5
9	Reading	1	-4.784	0.942	-3.168	208.7	63.4	5
9	Reading	2	-4.114	0.753	-2.511	252.9	50.6	5
9	Reading	3	-3.640	0.653	-2.047	284.1	43.9	5
9	Reading	4	-3.265	0.590	-1.680	308.8	39.7	5
9	Reading	5	-2.951	0.545	-1.372	329.5	36.6	5
9	Reading	6	-2.677	0.511	-1.104	347.6	34.4	5
9	Reading	7	-2.433	0.484	-0.864	363.7	32.6	5
9	Reading	8	-2.211	0.463	-0.647	378.3	31.1	5
9	Reading	9	-2.007	0.444	-0.447	391.7	29.9	5
9	Reading	10	-1.819	0.428	-0.262	404.2	28.8	5
9	Reading	11	-1.643	0.414	-0.089	415.8	27.9	5
9	Reading	12	-1.477	0.402	0.073	426.7	27.0	5
9	Reading	13	-1.321	0.391	0.226	437.0	26.3	5
9	Reading	14	-1.173	0.382	0.371	446.7	25.7	5
9	Reading	15	-1.031	0.374	0.510	456.1	25.1	5
9	Reading	16	-0.896	0.366	0.642	465.0	24.6	5
9	Reading	17	-0.766	0.360	0.770	473.6	24.2	5
9	Reading	18	-0.640	0.354	0.893	481.9	23.8	6
9	Reading	19	-0.518	0.349	1.013	489.9	23.5	6
9	Reading	20	-0.399	0.345	1.130	497.8	23.2	6
9	Reading	21	-0.283	0.342	1.243	505.4	23.0	6
9	Reading	22	-0.169	0.339	1.355	512.9	22.8	6
9	Reading	23	-0.056	0.336	1.465	520.3	22.6	6
9	Reading	24	0.054	0.335	1.574	527.6	22.5	6
9	Reading	25	0.164	0.334	1.682	534.9	22.4	7
9	Reading	26	0.274	0.333	1.789	542.1	22.4	7
9	Reading	27	0.383	0.333	1.896	549.3	22.4	7
9	Reading	28	0.492	0.334	2.003	556.5	22.4	7
9	Reading	29	0.602	0.335	2.111	563.7	22.5	7
9	Reading	30	0.713	0.336	2.219	571.1	22.6	7
9	Reading	31	0.825	0.339	2.329	578.4	22.8	7
9	Reading	32	0.939	0.342	2.441	586.0	23.0	8
9	Reading	33	1.055	0.346	2.555	593.6	23.3	8
9	Reading	34	1.174	0.350	2.671	601.5	23.6	8
9	Reading	35	1.297	0.356	2.792	609.5	23.9	8
9	Reading	36	1.424	0.362	2.916	617.9	24.4	8
9	Reading	37	1.555	0.370	3.045	626.6	24.9	8
9	Reading	38	1.693	0.379	3.180	635.7	25.5	9
9	Reading	39	1.839	0.390	3.323	645.3	26.2	9
9	Reading	40	1.993	0.403	3.474	655.5	27.1	9
9	Reading	41	2.159	0.419	3.636	666.4	28.2	9
9	Reading	42	2.339	0.438	3.813	678.2	29.5	9
9	Reading	43	2.537	0.462	4.007	691.3	31.1	10
9	Reading	44	2.759	0.493	4.225	705.9	33.2	10
9	Reading	45	3.015	0.535	4.476	722.8	36.0	10

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
9	Reading	46	3.323	0.594	4.778	743.1	40.0	10
9	Reading	47	3.717	0.689	5.163	769.1	46.3	10
9	Reading	48	4.285	0.870	5.721	806.6	58.5	10
9	Reading	49	5.443	1.472	6.855	882.9	99.0	10

K.5 Year 3 Spelling Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
3	Spelling	0	-5.668	1.590	-6.218	227.2	60.6	1
3	Spelling	1	-4.371	0.972	-5.025	272.7	37.0	2
3	Spelling	2	-3.663	0.793	-4.375	297.4	30.2	2
3	Spelling	3	-3.136	0.702	-3.890	315.9	26.8	2
3	Spelling	4	-2.700	0.646	-3.489	331.2	24.6	3
3	Spelling	5	-2.319	0.609	-3.139	344.5	23.2	3
3	Spelling	6	-1.975	0.582	-2.823	356.6	22.2	3
3	Spelling	7	-1.656	0.563	-2.529	367.8	21.5	3
3	Spelling	8	-1.353	0.550	-2.251	378.4	21.0	4
3	Spelling	9	-1.063	0.542	-1.984	388.6	20.6	4
3	Spelling	10	-0.779	0.537	-1.723	398.5	20.5	4
3	Spelling	11	-0.498	0.536	-1.465	408.3	20.4	4
3	Spelling	12	-0.216	0.538	-1.206	418.2	20.5	4
3	Spelling	13	0.070	0.543	-0.942	428.2	20.7	5
3	Spelling	14	0.365	0.550	-0.671	438.6	21.0	5
3	Spelling	15	0.671	0.560	-0.390	449.3	21.4	5
3	Spelling	16	0.991	0.572	-0.096	460.5	21.8	5
3	Spelling	17	1.326	0.584	0.212	472.2	22.2	5
3	Spelling	18	1.673	0.596	0.531	484.4	22.7	6
3	Spelling	19	2.033	0.610	0.862	497.0	23.2	6
3	Spelling	20	2.406	0.628	1.205	510.1	23.9	6
3	Spelling	21	2.802	0.656	1.569	523.9	25.0	6
3	Spelling	22	3.236	0.702	1.968	539.2	26.7	6
3	Spelling	23	3.745	0.783	2.436	557.0	29.8	6
3	Spelling	24	4.418	0.954	3.055	580.6	36.3	6
3	Spelling	25	5.670	1.559	4.206	624.4	59.4	6

K.6 Year 5 Spelling Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
5	Spelling	0	-5.690	1.615	-4.533	291.4	61.5	3
5	Spelling	1	-4.363	0.997	-3.290	338.8	38.0	3
5	Spelling	2	-3.615	0.820	-2.589	365.5	31.3	3
5	Spelling	3	-3.043	0.730	-2.053	385.9	27.8	4
5	Spelling	4	-2.566	0.671	-1.605	403.0	25.6	4
5	Spelling	5	-2.152	0.628	-1.217	417.8	23.9	4
5	Spelling	6	-1.784	0.595	-0.873	430.9	22.7	5
5	Spelling	7	-1.451	0.570	-0.560	442.8	21.7	5
5	Spelling	8	-1.143	0.551	-0.272	453.8	21.0	5
5	Spelling	9	-0.853	0.536	0.000	464.1	20.4	5
5	Spelling	10	-0.578	0.525	0.258	474.0	20.0	5
5	Spelling	11	-0.312	0.517	0.507	483.5	19.7	6
5	Spelling	12	-0.053	0.512	0.750	492.7	19.5	6
5	Spelling	13	0.202	0.510	0.989	501.8	19.4	6
5	Spelling	14	0.456	0.510	1.227	510.9	19.4	6
5	Spelling	15	0.712	0.513	1.467	520.0	19.6	6
5	Spelling	16	0.972	0.519	1.710	529.3	19.8	6
5	Spelling	17	1.240	0.530	1.961	538.9	20.2	7
5	Spelling	18	1.520	0.544	2.224	548.9	20.7	7
5	Spelling	19	1.819	0.565	2.504	559.6	21.5	7
5	Spelling	20	2.144	0.593	2.809	571.2	22.6	7
5	Spelling	21	2.507	0.632	3.149	584.2	24.1	8
5	Spelling	22	2.927	0.689	3.543	599.2	26.3	8
5	Spelling	23	3.438	0.781	4.022	617.4	29.7	8
5	Spelling	24	4.127	0.959	4.667	642.0	36.6	8
5	Spelling	25	5.403	1.573	5.863	687.6	60.0	8

K.7 Year 7 Spelling Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
7	Spelling	0	-6.111	1.669	-3.951	313.6	63.6	4
7	Spelling	1	-4.718	1.053	-2.499	368.9	40.1	4
7	Spelling	2	-3.868	0.881	-1.614	402.6	33.6	4
7	Spelling	3	-3.181	0.781	-0.900	429.9	29.8	5
7	Spelling	4	-2.623	0.704	-0.318	452.0	26.8	5
7	Spelling	5	-2.172	0.645	0.152	469.9	24.6	5
7	Spelling	6	-1.792	0.602	0.547	485.0	22.9	6
7	Spelling	7	-1.459	0.571	0.894	498.2	21.8	6
7	Spelling	8	-1.156	0.549	1.209	510.2	20.9	6
7	Spelling	9	-0.872	0.534	1.505	521.5	20.4	6
7	Spelling	10	-0.600	0.524	1.788	532.3	20.0	7
7	Spelling	11	-0.336	0.518	2.064	542.8	19.8	7
7	Spelling	12	-0.075	0.516	2.335	553.2	19.7	7
7	Spelling	13	0.186	0.517	2.607	563.5	19.7	7
7	Spelling	14	0.449	0.520	2.881	573.9	19.8	7
7	Spelling	15	0.718	0.526	3.160	584.6	20.1	8
7	Spelling	16	0.994	0.535	3.448	595.6	20.4	8
7	Spelling	17	1.282	0.548	3.748	607.0	20.9	8
7	Spelling	18	1.585	0.564	4.064	619.0	21.5	8
7	Spelling	19	1.908	0.585	4.400	631.8	22.3	8
7	Spelling	20	2.258	0.613	4.764	645.7	23.3	9
7	Spelling	21	2.645	0.652	5.168	661.1	24.8	9
7	Spelling	22	3.090	0.709	5.631	678.7	27.0	9
7	Spelling	23	3.629	0.800	6.192	700.1	30.5	9
7	Spelling	24	4.350	0.980	6.942	728.7	37.3	9
7	Spelling	25	5.659	1.599	8.306	780.7	60.9	9

K.8 Year 9 Spelling Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
9	Spelling	0	-5.484	1.637	-2.312	376.0	62.4	5
9	Spelling	1	-4.102	0.983	-0.855	431.6	37.5	5
9	Spelling	2	-3.370	0.785	-0.083	461.0	29.9	5
9	Spelling	3	-2.858	0.683	0.458	481.6	26.0	6
9	Spelling	4	-2.452	0.623	0.886	497.9	23.7	6
9	Spelling	5	-2.105	0.583	1.252	511.9	22.2	6
9	Spelling	6	-1.793	0.557	1.580	524.4	21.2	6
9	Spelling	7	-1.504	0.540	1.886	536.0	20.6	7
9	Spelling	8	-1.227	0.529	2.177	547.1	20.2	7
9	Spelling	9	-0.958	0.523	2.461	557.9	19.9	7
9	Spelling	10	-0.693	0.520	2.741	568.6	19.8	7
9	Spelling	11	-0.427	0.519	3.021	579.3	19.8	7
9	Spelling	12	-0.160	0.520	3.303	590.0	19.8	8
9	Spelling	13	0.110	0.523	3.587	600.9	19.9	8
9	Spelling	14	0.383	0.526	3.876	611.9	20.1	8
9	Spelling	15	0.661	0.531	4.168	623.0	20.2	8
9	Spelling	16	0.943	0.537	4.466	634.4	20.5	9
9	Spelling	17	1.232	0.545	4.771	646.0	20.8	9
9	Spelling	18	1.529	0.556	5.085	657.9	21.2	9
9	Spelling	19	1.840	0.572	5.412	670.4	21.8	9
9	Spelling	20	2.168	0.594	5.758	683.6	22.6	9
9	Spelling	21	2.525	0.626	6.134	697.9	23.9	10
9	Spelling	22	2.926	0.676	6.557	714.0	25.8	10
9	Spelling	23	3.405	0.761	7.063	733.3	29.0	10
9	Spelling	24	4.051	0.934	7.745	759.3	35.6	10
9	Spelling	25	5.278	1.538	9.038	808.6	58.6	10

K.9 Year 3 Grammar and Punctuation Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
3	GP	0	-4.661	1.520	-6.431	-64.8	111.8	1
3	GP	1	-3.448	0.910	-4.713	61.5	66.9	1
3	GP	2	-2.829	0.730	-3.835	126.0	53.6	1
3	GP	3	-2.387	0.638	-3.210	171.9	46.9	1
3	GP	4	-2.034	0.581	-2.709	208.8	42.7	1
3	GP	5	-1.731	0.543	-2.280	240.3	39.9	1
3	GP	6	-1.461	0.516	-1.898	268.4	37.9	1
3	GP	7	-1.213	0.497	-1.547	294.2	36.5	2
3	GP	8	-0.981	0.482	-1.218	318.4	35.5	2
3	GP	9	-0.760	0.472	-0.905	341.4	34.7	3
3	GP	10	-0.546	0.465	-0.602	363.7	34.2	3
3	GP	11	-0.337	0.461	-0.306	385.4	33.9	4
3	GP	12	-0.130	0.460	-0.013	406.9	33.8	4
3	GP	13	0.076	0.460	0.279	428.4	33.8	5
3	GP	14	0.284	0.463	0.574	450.1	34.1	5
3	GP	15	0.496	0.469	0.874	472.1	34.5	5
3	GP	16	0.714	0.477	1.182	494.8	35.1	6
3	GP	17	0.940	0.489	1.504	518.4	35.9	6
3	GP	18	1.180	0.505	1.843	543.4	37.1	6
3	GP	19	1.437	0.526	2.207	570.2	38.7	6
3	GP	20	1.720	0.555	2.607	599.6	40.8	6
3	GP	21	2.039	0.596	3.060	632.8	43.8	6
3	GP	22	2.416	0.657	3.594	672.1	48.3	6
3	GP	23	2.890	0.754	4.266	721.5	55.5	6
3	GP	24	3.560	0.943	5.215	791.2	69.3	6
3	GP	25	4.847	1.572	7.037	925.1	115.5	6

K.10 Year 5 Grammar and Punctuation Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
5	GP	0	-4.815	1.536	-5.398	11.1	112.9	3
5	GP	1	-3.588	0.928	-3.816	127.4	68.2	3
5	GP	2	-2.947	0.751	-2.990	188.2	55.2	3
5	GP	3	-2.479	0.662	-2.386	232.6	48.7	3
5	GP	4	-2.094	0.608	-1.889	269.0	44.7	3
5	GP	5	-1.758	0.570	-1.456	300.9	41.9	3
5	GP	6	-1.456	0.543	-1.066	329.5	39.9	3
5	GP	7	-1.178	0.522	-0.708	355.9	38.3	3
5	GP	8	-0.919	0.505	-0.373	380.5	37.1	4
5	GP	9	-0.675	0.491	-0.059	403.6	36.1	4
5	GP	10	-0.444	0.480	0.239	425.5	35.2	4
5	GP	11	-0.222	0.471	0.525	446.5	34.6	5
5	GP	12	-0.008	0.465	0.801	466.8	34.1	5
5	GP	13	0.201	0.461	1.070	486.6	33.9	6
5	GP	14	0.406	0.459	1.336	506.1	33.7	6
5	GP	15	0.611	0.460	1.600	525.5	33.8	6
5	GP	16	0.818	0.464	1.866	545.1	34.1	7
5	GP	17	1.029	0.472	2.138	565.1	34.7	7
5	GP	18	1.248	0.483	2.421	585.9	35.5	8
5	GP	19	1.480	0.500	2.720	607.8	36.8	8
5	GP	20	1.731	0.525	3.043	631.6	38.6	8
5	GP	21	2.011	0.561	3.405	658.2	41.2	8
5	GP	22	2.338	0.615	3.827	689.2	45.2	8
5	GP	23	2.746	0.705	4.354	727.9	51.8	8
5	GP	24	3.326	0.882	5.101	782.9	64.8	8
5	GP	25	4.491	1.482	6.603	893.2	108.9	8

K.11 Year 7 Grammar and Punctuation Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
7	GP	0	-5.466	1.656	-3.991	114.6	121.7	4
7	GP	1	-4.075	1.024	-2.545	220.8	75.3	4
7	GP	2	-3.273	0.835	-1.712	282.1	61.4	4
7	GP	3	-2.673	0.729	-1.089	327.8	53.6	4
7	GP	4	-2.198	0.656	-0.595	364.1	48.2	4
7	GP	5	-1.807	0.603	-0.189	394.0	44.3	4
7	GP	6	-1.472	0.564	0.158	419.5	41.4	4
7	GP	7	-1.178	0.534	0.464	442.0	39.2	5
7	GP	8	-0.912	0.511	0.740	462.3	37.6	5
7	GP	9	-0.666	0.494	0.996	481.1	36.3	6
7	GP	10	-0.435	0.482	1.236	498.8	35.4	6
7	GP	11	-0.214	0.473	1.466	515.6	34.8	6
7	GP	12	0.001	0.468	1.689	532.0	34.4	7
7	GP	13	0.211	0.465	1.908	548.1	34.2	7
7	GP	14	0.421	0.466	2.126	564.2	34.2	7
7	GP	15	0.633	0.470	2.346	580.3	34.5	7
7	GP	16	0.850	0.477	2.571	596.9	35.0	8
7	GP	17	1.075	0.487	2.805	614.1	35.8	8
7	GP	18	1.312	0.503	3.051	632.2	37.0	8
7	GP	19	1.567	0.524	3.316	651.6	38.5	9
7	GP	20	1.847	0.552	3.607	673.0	40.6	9
7	GP	21	2.163	0.592	3.935	697.1	43.5	9
7	GP	22	2.533	0.650	4.319	725.4	47.8	9
7	GP	23	2.992	0.743	4.797	760.5	54.6	9
7	GP	24	3.630	0.923	5.459	809.2	67.9	9
7	GP	25	4.859	1.534	6.735	903.0	112.7	9

K.12 Year 9 Grammar and Punctuation Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
9	GP	0	-4.742	1.532	-3.872	123.3	112.6	5
9	GP	1	-3.515	0.922	-2.392	232.1	67.8	5
9	GP	2	-2.880	0.742	-1.626	288.4	54.6	5
9	GP	3	-2.422	0.650	-1.074	329.0	47.8	5
9	GP	4	-2.052	0.593	-0.627	361.8	43.6	5
9	GP	5	-1.734	0.554	-0.243	390.0	40.7	5
9	GP	6	-1.451	0.526	0.099	415.1	38.7	5
9	GP	7	-1.192	0.505	0.410	438.1	37.1	5
9	GP	8	-0.952	0.488	0.700	459.4	35.9	5
9	GP	9	-0.725	0.476	0.974	479.5	35.0	6
9	GP	10	-0.508	0.467	1.236	498.7	34.3	6
9	GP	11	-0.298	0.461	1.489	517.3	33.9	6
9	GP	12	-0.093	0.458	1.737	535.5	33.6	7
9	GP	13	0.110	0.456	1.981	553.6	33.6	7
9	GP	14	0.313	0.458	2.226	571.5	33.7	7
9	GP	15	0.519	0.462	2.474	589.7	34.0	8
9	GP	16	0.729	0.470	2.728	608.4	34.5	8
9	GP	17	0.947	0.481	2.991	627.7	35.3	8
9	GP	18	1.178	0.497	3.269	648.2	36.5	9
9	GP	19	1.426	0.518	3.569	670.2	38.1	9
9	GP	20	1.700	0.549	3.899	694.5	40.3	10
9	GP	21	2.013	0.591	4.276	722.2	43.5	10
9	GP	22	2.386	0.655	4.727	755.4	48.1	10
9	GP	23	2.865	0.757	5.305	797.8	55.7	10
9	GP	24	3.553	0.954	6.135	858.8	70.1	10
9	GP	25	4.878	1.596	7.734	976.4	117.3	10

K.13 Year 3 Numeracy Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
3	Numeracy	0	-5.839	1.570	-7.030	29.2	94.3	1
3	Numeracy	1	-4.558	0.945	-5.678	110.4	56.8	1
3	Numeracy	2	-3.885	0.759	-4.968	153.0	45.6	1
3	Numeracy	3	-3.404	0.662	-4.461	183.5	39.8	1
3	Numeracy	4	-3.019	0.601	-4.055	207.8	36.1	1
3	Numeracy	5	-2.693	0.559	-3.710	228.5	33.6	1
3	Numeracy	6	-2.405	0.528	-3.407	246.8	31.7	1
3	Numeracy	7	-2.145	0.504	-3.132	263.3	30.3	1
3	Numeracy	8	-1.905	0.485	-2.879	278.5	29.1	2
3	Numeracy	9	-1.681	0.470	-2.643	292.7	28.2	2
3	Numeracy	10	-1.470	0.458	-2.419	306.1	27.5	2
3	Numeracy	11	-1.268	0.448	-2.206	318.8	26.9	2
3	Numeracy	12	-1.074	0.439	-2.002	331.1	26.4	3
3	Numeracy	13	-0.887	0.433	-1.804	343.0	26.0	3
3	Numeracy	14	-0.704	0.428	-1.612	354.5	25.7	3
3	Numeracy	15	-0.526	0.424	-1.424	365.8	25.4	3
3	Numeracy	16	-0.351	0.421	-1.238	377.0	25.3	4
3	Numeracy	17	-0.177	0.419	-1.055	388.0	25.2	4
3	Numeracy	18	-0.004	0.418	-0.873	398.9	25.1	4
3	Numeracy	19	0.168	0.419	-0.691	409.8	25.1	4
3	Numeracy	20	0.341	0.420	-0.509	420.8	25.2	4
3	Numeracy	21	0.516	0.422	-0.324	431.9	25.4	5
3	Numeracy	22	0.693	0.426	-0.137	443.1	25.6	5
3	Numeracy	23	0.874	0.431	0.054	454.6	25.9	5
3	Numeracy	24	1.059	0.438	0.249	466.3	26.3	5
3	Numeracy	25	1.252	0.446	0.452	478.5	26.8	6
3	Numeracy	26	1.452	0.457	0.663	491.2	27.4	6
3	Numeracy	27	1.663	0.470	0.886	504.5	28.2	6
3	Numeracy	28	1.887	0.487	1.123	518.8	29.2	6
3	Numeracy	29	2.129	0.507	1.378	534.1	30.5	6
3	Numeracy	30	2.395	0.533	1.658	550.9	32.0	6
3	Numeracy	31	2.691	0.567	1.971	569.7	34.0	6
3	Numeracy	32	3.031	0.611	2.330	591.3	36.7	6
3	Numeracy	33	3.433	0.673	2.754	616.7	40.4	6
3	Numeracy	34	3.932	0.770	3.280	648.3	46.2	6
3	Numeracy	35	4.615	0.953	4.001	691.6	57.2	6
3	Numeracy	36	5.890	1.570	5.347	772.4	94.3	6

K.14 Year 5 Numeracy Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
5	Numeracy	0	-5.732	1.515	-4.819	162.0	91.0	3
5	Numeracy	1	-4.527	0.910	-3.787	223.9	54.6	3
5	Numeracy	2	-3.908	0.731	-3.258	255.7	43.9	3
5	Numeracy	3	-3.465	0.638	-2.878	278.5	38.3	3
5	Numeracy	4	-3.107	0.580	-2.572	296.9	34.9	3
5	Numeracy	5	-2.802	0.540	-2.310	312.6	32.4	3
5	Numeracy	6	-2.533	0.509	-2.080	326.4	30.6	3
5	Numeracy	7	-2.290	0.485	-1.872	338.9	29.1	3
5	Numeracy	8	-2.068	0.465	-1.682	350.3	27.9	3
5	Numeracy	9	-1.862	0.448	-1.506	360.9	26.9	3
5	Numeracy	10	-1.670	0.434	-1.341	370.8	26.1	3
5	Numeracy	11	-1.489	0.422	-1.186	380.1	25.4	4
5	Numeracy	12	-1.317	0.412	-1.039	388.9	24.7	4
5	Numeracy	13	-1.153	0.403	-0.899	397.4	24.2	4
5	Numeracy	14	-0.995	0.396	-0.764	405.5	23.8	4
5	Numeracy	15	-0.843	0.390	-0.633	413.3	23.4	4
5	Numeracy	16	-0.695	0.385	-0.507	420.9	23.1	4
5	Numeracy	17	-0.551	0.381	-0.383	428.3	22.9	5
5	Numeracy	18	-0.410	0.377	-0.262	435.6	22.7	5
5	Numeracy	19	-0.271	0.375	-0.143	442.7	22.5	5
5	Numeracy	20	-0.133	0.373	-0.025	449.8	22.4	5
5	Numeracy	21	0.004	0.373	0.092	456.9	22.4	5
5	Numeracy	22	0.141	0.373	0.209	463.9	22.4	5
5	Numeracy	23	0.278	0.374	0.326	470.9	22.4	5
5	Numeracy	24	0.416	0.375	0.444	478.0	22.5	6
5	Numeracy	25	0.555	0.378	0.564	485.2	22.7	6
5	Numeracy	26	0.697	0.381	0.685	492.5	22.9	6
5	Numeracy	27	0.842	0.386	0.809	499.9	23.2	6
5	Numeracy	28	0.990	0.392	0.936	507.6	23.5	6
5	Numeracy	29	1.144	0.398	1.068	515.5	23.9	6
5	Numeracy	30	1.303	0.407	1.204	523.7	24.4	6
5	Numeracy	31	1.470	0.417	1.347	532.2	25.0	7
5	Numeracy	32	1.646	0.429	1.497	541.3	25.7	7
5	Numeracy	33	1.832	0.443	1.657	550.9	26.6	7
5	Numeracy	34	2.033	0.461	1.829	561.2	27.7	7
5	Numeracy	35	2.252	0.483	2.017	572.4	29.0	7
5	Numeracy	36	2.494	0.510	2.224	584.9	30.6	8
5	Numeracy	37	2.767	0.545	2.458	598.9	32.7	8
5	Numeracy	38	3.084	0.592	2.729	615.2	35.5	8
5	Numeracy	39	3.466	0.657	3.056	634.9	39.5	8
5	Numeracy	40	3.950	0.758	3.471	659.8	45.5	8
5	Numeracy	41	4.627	0.946	4.050	694.6	56.8	8
5	Numeracy	42	5.901	1.566	5.141	760.1	94.0	8

K.15 Year 7 Numeracy Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
7	Numeracy	0	-5.755	1.482	-3.684	230.1	89.0	4
7	Numeracy	1	-4.589	0.880	-2.607	294.8	52.8	4
7	Numeracy	2	-4.009	0.700	-2.073	326.9	42.1	4
7	Numeracy	3	-3.603	0.608	-1.698	349.4	36.5	4
7	Numeracy	4	-3.282	0.550	-1.402	367.2	33.0	4
7	Numeracy	5	-3.011	0.510	-1.152	382.2	30.6	4
7	Numeracy	6	-2.773	0.481	-0.932	395.4	28.9	4
7	Numeracy	7	-2.558	0.458	-0.734	407.3	27.5	4
7	Numeracy	8	-2.361	0.440	-0.552	418.2	26.4	4
7	Numeracy	9	-2.177	0.426	-0.383	428.4	25.6	5
7	Numeracy	10	-2.004	0.414	-0.223	438.0	24.9	5
7	Numeracy	11	-1.839	0.404	-0.071	447.1	24.3	5
7	Numeracy	12	-1.681	0.396	0.075	455.8	23.8	5
7	Numeracy	13	-1.529	0.389	0.215	464.3	23.4	5
7	Numeracy	14	-1.382	0.383	0.351	472.4	23.0	5
7	Numeracy	15	-1.239	0.378	0.483	480.3	22.7	6
7	Numeracy	16	-1.100	0.374	0.612	488.1	22.4	6
7	Numeracy	17	-0.963	0.370	0.738	495.6	22.2	6
7	Numeracy	18	-0.829	0.367	0.862	503.1	22.0	6
7	Numeracy	19	-0.697	0.364	0.983	510.4	21.9	6
7	Numeracy	20	-0.566	0.362	1.104	517.6	21.7	6
7	Numeracy	21	-0.437	0.360	1.223	524.8	21.6	6
7	Numeracy	22	-0.309	0.359	1.341	531.9	21.6	7
7	Numeracy	23	-0.181	0.359	1.459	539.0	21.5	7
7	Numeracy	24	-0.054	0.359	1.577	546.0	21.5	7
7	Numeracy	25	0.074	0.359	1.694	553.1	21.6	7
7	Numeracy	26	0.201	0.360	1.812	560.2	21.6	7
7	Numeracy	27	0.330	0.361	1.930	567.3	21.7	7
7	Numeracy	28	0.460	0.363	2.050	574.5	21.8	7
7	Numeracy	29	0.591	0.366	2.171	581.7	22.0	7
7	Numeracy	30	0.725	0.369	2.295	589.1	22.2	8
7	Numeracy	31	0.861	0.373	2.420	596.7	22.4	8
7	Numeracy	32	1.000	0.378	2.549	604.4	22.7	8
7	Numeracy	33	1.144	0.384	2.681	612.4	23.1	8
7	Numeracy	34	1.292	0.391	2.818	620.6	23.5	8
7	Numeracy	35	1.445	0.399	2.960	629.1	23.9	8
7	Numeracy	36	1.606	0.408	3.108	638.0	24.5	9
7	Numeracy	37	1.774	0.419	3.263	647.3	25.1	9
7	Numeracy	38	1.953	0.432	3.428	657.2	25.9	9
7	Numeracy	39	2.143	0.447	3.603	667.7	26.8	9
7	Numeracy	40	2.348	0.465	3.792	679.1	27.9	9
7	Numeracy	41	2.571	0.487	3.998	691.5	29.3	9
7	Numeracy	42	2.818	0.515	4.226	705.2	30.9	9
7	Numeracy	43	3.097	0.550	4.484	720.6	33.0	9
7	Numeracy	44	3.419	0.596	4.781	738.4	35.8	9
7	Numeracy	45	3.804	0.660	5.136	759.8	39.6	9
7	Numeracy	46	4.289	0.759	5.583	786.6	45.6	9
7	Numeracy	47	4.963	0.946	6.205	824.0	56.8	9
7	Numeracy	48	6.241	1.568	7.384	894.8	94.2	9

K.16 Year 9 Numeracy Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
9	Numeracy	0	-5.470	1.482	-1.710	348.7	89.0	5
9	Numeracy	1	-4.301	0.879	-0.831	401.4	52.8	5
9	Numeracy	2	-3.721	0.698	-0.395	427.6	41.9	5
9	Numeracy	3	-3.317	0.603	-0.091	445.9	36.2	5
9	Numeracy	4	-3.000	0.543	0.147	460.2	32.6	5
9	Numeracy	5	-2.735	0.502	0.347	472.2	30.1	5
9	Numeracy	6	-2.504	0.471	0.520	482.6	28.3	6
9	Numeracy	7	-2.299	0.446	0.674	491.8	26.8	6
9	Numeracy	8	-2.112	0.427	0.815	500.3	25.6	6
9	Numeracy	9	-1.940	0.411	0.944	508.0	24.7	6
9	Numeracy	10	-1.779	0.398	1.065	515.3	23.9	6
9	Numeracy	11	-1.628	0.387	1.179	522.1	23.3	6
9	Numeracy	12	-1.484	0.378	1.287	528.7	22.7	6
9	Numeracy	13	-1.346	0.371	1.391	534.9	22.3	7
9	Numeracy	14	-1.213	0.364	1.491	540.9	21.9	7
9	Numeracy	15	-1.084	0.359	1.588	546.7	21.6	7
9	Numeracy	16	-0.959	0.355	1.682	552.3	21.3	7
9	Numeracy	17	-0.836	0.351	1.774	557.9	21.1	7
9	Numeracy	18	-0.716	0.348	1.865	563.3	20.9	7
9	Numeracy	19	-0.597	0.346	1.954	568.7	20.8	7
9	Numeracy	20	-0.480	0.344	2.042	574.0	20.7	7
9	Numeracy	21	-0.363	0.343	2.130	579.2	20.6	7
9	Numeracy	22	-0.248	0.342	2.217	584.5	20.6	8
9	Numeracy	23	-0.132	0.342	2.304	589.7	20.5	8
9	Numeracy	24	-0.016	0.342	2.391	594.9	20.6	8
9	Numeracy	25	0.100	0.343	2.478	600.2	20.6	8
9	Numeracy	26	0.217	0.344	2.566	605.4	20.7	8
9	Numeracy	27	0.335	0.346	2.654	610.8	20.8	8
9	Numeracy	28	0.454	0.348	2.744	616.1	20.9	8
9	Numeracy	29	0.574	0.350	2.835	621.6	21.0	8
9	Numeracy	30	0.697	0.353	2.927	627.1	21.2	8
9	Numeracy	31	0.821	0.357	3.020	632.7	21.4	8
9	Numeracy	32	0.949	0.361	3.116	638.5	21.7	9
9	Numeracy	33	1.079	0.365	3.214	644.4	21.9	9
9	Numeracy	34	1.213	0.371	3.315	650.4	22.3	9
9	Numeracy	35	1.351	0.377	3.419	656.7	22.7	9
9	Numeracy	36	1.494	0.384	3.527	663.1	23.1	9
9	Numeracy	37	1.643	0.393	3.638	669.8	23.6	9
9	Numeracy	38	1.799	0.403	3.756	676.9	24.2	9
9	Numeracy	39	1.963	0.415	3.879	684.3	24.9	9
9	Numeracy	40	2.138	0.430	4.011	692.2	25.8	10
9	Numeracy	41	2.326	0.448	4.152	700.7	26.9	10
9	Numeracy	42	2.531	0.470	4.306	709.9	28.3	10
9	Numeracy	43	2.760	0.500	4.478	720.3	30.0	10
9	Numeracy	44	3.021	0.540	4.674	732.0	32.4	10
9	Numeracy	45	3.332	0.598	4.908	746.1	35.9	10

Year	Domain	Raw Score	Delta-Centred Logit	Logit SE	Transformed Logit	NAPLAN Scale Score	Scale Score SE	Band
9	Numeracy	46	3.727	0.691	5.205	763.9	41.5	10
9	Numeracy	47	4.296	0.871	5.633	789.6	52.3	10
9	Numeracy	48	5.451	1.472	6.502	841.8	88.4	10

K.17 Year 3, 5, 7, and 9 Persuasive Writing Score Equivalence Table

Year	Domain	Raw Score	Delta-Centred Logit	Transformed Logit	Logit SE	NAPLAN Scale Score	Scale Score SE	Band
3579	Writing	0	-12.539	-12.540	1.763	94.5	52.3	1
3579	Writing	1	-10.960	-10.960	1.078	141.4	32.0	1
3579	Writing	2	-10.075	-10.070	0.869	167.9	25.8	1
3579	Writing	3	-9.450	-9.450	0.770	186.3	22.9	1
3579	Writing	4	-8.933	-8.933	0.719	201.6	21.3	1
3579	Writing	5	-8.463	-8.463	0.694	215.6	20.6	1
3579	Writing	6	-8.008	-8.008	0.684	229.1	20.3	1
3579	Writing	7	-7.551	-7.551	0.685	242.7	20.3	1
3579	Writing	8	-7.083	-7.083	0.690	256.6	20.5	1
3579	Writing	9	-6.600	-6.600	0.695	270.9	20.6	2
3579	Writing	10	-6.110	-6.110	0.698	285.4	20.7	2
3579	Writing	11	-5.622	-5.622	0.698	299.9	20.7	2
3579	Writing	12	-5.136	-5.136	0.699	314.4	20.8	2
3579	Writing	13	-4.647	-4.647	0.702	328.9	20.8	3
3579	Writing	14	-4.151	-4.151	0.705	343.6	20.9	3
3579	Writing	15	-3.649	-3.649	0.705	358.5	20.9	3
3579	Writing	16	-3.146	-3.146	0.700	373.5	20.8	3
3579	Writing	17	-2.655	-2.655	0.690	388.0	20.5	4
3579	Writing	18	-2.185	-2.185	0.678	402.0	20.1	4
3579	Writing	19	-1.735	-1.735	0.666	415.3	19.8	4
3579	Writing	20	-1.300	-1.300	0.657	428.3	19.5	5
3579	Writing	21	-0.875	-0.875	0.650	440.9	19.3	5
3579	Writing	22	-0.457	-0.457	0.643	453.3	19.1	5
3579	Writing	23	-0.047	-0.047	0.637	465.5	18.9	5
3579	Writing	24	0.354	0.354	0.631	477.4	18.7	5
3579	Writing	25	0.747	0.747	0.626	489.0	18.6	6
3579	Writing	26	1.134	1.134	0.622	500.5	18.5	6
3579	Writing	27	1.516	1.516	0.620	511.9	18.4	6
3579	Writing	28	1.897	1.897	0.621	523.2	18.4	6
3579	Writing	29	2.280	2.280	0.624	534.6	18.5	7
3579	Writing	30	2.671	2.671	0.629	546.2	18.7	7
3579	Writing	31	3.071	3.071	0.634	558.0	18.8	7
3579	Writing	32	3.482	3.482	0.637	570.3	18.9	7
3579	Writing	33	3.894	3.894	0.636	582.5	18.9	8
3579	Writing	34	4.300	4.300	0.631	594.5	18.7	8
3579	Writing	35	4.694	4.694	0.625	606.2	18.6	8
3579	Writing	36	5.078	5.078	0.621	617.6	18.4	8
3579	Writing	37	5.456	5.456	0.620	628.9	18.4	8
3579	Writing	38	5.835	5.835	0.623	640.1	18.5	9
3579	Writing	39	6.222	6.222	0.631	651.6	18.7	9
3579	Writing	40	6.623	6.623	0.641	663.5	19.0	9
3579	Writing	41	7.042	7.042	0.653	676.0	19.4	9
3579	Writing	42	7.475	7.475	0.665	688.8	19.7	10
3579	Writing	43	7.920	7.920	0.680	702.0	20.2	10
3579	Writing	44	8.381	8.381	0.702	715.7	20.9	10
3579	Writing	45	8.874	8.874	0.743	730.4	22.1	10

Year	Domain	Raw Score	Delta-Centred Logit	Transformed Logit	Logit SE	NAPLAN Scale Score	Scale Score SE	Band
3579	Writing	46	9.436	9.436	0.820	747.0	24.3	10
3579	Writing	47	10.159	10.159	0.988	768.5	29.3	10
3579	Writing	48	11.461	11.461	1.599	807.2	47.5	10

APPENDIX L. VERTICAL LINK ITEMS STATISTICS

L.1 Reading – Year 3/Year 5: Adjusted Deltas, Equating Parameters and Statistics

Year 3 Item No.	Year 3 Label	Year 5 Item No.	Year 5 Label	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas	Year 3 Error	Year 5 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
13	R3Q13	06	R5Q06	-0.711	-0.769	-1.058	0.037	0.046	-0.799	-0.681	-0.681	-0.799	0.058	0.983	0.966	0.326	Y
14	R3Q14	07	R5Q07	0.427	0.852	0.562	0.036	0.037	0.588	0.691	0.691	0.588	-0.425	-8.238	67.871	0.000	N
15	R3Q15	08	R5Q08	0.575	0.417	0.128	0.036	0.038	0.444	0.549	0.549	0.444	0.158	3.015	9.091	0.003	Y
16	R3Q16	09	R5Q09	-1.004	-1.377	-1.667	0.039	0.054	-1.257	-1.124	-1.124	-1.257	0.373	5.602	31.379	0.000	N
17	R3Q17	10	R5Q10	-1.098	-1.332	-1.622	0.039	0.053	-1.281	-1.149	-1.149	-1.281	0.235	3.565	12.707	0.000	Y
18	R3Q18	11	R5Q11	-1.495	-1.541	-1.831	0.043	0.057	-1.590	-1.447	-1.447	-1.590	0.046	0.640	0.409	0.522	Y
19	R3Q19	12	R5Q12	0.182	0.147	-0.142	0.035	0.039	0.112	0.217	0.217	0.112	0.034	0.652	0.425	0.515	Y
27	R3Q27	20	R5Q20	-0.151	-0.260	-0.550	0.036	0.042	-0.261	-0.150	-0.150	-0.261	0.109	1.977	3.908	0.048	Y
28	R3Q28	21	R5Q21	0.728	0.978	0.688	0.037	0.037	0.801	0.905	0.905	0.801	-0.250	-4.769	22.746	0.000	Y
29	R3Q29	22	R5Q22	1.213	1.200	0.911	0.038	0.037	1.154	1.260	1.260	1.154	0.012	0.235	0.055	0.814	Y
30	R3Q30	23	R5Q23	-0.282	0.040	-0.249	0.037	0.040	-0.175	-0.066	-0.066	-0.175	-0.322	-5.907	34.888	0.000	N
31	R3Q31	24	R5Q24	1.267	1.295	1.006	0.039	0.037	1.227	1.335	1.335	1.227	-0.029	-0.531	0.282	0.596	Y
32	R3Q32	25	R5Q25														NN*

* NN: Link item was removed due to misfit.

	Reading - Before Review			Reading - After Review		
	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas
Mean	-0.029	-0.029	-0.319	0.057	0.057	-0.274
Std. Deviation	0.915	1.031	1.031	0.994	1.065	1.065
Equating Shift		0.290			0.331	

L.2 Reading – Year 5/Year 7: Adjusted Deltas, Equating Parameters and Statistics

Year 5 Item No.	Year 5 Label	Year 7 Item No.	Year 7 Label	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas	Year 5 Error	Year 7 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
13	R5Q13	12	R7Q12	0.168	0.085	-0.856	0.038	0.048	0.065	0.187	0.187	0.065	0.083	1.357	1.842	0.175	Y
14	R5Q14	13	R7Q13	0.546	0.682	-0.259	0.037	0.044	0.556	0.671	0.671	0.556	-0.135	-2.355	5.546	0.019	Y
15	R5Q15	14	R7Q14	-0.379	-0.264	-1.205	0.040	0.052	-0.387	-0.256	-0.256	-0.387	-0.114	-1.743	3.039	0.081	Y
16	R5Q16	15	R7Q15	2.085	2.180	1.240	0.039	0.042	2.075	2.190	2.190	2.075	-0.096	-1.667	2.778	0.096	Y
17	R5Q17	16	R7Q16	-0.331	-0.306	-1.246	0.040	0.052	-0.384	-0.253	-0.253	-0.384	-0.024	-0.371	0.138	0.710	Y
18	R5Q18	17	R7Q17	-0.261	-0.194	-1.135	0.040	0.051	-0.292	-0.163	-0.163	-0.292	-0.066	-1.021	1.043	0.307	Y
26	R5Q26	23	R7Q23	1.316	1.346	0.406	0.037	0.042	1.275	1.387	1.387	1.275	-0.030	-0.541	0.292	0.589	Y
27	R5Q27	24	R7Q24	0.284	0.089	-0.851	0.038	0.048	0.125	0.248	0.248	0.125	0.194	3.176	10.084	0.001	Y
28	R5Q28	25	R7Q25														NN*
29	R5Q29	26	R7Q26	2.123	2.038	1.098	0.039	0.042	2.023	2.138	2.138	2.023	0.084	1.473	2.171	0.141	Y
30	R5Q30	27	R7Q27	1.318	1.373	0.433	0.037	0.042	1.290	1.401	1.401	1.290	-0.055	-0.979	0.958	0.328	Y
31	R5Q31	28	R7Q28	1.242	1.083	0.143	0.037	0.042	1.106	1.218	1.218	1.106	0.159	2.839	8.062	0.005	Y
32	R5Q32	29	R7Q29														NN*

* NN: Link item was removed due to misfit.

	Reading - Before Review			Reading - After Review		
	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas
Mean	0.737	0.737	-0.203	0.737	0.737	-0.203
Std. Deviation	0.928	0.921	0.921	0.928	0.921	0.921
Equating Shift		0.940			0.940	

L.3 Reading – Year 7/Year 9: Adjusted Deltas, Equating Parameters and Statistics

Year 7 Item No.	Year 7 Label	Year 9 Item No.	Year 9 Label	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas	Year 7 Error	Year 9 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
30	R7Q30	24	R9Q24	0.145	0.455	-0.224	0.042	0.044	0.239	0.361	0.361	0.239	-0.310	-5.096	25.971	0.000	N
31	R7Q31	25	R9Q25	0.290	0.725	0.047	0.042	0.043	0.448	0.568	0.568	0.448	-0.435	-7.240	52.417	0.000	N
32	R7Q32	26	R9Q26	-0.030	0.120	-0.559	0.043	0.047	-0.019	0.108	0.108	-0.019	-0.150	-2.355	5.545	0.019	Y
33	R7Q33	27	R9Q27	0.304	0.720	0.042	0.042	0.043	0.452	0.572	0.572	0.452	-0.417	-6.932	48.055	0.000	Y
35	R7Q35	30	R9Q30														NN*
36	R7Q36	31	R9Q31	-0.204	0.057	-0.621	0.044	0.047	-0.138	-0.009	-0.009	-0.138	-0.262	-4.066	16.534	0.000	Y
37	R7Q37	32	R9Q32	0.892	1.007	0.328	0.041	0.042	0.891	1.008	1.008	0.891	-0.115	-1.953	3.813	0.051	Y
38	R7Q38	33	R9Q33	1.970	1.792	1.114	0.045	0.042	1.820	1.943	1.943	1.820	0.178	2.890	8.353	0.004	Y
39	R7Q39	34	R9Q34	3.481	3.200	2.521	0.065	0.050	3.259	3.423	3.423	3.259	0.282	3.436	11.803	0.001	Y
40	R7Q40	35	R9Q35	1.201	0.713	0.035	0.042	0.043	0.897	1.017	1.017	0.897	0.488	8.121	65.951	0.000	N
41	R7Q41	36	R9Q36	2.914	2.173	1.495	0.055	0.043	2.474	2.613	2.613	2.474	0.740	10.606	112.494	0.000	N

* NN: Link item was removed due to misfit.

	Reading - Before Review			Reading - After Review		
	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas
Mean	1.096	1.096	0.418	1.069	1.069	0.471
Std. Deviation	1.289	0.997	0.997	1.420	1.189	1.189
Equating Shift		0.679			0.598	

L.4 Spelling – Year 3/Year 5: Adjusted Deltas, Equating Parameters and Statistics

Year 3 Item No.	Year 3 Label	Year 5 Item No.	Year 5 Label	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas	Year 3 Error	Year 5 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
03	S3Q03	01	S5Q01	-2.218	-1.622	-3.500	0.058	0.068	-2.009	-1.830	-1.830	-2.009	-0.596	-6.663	44.397	0.000	N
06	S3Q06	02	S5Q02	0.040	0.290	-1.588	0.054	0.053	0.089	0.241	0.241	0.089	-0.250	-3.299	10.886	0.001	Y
14	S3Q14	13	S5Q13	-0.837	-0.730	-2.608	0.055	0.059	-0.864	-0.703	-0.703	-0.864	-0.107	-1.327	1.760	0.185	Y
19	S3Q19	15	S5Q15	2.043	1.818	-0.060	0.061	0.049	1.852	2.009	2.009	1.852	0.225	2.876	8.272	0.004	Y
21	S3Q21	18	S5Q18	2.727	2.751	0.873	0.066	0.050	2.656	2.822	2.822	2.656	-0.025	-0.299	0.089	0.765	Y
22	S3Q22	19	S5Q19	2.282	1.796	-0.082	0.063	0.049	1.959	2.119	2.119	1.959	0.486	6.093	37.120	0.000	N
23	S3Q23	20	S5Q20	2.728	2.825	0.947	0.066	0.050	2.694	2.859	2.859	2.694	-0.097	-1.168	1.364	0.243	Y
24	S3Q24	22	S5Q22	3.541	3.179	1.301	0.076	0.051	3.269	3.452	3.452	3.269	0.362	3.958	15.667	0.000	Y

	Spelling - Before Review			Spelling - After Review		
	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas
Mean	1.288	1.288	-0.590	1.707	1.707	-0.189
Std. Deviation	2.040	1.779	1.779	1.721	1.579	1.579
Equating Shift		1.878			1.896	

L.5 Spelling – Year 5/Year 7: Adjusted Deltas, Equating Parameters and Statistics

Year 5 Item No.	Year 5 Label	Year 7 Item No.	Year 7 Label	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas	Year 5 Error	Year 7 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
05	S5Q05	01	S7Q01	-1.284	-1.801	-3.534	0.051	0.075	-1.633	-1.452	-1.452	-1.633	0.517	5.698	32.463	0.000	Y
09	S5Q09	03	S7Q03	1.235	0.991	-0.743	0.050	0.052	1.041	1.185	1.185	1.041	0.244	3.387	11.469	0.001	y
11	S5Q11	08	S7Q08	1.362	1.673	-0.060	0.051	0.052	1.445	1.591	1.591	1.445	-0.311	-4.267	18.210	0.000	Y
12	S5Q12	11	S7Q11	2.625	2.833	1.100	0.058	0.054	2.650	2.809	2.809	2.650	-0.208	-2.624	6.888	0.009	Y
16	S5Q16	15	S7Q15	0.279	0.339	-1.394	0.049	0.054	0.236	0.382	0.382	0.236	-0.060	-0.827	0.684	0.408	Y
17	S5Q17	16	S7Q16	0.603	0.746	-0.987	0.049	0.053	0.602	0.747	0.747	0.602	-0.144	-1.989	3.957	0.047	Y
23	S5Q23	20	S7Q20	1.958	1.997	0.263	0.054	0.052	1.902	2.052	2.052	1.902	-0.038	-0.512	0.262	0.609	Y
25	S5Q25	21	S7Q21														NN*

* NN: Link item was removed due to misfit.

	Spelling - Before Review			Spelling - After Review		
	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas
Mean	0.968	0.968	-0.765	0.968	0.968	-0.765
Std. Deviation	1.267	1.480	1.480	1.267	1.480	1.480
Equating Shift		1.733			1.733	

L.6 Spelling – Year 7/Year 9: Adjusted Deltas, Equating Parameters and Statistics

Year 7 Item No.	Year 7 Label	Year 9 Item No.	Year 9 Label	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas	Year 7 Error	Year 9 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
05	S7Q05	02	S9Q02	-1.154	-1.228	-2.216	0.054	0.059	-1.271	-1.111	-1.111	-1.271	0.073	0.917	0.841	0.359	Y
07	S7Q07	03	S9Q03	0.101	-0.175	-1.164	0.052	0.054	-0.112	0.038	0.038	-0.112	0.277	3.689	13.609	0.000	Y
09	S7Q09	07	S9Q07	-1.051	-1.008	-1.996	0.053	0.057	-1.107	-0.952	-0.952	-1.107	-0.043	-0.551	0.304	0.581	Y
10	S7Q10	08	S9Q08	0.703	0.503	-0.485	0.053	0.053	0.528	0.678	0.678	0.528	0.200	2.662	7.087	0.008	Y
12	S7Q12	10	S9Q10	1.923	1.673	0.685	0.060	0.055	1.717	1.879	1.879	1.717	0.249	3.060	9.361	0.002	Y
17	S7Q17	15	S9Q15	-0.242	-0.364	-1.353	0.052	0.055	-0.379	-0.228	-0.228	-0.379	0.122	1.614	2.604	0.107	Y
22	S7Q22	19	S9Q19	1.895	2.252	1.264	0.060	0.058	1.990	2.157	2.157	1.990	-0.357	-4.274	18.270	0.000	N
23	S7Q23	20	S9Q20	2.644	3.168	2.180	0.068	0.066	2.811	3.001	3.001	2.811	-0.524	-5.530	30.577	0.000	N
25	S7Q25	25	S9Q25	3.854	3.851	2.863	0.092	0.077	3.733	3.973	3.973	3.733	0.003	0.025	0.001	0.980	Y

	Spelling - Before Review			Spelling - After Review		
	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas
Mean	0.964	0.964	-0.025	0.590	0.590	-0.523
Std. Deviation	1.724	1.848	1.848	1.785	1.782	1.782
Equating Shift		0.988			1.114	

L.7 Grammar and Punctuation – Year 3/Year 5: Adjusted Deltas, Equating Parameters and Statistics

Year 3 Item No.	Year 3 Label	Year 5 Item No.	Year 5 Label	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas	Year 3 Error	Year 5 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
30	G3Q30	26	G5Q26	-1.178	-1.226	-1.902	0.039	0.048	-1.264	-1.140	-1.140	-1.264	0.048	0.783	0.614	0.433	Y
31	G3Q31	28	G5Q28	-1.310	-1.138	-1.814	0.040	0.047	-1.286	-1.162	-1.162	-1.286	-0.171	-2.778	7.717	0.005	Y
34	G3Q34	30	G5Q30	-0.983	-1.087	-1.762	0.038	0.046	-1.094	-0.975	-0.975	-1.094	0.104	1.743	3.040	0.081	Y
37	G3Q37	31	G5Q31	-0.882	-1.370	-2.046	0.037	0.050	-1.189	-1.064	-1.064	-1.189	0.488	7.844	61.530	0.000	N
39	G3Q39	34	G5Q34	-0.434	-0.344	-1.019	0.035	0.039	-0.441	-0.337	-0.337	-0.441	-0.090	-1.717	2.948	0.086	Y
42	G3Q42	37	G5Q37	0.370	0.305	-0.370	0.035	0.035	0.288	0.387	0.387	0.288	0.064	1.301	1.693	0.193	Y
48	G3Q48	49	G5Q49	1.522	1.966	1.290	0.040	0.037	1.690	1.799	1.799	1.690	-0.443	-8.137	66.209	0.000	N

	Grammar & Punctuation - Before Review			Grammar & Punctuation - After Review		
	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas
Mean	-0.414	-0.414	-1.089	-0.707	-0.707	-1.373
Std. Deviation	1.024	1.207	1.207	0.688	0.663	0.663
Equating Shift		0.675			0.666	

L.8 Grammar and Punctuation – Year 5/Year 7: Adjusted Deltas, Equating Parameters and Statistics

Year 5 Item No.	Year 5 Label	Year 7 Item No.	Year 7 Label	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas	Year 5 Error	Year 7 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
27	G5Q27	26	G7Q26	-2.689	-3.145	-3.864	0.063	0.103	-3.038	-2.796	-2.796	-3.038	0.456	3.780	14.287	0.000	Y
33	G5Q33	32	G7Q32	-0.194	-0.160	-0.879	0.035	0.043	-0.232	-0.121	-0.121	-0.232	-0.034	-0.608	0.370	0.543	Y
40	G5Q40	37	G7Q37	1.018	0.725	0.006	0.035	0.040	0.818	0.925	0.925	0.818	0.293	5.514	30.401	0.000	Y
41	G5Q41	38	G7Q38	0.471	0.637	-0.083	0.034	0.040	0.501	0.606	0.606	0.501	-0.165	-3.148	9.910	0.002	Y
42	G5Q42	39	G7Q39	0.891	0.791	0.072	0.035	0.040	0.788	0.894	0.894	0.788	0.099	1.870	3.498	0.061	Y
45	G5Q45	40	G7Q40	1.394	1.386	0.667	0.037	0.041	1.335	1.445	1.445	1.335	0.008	0.151	0.023	0.880	Y
47	G5Q47	43	G7Q43	0.919	1.577	0.858	0.035	0.042	1.194	1.303	1.303	1.194	-0.658	-12.039	144.949	0.000	N

	Grammar & Punctuation - Before Review			Grammar & Punctuation - After Review		
	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas
Mean	0.259	0.259	-0.460	0.149	0.149	-0.680
Std. Deviation	1.393	1.603	1.603	1.492	1.636	1.636
Equating Shift		0.719			0.829	

L.9 Grammar and Punctuation – Year 7/Year 9: Adjusted Deltas, Equating Parameters and Statistics

Year 7 Item No.	Year 7 Label	Year 9 Item No.	Year 9 Label	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas	Year 7 Error	Year 9 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
29	G7Q29	28	G9Q28	-1.082	-0.968	-1.281	0.044	0.047	-1.089	-0.961	-0.961	-1.089	-0.115	-1.781	3.172	0.075	Y
33	G7Q33	36	G9Q36	-0.196	0.127	-0.187	0.040	0.040	-0.091	0.022	0.022	-0.091	-0.323	-5.705	32.550	0.000	Y
35	G7Q35	37	G9Q37	1.102	1.395	1.082	0.043	0.041	1.189	1.308	1.308	1.189	-0.293	-4.930	24.302	0.000	Y
36	G7Q36	38	G9Q38	0.339	0.370	0.056	0.040	0.039	0.298	0.410	0.410	0.298	-0.031	-0.546	0.298	0.585	Y
41	G7Q41	42	G9Q42	0.452	-0.108	-0.421	0.041	0.041	0.114	0.230	0.230	0.114	0.560	9.656	93.241	0.000	N
42	G7Q42	43	G9Q43														NN*
46	G7Q46	45	G9Q45	0.422	0.183	-0.131	0.041	0.040	0.245	0.360	0.360	0.245	0.239	4.178	17.456	0.000	Y
49	G7Q49	50	G9Q50	0.724	0.762	0.449	0.042	0.039	0.686	0.800	0.800	0.686	-0.038	-0.670	0.449	0.503	Y

* NN: Link item was removed due to misfit.

	Grammar & Punctuation - Before Review			Grammar & Punctuation - After Review		
	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas
Mean	0.252	0.252	-0.062	0.218	0.218	-0.002
Std. Deviation	0.708	0.732	0.732	0.769	0.783	0.783
Equating Shift		0.314			0.220	

L.10 Numeracy – Year 3/Year 5: Adjusted Deltas, Equating Parameters and Statistics

Year 3 Item No.	Year 3 Label	Year 5 Item No.	Year 5 Label	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas	Year 3 Error	Year 5 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
06	N3Q06	02	N5Q02	-2.469	-2.482	-3.315	0.053	0.082	-2.573	-2.378	-2.378	-2.573	0.013	0.135	0.018	0.892	Y
07	N3Q07	03	N5Q03	-2.128	-2.222	-3.055	0.049	0.074	-2.263	-2.086	-2.086	-2.263	0.094	1.056	1.114	0.291	Y
10	N3Q10	06	N5Q06	-1.458	-1.202	-2.035	0.043	0.054	-1.399	-1.261	-1.261	-1.399	-0.256	-3.709	13.756	0.000	Y
13	N3Q13	09	N5Q09	-0.426	-0.089	-0.922	0.038	0.043	-0.315	-0.200	-0.200	-0.315	-0.337	-5.873	34.490	0.000	Y
23	N3Q23	13	N5Q13	-0.156	0.311	-0.522	0.038	0.041	0.021	0.133	0.133	0.021	-0.467	-8.349	69.702	0.000	N
24	N3Q24	21	N5Q21	1.266	1.265	0.432	0.041	0.039	1.209	1.322	1.322	1.209	0.001	0.018	0.000	0.986	Y
26	N3Q26	22	N5Q22	1.317	1.177	0.344	0.041	0.039	1.190	1.304	1.304	1.190	0.140	2.469	6.098	0.014	Y
30	N3Q30	27	N5Q27	0.962	1.027	0.194	0.039	0.039	0.939	1.050	1.050	0.939	-0.065	-1.183	1.401	0.237	Y
32	N3Q32	29	N5Q29	1.137	0.546	-0.287	0.040	0.040	0.785	0.898	0.898	0.785	0.591	10.443	109.046	0.000	N
33	N3Q33	40	N5Q40	3.105	2.818	1.985	0.062	0.043	2.886	3.037	3.037	2.886	0.287	3.799	14.431	0.000	Y

	Numeracy - Before Review			Numeracy - After Review		
	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas	Year 3 Deltas	Year 5 Adj. Deltas	Year 5 Deltas
Mean	0.115	0.115	-0.718	0.021	0.021	-0.796
Std. Deviation	1.764	1.660	1.660	1.958	1.872	1.872
Equating Shift		0.833			0.817	

L.11 Numeracy – Year 5/Year 7: Adjusted Deltas, Equating Parameters and Statistics

Year 5 Item No.	Year 5 Label	Year 7 Item No.	Year 7 Label	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas	Year 5 Error	Year 7 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
08	N5Q08	41	N7NCQ01	-1.454	-1.036	-2.519	0.047	0.060	-1.321	-1.169	-1.169	-1.321	-0.418	-5.480	30.026	0.000	N
10	N5Q10	42	N7NCQ02	-0.737	-0.174	-1.657	0.042	0.050	-0.521	-0.390	-0.390	-0.521	-0.563	-8.626	74.412	0.000	N
11	N5Q11	04	N7CAQ04	-1.064	-1.167	-2.650	0.044	0.062	-1.192	-1.040	-1.040	-1.192	0.103	1.357	1.841	0.175	Y
17	N5Q17	10	N7CAQ10	-0.404	-0.692	-2.174	0.040	0.055	-0.616	-0.480	-0.480	-0.616	0.287	4.227	17.871	0.000	Y
18	N5Q18	13	N7CAQ13	0.093	0.516	-0.967	0.039	0.045	0.245	0.364	0.364	0.245	-0.423	-7.108	50.523	0.000	N
30	N5Q30	14	N7CAQ14	0.669	0.356	-1.127	0.039	0.046	0.452	0.573	0.573	0.452	0.313	5.195	26.990	0.000	Y
31	N5Q31	17	N7CAQ17	-0.347	-0.247	-1.730	0.040	0.050	-0.361	-0.233	-0.233	-0.361	-0.100	-1.565	2.449	0.118	Y
33	N5Q33	18	N7CAQ18	1.002	0.950	-0.533	0.039	0.044	0.917	1.034	1.034	0.917	0.052	0.882	0.778	0.378	Y
34	N5Q34	19	N7CAQ19														NN*
35	N5Q35	45	N7NCQ05	1.856	1.655	0.172	0.042	0.044	1.695	1.816	1.816	1.695	0.202	3.319	11.016	0.001	Y
36	N5Q36	31	N7CAQ31	1.716	1.834	0.351	0.041	0.044	1.715	1.835	1.835	1.715	-0.118	-1.961	3.844	0.050	Y
39	N5Q39	47	N7NCQ07	2.267	1.771	0.288	0.045	0.044	1.956	2.082	2.082	1.956	0.496	7.874	61.992	0.000	N
42	N5Q42	48	N7NCQ08	3.823	3.654	2.172	0.065	0.057	3.652	3.825	3.825	3.652	0.169	1.956	3.824	0.051	Y

* NN: Link item was removed due to misfit.

	Numeracy - Before Review			Numeracy - After Review		
	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas	Year 5 Deltas	Year 7 Adj. Deltas	Year 7 Deltas
Mean	0.618	0.618	-0.865	0.906	0.906	-0.690
Std. Deviation	1.569	1.424	1.424	1.572	1.575	1.575
Equating Shift		1.483			1.596	

L.12 Numeracy – Year 7/Year 9: Adjusted Deltas, Equating Parameters and Statistics

Year 7 Item No.	Year 7 Label	Year 9 Item No.	Year 9 Label	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas	Year 7 Error	Year 9 Error	d. - 2*ex	d. + 2*ey	d. + 2*ex	d. - 2*ey	Diff-erence	Std. Diff.	Chi-Square	Sig. Level	Link Used
02	N7CAQ02	01	N9CAQ01	-2.395	-1.889	-2.810	0.058	0.063	-2.227	-2.056	-2.056	-2.227	-0.506	-5.909	34.915	0.000	N
08	N7CAQ08	04	N9CAQ04	-1.887	-1.853	-2.775	0.052	0.062	-1.951	-1.789	-1.789	-1.951	-0.034	-0.420	0.176	0.674	Y
12	N7CAQ12	05	N9CAQ05	-0.233	-0.118	-1.039	0.044	0.047	-0.240	-0.111	-0.111	-0.240	-0.115	-1.779	3.163	0.075	Y
15	N7CAQ15	07	N9CAQ07	0.019	-0.432	-1.353	0.044	0.049	-0.273	-0.141	-0.141	-0.273	0.451	6.846	46.865	0.000	N
16	N7CAQ16	08	N9CAQ08														NN*
20	N7CAQ20	09	N9CAQ09	-1.483	-1.328	-2.249	0.048	0.055	-1.479	-1.333	-1.333	-1.479	-0.155	-2.123	4.509	0.034	Y
21	N7CAQ21	12	N9CAQ12	0.097	0.065	-0.856	0.044	0.047	0.017	0.145	0.145	0.017	0.032	0.493	0.243	0.622	Y
26	N7CAQ26	19	N9CAQ19	0.293	0.602	-0.319	0.044	0.047	0.383	0.512	0.512	0.383	-0.310	-4.810	23.131	0.000	Y
28	N7CAQ28	20	N9CAQ20	0.642	0.371	-0.550	0.045	0.047	0.441	0.571	0.571	0.441	0.271	4.161	17.310	0.000	Y
29	N7CAQ29	27	N9CAQ27	1.046	1.293	0.372	0.047	0.048	1.103	1.237	1.237	1.103	-0.247	-3.676	13.515	0.000	Y
36	N7CAQ36	28	N9CAQ28														NN*
37	N7CAQ37	38	N9CAQ38	4.427	3.400	2.478	0.117	0.065	3.779	4.047	4.047	3.779	1.027	7.675	58.908	0.000	N
46	N7NCQ06	46	N9NCQ06	1.088	1.503	0.581	0.047	0.048	1.228	1.363	1.363	1.228	-0.414	-6.170	38.064	0.000	Y

* NN: Link item was removed due to misfit.

	Numeracy - Before Review			Numeracy - After Review		
	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas	Year 7 Deltas	Year 9 Adj. Deltas	Year 9 Deltas
Mean	0.147	0.147	-0.775	-0.055	-0.055	-0.854
Std. Deviation	1.836	1.572	1.572	1.107	1.172	1.172
Equating Shift		0.921			0.800	

APPENDIX M. NAPLAN 2017 Writing Pairwise Equating Summary

Pairwise Equating Verification

As context, the following variations of tasks have been used in previous years.

- From 2008 to 2010, narrative writing tasks, single prompt
- From 2011 to 2014 persuasive tasks, single prompt
- In 2015, separate persuasive tasks for years 3 and 5 versus years 7and 9
- In 2016, separate narrative tasks for years 3 and 5 versus years 7 and 9
- In 2017, separate persuasive tasks for years 3 and 5 versus years 7 and 9

Thus, in 2017 Persuasive prompts were administered to participating students and there were differentiated prompts for lower year levels and higher year levels. The equating verification study comprised a the following key components:

- Pairwise comparisons of 2015 and 2017 scripts to obtain, if possible, a common scale based on the comparisons
- Cross-rerferencing pairwise locations for 2015 and 2017 with rubric-based locations for the same scripts

A decision has been taken to form a single Writing scale. Nevertheless, as context for interpreting the information it is useful to observe similarities and differences between genres. The Narrative and Persuasive marking guides contain overlapping criteria but also have differences which are summarised below:

- The first three criteria differ in being genre-specific (Audience, Text Structure, Ideas)
- The fourth Narrative criterion is Character and Setting whereas the fourth Persuasive criterion is Persuasive Devices (they have an equal number of categories)
- Paragraphing has a different number of categories
- Other criteria are the same–these include Cohesion and all conventions apart from Paragraphing

In previous years, identity equating had been employed. In 2017, there was again a very high correlation between threshold locations for 2015 and 2017 calibrations and the decision taken to treat the scale as the same.

The pairwise study design for writing in the NAPLAN 2017 assessment was essentially the same as that used in 2016. A group of 40 judges compared (i) 2015 scripts with other 2015 scripts, (ii) 2017 scripts with other 2017 scripts, and (iii) 2015 scripts with 2017 scripts. The 2015 and 2017 scripts represented performances on two differentiated tasks designed for year 3/5 and year 7/9 students.

The purpose of the pairwise study was to cross-check other sources of information in the equating of Writing. The design allows evaluation of whether, for a given scale location based on pairwise comparisons, a similar rubric score was predicted for 2015 and 2017 scripts.

Pairwise Study

The purpose of the pairwise study is to obtain a common frame of reference by which to compare marking in 2015 with marking in 2017. The key focus is whether there is indication of a change in marker behaviour and trends, including but not limited to changes in harshness. It is noted that

prompts are selected in an attempt to minimise task-effects. It is also noted that exemplars are used in the Writing marking guide to help anchor score-pooints over time.

There wre a total of 480 scripts of which 246 were from 2017 and 234 were from 2015. All scripts had rubric score. Scripts were drawn by juriscictions so that there was approximately a uniform distribution across most of the range of raw scors, with equal numbers for Year 3/5 and Year 7/9 tasks in the sample. A total of 35 judges from around Australia made a total of 21,818 comparisons. All judges but one had good Outfit indices (less than 1.2), the other being 1.7. Person Characteristic Curves were checked for each and every performance, showing acceptable fit across the range.

Figure XX shows the plot of pairwise scale locations (*x*-axis) against locations based on the rubrics (*y*-axis) for 2015 and 2017 separately. The linear correlation overall is approximately $r = 0.940$ for 2015 scripts and $r = 0.937$ for 2017 scripts. As can be seen, however, the curves are somewhat curvilinear as in previous years of the programme.

The pairwise scale locations show the ordering of the scripts based on direct comparisons whereas the NAPLAN scale locations are based on marking. In the plot, persuasive writing 2015 and persuasive writing 2017 are highlighted separately. The rubric locations for 2015 are based on the 2011 calibration, which continued to be used till 2015. The rubric locations (logits) for 2017 are based on the same correspondence table. Regression lines are shown separately for each of these years. It can be seen that there is a very similar correspondence between the pairwise and NAPLAN scale locations for 2015 and 2017 scripts. The correlation and nature of the relationship are relatively similar for both of these calendar years to the relationship in previous calendar years.

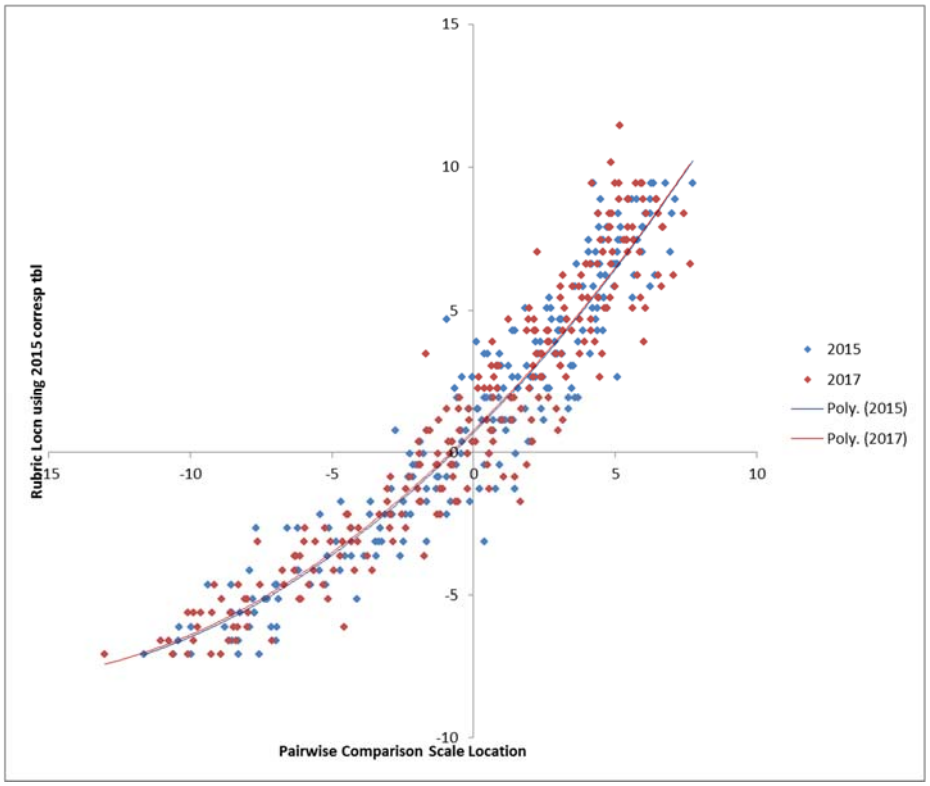


Figure XX. Scatterplot of the NAPLAN and pairwise scale locations.

Cross-referencing the pairwise locations with rubric locations indicates a high level of consistency in marking between 2015 and 2017. This evidence can be interpreted in combination with the high level of correspondence between threshold locations in 2015 and 2017.