Internal Consistency of the easyCBM© CCSS

Reading Measures

Grades 3-8

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Published by

Abstract

This technical report documents findings from a study of the internal consistency and split-half reliability of the easyCBM© CCSS Reading measures, grades 3-8. Data, drawn from an extant data set gathered in school year 2013-2014, include scores from over 150,000 students' fall and winter benchmark assessments. Findings suggest that the easyCBM© CCSS Reading measures are internally consistent, with a median Cronbach's alpha of .87, and a median split-half reliability of .76 (first half) and .82 (second half) across all 12 measures analyzed.

Internal Consistency of the easyCBM© CCSS Reading Measures, Grades 3-8

Reading measures specifically written to align with the Common Core State Standards' (CCSS) focus on literacy measures drawing from informational as well as literary text were added to the easyCBM© benchmarking and progress monitoring system in 2014, as part of a larger effort to expand the reading and mathematics assessments available on the system. Detailed information about the development process can be found in a series of technical reports written by Alonzo, Park, and Tindal (2012a-f). All easyCBM© CCSS reading items were written by teachers and district reading specialists, under the guidance of experienced assessment developers at the University of Oregon. All 13 test forms at each grade level were written to be of equivalent difficulty, with the difficulty increasing incrementally from one grade to the next. In the current study, we used extant data from the easyCBM© database to analyze the internal consistency and split-half reliability of the easyCBM© CCSS measures across all grades where they are offered.

Methods

Participants

The study was conducted using values from the fall and winter 2013-2014 easyCBM© CCSS reading benchmark assessments. The fall benchmark was taken by 17,914 grade 3 students; 16,217 grade 4 students; 16,645 grade 5 students; 9,256 grade 6 students; 8,498 grade 7 students; and 7,401 grade 8 students, for a total of 75,931 participants. The winter benchmark was taken by 19,406 grade 3 students; 17,824 grade 4 students; 16,825 grade 5 students; 10,102 grade 6 students; 8,825 grade 7 students; and 8,223 grade 8 students, for a total of 81,205 participants.

Across all grades, students of American Indian or Alaskan Native descent comprised 1-2% of the sample, and Asian students made up 1-2% of the sample. Black or African American students made up 11-14% of the sample in grades 3-5 and 2-3% of the sample in grades 6-8. Native Hawaiian or other Pacific Islander students made up less than 1% of the sample, while students identified as two or more races constituted 1-2% of the sample across all grades. Lastly, White students made up 33-53% of the sample, and those classified as *Unknown ethnicity* made up 27-47% of the sample across all grades. Across all grades, 7-15% of the students in the data set were missing racial information. For the grade 7 winter benchmark, information about race was missing for all students.

Similarly, students identified as Hispanic/Latino made up 7-15% of the sample and students identified as Not Hispanic/Latino made up 44-62% of the sample, varying by grade level, with this information not provided at all for some students at each grade level. The percentage of ELL students in the sample ranged from 15-32%. Students identified as having a learning disability constituted 22-36% of the sample. Males made up 49-54% of the sample. As with the information about race, gender information for the grade 7 winter measure was missing in the data set. Complete demographic information can be found in Tables 1-3.

Measures

The fall and winter benchmark versions of the easyCBM© CCSS reading measures for grades 3 through 8 were used for this study. (Due to the time of year in which the data were gathered, spring benchmark measures were not included in this study). Each measure consists of five testlets, with an item prompt (a short passage or image/graphic display of information), followed by five multiple-choice questions. Each question includes a correct answer and two plausible but incorrect distractor options. Each measure begins with two testlets based on short

literary text, followed by two testlets based on informational text, and finally a single testlet based on "read to perform a task". Students score one point for every question they answer correctly, for a total of 25 points possible on each measure. The measures are designed for online administration in a group setting, where students read and respond to the questions on a computer or tablet device connected to the Internet. Responses are automatically recorded and scored by the computer system as students work their way through the assessments. PDFs of the measures are available for teachers to print for students who have difficulty accessing the material on a computer screen.

The development of the measures for each grade (3-8 individually) is described in detail in their respective technical reports Alonzo, Park, and Tindal (2012 a-f). As the technical reports document, the alternate forms of the measures within each grade (both benchmark and progress monitoring forms) were designed to be of equivalent difficulty, using a systematic and tightly-controlled development plan. Thus, although this study used data only from fall and winter benchmark assessments, the results should generalize to the other forms.

Data preparation and analysis

Prior to analysis, students who had not responded to any items on a particular reading measure were removed from the dataset. Next, the data were examined for scoring irregularities and any out-of-range values were removed.

The measures were analyzed for internal consistency using Cronbach's Alpha and split-half reliability (first half/second half) as well as through computation of item level statistics of the top and bottom 27th percentiles. For the split-half reliability analyses, the measures were analyzed using the first half to the median compared to the second half.

Results

Descriptive statistics for easyCBM© CCSS reading measures can be found in Table 4. Table 5 and 6-17, respectively, document the internal consistency in the form of average inter-item reliability (Cronbach's Alpha), followed by split-half reliability and top / bottom reliability

Internal Consistency

CCSS easyCBM© reading

The Cronbach's Alpha ranged from .83 to .90, with a median of .87 for all measures in both the fall and winter. As expected, all fall and winter measures for each grade were within 0.03 of one another, with some falling within 0.00 to 0.02. See table 5 for complete inter-item reliability data.

The split-half reliability ranged from .73 to .81 for the first and .73 to .86 for the second half of the measures. The median for the first half was .76, and the median was .82 for the second half. The correlation between the two halves ranged from .59 to .74, with a median correlation of .67. See table 5 for complete split-half reliability data.

All items at all grade levels performed as expected with the higher percentile students getting the items correct more often than the lower percentile students. Complete item-level statistics can be found in tables 6-17. The results of these analyses suggest the best reliability is achieved by retaining all items.

Discussion

Results of this study provide evidence in support of the internal consistency of the easyCBM© CCSS Reading measures, across grades 3-8. Although only data from the Fall and Winter benchmark assessments were used in this study, the development process used for the measures, in which all alternate forms within a given grade level were designed concurrently and

to be of equivalent difficulty, and the consistent findings across all grades and forms analyzed suggests that the results may well generalize to the other easyCBM© CCSS Reading forms, including the Spring benchmark tests and all ten progress monitoring forms at each grade level. It is also worth noting that the consistency of the findings across the fall and winter benchmark test forms add to the evidence of form equivalence reported in earlier technical reports documenting the development process used in the creation of the measures.

Table 1

Demographic Data: easyCBM© Reading

Grade/ Time	Race							
	American Indian or Alaskan Native	Asian	Black or African American	Native Hawaiian or Other Pacific Islander	Two or more races	Unknown	White	Missing
3/F	413	348	2518	43	393	4819	8097	1283
3/W	393	356	2736	46	437	5711	8291	1436
4/F	382	283	1772	44	329	5008	7264	1135
4/W	328	338	2022	59	356	5720	7704	1297
5/F	343	349	1874	52	353	5139	7519	1016
5/W	311	365	2125	67	351	5079	7294	1233
6/F	198	141	292	31	163	2601	4912	918
6/W	195	124	320	40	111	3608	4525	1179
7/F	175	101	174	24	132	3049	3814	1029
7/W	.	.	.	.	.	.	.	.
8/F	149	83	233	19	109	2864	3017	927
8/W	107	57	164	15	93	3903	2679	1205

Table 2

Demographic Data: easyCBM© Reading (con't)

Grade/ Time	Hispanic/ Latino	Not Hispanic/ Latino	Unknown	Missing	Yes	No	Missing
		Ethnicity				ELL	
3/F	2761	10054	3512	1587	5033	12220	661
3/W	2906	10149	4486	1865	6114	12610	682
4/F	1695	9452	3505	1565	3868	11771	610
4/W	1851	9518	4634	1821	5161	11913	750
5/F	1432	9782	3728	1703	3497	12526	622
5/W	1646	9130	4154	1895	4256	11957	612
6/F	1072	5756	1399	1029	1597	7262	397
6/W	1119	4925	2548	1510	2977	6716	409
7/F	885	4928	1602	1083	1349	6730	419
7/W	780	4034	2671	1340	2550	5854	421
8/F	680	4317	1485	919	1117	5887	397
8/W	605	3603	2761	1254	2518	5330	375

Table 3

Demographic Data: easyCBM© Reading (con't)

Grade/ Time	Disability			Gender			
	Yes	No	Missing	Male	Female	Unknown	Missing
3/F	3906	13092	916	9659	7886	127	242
3/W	4648	13821	937	10318	8562	228	298
4/F	3714	11343	1160	8736	7050	127	314
4/W	4677	11975	1172	9448	7757	218	401
5/F	3833	11766	1046	8895	7280	117	353
5/W	4161	11733	931	9062	7347	131	285
6/F	2104	6473	679	4499	4494	59	204
6/W	3264	6151	687	4931	4851	126	194
7/F	1919	5750	829	4296	4056	66	80
7/W	3062	4830	933	.	.	.	.
8/F	1687	4991	723	3685	3561	60	95
8/W	2982	4390	851	4103	3907	114	99

Table 4

Descriptive Statistics: easyCBM© Reading

Grade/time	*N*	*M*	*SD*	Total possible
3/F	17914	31.06	6.16	50
3/W	19406	29.87	4.76	50
4/F	16217	29.38	4.90	50
4/W	17824	29.35	4.68	50
5/F	16645	29.70	4.28	50
5/W	16825	28.35	3.88	50
6/F	9256	28.96	5.02	50
6/W	10102	28.49	4.48	50
7/F	8498	29.99	4.50	50
7/W	8825	28.59	4.28	50
8/F	7401	28.87	4.69	50
8/W	8223	28.87	4.55	50

Table 5

Internal Reliability: easyCBM© Reading

Grade/time	Cronbach's alpha	Split-half reliability		
		1st half	2nd half	Correlation
3/F	.90	.81	.86	.74
3/W	.87	.73	.82	.69
4/F	.88	.77	.83	.67
4/W	.87	.74	.81	.67
5/F	.84	.76	.75	.60
5/W	.85	.81	.73	.59
6/F	.89	.78	.85	.67
6/W	.87	.74	.85	.65
7/F	.83	.75	.75	.56
7/W	.86	.73	.80	.65
8/F	.88	.75	.84	.68
8/W	.88	.76	.81	.66

Table 6

Item Statistics of Students for Grade 3 easyCBM© Reading Fall Benchmark

	27th percentile and below				73rd percentile and above		
	M	*SD*	*N*		*M*	*SD*	*N*
Item 1	0.67	0.47	4880		0.99	0.09	6002
Item 2	0.44	0.50	4880		0.97	0.16	6002
Item 3	0.48	0.50	4880		0.93	0.26	6002
Item 4	0.34	0.48	4880		0.95	0.21	6002
Item 5	0.37	0.48	4880		0.98	0.14	6002
Item 6	0.47	0.50	4880		0.85	0.36	6002
Item 7	0.36	0.48	4880		0.92	0.27	6002
Item 8	0.35	0.48	4880		0.96	0.20	6002
Item 9	0.50	0.50	4880		1.00	0.03	6002
Item 10	0.47	0.50	4880		1.00	0.07	6002
Item 11	0.46	0.50	4880		0.97	0.16	6002
Item 12	0.34	0.47	4880		0.99	0.12	6002
Item 13	0.35	0.48	4880		0.94	0.23	6002
Item 14	0.38	0.48	4880		0.97	0.16	6002
Item 15	0.48	0.50	4880		0.98	0.14	6002
Item 16	0.27	0.44	4880		0.89	0.31	6002
Item 17	0.43	0.50	4880		0.97	0.16	6002
Item 18	0.32	0.46	4880		0.98	0.14	6002
Item 19	0.38	0.48	4880		0.97	0.18	6002
Item 20	0.40	0.49	4880		0.99	0.12	6002
Item 21	0.51	0.50	4880		0.99	0.11	6002
Item 22	0.41	0.49	4880		0.97	0.17	6002
Item 23	0.33	0.47	4880		0.97	0.18	6002
Item 24	0.35	0.48	4880		0.97	0.16	6002
Item 25	0.40	0.49	4880		0.99	0.12	6002

Table 7

Item Statistics of Students for Grade 3 easyCBM© Reading Winter Benchmark

| | 27th percentile and below | | | | 73rd percentile and above | | |
	M	*SD*	*N*		*M*	*SD*	*N*
Item 1	0.70	0.46	6197		1.00	0.06	5297
Item 2	0.64	0.48	6197		1.00	0.07	5297
Item 3	0.39	0.49	6197		0.53	0.50	5297
Item 4	0.64	0.48	6197		0.99	0.11	5297
Item 5	0.56	0.50	6197		0.98	0.15	5297
Item 6	0.59	0.49	6197		0.99	0.11	5297
Item 7	0.60	0.49	6197		1.00	0.07	5297
Item 8	0.25	0.44	6197		0.77	0.42	5297
Item 9	0.41	0.49	6197		0.72	0.45	5297
Item 10	0.63	0.48	6197		1.00	0.05	5297
Item 11	0.68	0.46	6197		1.00	0.05	5297
Item 12	0.66	0.47	6197		1.00	0.06	5297
Item 13	0.45	0.50	6197		0.96	0.19	5297
Item 14	0.46	0.50	6197		0.95	0.21	5297
Item 15	0.72	0.45	6197		1.00	0.03	5297
Item 16	0.67	0.47	6197		0.99	0.07	5297
Item 17	0.50	0.50	6197		0.98	0.15	5297
Item 18	0.69	0.46	6197		1.00	0.06	5297
Item 19	0.49	0.50	6197		0.94	0.24	5297
Item 20	0.31	0.46	6197		0.79	0.41	5297
Item 21	0.66	0.47	6197		0.97	0.18	5297
Item 22	0.67	0.47	6197		1.00	0.04	5297
Item 23	0.64	0.48	6197		0.97	0.16	5297
Item 24	0.65	0.48	6197		0.99	0.09	5297
Item 25	0.76	0.43	6197		1.00	0.04	5297

Table 8

Item Statistics of Students for Grade 4 easyCBM© Reading Fall Benchmark

	27th percentile and below			73rd percentile and above		
	M	*SD*	*N*	*M*	*SD*	*N*
Item 1	0.55	0.50	4971	0.96	0.19	6535
Item 2	0.73	0.44	4971	0.98	0.14	6535
Item 3	0.51	0.50	4971	0.95	0.22	6535
Item 4	0.51	0.50	4971	0.94	0.24	6535
Item 5	0.44	0.50	4971	0.88	0.33	6535
Item 6	0.79	0.41	4971	1.00	0.07	6535
Item 7	0.73	0.44	4971	0.97	0.16	6535
Item 8	0.70	0.46	4971	1.00	0.06	6535
Item 9	0.73	0.44	4971	1.00	0.06	6535
Item 10	0.29	0.45	4971	0.83	0.37	6535
Item 11	0.66	0.47	4971	0.97	0.17	6535
Item 12	0.55	0.50	4971	0.99	0.08	6535
Item 13	0.39	0.49	4971	0.93	0.26	6535
Item 14	0.62	0.49	4971	0.99	0.09	6535
Item 15	0.68	0.47	4971	1.00	0.03	6535
Item 16	0.48	0.50	4971	0.96	0.19	6535
Item 17	0.33	0.47	4971	0.96	0.21	6535
Item 18	0.42	0.49	4971	0.97	0.17	6535
Item 19	0.46	0.50	4971	0.96	0.19	6535
Item 20	0.31	0.46	4971	0.68	0.47	6535
Item 21	0.77	0.42	4971	1.00	0.07	6535
Item 22	0.71	0.45	4971	1.00	0.07	6535
Item 23	0.80	0.40	4971	1.00	0.05	6535
Item 24	0.63	0.48	4971	0.98	0.14	6535
Item 25	0.54	0.50	4971	0.95	0.22	6535

Table 9

Item Statistics of Students for Grade 4 easyCBM© Reading Winter Benchmark

	27th percentile and below			73rd percentile and above		
	M	*SD*	*N*	*M*	*SD*	*N*
Item 1	0.83	0.37	5451	1.00	0.06	6456
Item 2	0.78	0.41	5451	0.99	0.08	6456
Item 3	0.59	0.49	5451	0.98	0.15	6456
Item 4	0.69	0.46	5451	1.00	0.06	6456
Item 5	0.29	0.45	5451	0.81	0.39	6456
Item 6	0.55	0.50	5451	0.79	0.41	6456
Item 7	0.79	0.41	5451	1.00	0.06	6456
Item 8	0.32	0.47	5451	0.85	0.36	6456
Item 9	0.66	0.47	5451	1.00	0.07	6456
Item 10	0.79	0.41	5451	0.99	0.08	6456
Item 11	0.51	0.50	5451	0.98	0.13	6456
Item 12	0.76	0.43	5451	1.00	0.02	6456
Item 13	0.55	0.50	5451	0.95	0.21	6456
Item 14	0.54	0.50	5451	0.98	0.14	6456
Item 15	0.46	0.50	5451	0.98	0.16	6456
Item 16	0.73	0.44	5451	0.97	0.16	6456
Item 17	0.58	0.49	5451	0.99	0.11	6456
Item 18	0.54	0.50	5451	0.98	0.15	6456
Item 19	0.48	0.50	5451	0.97	0.16	6456
Item 20	0.27	0.44	5451	0.72	0.45	6456
Item 21	0.74	0.44	5451	0.98	0.13	6456
Item 22	0.48	0.50	5451	0.97	0.18	6456
Item 23	0.78	0.42	5451	1.00	0.04	6456
Item 24	0.51	0.50	5451	0.99	0.10	6456
Item 25	0.58	0.49	5451	0.91	0.29	6456

Table 10

Item Statistics of Students for Grade 5 easyCBM© Reading Fall Benchmark

	27th percentile and below				73rd percentile and above		
	M	*SD*	*N*		*M*	*SD*	*N*
Item 1	0.67	0.47	5406		0.96	0.19	7232
Item 2	0.72	0.45	5406		0.98	0.15	7232
Item 3	0.79	0.41	5406		0.99	0.09	7232
Item 4	0.82	0.38	5406		1.00	0.03	7232
Item 5	0.54	0.50	5406		0.95	0.23	7232
Item 6	0.59	0.49	5406		0.96	0.20	7232
Item 7	0.58	0.49	5406		0.98	0.15	7232
Item 8	0.57	0.50	5406		0.98	0.14	7232
Item 9	0.81	0.40	5406		1.00	0.04	7232
Item 10	0.72	0.45	5406		0.95	0.22	7232
Item 11	0.69	0.46	5406		0.98	0.13	7232
Item 12	0.40	0.49	5406		0.67	0.47	7232
Item 13	0.58	0.49	5406		0.99	0.11	7232
Item 14	0.66	0.47	5406		0.96	0.19	7232
Item 15	0.17	0.38	5406		0.25	0.43	7232
Item 16	0.60	0.49	5406		0.97	0.16	7232
Item 17	0.61	0.49	5406		0.88	0.32	7232
Item 18	0.65	0.48	5406		0.98	0.14	7232
Item 19	0.26	0.44	5406		0.71	0.45	7232
Item 20	0.42	0.49	5406		0.87	0.33	7232
Item 21	0.87	0.34	5406		1.00	0.06	7232
Item 22	0.66	0.47	5406		0.99	0.11	7232
Item 23	0.78	0.42	5406		0.99	0.09	7232
Item 24	0.58	0.49	5406		0.95	0.21	7232
Item 25	0.58	0.49	5406		0.97	0.16	7232

Table 11

Item Statistics of Students for Grade 5 easyCBM© Reading Winter Benchmark

	27th percentile and below				73rd percentile and above		
	M	*SD*	*N*		*M*	*SD*	*N*
Item 1	0.92	0.27	6297		1.00	0.01	4612
Item 2	0.69	0.46	6297		0.98	0.13	4612
Item 3	0.86	0.35	6297		1.00	0.06	4612
Item 4	0.82	0.39	6297		1.00	0.05	4612
Item 5	0.84	0.37	6297		1.00	0.03	4612
Item 6	0.77	0.42	6297		0.99	0.10	4612
Item 7	0.59	0.49	6297		0.99	0.10	4612
Item 8	0.80	0.40	6297		1.00	0.04	4612
Item 9	0.58	0.49	6297		0.98	0.14	4612
Item 10	0.81	0.39	6297		1.00	0.03	4612
Item 11	0.86	0.35	6297		1.00	0.03	4612
Item 12	0.89	0.31	6297		1.00	0.04	4612
Item 13	0.73	0.44	6297		1.00	0.06	4612
Item 14	0.73	0.44	6297		0.99	0.09	4612
Item 15	0.51	0.50	6297		0.94	0.24	4612
Item 16	0.22	0.41	6297		0.81	0.40	4612
Item 17	0.50	0.50	6297		0.98	0.15	4612
Item 18	0.54	0.50	6297		0.99	0.10	4612
Item 19	0.58	0.49	6297		0.99	0.11	4612
Item 20	0.40	0.49	6297		0.74	0.44	4612
Item 21	0.88	0.32	6297		1.00	0.02	4612
Item 22	0.81	0.40	6297		1.00	0.05	4612
Item 23	0.85	0.35	6297		1.00	0.05	4612
Item 24	0.82	0.38	6297		1.00	0.04	4612
Item 25	0.90	0.30	6297		1.00	0.04	4612

Table 12

Item Statistics of Students for Grade 6 easyCBM© Reading Fall Benchmark

	27th percentile and below				73rd percentile and above		
	M	*SD*	*N*		*M*	*SD*	*N*
Item 1	0.87	0.34	2791		0.99	0.07	3432
Item 2	0.42	0.49	2791		0.80	0.40	3432
Item 3	0.35	0.48	2791		0.88	0.32	3432
Item 4	0.77	0.42	2791		0.99	0.09	3432
Item 5	0.64	0.48	2791		0.99	0.10	3432
Item 6	0.88	0.33	2791		1.00	0.02	3432
Item 7	0.77	0.42	2791		1.00	0.04	3432
Item 8	0.78	0.41	2791		1.00	0.06	3432
Item 9	0.58	0.49	2791		0.96	0.20	3432
Item 10	0.79	0.41	2791		1.00	0.07	3432
Item 11	0.70	0.46	2791		1.00	0.06	3432
Item 12	0.76	0.43	2791		1.00	0.03	3432
Item 13	0.41	0.49	2791		0.96	0.19	3432
Item 14	0.72	0.45	2791		1.00	0.06	3432
Item 15	0.72	0.45	2791		1.00	0.07	3432
Item 16	0.56	0.50	2791		1.00	0.04	3432
Item 17	0.47	0.50	2791		0.99	0.10	3432
Item 18	0.48	0.50	2791		0.99	0.07	3432
Item 19	0.25	0.44	2791		0.86	0.34	3432
Item 20	0.46	0.50	2791		0.99	0.10	3432
Item 21	0.43	0.50	2791		0.91	0.28	3432
Item 22	0.22	0.41	2791		0.55	0.50	3432
Item 23	0.44	0.50	2791		0.95	0.23	3432
Item 24	0.56	0.50	2791		0.97	0.16	3432
Item 25	0.64	0.48	2791		0.97	0.16	3432

Table 13

Item Statistics of Students for Grade 6 easyCBM© Reading Winter Benchmark

	27th percentile and below				73rd percentile and above		
	M	*SD*	*N*		*M*	*SD*	*N*
Item 1	0.56	0.50	3228		0.97	0.16	4178
Item 2	0.30	0.46	3228		0.74	0.44	4178
Item 3	0.48	0.50	3228		0.96	0.21	4178
Item 4	0.58	0.49	3228		0.96	0.21	4178
Item 5	0.38	0.49	3228		0.75	0.43	4178
Item 6	0.51	0.50	3228		0.97	0.17	4178
Item 7	0.76	0.43	3228		1.00	0.06	4178
Item 8	0.26	0.44	3228		0.73	0.45	4178
Item 9	0.81	0.39	3228		0.99	0.09	4178
Item 10	0.66	0.47	3228		0.99	0.12	4178
Item 11	0.78	0.41	3228		1.00	0.04	4178
Item 12	0.66	0.47	3228		0.99	0.10	4178
Item 13	0.86	0.35	3228		1.00	0.02	4178
Item 14	0.68	0.47	3228		0.99	0.10	4178
Item 15	0.75	0.43	3228		0.99	0.08	4178
Item 16	0.60	0.49	3228		0.96	0.20	4178
Item 17	0.75	0.43	3228		1.00	0.04	4178
Item 18	0.74	0.44	3228		0.99	0.10	4178
Item 19	0.63	0.48	3228		0.99	0.07	4178
Item 20	0.51	0.50	3228		0.94	0.23	4178
Item 21	0.58	0.49	3228		0.88	0.33	4178
Item 22	0.85	0.36	3228		1.00	0.05	4178
Item 23	0.84	0.37	3228		1.00	0.07	4178
Item 24	0.80	0.40	3228		0.99	0.08	4178
Item 25	0.84	0.36	3228		1.00	0.06	4178

Table 14
Item Statistics of Students for Grade 7 easyCBM© Reading Fall Benchmark

| | 27th percentile and below | | | 73rd percentile and above | | |
	M	*SD*	*N*	*M*	*SD*	*N*
Item 1	0.68	0.47	2646	0.99	0.11	3177
Item 2	0.73	0.45	2646	0.99	0.11	3177
Item 3	0.55	0.50	2646	0.90	0.29	3177
Item 4	0.53	0.50	2646	0.98	0.12	3177
Item 5	0.55	0.50	2646	0.96	0.19	3177
Item 6	0.28	0.45	2646	0.63	0.48	3177
Item 7	0.80	0.40	2646	1.00	0.06	3177
Item 8	0.72	0.45	2646	1.00	0.05	3177
Item 9	0.47	0.50	2646	0.90	0.30	3177
Item 10	0.72	0.45	2646	0.99	0.07	3177
Item 11	0.76	0.42	2646	1.00	0.05	3177
Item 12	0.54	0.50	2646	0.96	0.19	3177
Item 13	0.45	0.50	2646	0.96	0.19	3177
Item 14	0.58	0.49	2646	0.96	0.19	3177
Item 15	0.65	0.48	2646	0.93	0.26	3177
Item 16	0.25	0.43	2646	0.71	0.45	3177
Item 17	0.51	0.50	2646	0.91	0.28	3177
Item 18	0.36	0.48	2646	0.85	0.36	3177
Item 19	0.46	0.50	2646	0.89	0.31	3177
Item 20	0.32	0.46	2646	0.74	0.44	3177
Item 21	0.84	0.37	2646	1.00	0.04	3177
Item 22	0.55	0.50	2646	0.77	0.42	3177
Item 23	0.77	0.42	2646	0.99	0.10	3177
Item 24	0.85	0.35	2646	0.99	0.09	3177
Item 25	0.57	0.50	2646	0.96	0.19	3177

Table 15
Item Statistics of Students for Grade 7 easyCBM© Reading Winter Benchmark

	27th percentile and below				73rd percentile and above		
	M	*SD*	*N*		*M*	*SD*	*N*
Item 1	0.33	0.47	2635		0.75	0.44	3560
Item 2	0.81	0.39	2635		0.99	0.09	3560
Item 3	0.92	0.27	2635		1.00	0.02	3560
Item 4	0.70	0.46	2635		0.94	0.24	3560
Item 5	0.81	0.39	2635		0.99	0.07	3560
Item 6	0.33	0.47	2635		0.75	0.43	3560
Item 7	0.66	0.47	2635		0.99	0.08	3560
Item 8	0.77	0.42	2635		1.00	0.05	3560
Item 9	0.42	0.49	2635		0.90	0.30	3560
Item 10	0.82	0.38	2635		1.00	0.03	3560
Item 11	0.76	0.43	2635		1.00	0.05	3560
Item 12	0.65	0.48	2635		0.99	0.09	3560
Item 13	0.72	0.45	2635		1.00	0.06	3560
Item 14	0.71	0.45	2635		0.99	0.11	3560
Item 15	0.43	0.50	2635		0.81	0.39	3560
Item 16	0.56	0.50	2635		0.95	0.21	3560
Item 17	0.81	0.39	2635		--	--	--
Item 18	0.51	0.50	2635		0.94	0.24	3560
Item 19	0.60	0.49	2635		0.91	0.28	3560
Item 20	0.70	0.46	2635		0.99	0.08	3560
Item 21	0.66	0.48	2635		0.97	0.17	3560
Item 22	0.64	0.48	2635		0.98	0.14	3560
Item 23	0.79	0.41	2635		1.00	0.04	3560
Item 24	0.38	0.49	2635		0.86	0.35	3560
Item 25	0.71	0.45	2635		0.99	0.09	3560

Note. Item 17 of the winter Grade 7 measure has a variance of zero indicating all participants answered the question correctly.

Table 16

Item Statistics of Students for Grade 8 easyCBM© Reading Fall Benchmark

| | 27th percentile and below | | | 73rd percentile and above | | |
	M	*SD*	*N*	*M*	*SD*	*N*
Item 1	0.80	0.40	2491	1.00	0.07	3058
Item 2	0.86	0.35	2491	1.00	0.06	3058
Item 3	0.83	0.37	2491	0.98	0.13	3058
Item 4	0.67	0.47	2491	0.98	0.13	3058
Item 5	0.82	0.38	2491	1.00	0.04	3058
Item 6	0.75	0.43	2491	0.99	0.10	3058
Item 7	0.67	0.47	2491	0.89	0.31	3058
Item 8	0.55	0.50	2491	0.94	0.24	3058
Item 9	0.73	0.45	2491	0.98	0.15	3058
Item 10	0.25	0.43	2491	0.72	0.45	3058
Item 11	0.30	0.46	2491	0.82	0.39	3058
Item 12	0.50	0.50	2491	0.97	0.17	3058
Item 13	0.46	0.50	2491	0.95	0.21	3058
Item 14	0.44	0.50	2491	0.93	0.26	3058
Item 15	0.50	0.50	2491	0.85	0.36	3058
Item 16	0.71	0.45	2491	0.98	0.15	3058
Item 17	0.76	0.42	2491	1.00	0.04	3058
Item 18	0.72	0.45	2491	1.00	0.07	3058
Item 19	0.74	0.44	2491	1.00	0.06	3058
Item 20	0.66	0.47	2491	0.99	0.12	3058
Item 21	0.74	0.44	2491	0.99	0.07	3058
Item 22	0.73	0.45	2491	0.99	0.09	3058
Item 23	0.59	0.49	2491	0.98	0.14	3058
Item 24	0.69	0.46	2491	0.99	0.09	3058
Item 25	0.37	0.48	2491	0.88	0.33	3058

Table 17

Item Statistics of Students for Grade 8 easyCBM© Reading Winter Benchmark

| | 27th percentile and below | | | | 73rd percentile and above | | |
	M	*SD*	*N*		*M*	*SD*	*N*
Item 1	0.77	0.42	2264		1.00	0.06	3614
Item 2	0.87	0.34	2264		1.00	0.04	3614
Item 3	0.66	0.47	2264		0.91	0.29	3614
Item 4	0.84	0.37	2264		1.00	0.05	3614
Item 5	0.81	0.39	2264		0.99	0.12	3614
Item 6	0.71	0.46	2264		0.99	0.11	3614
Item 7	0.52	0.50	2264		0.92	0.27	3614
Item 8	0.49	0.50	2264		0.96	0.18	3614
Item 9	0.50	0.50	2264		0.97	0.18	3614
Item 10	0.63	0.48	2264		0.99	0.10	3614
Item 11	0.81	0.39	2264		1.00	0.06	3614
Item 12	0.40	0.49	2264		0.93	0.25	3614
Item 13	0.63	0.48	2264		0.98	0.12	3614
Item 14	0.51	0.50	2264		0.98	0.12	3614
Item 15	0.34	0.48	2264		0.57	0.50	3614
Item 16	0.31	0.46	2264		0.98	0.14	3614
Item 17	0.45	0.50	2264		0.99	0.09	3614
Item 18	0.30	0.46	2264		0.89	0.31	3614
Item 19	0.38	0.48	2264		0.85	0.35	3614
Item 20	0.33	0.47	2264		0.97	0.18	3614
Item 21	0.82	0.39	2264		0.99	0.08	3614
Item 22	0.79	0.41	2264		1.00	0.04	3614
Item 23	0.67	0.47	2264		0.97	0.16	3614
Item 24	0.75	0.43	2264		1.00	0.05	3614
Item 25	0.63	0.48	2264		0.97	0.17	3614

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