

MAP Scores Report 2015-16

Key Findings

- 1. The percent of students that tested advanced or proficient on the math portion increased 1% (45% to 46%) and increased 2% on the reading portion (40% to 42%) of the spring MAP test.
- 2. Proficiency gaps exist between demographic groups on MAP reading and math scores. These gaps are similar to disparities on other standardized tests.
- 3. All demographic groups saw the same or an increase in the percent of students achieving proficiency in reading and math from fall to spring during both the 2014-15 and 2015-16 school years.
- 4. Students in each demographic group met their growth goal at more similar rates than the percent achieving proficiency. All demographic groups saw the same or an increase in the percent of students meeting reading growth goals. This is encouraging because students who have a lower score must grow more over the year to meet their goal.

The Madison Metropolitan School District (MMSD) has administered the Measures of Academic Progress (MAP) test in grades 3-8 for the past five school years: 2011-12 through 2015-16. This report focuses on progress made on the percent of students testing at least proficient in math and reading for each of the fall and spring administrations of the test during the 2014-15 and 2015-16 school years and the fall to spring growth of students during each of these school years.

Overall District Performance

The percent of students that tested advanced or proficient on the 2015-16 spring MAP test increased 2% for the reading portion and increased 1% for the math portion. The percent of students meeting their fall to spring growth target increased 1% on the reading portion and decreased 1% on the math portion.

	Percent Meeting Proficiency								Percent Meeting Growth				
	Fall 2014-15	Spring 2014-15	Fall 2015-16	Spring 2015-16	Change Spring-Spring	4 Year Trend	2014-15	2015-16	Change	4 Year Trend			
Reading	39%	40%	40%	42%	2%	6%	56%	57%	1%	4%			
Math	41%	45%	41%	46%	1%	4%	63%	62%	-1%	2%			

^{**} The data in this table describes all students who took the MAP test during the 2014-15 and 2015-16 school years. The gains greater than 0.5% are colored green and decreases greater than -0.5% are colored red

Data Notes

The data in this report comes from the fall and spring testing windows for the 2014-15 and 2015-16 school years. In the majority of this report, we include all student data for scores and growth, regardless of whether students have taken the MAP exam in both the fall and spring and whether or not it was at the same school. This may differ from other reports, such as the Annual Report, which uses students with both a fall and spring score. When reflecting on this report, it is important to keep in mind that it includes all students and all scores, which may produce slightly different numbers.



Proficiency and Growth Breakdown

Proficiency and Growth by Demographics

All demographic groups stayed the same or increased in the percent of students achieving proficiency in both math and reading between the spring of the 2014-15 and the 2015-16 school years. Proficiency gaps between demographic groups persist in both math and reading proficiency. These gaps are similar to those found on other standardized tests and measures of student performance. Students identifying as white continued to have the highest percentage of students achieving proficiency in math and reading, while African American students had the lowest for both math and reading. The gap between African American and white students in proficiency rates remained the same in reading between the 2014-15 and 2015-16 school year, while the gap in math proficiency rates decreased by I percentage point.

All demographic groups had relatively similar percentages of students achieving their growth targets in the 2015-16 school year for both math and reading. Students identifying as Asian had the highest percentage of students meeting their growth goals in reading and math, while African American students had the lowest percentage of students meeting their growth goals. Each demographic group had the same or an increased percent of students meeting their reading growth targets between the 2014-15 and 2015-16 school year, with the exception of Native American students. However, only African American and Native American students had an increased percent of students meeting their math growth target rates between the 2014-15 and 2015-16 school years. Hispanic, multiracial, and white students all showed a decrease in the percent of students meeting their target growth rates. There were low numbers of Native American students that took the MAP exam, which increased the variability of growth target rates in both reading and math.

Proficiency and Growth by Grade Level

The percent of students achieving proficiency in reading at each grade level remained the same or increased, while the percent of students achieving proficiency in math decreased for fourth and fifth graders. The largest difference between consecutive grades in the percent of students testing proficient in reading and math was between the seventh and eighth grade, with increases of 5% in reading and 6% in math. Four of the six grades tested showed increases in the percentage of students meeting their reading growth targets between the 2014-15 and 2015-16 school years, with students between seventh and eighth grade and students between eighth and seventh grade the largest increase, at 6%. Four of the six grades also showed an increase in the percentage of students meeting their math growth targets, with students between third and fourth grade showing the largest increase.



Reading Proficiency and Growth Target Attainment

		Р	ercent Pro	oficient	Percent Meeting Growth			
	Fall	Spring	Fall	Spring	Change Spring-			
	2014-15	2014-15	2015-16	2015-16	Spring	2014-15	2015-16	Change
Race and Ethnicity								
African American	10%	12%	12%	14%	2%	49%	53%	4%
Hispanic/Latino	17%	19%	19%	20%	1%	58%	58%	0%
Native American		27%	23%	30%	3%	63%	42%	-19%
Multiracial	34%	37%	37%	39%	2%	56%	58%	2%
Asian	40%	42%	40%	43%	1%	55%	61%	6%
White	62%	63%	62%	65%	2%	58%	58%	0%
Gender								
Male	35%	36%	36%	39%	3%	56%	58%	2%
Female	43%	44%	44%	45%	1%	56%	57%	1%
Low-Income								
Low-Income	15%	16%	16%	17%	1%	54%	57%	3%
Not Low-Income	63%	64%	64%	67%	3%	58%	58%	0%
English-language-learn	ers							
ELL	19%	21%	21%	23%	2%	59%	60%	1%
Non-ELL	46%	47%	47%	49%	2%	56%	56%	0%
Special Education								
Special Educ.	11%	12%	11%	14%	2%	55%	56%	1%
Not Special Educ.	43%	44%	44%	46%	2%	57%	57%	0%
Advanced Learners								
Non-Adv. Learners	27%	28%	27%	30%	2%	55%	57%	2%
Advanced Learners	74%	76%	74%	76%	0%	60%	58%	-2%
Grade								
Third Grade	34%	37%	37%	41%	4%	56%	57%	1%
Fourth Grade	36%	42%	35%	42%	0%	58%	57%	-1%
Fifth Grade	43%	44%	40%	44%	0%	60%	59%	-1%
Sixth Grade	38%	40%	41%	43%	3%	58%	60%	2%
Seventh Grade	41%	36%	43%	41%	5%	52%	58%	6%
Eighth Grade	41%	39%	39%	39%	0%	50%	56%	6%

^{**} The data in this table describes all students that took the MAP Reading portion during the 2014-15 and 2015-16 school years

The table is organized from low to high on the Spring 2015-16 column, except for the Grade section

The gains greater than 0.5% are colored green and decreases greater than -0.5% are colored red

^{*}The fall proficiency rate in 2014-15 for Native American students was dropped from this report because fewer than 8 students had a recorded score.



Reading Proficiency and Growth Attainment by School

			Percent Proficient			Change	Percent Meeting Growth			
		Fall 2014- 15	Spring 2014-15	Fall 2015- 16	Spring 2015-16	Change Spring- Spring	2014- 2015	2015- 2016	Change	
Middle School	ls									
East	Black Hawk	25%	23%	24%	24%	1%	55%	63%	7%	
	Sherman	23%	23%	27%	26%	3%	60%	53%	-7%	
	O'Keeffe	54%	51%	52%	52%	1%	49%	52%	3%	
La Follette	Badger Rock	24%	21%	28%	26%	5%	69%	43%	-26%	
	Sennett	29%	29%	30%	31%	2%	54%	61%	7%	
	Whitehorse	32%	30%	32%	32%	2%	54%	55%	1%	
Memorial	Jefferson	42%	42%	42%	40%	-2%	49%	50%	1%	
	Spring Harbor	43%	43%	42%	40%	-3%	53%	52%	-1%	
	Toki	34%	30%	39%	41%	11%	42%	56%	14%	
West	Wright	18%	19%	22%	22%	3%	59%	68%	7%	
	Cherokee	35%	35%	36%	35%	0%	59%	54%	-5%	
	Hamilton	71%	68%	71%	72%	4%	56%	55%	-1%	
Elementary Sc	-hools									
East	Lake View	19%	20%	22%	19%	-1%	56%	61%	5%	
	Sandburg	21%	27%	27%	25%	-2%	65%	46%	-19%	
	Mendota	12%	20%	20%	27%	7%	60%	58%	-2%	
	Hawthorne	17%	29%	25%	30%	1%	58%	58%	0%	
	Gompers	35%	36%	29%	33%	-3%	41%	56%	15%	
	Lindbergh	26%	28%	27%	36%	8%	54%	56%	2%	
	Emerson	40%	36%	35%	39%	3%	43%	53%	10%	
	Lowell	51%	54%	49%	54%	0%	62%	50%	-12%	
	Marquette	59%	56%	55%	58%	2%	57%	46%	-9%	
La Follette	Allis	17%	18%	16%	18%	0%	48%	59%	11%	
	Schenk	22%	25%	24%	26%	1%	52%	53%	1%	
	Glendale	23%	25%	21%	26%	1%	64%	63%	-1%	
	Nuestro Mundo	20%	26%	23%	36%	10%	74%	76%	2%	
	Kennedy	33%	34%	33%	39%	5%	54%	63%	9%	
	Elvehjem	39%	46%	43%	51%	5%	59%	58%	-1%	
Memorial	Falk	19%	18%	16%	25%	7%	53%	58%	6%	
	Orchard Ridge	32%	35%	30%	33%	-2%	58%	55%	-3%	
	Huegel	33%	39%	36%	43%	4%	62%	60%	-2%	
	Crestwood	51%	53%	47%	44%	-9%	50%	50%	0%	
	Muir	42%	44%	37%	46%	2%	61%	54%	-7%	
	Olson	43%	47%	44%	47%	0%	53%	58%	5%	
	Stephens	43%	50%	45%	50%	0%	69%	56%	-13%	
	Chavez	48%	52%	46%	54%	2%	61%	55%	-6%	
West	Leopold	22%	24%	18%	23%	-1%	58%	66%	8%	
	Lincoln	28%	31%	27%	29%	-2%	54%	61%	7%	
	Thoreau	49%	55%	46%	54%	-1%	73%	63%	-10%	
	Randall	60%	69%	63%	66%	-3%	64%	60%	-4%	
	Van Hise	72%	73%	66%	76%	3%	63%	66%	3%	
	Shorewood	72%	77%	75%	85%	8%	54%	69%	15%	

^{**} The data in this table describes students that took the MAP Reading portion during the 2014-15 and 2015-16 school years at the same school in the fall and spring

The gains greater than 0.5% are colored green and decrease greater than -0.5% are colored red

The table is organized according to high school feeder patterns for elementary and middle school levels



Math Proficiency and Growth Target Attainment

	F 11		ercent Pro		Cl	Percen	t Meeting	Growth
	Fall 2014-15	Spring 2014-15	Fall 2015-16	Spring 2015-16	Change Spring-Spring	2014-15	2015-16	Change
Race and Ethnicity								
African American	10%	12%	10%	14%	2%	55%	57%	2%
Native American		23%	23%	24%	1%	53%	67%	14%
Hispanic/Latino	19%	23%	19%	26%	3%	62%	61%	-1%
Multiracial	37%	41%	35%	42%	1%	61%	59%	-2%
Asian	51%	56%	50%	57%	1%	67%	67%	0%
White	63%	68%	64%	69%	1%	67%	64%	-3%
Gender								
Female	41%	45%	40%	45%	0%	63%	62%	-1%
Male	41%	45%	41%	47%	2%	63%	62%	-1%
Non Low-Income								
Low-Income	17%	20%	17%	22%	2%	59%	59%	0%
Not Low-Income	65%	69%	65%	71%	2%	68%	64%	-4%
English-language learners								
ELL	24%	29%	25%	31%	2%	64%	62%	-2%
Non-ELL	47%	51%	46%	52%	1%	63%	62%	-1%
Special Education								
Special Educ.	12%	16%	13%	16%	0%	54%	61%	7%
No Special Educ.	45%	49%	45%	51%	2%	65%	62%	-3%
Advanced Learners								
Non-Adv. Learners	29%	33%	28%	34%	1%	61%	61%	0%
Advanced Learners	78%	80%	77%	80%	0%	69%	65%	-4%
Grade								
Third Grade	35%	45%	37%	46%	1%	64%	69%	5%
Fourth Grade	41%	51%	39%	49%	-2%	67%	62%	-5%
Fifth Grade	49%	48%	45%	45%	-3%	65%	64%	-1%
Sixth Grade	36%	43%	39%	47%	4%	63%	64%	1%
Seventh Grade	41%	39%	43%	45%	6%	60%	64%	4%
Eighth Grade	42%	42%	40%	43%	1%	60%	64%	4%

^{**} The data in this table describes all students that took the MAP Math portion during the 2014-15 and 2015-16 school years

The table is organized from low to high on the Spring 2015-16 column, except for the Grade section

The gains greater than 0.5% are colored green and decreases greater than -0.5% are colored red

^{*}The fall proficiency rate in 2014-15 for Native American students was dropped from this report because fewer than 8 students had a recorded score.



Math Proficiency and Growth Attainment by School

			P	ercent Profic	cient	Change	Percei	Percent Meeting	
		Fall 2014-15	Spring 2014-15	Fall 2015- 16	Spring 2015-16	Spring- Spring	2014- 2015	2015- 2016	Change
Middle School	s							_	
East	Sherman	26%	25%	24%	27%	2%	59%	62%	3%
	Black Hawk	23%	29%	24%	33%	4%	66%	65%	-1%
	O'Keeffe	51%	52%	51%	53%	1%	68%	60%	-8%
La Follette	Badger Rock	28%	32%	23%	22%	-10%	68%	39%	-29%
	Sennett	29%	31%	28%	35%	4%	62%	67%	5%
	Whitehorse	27%	33%	34%	43%	10%	69%	59%	-10%
Memorial	Toki	34%	38%	40%	44%	6%	57%	63%	6%
	Jefferson	45%	42%	42%	46%	4%	51%	53%	2%
	Spring Harbor	49%	44%	43%	48%	4%	47%	66%	19%
West	Wright	19%	22%	18%	26%	4%	63%	69%	6%
	Cherokee	33%	32%	33%	37%	5%	59%	55%	-4%
	Hamilton	71%	73%	73%	75%	2%	66%	60%	-6%
Elementary So	thools								
East	Lake View	18%	26%	21%	16%	-10%	70%	48%	-22%
	Gompers	31%	26%	24%	27%	1%	40%	64%	24%
	Sandburg	28%	36%	29%	34%	-2%	68%	62%	-6%
	Mendota	16%	20%	21%	34%	14%	58%	67%	9%
	Hawthorne	27%	32%	28%	36%	4%	68%	66%	-2%
	Emerson	33%	38%	31%	37%	-1%	58%	58%	0%
	Lindbergh	19%	29%	25%	38%	9%	69%	75%	6%
	Lowell	45%	55%	42%	46%	-9 %	64%	66%	2%
	Marquette	65%	62%	54%	62%	0%	57%	59%	2%
La Follette	Allis	19%	24%	20%	28%	4%	55%	62%	7%
	Schenk	29%	37%	26%	29%	-8%	64%	65%	1%
	Glendale	27%	32%	22%	30%	-2%	63%	59%	-4%
	Nuestro Mundo	26%	38%	30%	42%	4%	70%	67%	-3%
	Kennedy	41%	47%	40%	48%	1%	67%	64%	-3%
	Elvehjem	51%	63%	51%	57%	-6%	74%	71%	-3%
Memorial	Falk	20%	19%	15%	21%	2%	52%	48%	-4%
	Orchard Ridge	41%	36%	26%	33%	-3%	62%	64%	2%
	Huegel	37%	45%	39%	49%	4%	69%	64%	-5%
	Crestwood	51%	59%	51%	49%	-10%	60%	54%	-6%
	Olson	46%	51%	51%	56%	5%	59%	53%	-6%
	Chavez	52%	62%	54%	56%	-6%	75%	56%	-19%
	Muir	55%	63%	54%	58%	-5%	71%	61%	-10%
	Stephens	52%	62%	57%	64%	2%	79%	77%	-2%
West	Leopold	22%	33%	23%	28%	-5%	70%	62%	-8%
	Lincoln	32%	36%	29%	32%	-4%	60%	60%	0%
	Thoreau	47%	58%	47%	55%	-3%	66%	67%	1%
	Randall	65%	69%	60%	68%	-1%	70%	64%	-6%
	Van Hise	76%	77%	75%	86%	9%	58%	65%	7%
	Shorewood	85%	87%	81%	89%	2%	74%	73%	-1%

^{**} The data in this table describes students that took the MAP Math portion during the 2014-15 and 2015-16 school years at the same school in the fall and spring

The gains greater than 0.5% are colored green and decrease greater than -0.5% are colored red

The table is organized according to high school feeder patterns for elementary and middle school levels

2015-16 MAP Results Breakdown

The proficiency rates illustrated earlier in this report show MAP results aggregated into two groups. This section, along with the histograms in the next section, breaks down student MAP performance even further, showing student achievement results delineated into the four result categories of the MAP assessment – minimal, basic, proficient, and advanced.

MAP Results by Demographics

There were some noticeable differences in the breakup of both MAP reading and math scores among different groups. A greater percentage of males scored minimal on reading, while males and females had a similar breakup on math scores. A greater percentage of non-English language learner students scored advanced on both reading and math than ELL students. Similarly, a greater percentage of students not in special education scored advanced on both reading and math than students in special education. White students had the highest percentage of students scoring both proficient and advanced on both reading and math, while African American students had the largest percentage of students scoring minimal on both reading and math.

MAP Results by Grade Level

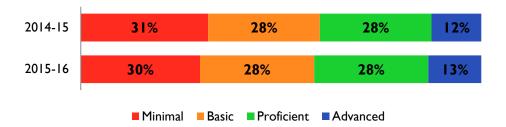
Higher grade levels had a decreasing percent of students scoring minimal in reading, but also had a decreasing percent of students scoring advanced. Students between grades 3 and 4 had the highest percent scoring minimal and scoring advanced in reading among all grade levels. The breakup of MAP math results were similar among all grade levels. Nearly all grade levels had 25 percent of students scoring minimal and 15 percent of student scoring advanced. Students between grades 5 and 6 had the highest percent of students scoring minimal on math, while students between grades 6 and 7 had the highest percent of student scoring advanced.

MAP Results by Year

The breakdown of MAP reading and math scores were similar in the 2014-15 and 2015-16 school years. The percent of students scoring advanced in reading grew by I percentage point, while the percent of students scoring advanced in math decreased by I percentage point. The distribution of MAP reading scores showed a slight increase in the percent of students achieving advanced in 2015-16 for all demographic and grade level groups, while all groups showed a slight decrease in the percent of students scoring minimal. Each demographic group showed an increase in the percent of students achieving an advanced score on the 2015-16 MAP math test, and a decrease in the percent of students scoring minimal.

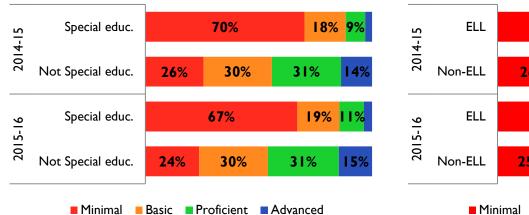


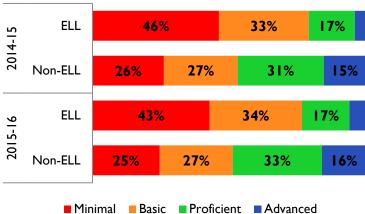
2015-16 MAP Reading Results

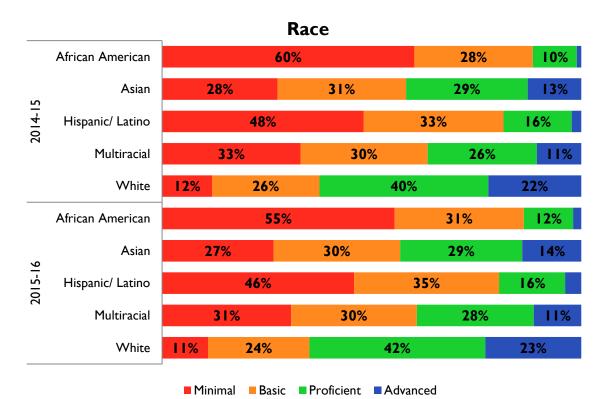


Special Education

English Language Learners





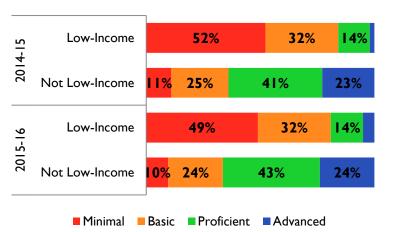


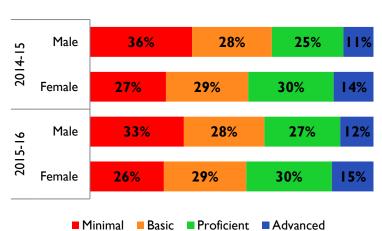
^{**}Results for Native American students were dropped because there was more than one result category with fewer than 8 records



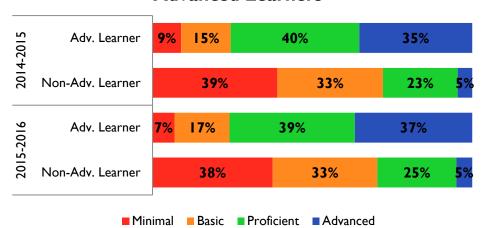
Low income

Gender

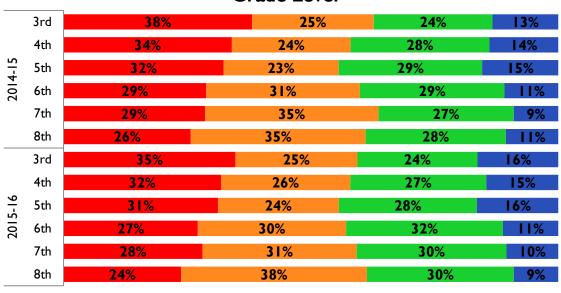




Advanced Learners

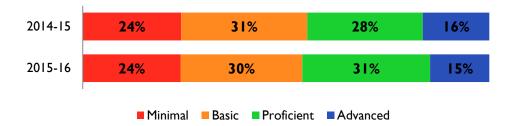


Grade Level



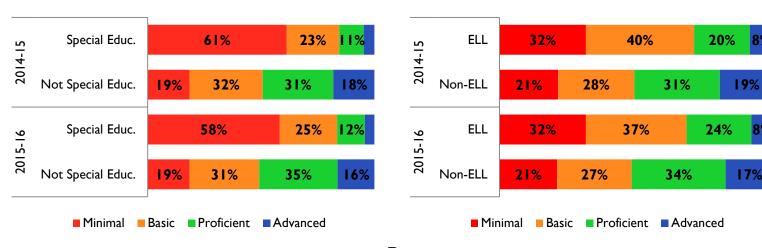


2015-16 MAP Math Results

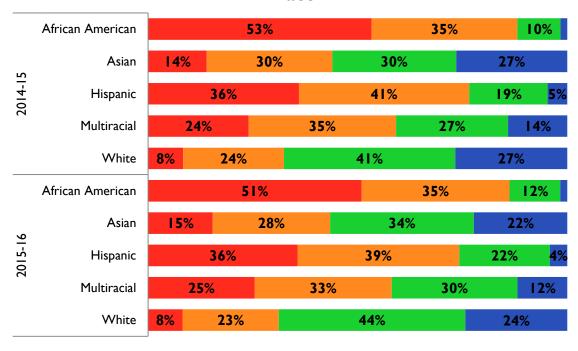


Special Education

English Language Learners



Race



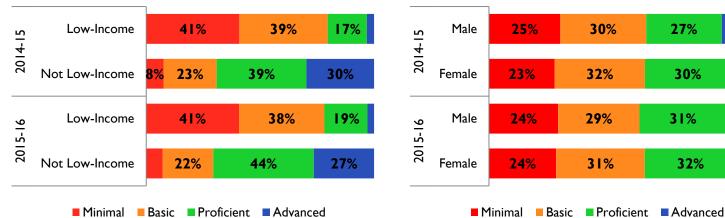
^{**}Results for Native American students were dropped because there was more than one result category with fewer than 8 records

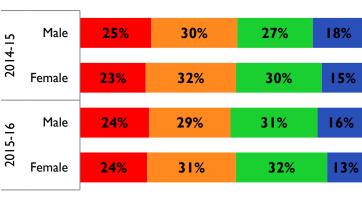
■ Minimal ■ Basic ■ Proficient ■ Advanced



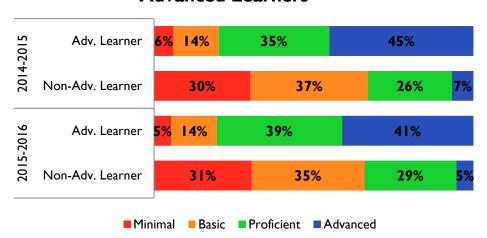
Low income

Gender

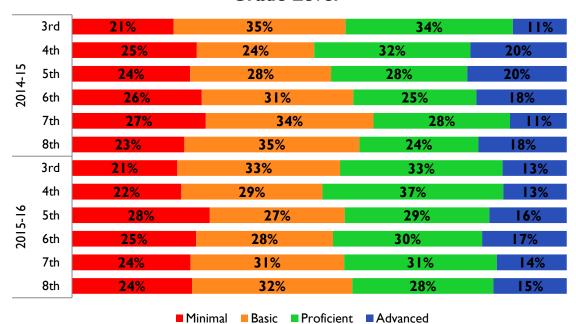




Advanced Learners



Grade Level



Interactive visualization of MAP Score Distributions

The inclusion of an interactive visualization responds to a request from the Board of Education to investigate MAP score distributions across student groups. The visualization is available at the Research & Program Evaluation Office's Visual Analytics page found at mmsd.org/research. The graphs are histograms that show RIT score distributions across our largest student groups for the data in this report.

Reading Histograms

A histogram is a useful graph that illustrates the relative frequency of values, which, for this report, are MAP RIT scores. Higher bars within a histogram mean the score represented is relatively more common, while lower bars mean the score represented is relatively less common. Graphs are organized by grade, with the number running down the left hand column indicating the grade. The numbers on the vertical axis next to each graph show how many students received each score. Scores are color coded based on corresponding result levels. Red bars indicate minimal scores, gold bars indicate basic scores, green bars indicate proficient scores, and blue bars indicate advanced scores.

Key Findings

Histograms across both subject and student groups appear to have RIT scores that are normally distributed. Furthermore, the distribution of scores for each group shift to the right (upward) at higher grade levels, suggesting that, on average, students continuously improve their raw RIT score as they get older. Taken together, these graphs provide no evidence of MAP having a tendency to cluster student scores at or just above proficiency cutoff points.

For student groups with smaller numbers of students, the histograms become less normally distributed and don't have as prominent of a peak as student groups with larger numbers. For instance, the distribution of scores for white students is more normally distributed than the distribution of sores for multiracial students. This is expected, as tests that are administered to several students are more likely to have a normal distribution that smaller groups of students. There are noticeable differences in minimum and maximum RIT scores for the different student groups, but scores in each groups tend to cluster around a midpoint, with higher or lower RIT scores becoming less common the further away from the group midpoint.

While student groups shared similar distributions, these histograms show the existing disparities in student performance. Histograms for certain student groups are centered around much lower midpoints (seen through graphs that have higher peaks further to the left) than other groups. Students identifying as Hispanic/Latino and African American have distributions that center around a midpoint lower than white students. These groups also have a greater distribution of students scores below proficiency. Student RIT score growth during a year rarely exceeds single digits, and student groups with lower proficiency rates tend to have midpoints that are lower on the RIT score scale than student groups with higher proficiency rates.

Appendix A: NWEA Measures of Academic Progress Information

Description

Measures of Academic Progress (MAP) is a computerized adaptive assessment designed to measure students' academic achievement in reading, mathematics, and language. The MAP dynamically adapts to student levels responses as they take the test. This means that if a student answers a question correctly, MAP presents a more challenging item; if he or she answers it incorrectly, MAP offers a simpler item. In an optimal test, a student answers approximately half the items correctly and half incorrectly. The final score is then an estimate of the student's achievement level. MAP is a product of the Northwest Evaluation Association (NWEA). NWEA aligns the MAP to state and national standards and works to ensure that MAP tests reflect current requirements. MAP offers full performance data within 24 hours. School-wide achievement reports are presented within 72 hours of completion.

Administration

MMSD administers reading and mathematics MAP content areas twice a year to all students in grades 3-8 (fall and spring). The district also administers a Winter MAP test in reading only. The winter MAP is used primarily for progress monitoring during the year, and as such, the results are not included in yearly reporting at the district level. Typically, English Language Learners with DPI language levels I and 2 will not take the MAP assessment. Educational Services staff also help determine the extent to which students with disabilities can participate in the MAP, based on students' Individualized Education Program. Parents can also choose to opt their child out of MAP administration by notifying the school's principal in writing.

Uses of Results

MMSD uses MAP results for a variety of purposes:

- 1. To gauge student achievement and growth, both within year and year to year
- 2. To tailor instruction appropriately based on what students know and what they are ready to learn
- 3. To monitor progress for buildings and the district via the Data Dashboard
- 4. To evaluate district progress on student achievement milestones described in the Strategic Framework

Scoring

Every test item on a MAP assessment corresponds to a value on the RIT Scale. RIT assigns a value of difficulty to each item with an equal interval measurement, so differences between scores are the same regardless of whether a student is at the top or bottom of the scale. RIT measures understanding regardless of grade level, which helps to track a student's progress from year to year. MAP scores allow educators to see each student's level of understanding around specific concepts. Divided into four subject categories, RIT charts show which topics and sub-topics the student has mastered, and which targets represent opportunities for growth.

Proficiency Calculation – Alignment with WKCE

Every student is assigned a performance level on the MAP that is similar to the levels on the WKCE based on their RIT score (Minimal, Basic, Proficient, and Advanced). In fall 2012, NWEA conducted a norming study to align MAP and WKCE scores so MAP results would be predictive of a student's next WKCE results. Wisconsin transitioned from the WKCE to Smarter Balanced in 2014-15, but MAP proficiency levels can still be interpreted the same way.

Growth Calculation

Each student receives a fall to spring growth target based only on their fall RIT score that represents typical growth between fall and spring for students receiving the same fall RIT score. The growth target is then compared against the student's actual fall to spring growth to determine whether he or she met the expected fall to spring growth. The result is a yes/no answer, which is reported in aggregate as a percent of students meeting growth. Students with lower RIT scores are expected to grow more; for example, during the 2014-15 academic year a third grade student who scores 160 in reading in the fall is expected to grow 12 points by spring, but a third grade student who scores 219 in the fall is expected to grow only 6 points. Expected growth ranges between 2 and 14 points.