

**Report to
INTERIM EDUCATION COMMITTEE
By Greg Gallagher, Assessment Director
Department of Public Instruction
May 19, 2016**

Mr. Chairman and Members of the Interim Education Committee:

I am Greg Gallagher, Assessment Director, within the Department of Public Instruction. Pursuant to NDCC 15.1-21-10, I submit the following report regarding the administration of the 2014-15 North Dakota State Assessment (NDSA). This report provides an overview of the testing procedures employed, the summative data generated, and the technical documentation provided to confirm the validity and reliability of the 2014-15 NDSA. This report also presents a variety of statewide academic achievement data that provide insight on the current performance of our students.

I. Administration of North Dakota State Assessment Program

During 2014-15, the North Dakota Department of Public Instruction (NDDPI) administered a collection of 34 separate assessments, which comprise the North Dakota State Assessment system, including 17 general assessments (the NDSA), 17 assessments for students with significant cognitive disabilities (the North Dakota Alternate Assessment based on alternate achievement standards, or NDAA). The NDSA and NDAA are each comprised of English language arts/literacy and mathematics in grades 3-8 and 11 and science in grades 4, 8, and 11. Each of these grade- and subject-specific assessments must meet certain rigorous specifications in design and administration in order to be considered valid and reliable assessments of their subject matter. The U.S. Department of Education (USED), through its established peer review process, independently reviews the technical specifications of the NDSA and NDAA system to verify all claims for validity and reliability. The state's assessment system historically operates in full compliance with the operational rules and guidance of the ED peer review process. The USED is currently conducting an extensive, scheduled peer review of the state's newest generation of assessments.

The NDSA in English language arts/literacy and mathematics is administered under the terms of a Memorandum of Understanding with the Smarter Balanced Assessment Consortium, regarding the use of the Consortium's assessment products and services, and under the terms of a contract with Measured Progress, the state's

contractor, managing the operational deployment of the English language arts and mathematics state assessments. The NDSA in science is administered under the terms of a contract with DRC, the state's contractor, managing the operational deployment of the science assessments. The NDAA in English language arts/literacy and mathematics is administered under the terms of a Memorandum of Understanding with the Dynamic Learning Maps Consortium. The NDAA science assessments are administered in part under a separate grant with the assistance of North Dakota State University.

In addition to direct technical assistance and program management supports provided by the state's assessment contractors, the NDDPI is supported by nationally recognized technical advisors to ensure that the NDSA system meets defined industry standards and psychometric parameters.

The 2014-15 technical report for the NDSA, prepared by Smarter Balanced and scheduled for release later this month, provides extensive documentation regarding the design and performance of all components within the state's general assessment system. The Smarter Balanced 2013-14 technical report provides extensive documentation and supporting evidence regarding the overall performance of the Smarter Balanced designed assessments, ensuring foundational validity and reliability. The technical report provides detailed support regarding, among many matters, the development of tests and test items, administrative practices, accommodation policies, and the manner in which state educators participated in setting the academic achievement standards that set definitions for proficiency for every subject and grade level. You can access this technical manual at the following web address: [\(http://www.smarterbalanced.org/assessments/development/\)](http://www.smarterbalanced.org/assessments/development/).

The 2014-15 technical report for the NDAA is currently being compiled by the Dynamic Learning Maps Consortium.

Approximately 55,000 students participated in the administration of the state's various academic achievement assessments during 2014-15. Approximately 620 students participated in the NDAA during 2014-15, based on each student's individualized education program. The administration of each of the assessments is standardized according to established rules to ensure systemic reliability.

II. Student Academic Achievement Results, 2014-15

The state's education system uses a variety of measures to assess overall student academic achievement. These measures include graduation rates, general

proficiency rates and specific standards-level performance on the North Dakota State Assessments (including the NDSA, and NDAA), junior and senior college readiness on the ACT and SAT, state-level performance on the National Assessment of Educational Progress (NAEP), various reading and language proficiency assessments, and district-defined interim and formative assessments. School personnel have various student achievement data upon which to assess individual student achievement and growth patterns and overall curricular and school improvement efforts. These data are essential in supporting the work of teachers and administrators statewide in advancing various education improvement activities.

Among these various metrics, the North Dakota State Assessments (NDSA and NDAA) represent the primary measures for assessing overall student achievement in terms of the state's challenging content and achievement standards, as specified within state and federal law. It is the state's expressed instructional goal that all students progress steadily to achieve a proficient or advanced standing on the North Dakota State Assessments. The results from the 2014-15 NDSA are used to

- Inform students, parents, and educators of each student's performance in terms of the NDSA's standards-based construct,
- Report to educators and the public overall composite student performance and disaggregated student performance by ethnicity, by grade, and by service status (i.e., economic disability status, limited English proficiency, and students with special needs), and
- Provide to educators student achievement data to guide curricular and instructional decisions.

The 2014-15 NDSA results mark a baseline, recalibration year for the state's new general assessment program based on the Smarter Balanced Assessment System. The 2014-15 NDSA and NDAA are both aligned to the state's academic content standards based on the Common Core State Standards. These standards represent a more rigorous coverage of academic content required for successfully engaging in college and career immediately following high school graduation. The 2014-15 NDSA underwent an extensively reviewed standard setting process, resulting in new achievement cut scores that represent a more rigorous definition of proficiency. The state's new baseline marks a significant departure from previous years' results. These proficiency definitions in each of the tested grades, 3-8 and 11, provide a steady trajectory, guiding students toward readiness for successful entry into either college or career.

Appendix A presents the academic achievement standards that define the state’s four achievement levels (i.e., Level 1: Novice; Level 2: Partially Proficient; Level 3: Proficient; and Level 4: Advanced). The *Level 3: Proficient* line designates at which point students are considered grade-level appropriate, whose path forward marks a strong indicator for reaching college and career readiness at high school graduation.

During the 2014-15 NDSA test administration, some students who participated in the online NDSA experienced certain computer technical disruptions that affected their ability to take the NDSA in an optimal manner. These disruptions, which varied for certain students, may have included an inability to logon to the online platform, a sporadic slow-down in computer performance, a limited number of test items that rendered inconsistently on the computer, or a student’s inability to complete components of the test.

Students who participated in the 2014-15 NDSA evidenced various types of participation and levels of completion. The table below presents overall statewide, public school student participation in the 2014-15 NDSA and NDAA. **Appendix B** provides a summary of student achievement results across the various levels of participation.

**Public School Student Participation
2014-15 NDSA and NDAA
By Test Form**

Subject	NDSA Online (Complete)	NDSA Paper (Complete)	NDAA (Complete)	Partial (CAT only)*	Incomplete	Total
ELA	43,746 (79.6%)	2859 (5.2%)	621 (1.1%)	5889 (10.7%)	1868 (3.4%)	54,983 (100%)
Math	43,901 (79.8%)	2548 (4.6%)	621 (1.1%)	5824 (10.6%)	2152 (3.9%)	55,046 (100%)

*For schools that elected to administer only the Computer Adaptive Test (CAT) component of the NDSA.

Combining those students who completed either their NDSA (online- or paper-form) or NDAA, approximately 86% of public school students completed their state assessment, producing results that constitute a complete, reportable score. An initial analysis of these results indicates that these results provide a valid measure of student achievement against the state’s achievement standards.

Approximately 10.7% of public school students completed partial NDSA tests. These partial-test students resided in districts or schools who elected to participate in only the computer adaptive component of the online NDSA, employing an option

provided to schools by the North Dakota Department of Public Instruction, immediately following a service disruption in early April 2015. These partial-test students did not participate in the performance task component of the NDSA, which when combined with the computer adaptive component, produces a complete, reportable score. Scoring results gathered from partial tests only generated scale scores and achievement level designations that approximate, but do not equal a complete, reportable score. Partial-test scores, since they are approximated scores, are not considered complete and are not referenced in aggregated reporting.

Approximately 3.7% of public school students did not complete the NDSA online- or paper-form tests. The reasons certain students did not complete the NDSA may include absence, inability to address the test to completion, or the effect of test disruptions. An incomplete test means that no score was able to be reported because the student did not complete a sufficient number of test items to develop an approximate score or the student met the criteria for score invalidation. Incomplete NDSA testing does not produce valid, reportable results or approximated results.

Because test disruptions during the 2014-15 NDSA test administration were documented and uncertainty exists regarding the effect of these disruptions on the performance of individual students or on the wider testing environment within certain testing locales, the North Dakota Department of Public Instruction commissioned a study, supported by the Smarter Balanced Assessment Consortium, to analyze these specific and broadly defined concerns. This validity study is being conducted by the Center for Assessment, in Dover, New Hampshire. The North Dakota Department of Public Instruction will release the results of this study following its completion.

The ability to dependably compare test scores is what allows teachers and parents to make inferences about what students know and can do within a content area. Typically standardized content and administration procedures are central to score comparability. During the achievement level standard setting process that defined the cut scores for the Smarter Balanced Assessments, conducted among participating states within the Smarter Balanced Assessment Consortium, participants, including North Dakota educators, considered the purpose and effect of the National Assessment for Education Progress (NAEP). Participants objectively and independently set cut scores for the Smarter Balanced achievement levels, guided in part by the longitudinal data provided by NAEP. The Smarter Balanced achievement standards setting established proficiency cut scores that more closely aligned to the NAEP cut scores than

previous NDSA tests. Effectively, the NDSA and the NAEP are now more closely align to comparable academic expectations. The NAEP now provides another measure to help calibrate the rigor of the NDSA.

Appendix C presents how the 2014-15 NDSA proficiency/advanced scores now more closely resemble the proficiency/advanced scores of the NAEP, compared to the state's previous proficiency cut score definitions.

Appendix D presents a scatterplot illustrating the distribution of public schools statewide according to each school's composite English language arts/literacy and mathematics proficiency/advanced achievement rates.

Appendix E presents a summary of the 2014-15 NDSA science student achievement results, by grade and subgroup.

III. NDSA Performance, 2015-16

Following the performance of the 2014-15 NDSA and in advance of the deployment of the 2015-16 NDSA test administration, the NDDPI and Measured Progress initiated various program remediation efforts, supported with the technical assistance of Smarter Balanced, to ensure a seamless, stable test administration platform. Currently, schools statewide have largely completed the 2015-16 NDSA test administration, evidencing no reported test disruptions or aberrant operations, producing complete test administration cycles at all schools, generating test results within the contracted timeframe, and receiving generally high levels of satisfactions from test administrators and students. Initial anecdotal comments indicate that students have demonstrated notable levels of constructive engagement with the assessments at all grade levels.

Mr. Chairman, this completes my presentation regarding the current status of the NDSA and NDAA assessment programs.

Appendix A

Achievement Levels

Based on their tabulated scale scores, students fall into one of four categories of performance called *achievement levels*. The tables below show the threshold scores (the minimum Scale Scores that determine which Achievement Level students fall into) for Math and English Language Arts/Literacy:

Grade	Mathematics			
	Level 4	Level 3	Level 2	Level 1
3	2501–2621	2436–2500	2381–2435	2189–2380
4	2549–2659	2485–2548	2411–2484	2204–2410
5	2579–2700	2528–2578	2455–2527	2219–2454
6	2610–2748	2552–2609	2473–2551	2235–2472
7	2635–2778	2567–2634	2484–2566	2250–2483
8	2653–2802	2586–2652	2504–2585	2265–2503
11	2718–2862	2628–2717	2543–2627	2280–2542

Grade	English Language Arts/Literacy			
	Level 4	Level 3	Level 2	Level 1
3	2490–2623	2432–2489	2367–2431	2114–2366
4	2533–2663	2473–2532	2416–2472	2131–2415
5	2582–2701	2502–2581	2442–2501	2201–2441
6	2618–2724	2531–2617	2457–2530	2210–2456
7	2649–2745	2552–2648	2479–2551	2258–2478
8	2668–2769	2567–2667	2487–2566	2288–2486
11	2682–2795	2583–2681	2493–2582	2299–2492

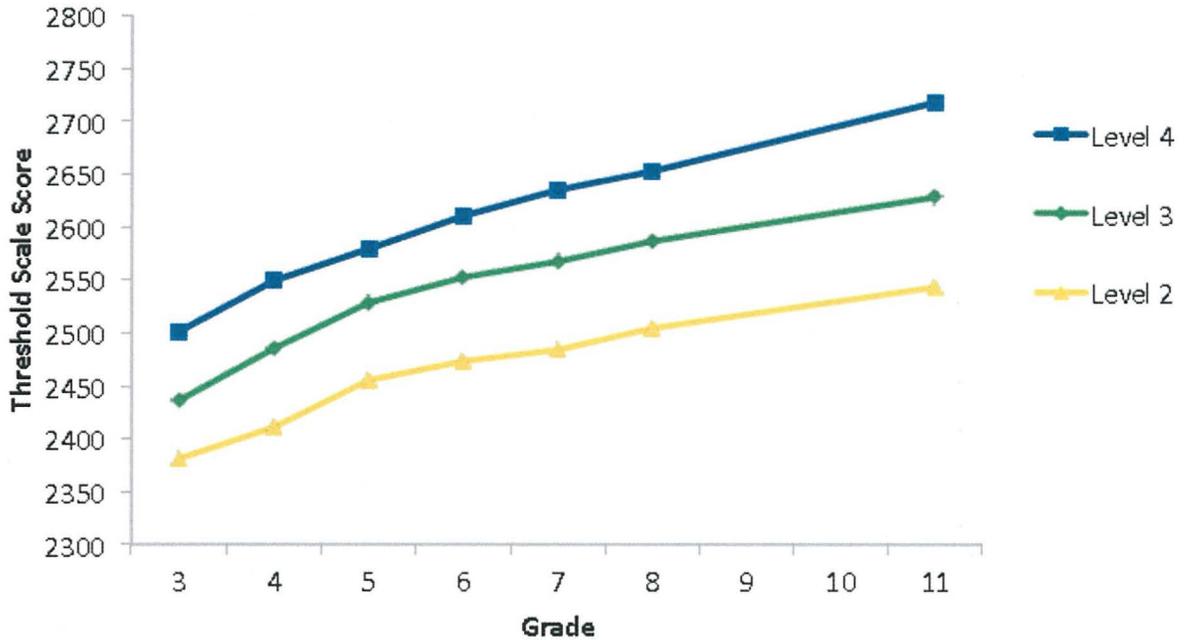
Achievement Level Categories

These categories are defined by Achievement Level Descriptors, the specifications for what knowledge and skills students display at each level

- Level 1: Novice;
- Level 2: Partially Proficient;
- Level 3: Proficient; and
- Level 4: Advanced

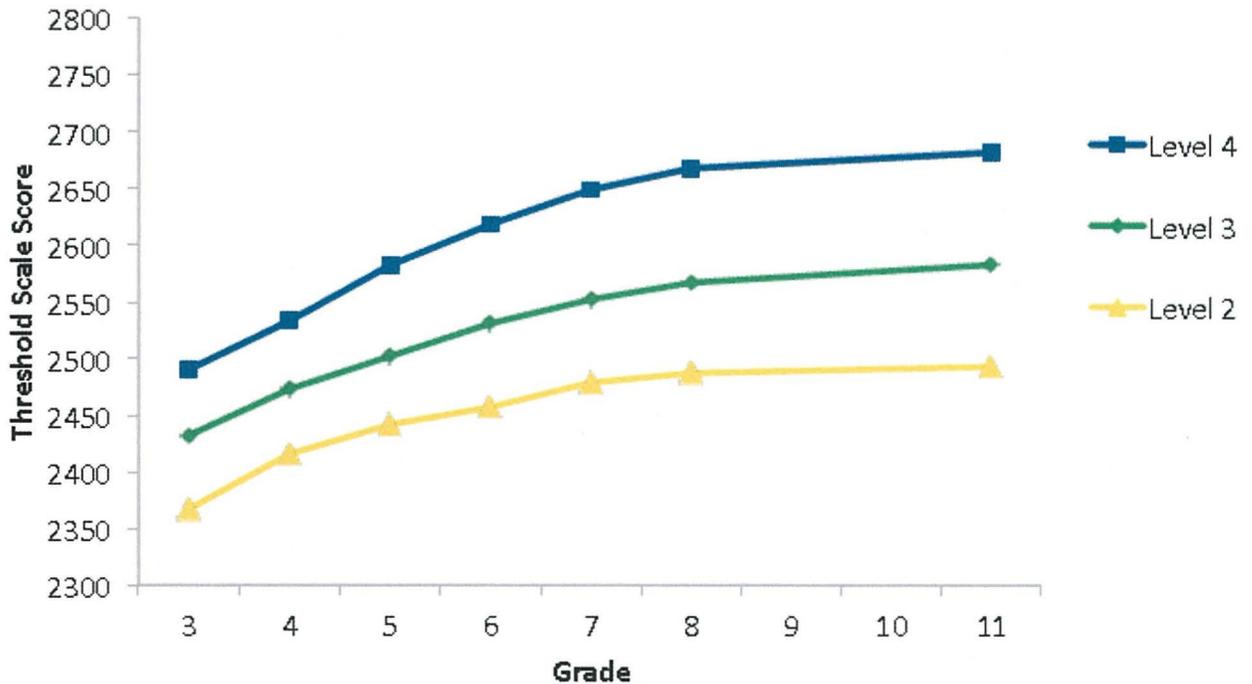
Students performing at Levels 3 and 4 are considered on track to demonstrating the knowledge and skills necessary for college and career readiness.

Mathematics: Threshold Scale Scores



Adopted November 14, 2014

English Language Arts/Literacy: Threshold Scale Scores



Adopted November 14, 2014

**Appendix B
Summary of NDSA and NDAA
Student Achievement Results, 2014-15**

North Dakota State Assessment
Spring 2015
ELA State Composite, by Subgroup

Category	Group	Proficiency											
		Paper Tests ⁵			Online Tests ⁶			NDAA ⁶			All Tests ⁷		
		Proficiency Denominator	Proficiency Numerator	Proficiency Rate									
District	All	2859	1527	53.41%	43746	19996	45.71%	621	365	58.78%	47226	21888	46.35%
District	Male	1476	722	48.92%	22360	8786	39.29%	395	234	59.24%	24231	9742	40.20%
District	Female	1383	805	58.21%	21386	11210	52.42%	226	131	57.96%	22995	12146	52.82%
District	White	2108	1272	60.34%	35556	17768	49.97%	462	276	59.74%	38126	19316	50.66%
District	Native American	571	177	31.00%	4055	839	20.69%	90	50	55.56%	4716	1066	22.60%
District	Black	59	29	49.15%	1864	558	29.94%	33	18	54.55%	1956	605	30.93%
District	Hispanic	79	27	34.18%	1442	427	29.61%	24	16	66.67%	1545	470	30.42%
District	Asian	42	22	52.38%	829	404	48.73%	12	5	41.67%	883	431	48.81%
District	LEP	77	20	25.97%	1543	184	11.92%	30	16	53.33%	1650	220	13.33%
District	Not LEP	2782	1507	54.17%	42203	19812	46.94%	591	349	59.05%	45576	21668	47.54%
District	Low Income	1229	495	40.28%	13760	3976	28.90%	341	206	60.41%	15330	4677	30.51%
District	Not Low Income	1630	1032	63.31%	29986	16020	53.42%	280	159	56.79%	31896	17211	53.96%
District	IEP	372	80	21.51%	4862	646	13.29%	621	365	58.78%	5855	1091	18.63%
District	Not IEP	2487	1447	58.18%	38884	19350	49.76%	0	0		41371	20797	50.27%
District	Migrant	7	1	14.29%	72	8	11.11%	1	1	100.00%	80	10	12.50%
District	Not Migrant	2852	1526	53.51%	43674	19988	45.77%	620	364	58.71%	47146	21878	46.40%

⁵Paper Tests: Summary statistics for students who took the paper-and-pencil NDSA, producing a reportable score. May not include certain LEP (newly arrived) students.

⁶Online/NDAA Tests: Summary statistics for students who took either the complete online NDSA or the online NDAA, producing a reportable score. May not include certain LEP (newly arrived) students.

⁷All Tests: Summary statistics for students who took either the complete NDSA or the NDAA, producing a reportable score.

North Dakota State Assessment
 Spring 2015
 ELA State Composite, by Subgroup

Category	Group	Approximate Proficiency of Partial-Invalid Test (CAT Only) ⁸		
		Proficiency Denominator	Proficiency Numerator	Proficiency Rate
District	All	5889	2509	42.60%
District	Male	3015	1137	37.71%
District	Female	2874	1372	47.74%
District	White	4773	2226	46.64%
District	Native American	531	82	15.44%
District	Black	263	81	30.80%
District	Hispanic	192	66	34.38%
District	Asian	130	54	41.54%
District	LEP	188	20	10.64%
District	Not LEP	5701	2489	43.66%
District	Low Income	1952	553	28.33%
District	Not Low Income	3937	1956	49.68%
District	IEP	675	97	14.37%
District	Not IEP	5214	2412	46.26%
District	Migrant	3	0	0.00%
District	Not Migrant	5886	2509	42.63%

⁸Approximate Proficiency of Partial – Invalid Test (CAT only):
 Summary statistics for students who took only the computer adaptive test (CAT) section of the NDSA and not separate performance task section of the NDSA. Approximated proficiency rates are calculated based on the CAT-only test section and are not generated through approved scoring procedures. Approximated rates, based on partial tests, are considered invalidated, yet may provide a relative measure of a student's overall performance. Approximated rates are not equivalent with valid scale scores or achievement levels.

North Dakota State Assessment
Spring 2015
Math State Composite, by Subgroup

Category	Group	Proficiency											
		Paper Tests ⁵			Online Tests ⁶			NDAA ⁶			All Tests ⁷		
		Proficiency Denominator	Proficiency Numerator	Proficiency Rate	Proficiency Denominator	Proficiency Numerator	Proficiency Rate	Proficiency Denominator	Proficiency Numerator	Proficiency Rate	Proficiency Denominator	Proficiency Numerator	Proficiency Rate
District	All	2548	1124	44.11%	43901	17569	40.02%	621	103	16.59%	47070	18796	39.93%
District	Male	1305	578	44.29%	22436	9113	40.62%	395	70	17.72%	24136	9761	40.44%
District	Female	1243	546	43.93%	21465	8456	39.39%	226	33	14.60%	22934	9035	39.40%
District	White	1852	941	50.81%	35536	15857	44.62%	462	76	16.45%	37850	16874	44.58%
District	Native American	541	137	25.32%	4086	595	14.56%	90	17	18.89%	4717	749	15.88%
District	Black	52	13	25.00%	1926	396	20.56%	33	3	9.09%	2011	412	20.49%
District	Hispanic	73	17	23.29%	1460	319	21.85%	24	5	20.83%	1557	341	21.90%
District	Asian	30	16	53.33%	893	402	45.02%	12	2	16.67%	935	420	44.92%
District	LEP	65	12	18.46%	1676	181	10.80%	30	6	20.00%	1771	199	11.24%
District	Not LEP	2483	1112	44.78%	42225	17388	41.18%	591	97	16.41%	45299	18597	41.05%
District	Low Income	1142	346	30.30%	13899	3186	22.92%	341	61	17.89%	15382	3593	23.36%
District	Not Low Income	1406	778	55.33%	30002	14383	47.94%	280	42	15.00%	31688	15203	47.98%
District	IEP	331	48	14.50%	4891	635	12.98%	621	103	16.59%	5843	786	13.45%
District	Not IEP	2217	1076	48.53%	39010	16934	43.41%	0	0		41227	18010	43.68%
District	Migrant	4	0	0.00%	77	10	12.99%	1	1	100.00%	82	11	13.41%
District	Not Migrant	2544	1124	44.18%	43824	17559	40.07%	620	102	16.45%	46988	18785	39.98%

⁵Paper Tests: Summary statistics for students who took the paper-and-pencil NDSA, producing a reportable score. May not include certain LEP (newly arrived) students.

⁶Online/NDAA Tests: Summary statistics for students who took either the complete online NDSA or the online NDAA, producing a reportable score.

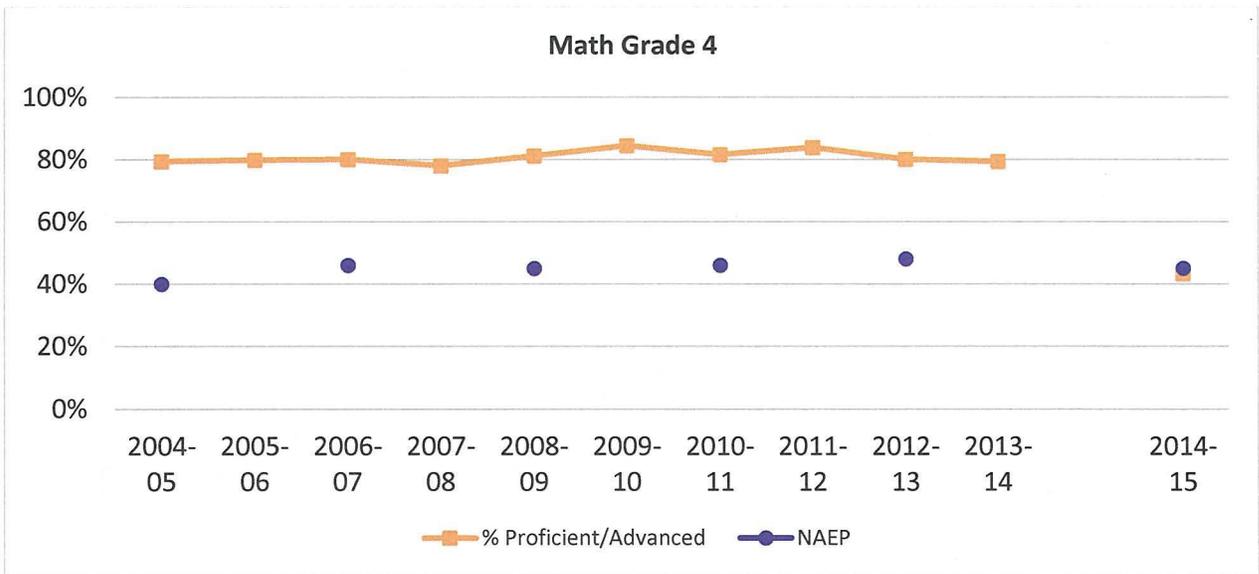
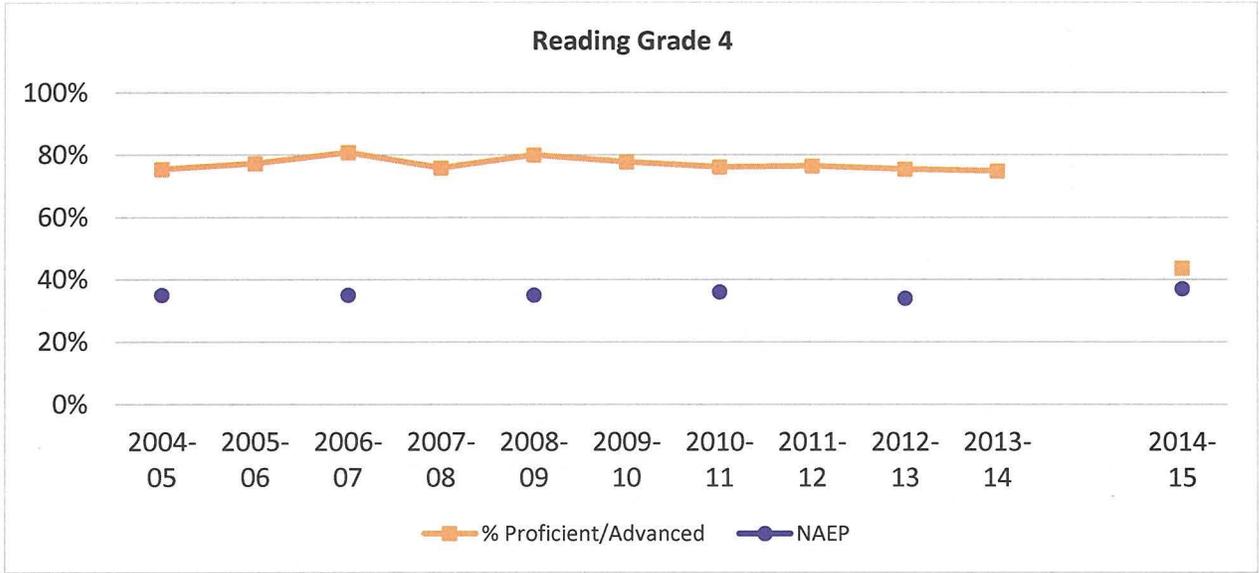
⁷All Tests: Summary statistics for students who took either the complete NDSA or the NDAA, producing a reportable score.

North Dakota State Assessment
 Spring 2015
 Math State Composite, by Subgroup

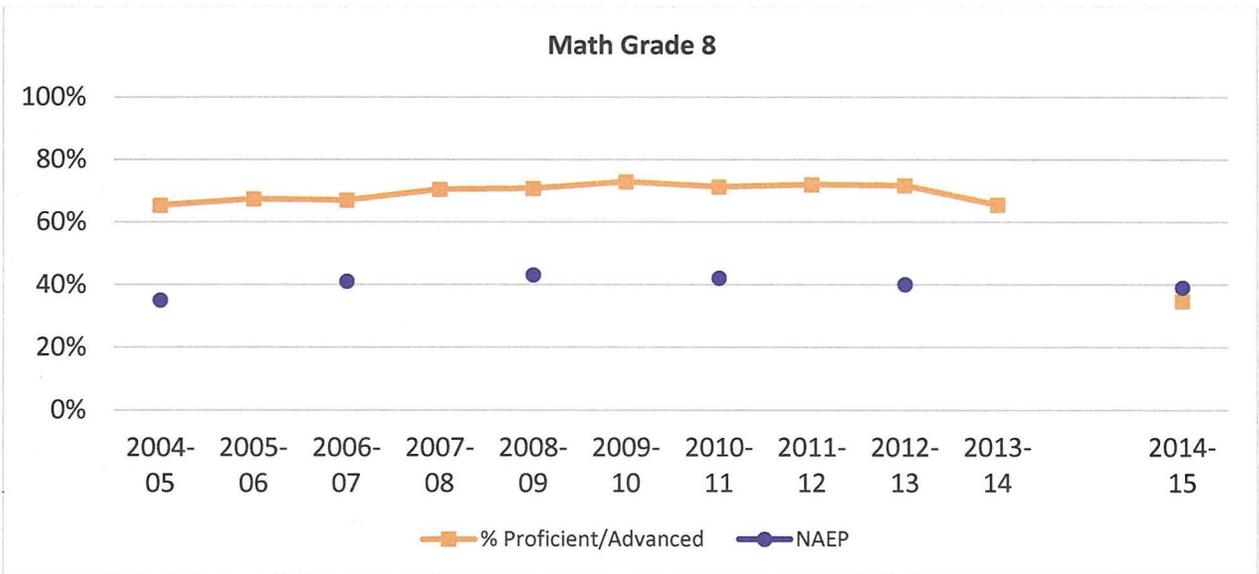
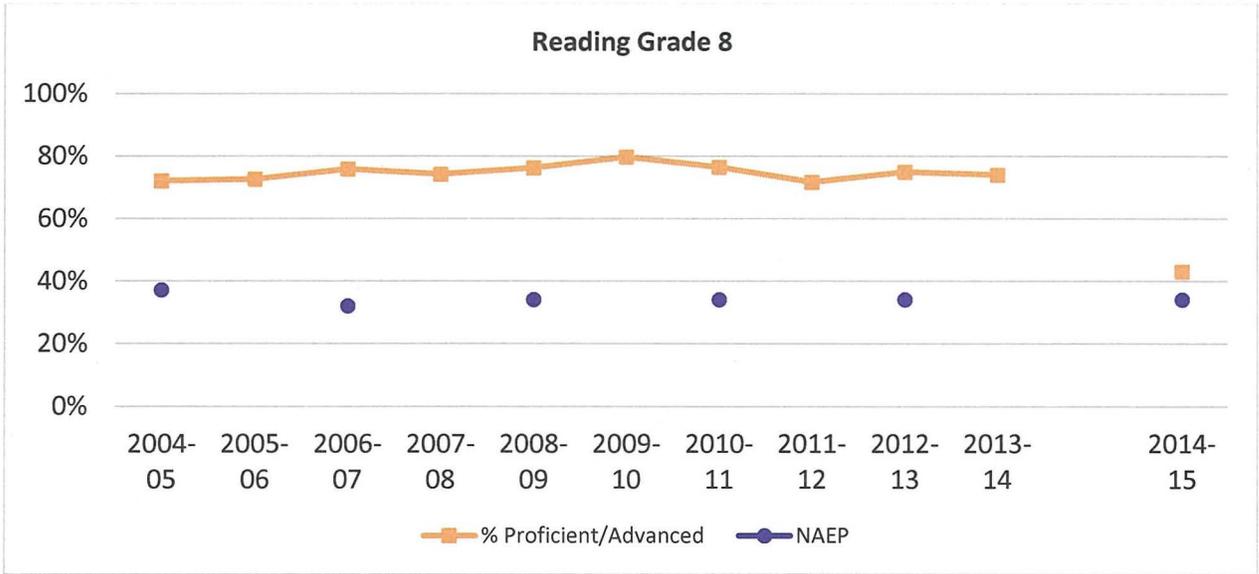
Category	Group	Approximate Proficiency of Partial-Invalid Test (CAT Only) ⁸		
		Proficiency Denominator	Proficiency Numerator	Proficiency Rate
District	All	5824	2185	37.52%
District	Male	2985	1178	39.46%
District	Female	2839	1007	35.47%
District	White	4781	1988	41.58%
District	Native American	487	60	12.32%
District	Black	249	59	23.69%
District	Hispanic	188	35	18.62%
District	Asian	119	43	36.13%
District	LEP	190	21	11.05%
District	Not LEP	5634	2164	38.41%
District	Low Income	1864	415	22.26%
District	Not Low Income	3960	1770	44.70%
District	IEP	660	73	11.06%
District	Not IEP	5164	2112	40.90%
District	Migrant	1	0	0.00%
District	Not Migrant	5823	2185	37.52%

⁸Approximate Proficiency of Partial – Invalid Test (CAT only): Summary statistics for students who took only the computer adaptive test (CAT) section of the NDSA and not separate performance task section of the NDSA. Approximated proficiency rates are calculated based on the CAT-only test section and are not generated through approved scoring procedures. Approximated rates, based on partial tests, are considered invalidated, yet may provide a relative measure of a student's overall performance. Approximated rates are not equivalent with valid scale scores or achievement levels.

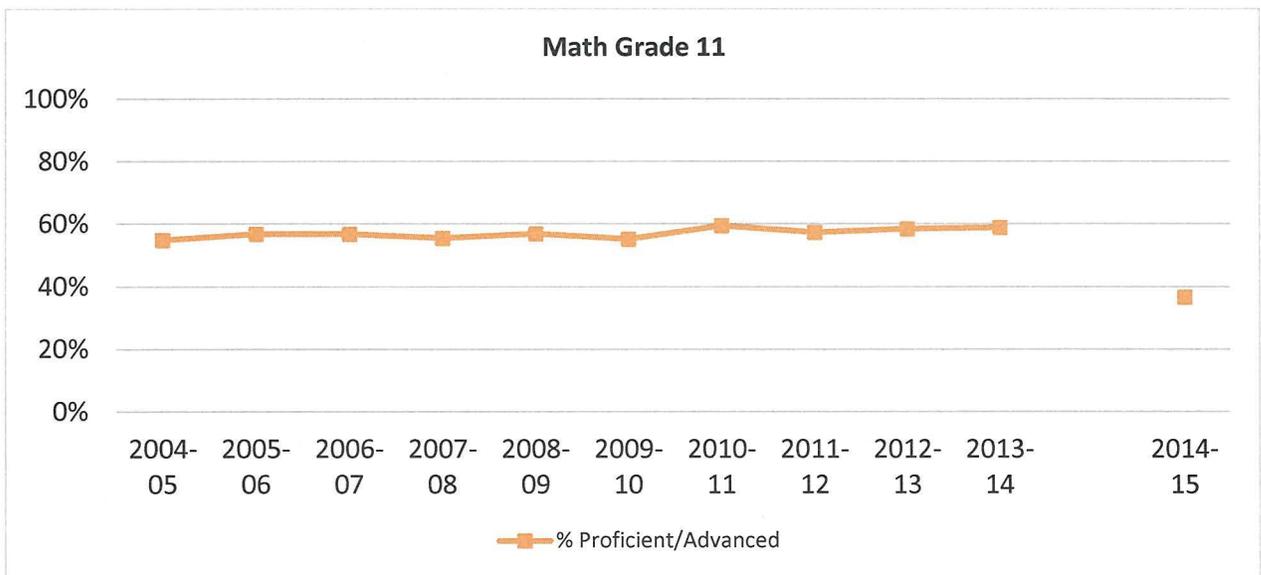
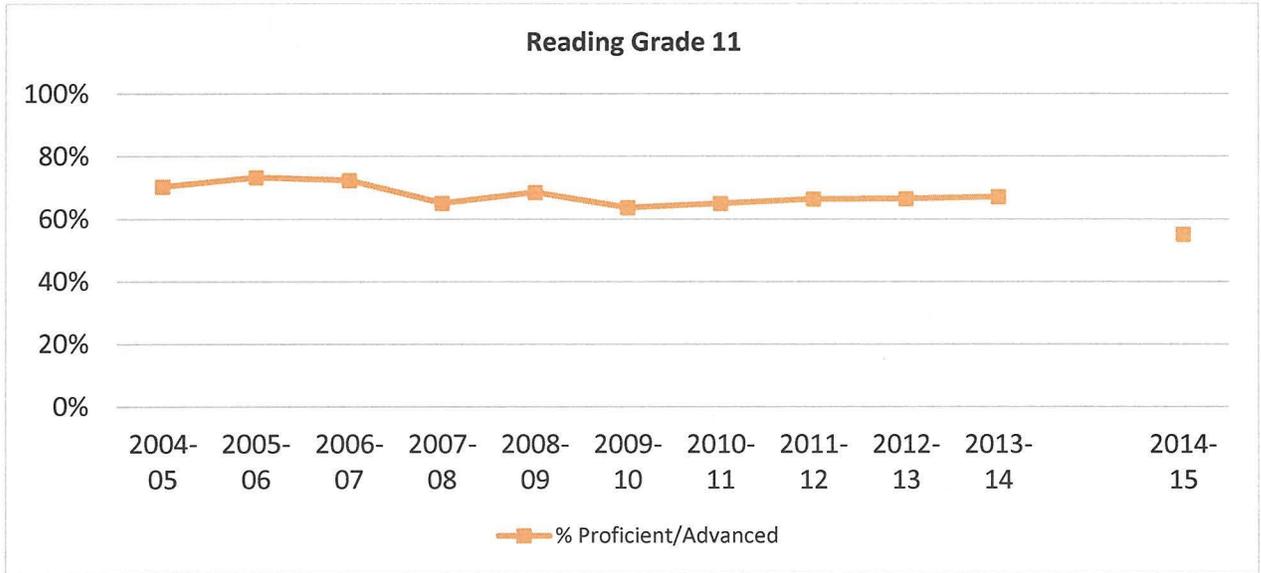
Appendix C
State-Level Student Proficiency Rates in Reading and Mathematics,
NDSA and NAEP Achievement Rates
Grade 4



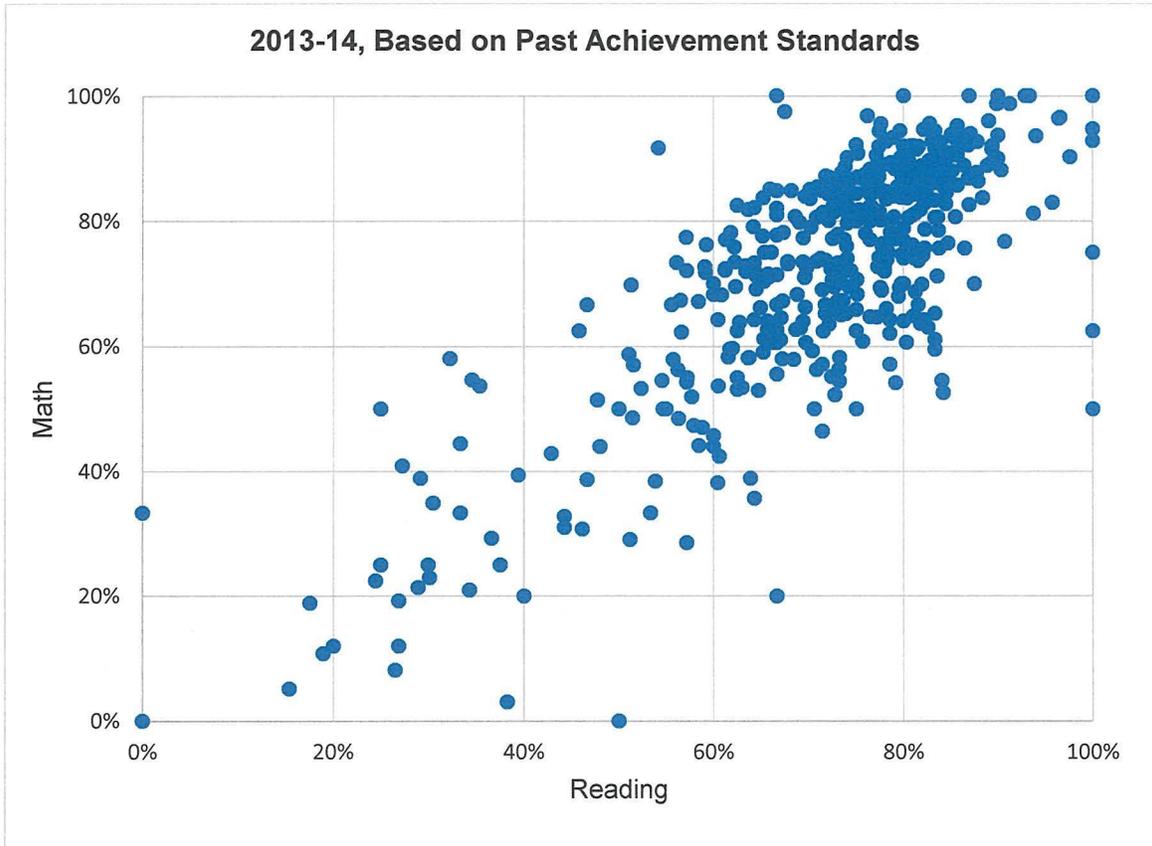
Appendix C
State-Level Student Proficiency Rates in Reading and Mathematics,
NDSA and NAEP Achievement Rates
Grade 8



**Appendix C
State-Level Student Proficiency Rates in Reading and Mathematics,
NDSA Achievement Rates
Grade 11**

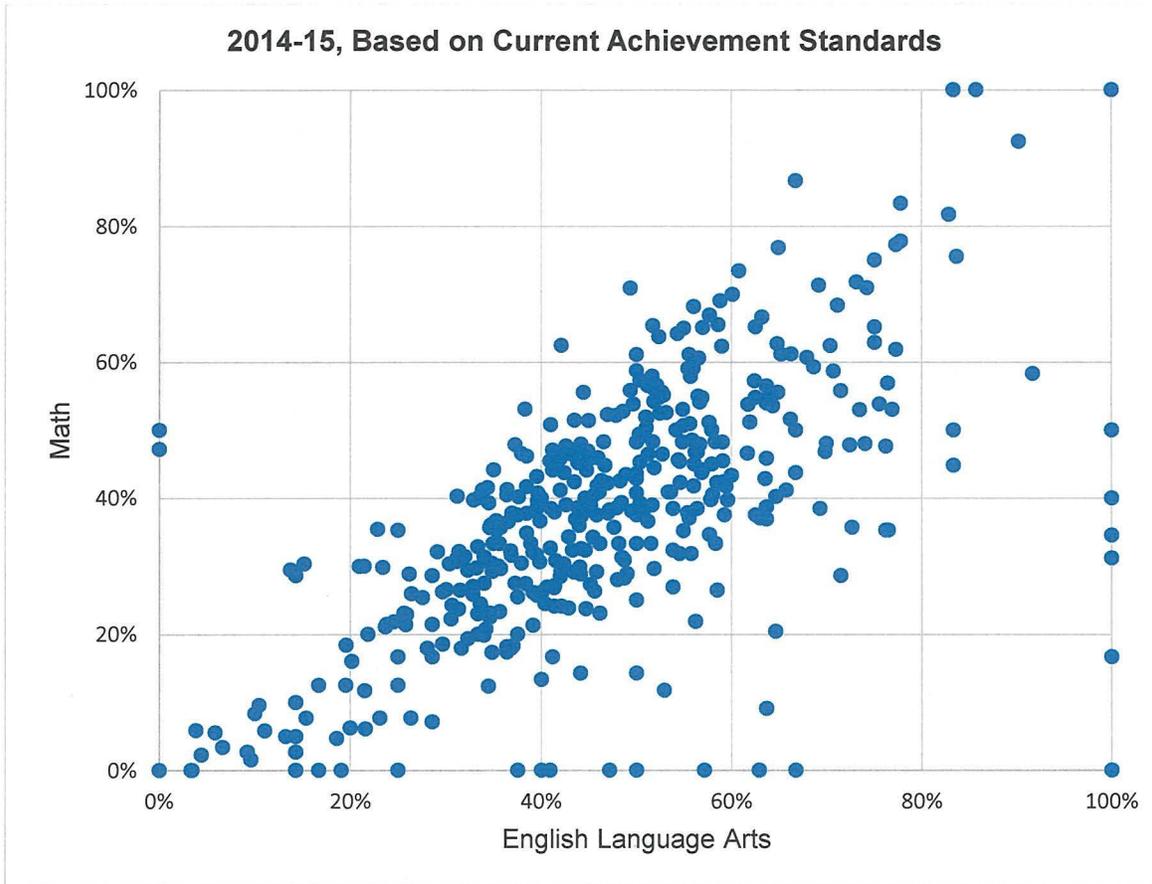


Appendix D.1
Distribution of Composite Reading and Mathematics
Proficiency Rates by School, 2013-14



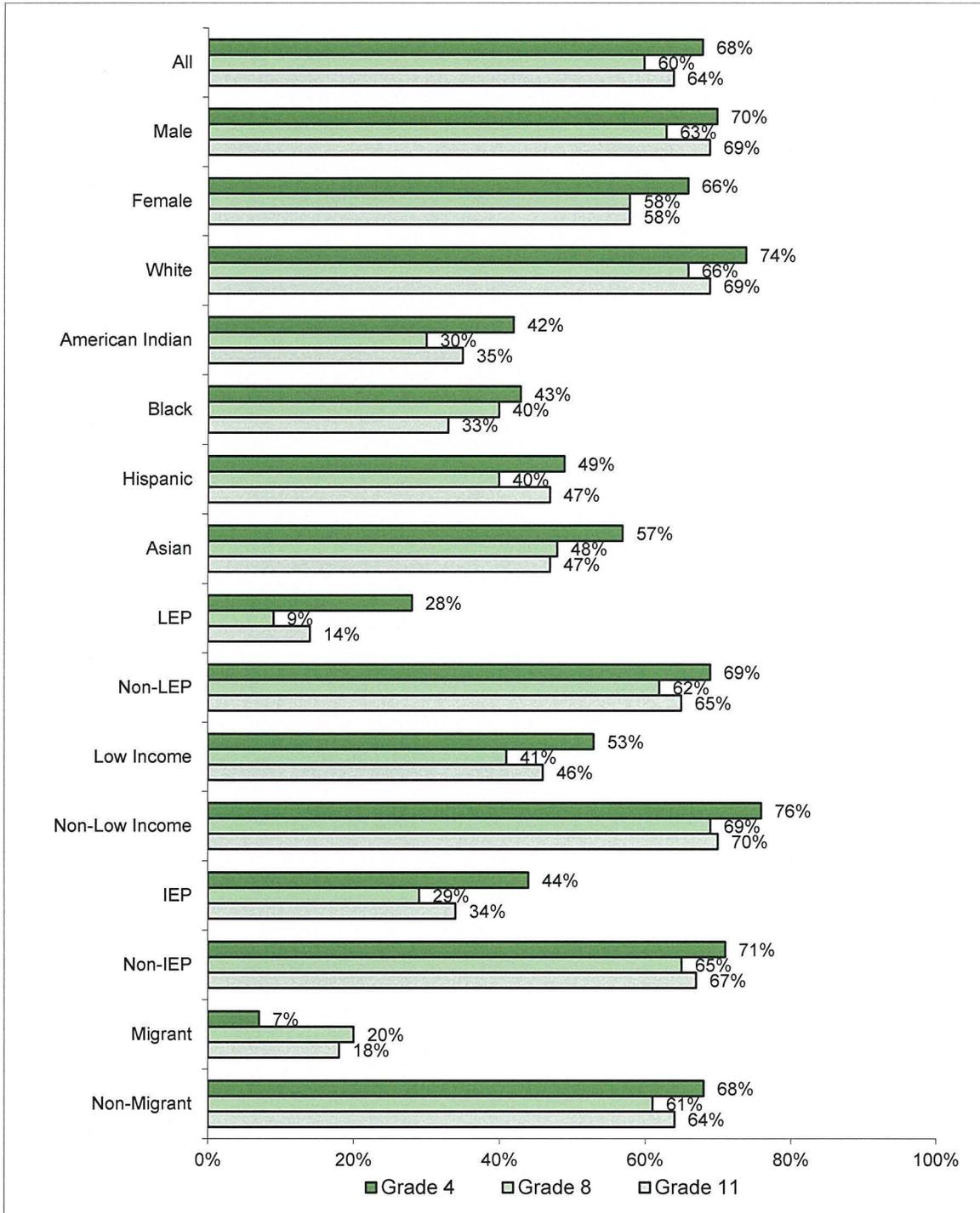
This chart presents the distribution of schools statewide by composite reading and mathematics proficiency rates, where each point represents a school and displays that school's overall reading and mathematics proficiency rate. This illustrates the wide spread of school achievement among our individual school plants, based on 2013-14 North Dakota achievement results.

Appendix D.2
Distribution of Composite English Language Arts and Mathematics
Proficiency Rates by School, 2014-15



This chart presents the distribution of schools statewide by composite reading and mathematics proficiency rates, where each point represents a school and displays that school's overall reading and mathematics proficiency rate. This illustrates the wide spread of school achievement among our individual school plants, based on 2014-15 North Dakota achievement results.

**Appendix E
North Dakota State Assessment Results, Science, 2014-15
By Grade and Subgroup
Percent Proficient/Advanced**



Grade 4, n=7,939

Grade 8, n=7,486

Grade 11, n=7,149