

Figures for
CMAS Technical Report
Spring 2014

List of Figures

FIGURE 1. CMAS BLUEPRINT-GRADE 4	1
FIGURE 2. CMAS BLUEPRINT-GRADE 5	2
FIGURE 3. CMAS BLUEPRINT-GRADE 7	3
FIGURE 4. CMAS BLUEPRINT-GRADE 8	4
FIGURE 5. STANDARD SETTING RECOMMENDATIONS-SOCIAL STUDIES	5
FIGURE 6. STANDARD SETTING RECOMMENDATIONS-SCIENCE	6
FIGURE 7. SAMPLE 2PL ITEM CHARACTERISTIC CURVE.....	7
FIGURE 8. SAMPLE 2PL ITEM RESPONSE CURVES	8
FIGURE 9. ITEM RESPONSE CURVES FOR A 2-POINT ITEM	9
FIGURE 10. SAMPLE TRIAN REPORT	10
FIGURE 11. SAMPLE ADJUDICATION SPREADSHEET	11
FIGURE 12. GRADE 4 SCALE SCORE DISTRIBUTION	12
FIGURE 13. GRADE 5 SCALE SCORE DISTRIBUTION	13
FIGURE 14. GRADE 7 SCALE SCORE DISTRIBUTION	14
FIGURE 15. GRADE 8 SCALE SCORE DISTRIBUTION	15
FIGURE 16. GRADE 4 SCREE PLOT	16
FIGURE 17. GRADE 5 SCREE PLOT	17
FIGURE 18. GRADE 7 SCREE PLOT	18
FIGURE 19. GRADE 8 SCREE PLOT	19

Figure 1. CMAS Blueprint-Grade 4

TEST BLUEPRINT CMAS Social Studies Grade 4		SRs	3pt CRs	Total Points	Total Items	Total PE Points	% of Score Points
1	History	7	4	19	11	10-14	25%
	PGC 1			9-10			
	GLE 1	3-4	2	9-10			
	PGC 2			9-10			
	GLE 2	3-4	2	9-10			
2	Geography	14	2	20	16	9-14	27%
	PGC 1			10-11			
	GLE 1	7-8	1	10-11			
	PGC 2			9-10			
	GLE 2	6-7	1	9-10			
3	Economics	11	2	17	13	0-4	23%
	PGC 1			8-9			
	GLE 1	5-9	0-1	8-9			
	PGC 2			8-9			
	GLE 2	3-6	1-2	8-9			
4	Civics	7	4	19	11	0-6	25%
	PGC 1			8-9			
	GLE 1	2-6	1-2	8-9			
	PGC 2			10-11			
	GLE 2	2-5	2-3	10-11			
TOTAL		39	12	75	51	24	100%
<p>Operational form target ranges:</p> <p>DOK as a total percentage of test points:</p> <p>DOK 1=15%-20%</p> <p>DOK 2= <55%</p> <p>DOK 3=25%-30%</p> <p>Number of TEIs as a percentage of total items:</p> <p>Year 1 (2014) 20% of total items</p> <p>Years 2-5 25% of total items</p>							

Figure 2. CMAS Blueprint-Grade 5

	TEST BLUEPRINT CMAS Science Grade 5	SRs	2 pt CRs	3 pt CRs	Total CRs	Total CR points	Total Points	Total Items	Total SI/NS Points	Total Sim Points	% of Score Points
1	Physical Science	9	4	1	5	11	20	14	8	5-8	25%
	PGC 2						20				
	GLE 1	9	4	1	5	11	20	14			
2	Life Science	17	5	1	6	13	30	23	10	10-15	38%
	PGC 3						12-15				
	GLE 1	7	2-4	0-1	2-4	5-8	12-15	9-11			
	PGC 1						15-18				
	GLE 2	10	2-4	0-1	2-4	5-8	15-18	12-14			
3	Earth Systems Science	17	5	1	6	13	30	23	12	10-15	38%
	PGC 3						9-12				
	GLE 1	6	0-3	0-1	1-3	3-6	9-12	7-9			
	PGC 2						18-21				
	GLE 2	5	0-3	0-1	1-3	3-6	8-11	7-9			
	GLE 3	6	0-3	0-1	1-3	3-6	9-12	7-9			
TOTAL		43	14	3	17	37	80	60	30	30	100%
4	Scientific Investigations and the Nature of Science (SI/NS)	30 Points for SI/NS will be distributed among the 3 Standards									38%
Operational form target ranges: DOK as a total percentage of test points: DOK 1 20-25% DOK 2 45-50% DOK 3 25-30% Number of TEIs as percentage of total items: Year 1 (2014) 20% of total items Years 2-5 25% of total items											

Figure 3. CMAS Blueprint-Grade 7

TEST BLUEPRINT CMAS Social Studies Grade 7		SRs	3pt CRs	Total Points	Total Items	Total PE Points	% of Score Points
1	History	8	4	20	12	8-14	28%
	PGC 1			8			
	GLE 1	2-5	1-2	8			
	PGC 2			12			
	GLE 2	3-6	2-3	12			
2	Geography	9	3	18	12	8-12	25%
	PGC 1			8-10			
	GLE 1	3-6	1-2	8-10			
	PGC 2			8-10			
	GLE 2	3-6	1-2	8-10			
3	Economics	10	2	16	12	0-4	22%
	PGC 1			8			
	GLE 1	5-8	0-1	8			
	PGC 2			8			
	GLE 2	2-5	1-2	8			
4	Civics	9	3	18	12	0-6	25%
	PGC 2			9			
	GLE 1	6	1	9			
	PGC 1			9			
	GLE 2	3	2	9			
TOTAL		36	12	72	48	24	100%
<p>Operational form target ranges:</p> <p>DOK as a total percentage of test points:</p> <p>DOK 1= 15%-20%</p> <p>DOK 2= <50%</p> <p>DOK 3= 30%-35%</p> <p>Number of TEIs as a percentage of total items:</p> <p>Year 1 (2014) 20% of total items</p> <p>Years 2-5 25% of total items</p>							

Figure 4. CMAS Blueprint-Grade 8

TEST BLUEPRINT CMAS Science Grade 8		SRs	2pt CRs	3pt CRs	Total CRs	Total CR points	Total Points	Total Items	Total SI/NS Points	Total Sim Points	% of Score Points
1	Physical Science	16	5	1	6	13	29	22	7	5-7 or 10-14	36%
	PGC 1						7-8				
	GLE 1	2-5	0-2	0-1	1-2	2-5	7-8	4-6			
	PGC 3						7-8				
	GLE 2	2-5	0-2	0-1	1-2	2-5	7-8	4-6			
	PGC 2						7-8				
	GLE 3	2-5	0-2	0-1	1-2	2-5	7-8	4-6			
	PGC 3						7-8				
	GLE 4	2-5	0-2	0-1	1-2	2-5	7-8	4-6			
2	Life Science	13	4	1	5	11	24	18	6	5-7 or 10-14	30%
	PGC 2						11-13				
	GLE 1	5-8	1-3	0-1	2-3	4-7	11-13	8-10			
	PGC 3						11-13				
	GLE 2	5-8	1-3	0-1	2-3	4-7	11-13	8-10			
3	Earth Systems Science	14	5	1	6	13	27	20	7	5-7 or 10-14	34%
	PGC 2						12-14				
	GLE 1	2-5	0-2	0-1	1-2	2-5	6-7	4-6			
	GLE 2	2-5	0-2	0-1	1-2	2-5	6-7	4-6			
	PGC 1						12-15				
	GLE 3	2-5	0-2	0-1	1-2	2-5	6-8	4-6			
	GLE 4	2-5	0-2	0-1	1-2	2-5	6-7	4-6			
TOTAL		43	14	3	17	37	80	60	20	30	100%
4	Scientific Investigations and the Nature of Science (SI/NS)	20 Points for SI/NS will be distributed among the 3 Standards									25%

* Simulation points are dependent on whether one or two simulations are associated with a particular standard.

Operational form target ranges:

DOK as a total percentage of test points:

DOK 1 15%-20%

DOK 2 <50%

DOK 3 30%-35%

Number of TEIs as a percentage of total items

Year 1 (2014) 15-20% of total items

Years 2-5 25% of total items

Figure 5. Standard Setting Recommendations-Social Studies

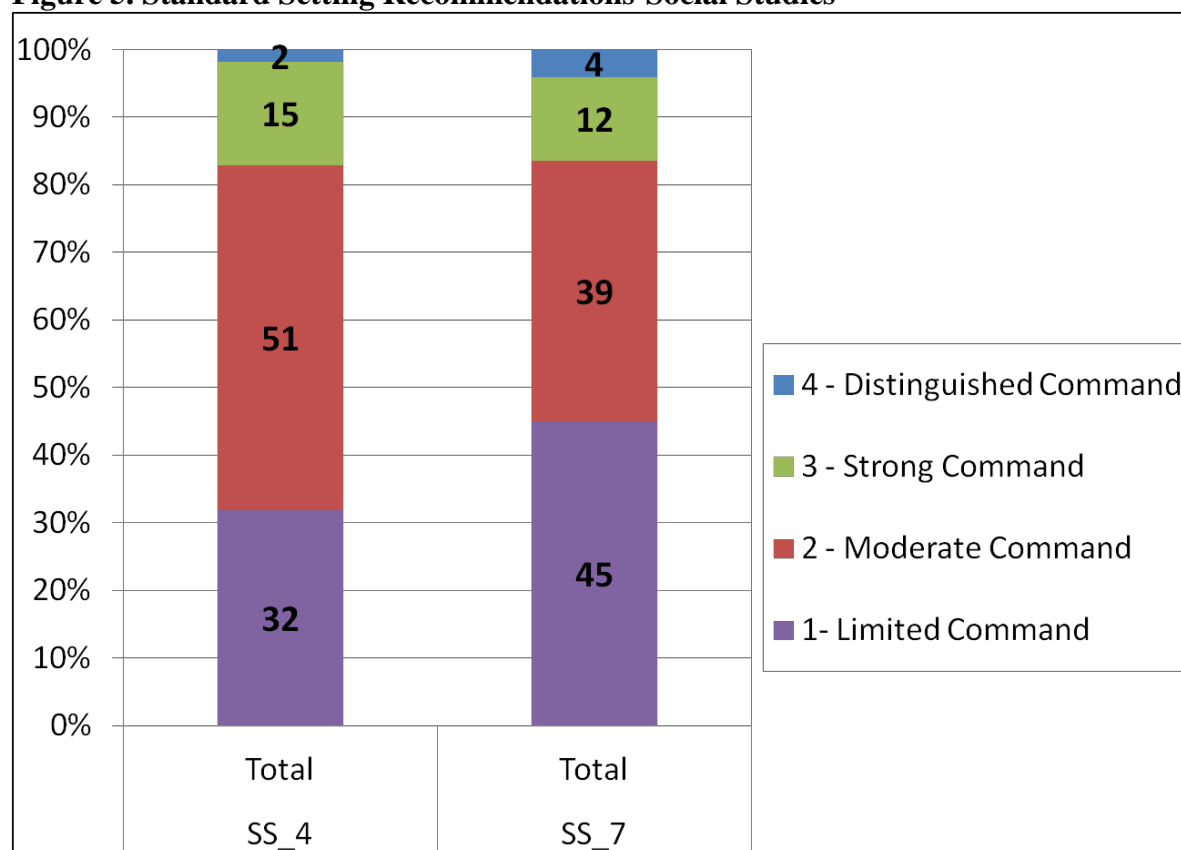


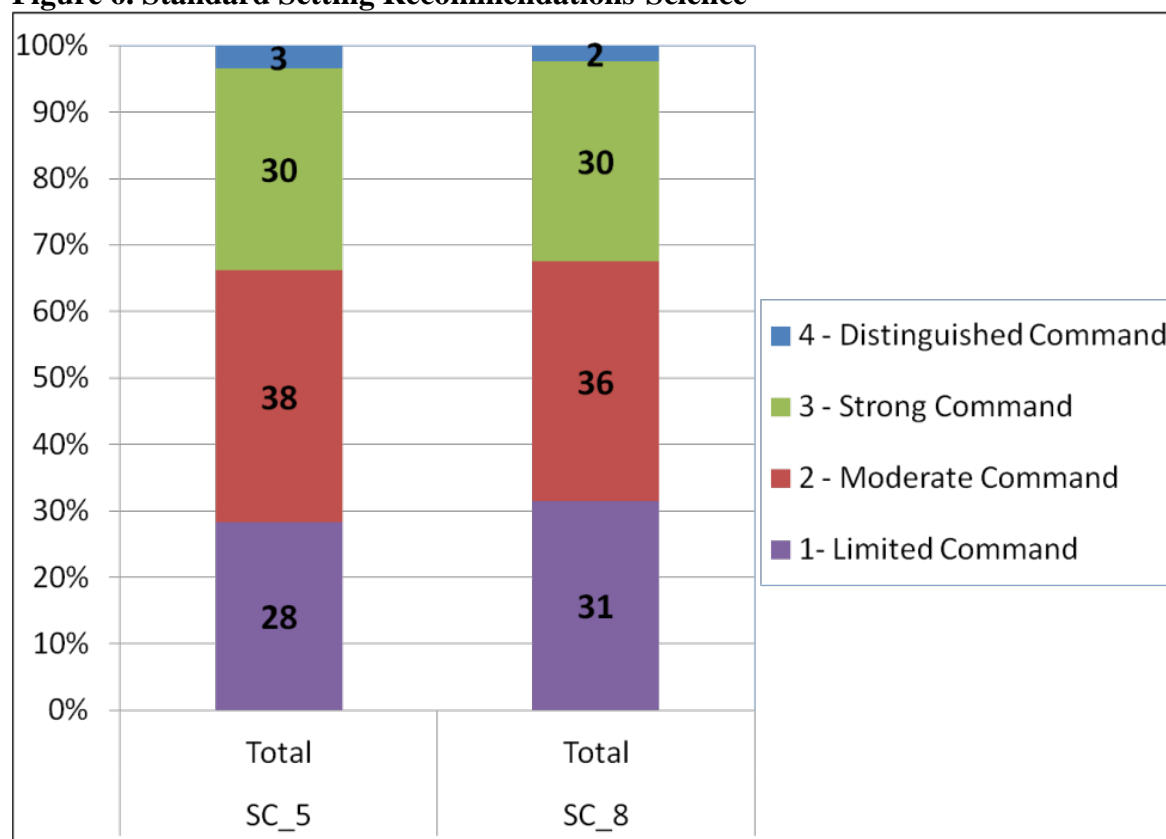
Figure 6. Standard Setting Recommendations-Science

Figure 7. Sample 2PL Item Characteristic Curve

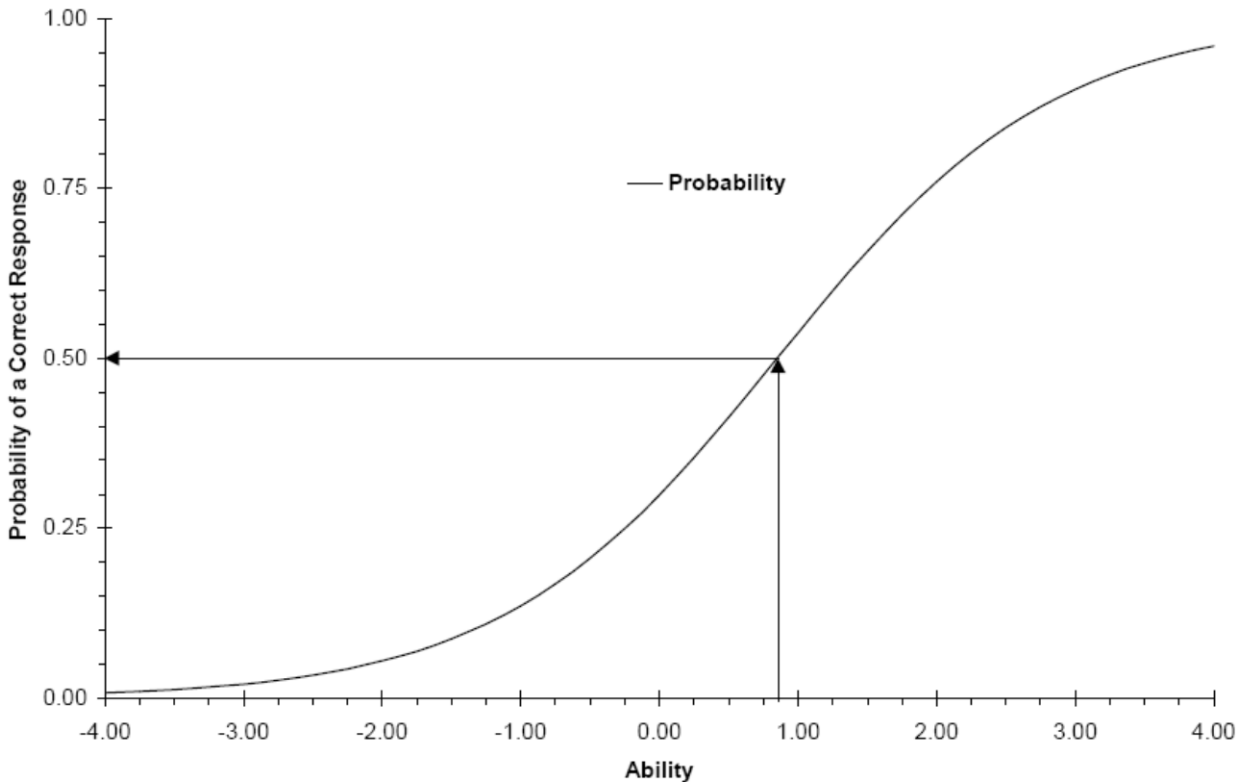


Figure 8. Sample 2PL Item Response Curves

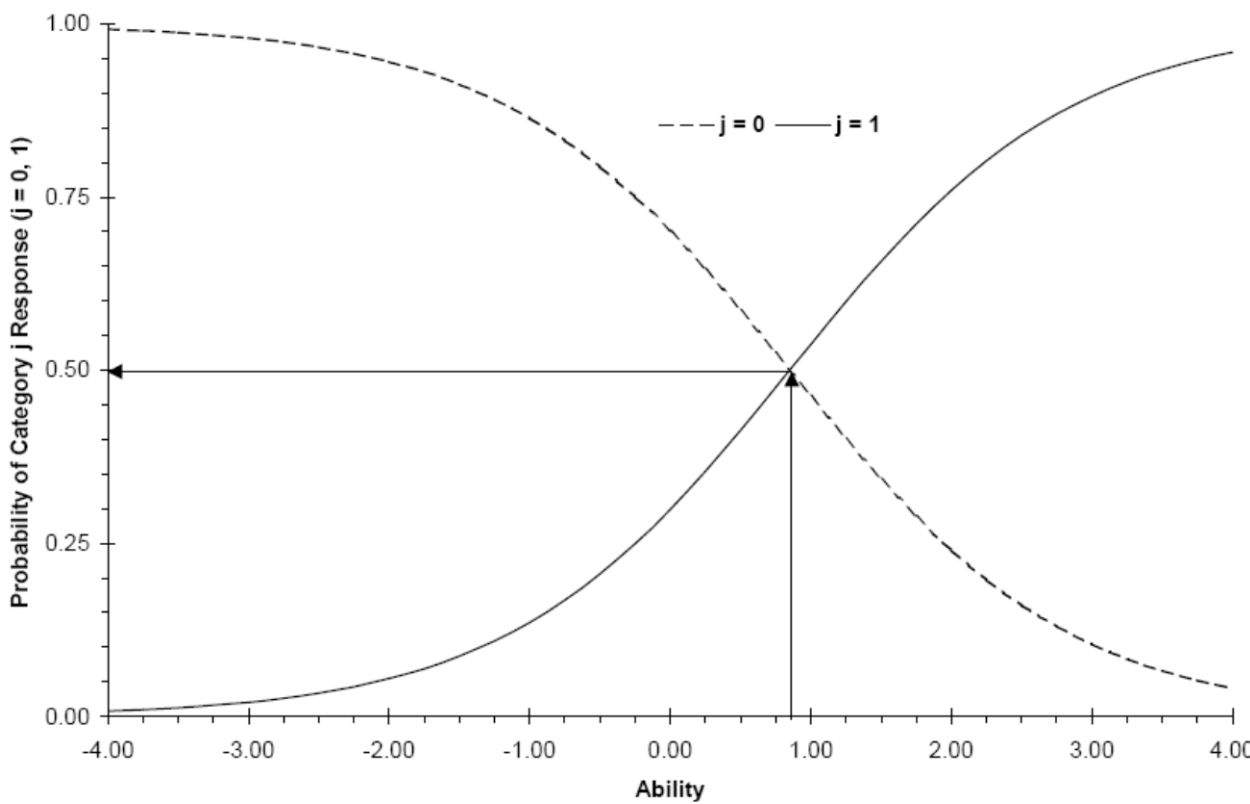


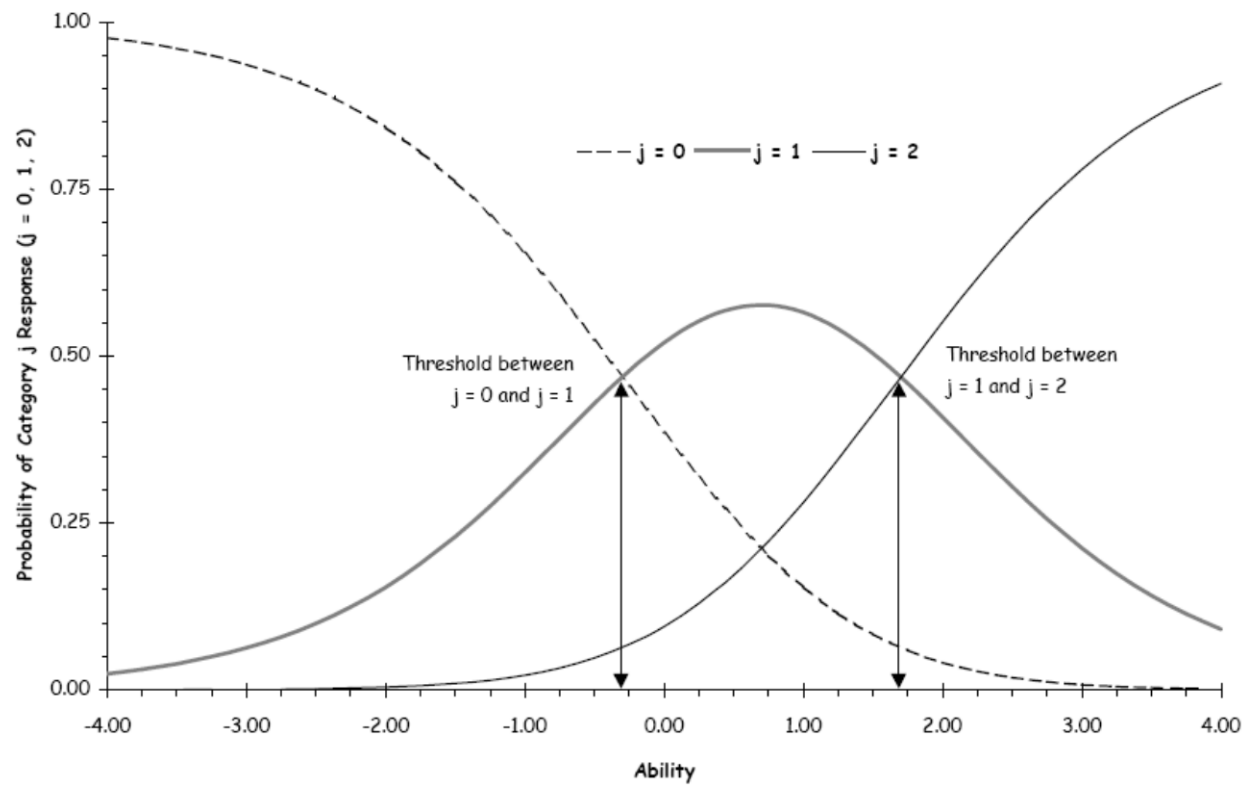
Figure 9. Item Response Curves for a 2-point Item

Figure 10. Sample TRIAN Report

Item	Form	Key	Corr.	*	PV<15	A%	*	B%	*	C%	*	D%	*	Omit%	Ncount
20	A2	A	0.12	*		16		43	*	31		11		0	1809
26	A2	A	0.28			34		13		49	*	4		0	1809
29	B3	C	0.26			5		4		41		50	*	0	1794

Figure 11. Sample Adjudication Spreadsheet

Form	ItemID	Response	Score	COUNT	PERCENT	Correct Response?
A1	123456789	d_clouds b_bay1fd_cold b_bay2fd_snow b_bay3fd_rain b_bay4	0	27	0.7	N
A1	123456789	d_clouds b_bay1fd_cold b_bay2fd_snow b_bay4fd_rain b_bay3	0	19	0.5	N
A1	123456789	d_clouds b_bay1fd_cold b_bay3fd_snow b_bay2fd_rain b_bay4	0	9	0.2	N
A1	123456789	d_clouds b_bay1fd_cold b_bay3fd_snow b_bay4fd_rain b_bay2	0	10	0.3	N
A1	123456789	d_clouds b_bay1fd_cold b_bay4fd_snow b_bay2fd_rain b_bay3	0	20	0.5	N
A1	123456789	d_clouds b_bay1fd_cold b_bay4fd_snow b_bay3fd_rain b_bay2	0	30	0.8	N
A1	123456789	d_clouds b_bay2fd_cold b_bay1fd_snow b_bay3fd_rain b_bay4	0	29	0.7	N
A1	123456789	d_clouds b_bay2fd_cold b_bay1fd_snow b_bay4fd_rain b_bay3	0	11	0.3	N
A1	123456789	d_clouds b_bay2fd_cold b_bay3fd_snow b_bay1fd_rain b_bay4	0	448	11.5	N
A1	123456789	d_clouds b_bay2fd_cold b_bay3fd_snow b_bay4fd_rain b_bay1	0	11	0.3	N
A1	123456789	d_clouds b_bay2fd_cold b_bay4fd_snow b_bay1fd_rain b_bay3	0	619	15.9	N
A1	123456789	d_clouds b_bay2fd_cold b_bay4fd_snow b_bay3fd_rain b_bay1	0	46	1.2	N
A1	123456789	d_clouds b_bay3fd_cold b_bay1fd_snow b_bay2fd_rain b_bay4	0	8	0.2	N
A1	123456789	d_clouds b_bay3fd_cold b_bay1fd_snow b_bay4fd_rain b_bay2	0	11	0.3	N
A1	123456789	d_clouds b_bay3fd_cold b_bay2fd_snow b_bay1fd_rain b_bay4	0	579	14.9	N
A1	123456789	d_clouds b_bay3fd_cold b_bay2fd_snow b_bay4fd_rain b_bay1	0	25	0.6	N
A1	123456789	d_clouds b_bay3fd_cold b_bay4fd_snow b_bay1fd_rain b_bay2	0	183	4.7	N
A1	123456789	d_clouds b_bay3fd_cold b_bay4fd_snow b_bay2fd_rain b_bay1	0	29	0.7	N
A1	123456789	d_clouds b_bay4fd_cold b_bay1fd_snow b_bay2fd_rain b_bay3	0	7	0.2	N
A1	123456789	d_clouds b_bay4fd_cold b_bay1fd_snow b_bay3fd_rain b_bay2	0	12	0.3	N
A1	123456789	d_clouds b_bay4fd_cold b_bay2fd_snow b_bay3fd_rain b_bay1	0	33	0.8	N
A1	123456789	d_clouds b_bay4fd_cold b_bay3fd_snow b_bay1fd_rain b_bay2	0	129	3.3	N
A1	123456789	d_clouds b_bay4fd_cold b_bay3fd_snow b_bay2fd_rain b_bay1	0	7	0.2	N
A1	123456789	d_clouds b_bay4fd_snow b_bay1fd_rain b_bay3	0	1	0.0	N
A1	123456789	Omitted	0	4	0.1	N
A1	123456789	d_clouds b_bay4fd_cold b_bay2fd_snow b_bay1fd_rain b_bay3	1	1586	40.7	Y

Figure 12. Grade 4 Scale Score Distribution

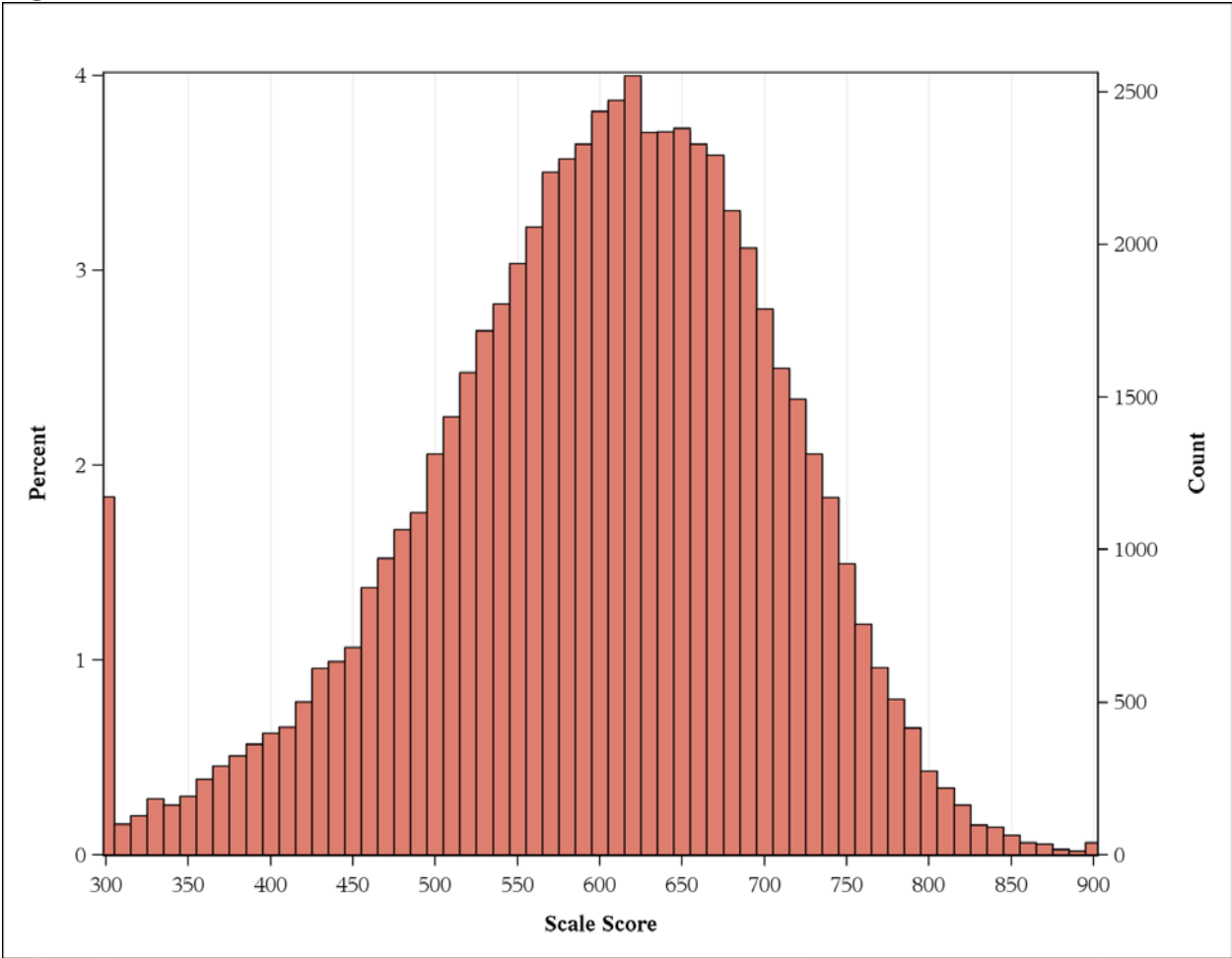


Figure 13. Grade 5 Scale Score Distribution

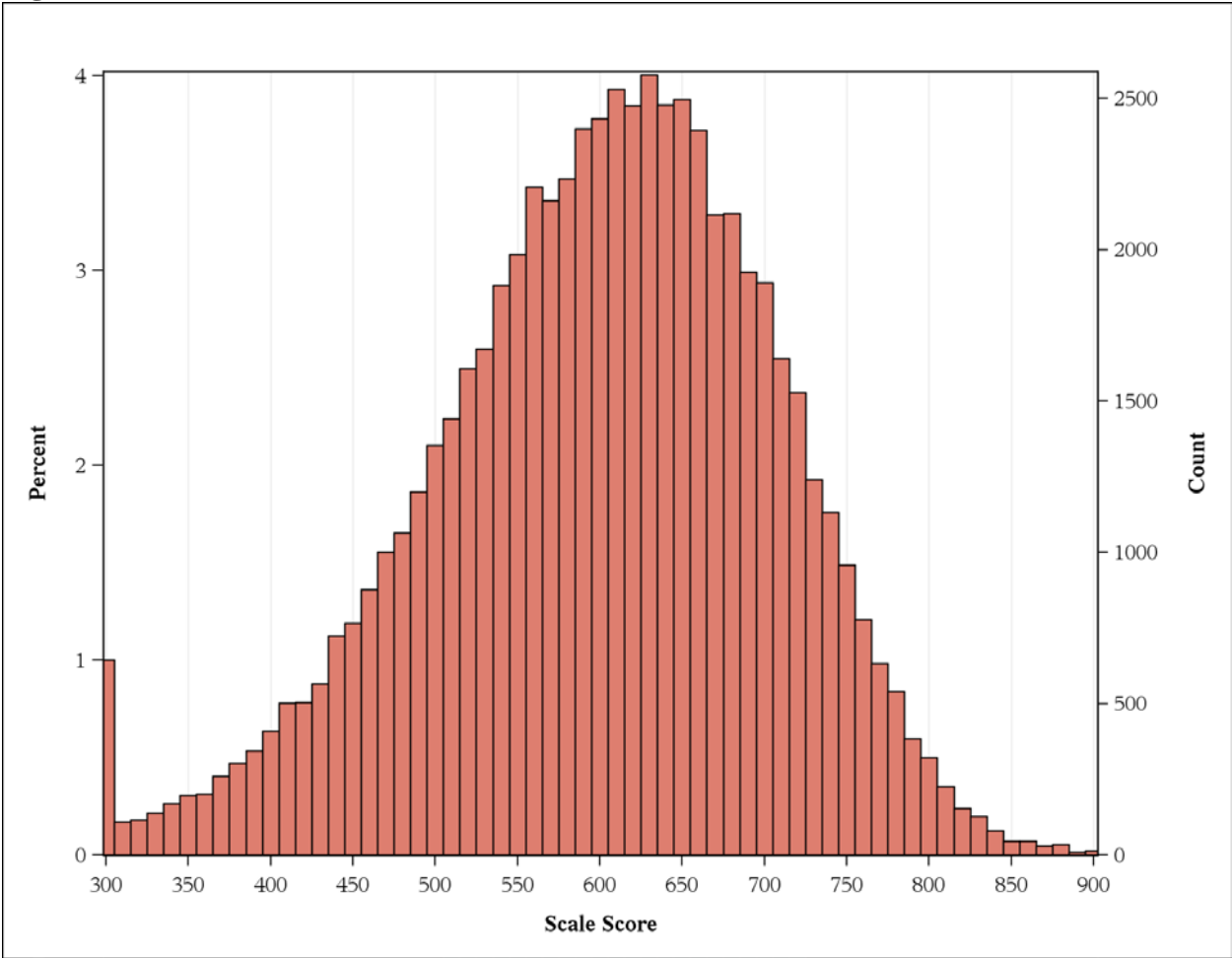


Figure 14. Grade 7 Scale Score Distribution

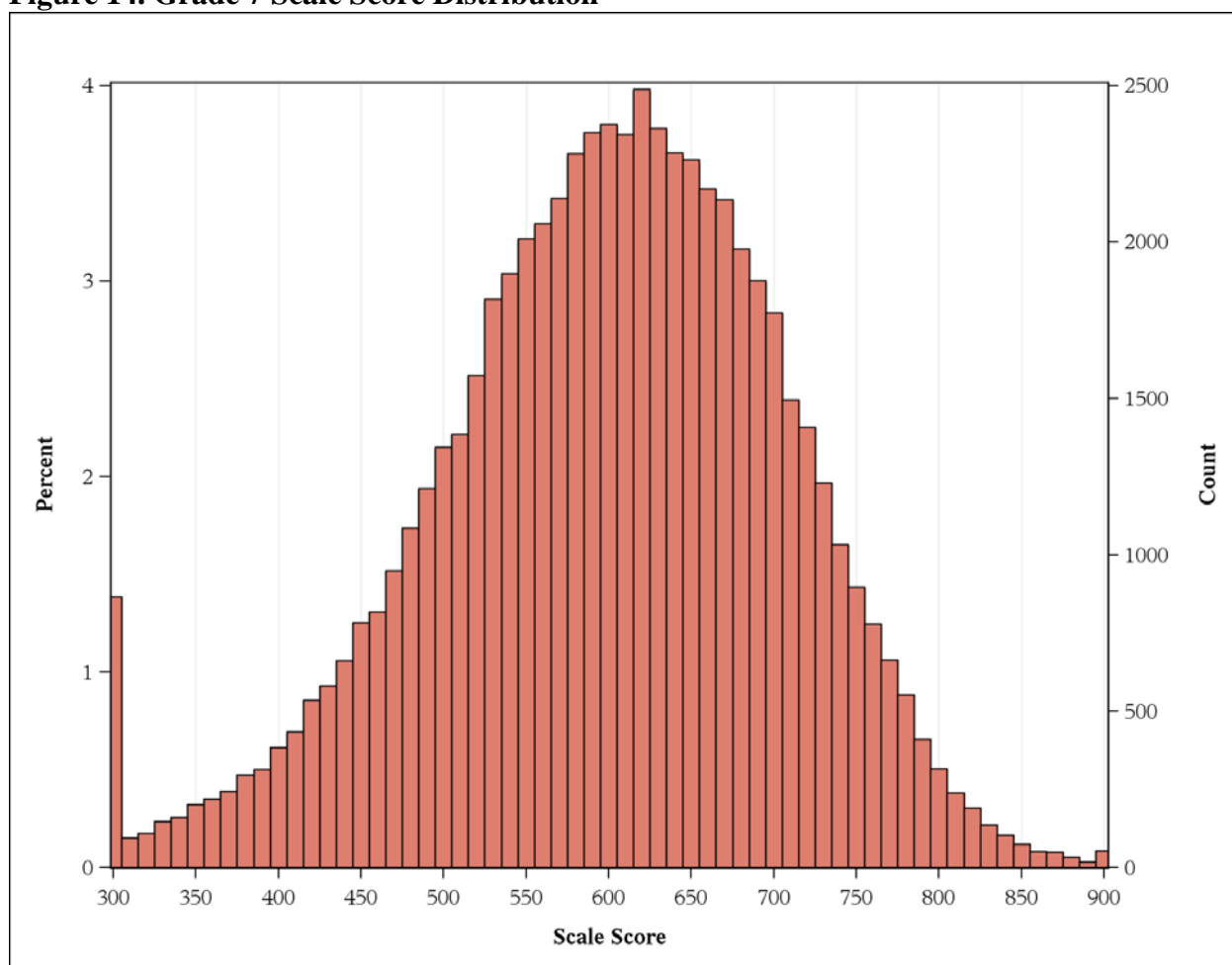


Figure 15. Grade 8 Scale Score Distribution

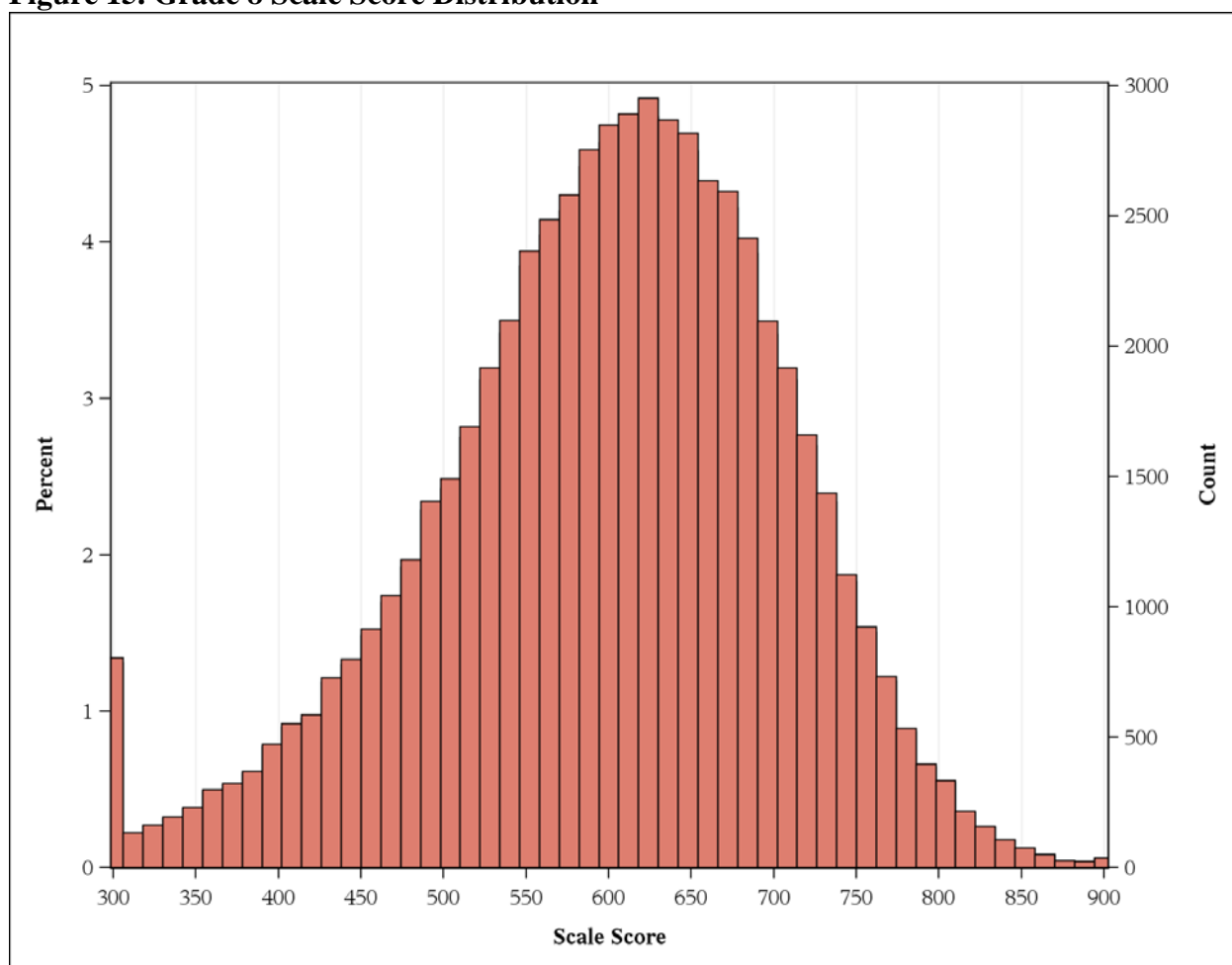


Figure 16. Grade 4 Scree Plot

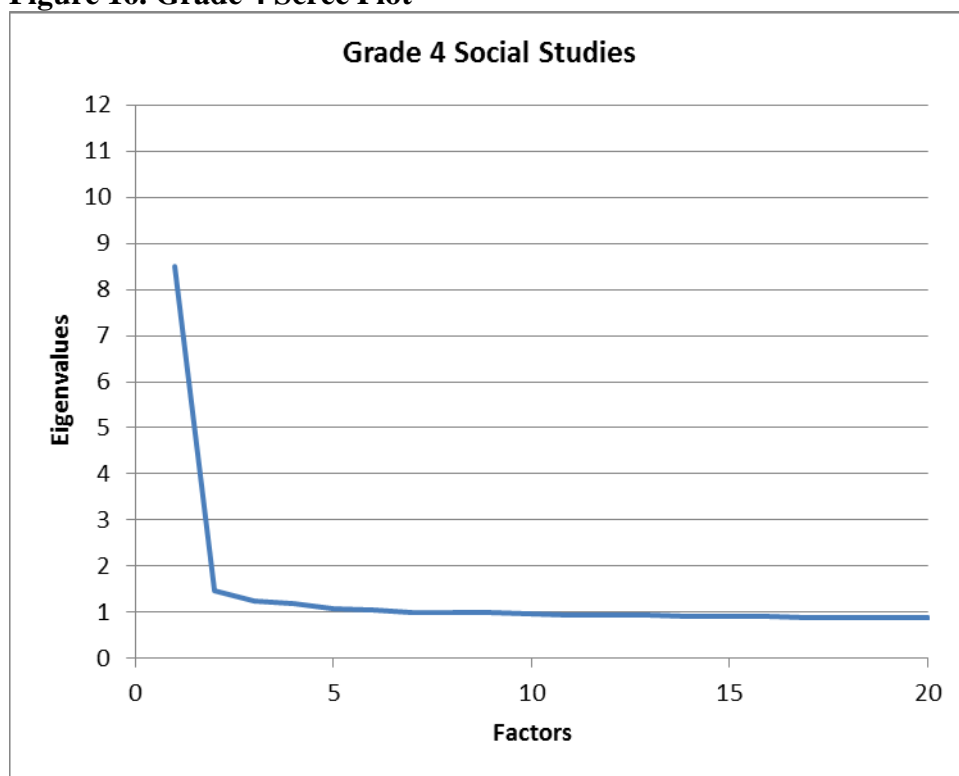


Figure 17. Grade 5 Scree Plot

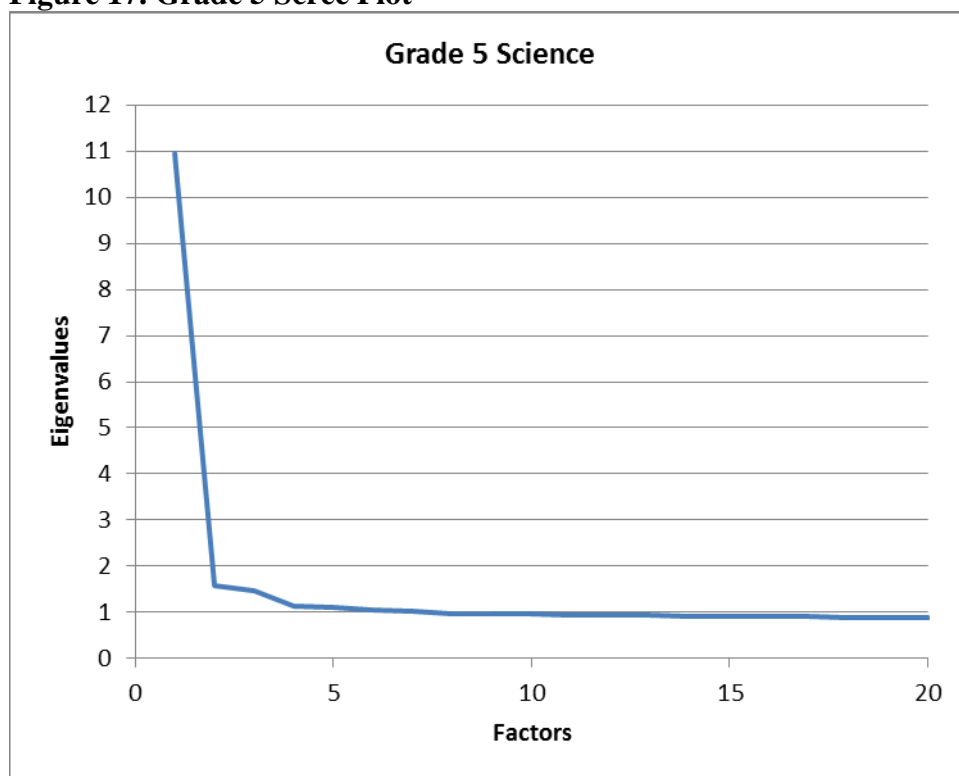


Figure 18. Grade 7 Scree Plot

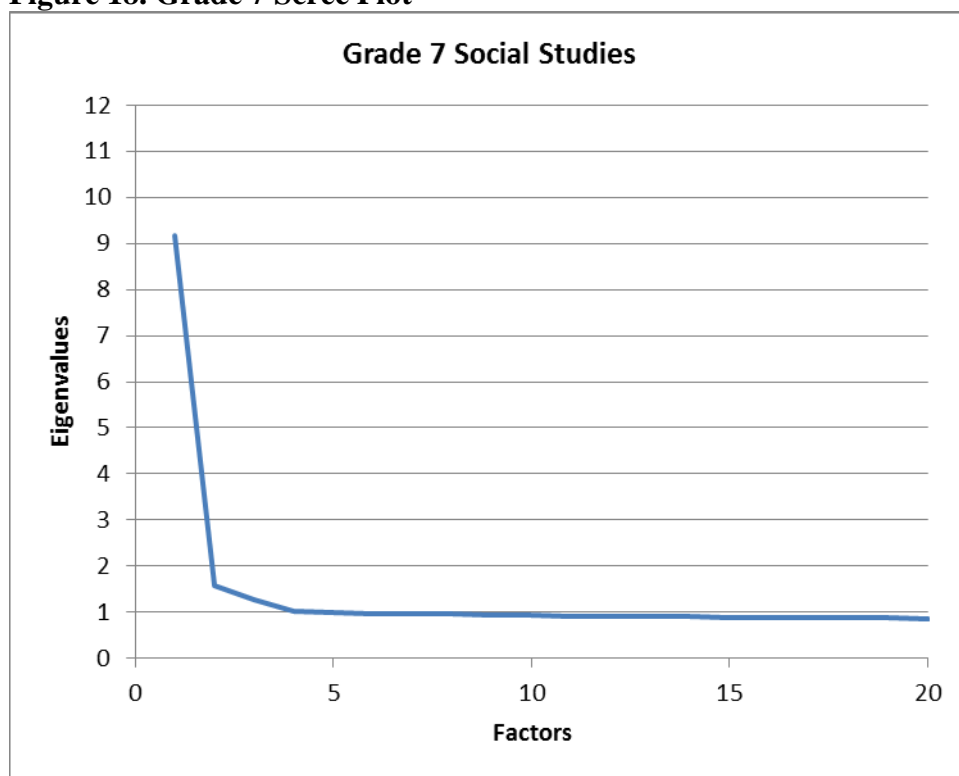


Figure 19. Grade 8 Scree Plot

