



EVANSTON/SKOKIE
SCHOOL DISTRICT 65

Every Child, Every Day, Whatever it Takes

TO: Evanston/Skokie School District 65 Board of Education
CC: Paul Goren, Superintendent
FROM: Peter Godard, Chief Officer, Research, Accountability, & Data
DATE: August 29, 2016
RE: Recommended Revision to Strategic Plan Outcome Metric Definitions & Targets

Objective: Information Discussion Follow-up Decision

In response to recent research conducted by the Northwest Evaluation Association (NWEA), this memo includes a recommendation for updating the definitions of metrics approved by the Board in March 2015 to be used in tracking the District’s progress. Based on the recommended changes to metric definitions, the memo also includes a recommendation for revising the targets for these metrics approved by the Board in August 2015.

Summary of recommendation

The Office of Research, Accountability, and Data (RAD) recommends that the Board update the existing MAP benchmark definitions--which are based on a 2011 study--with new definitions drawn from a 2015 study conducted by NWEA, the MAP assessment vendor. Both definitions estimate the minimum MAP scores associated with average performance or better in a student’s freshman year of college, but the updated definition is based on more rigorous research. RAD also recommends that the Board adopt benchmark definitions for grades three and four that RAD has imputed from NWEA’s 2015 study, which does not estimate benchmarks for these grades.

RAD further recommends that the Board begin using NWEA’s 2015 norms studies in place of the 2011 norms studies currently used to calculate the percent of students making expected gains and the percent of students at or below the 25th percentile.

The intent of this recommendation is to ensure the most accurate benchmarks and norms are used to track our progress. Although the District’s performance appears higher according to most of these new definitions, it is important to note that only the measurement has changed--not the performance of our students.

After analyzing the effects of these new definitions on the District’s historical performance trends, RAD also recommends updating two of the six performance targets previously adopted by the Board. The existing and updated targets are shown side by side in the table below, with changing targets highlighted.

Measure	Current 5-Year target based on 2011 norms and benchmarks	Recommended 5-Year target based on 2015 norms and benchmarks
Meeting CRBs in math	5.0%	5.0%
Meeting CRBs in reading	6.5%	6.5%
Making expected gains in math	5.0%	7.0%
Making expected gains in reading	6.5%	7.0%
At or below 25th percentile in math	-3.5%	-3.5%
At or below 25th percentile in reading	-2.0%	-2.0%

Rationale for adopting the new college readiness benchmarks

In order to align District 65’s performance standards with the latest recommendations of NWEA and to ensure that the District’s benchmarks are based on the latest and most statistically rigorous research, RAD recommends that the Board adopt NWEA’s updated college readiness benchmarks for grades five through eight and a benchmark imputed by RAD for grades three and four.

NWEA published a new study in 2015 in which it estimated college readiness benchmarks (Thum & Matta, 2015). The vendor recommends that users rely on this study in place of the 2011 definitions that District 65 currently uses (Theaker & Johnson, 2011; Theaker & Johnson, 2013). The 2015 study uses data collected on over 83,000 students in 410 schools across the country, tracking both their MAP scores in grades 5-8 and their ACT scores if they decided to take the college entrance exam. The authors of the study determined the new benchmarks in two steps:

1. Determine the minimum ACT score that corresponds to a 50% chance of doing B- work or better in the freshman year of college, and a 75% chance of doing C work or better. For both reading and math, this benchmark ACT score was 22.
2. Analyzing the collected data, determine the MAP scores in reading and math at each grade level 5-8 that correspond to an ACT score of 22 or above when the student reaches the 11th grade.

These new benchmarks are created and supported by NWEA. Adopting them will put the District’s performance measurement system in line with the vendor’s most recent research. Additionally, the 2015 study controls for the fact that those students who choose to take the ACT are likely to perform better on it than those students who chose not to take the exam at all. This self-selection problem is not controlled for in the 2011 study on which District 65’s current benchmarks are based.

Notably, the cut points for the new benchmarks fall at a lower percentile rank than the old benchmark cut points. The tables below list the old and new percentile and RIT score cut points.

Mathematics	NWEA 2011 Benchmark		NWEA 2015 Benchmark		Reading	NWEA 2011 Benchmark		NWEA 2015 Benchmark	
	RIT	%ile	RIT	%ile		RIT	%ile	RIT	%ile
Grade 3	216	84	N/A	N/A	Grade 3	208	73	N/A	N/A
Grade 4	224	79	N/A	N/A	Grade 4	215	72	N/A	N/A
Grade 5	236	84	226	61	Grade 5	220	71	215	58
Grade 6	242	85	232	65	Grade 6	224	70	220	61
Grade 7	244	78	238	70	Grade 7	227	69	224	64
Grade 8	249	79	243	73	Grade 8	230	70	227	66

The 2015 study does not include updated benchmarks for third and fourth grade. In order to continue to estimate college readiness for those grade levels, RAD recommends setting college readiness benchmarks at these grade levels based on the percentile rank of the fifth grade cut points. In mathematics, the third and fourth grade cut points would be set at the 61st percentile. In reading, the third and fourth grade cut points would be set at the 58th percentile.

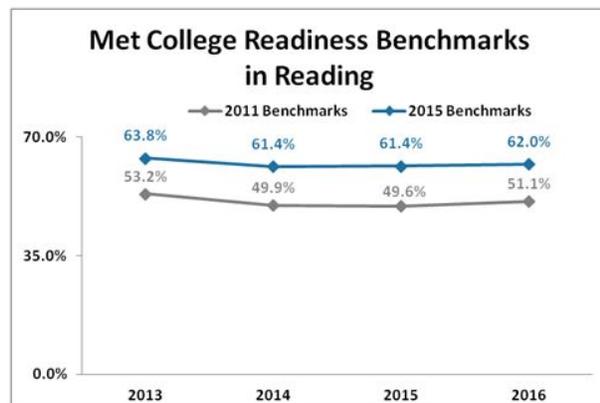
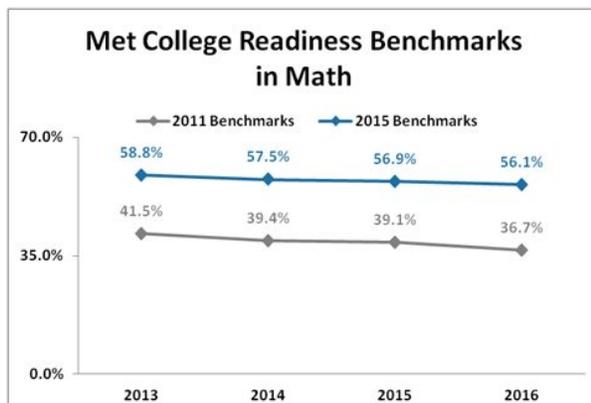
Rationale for adopting the new norms

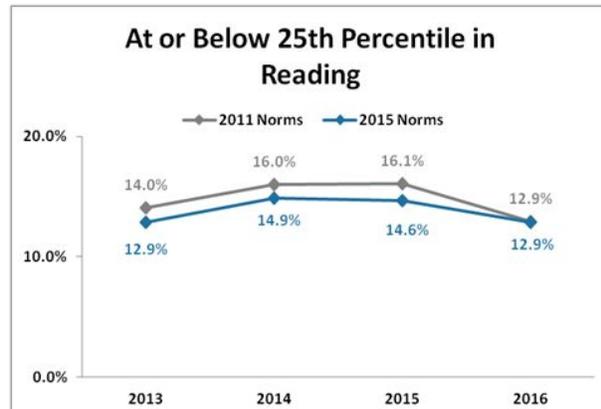
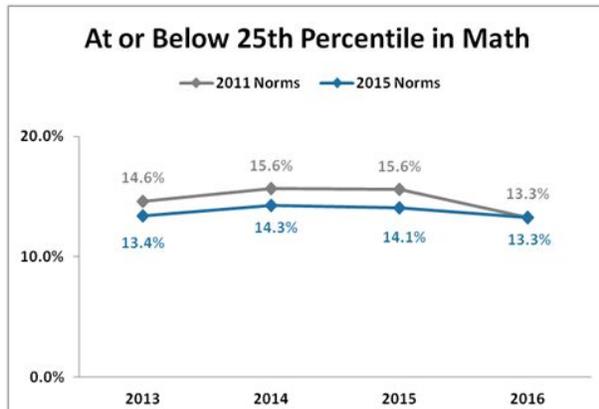
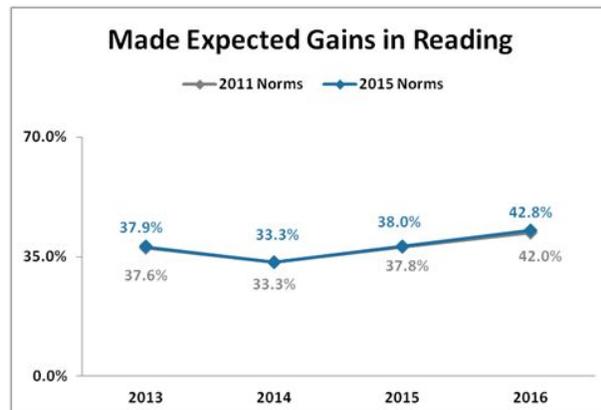
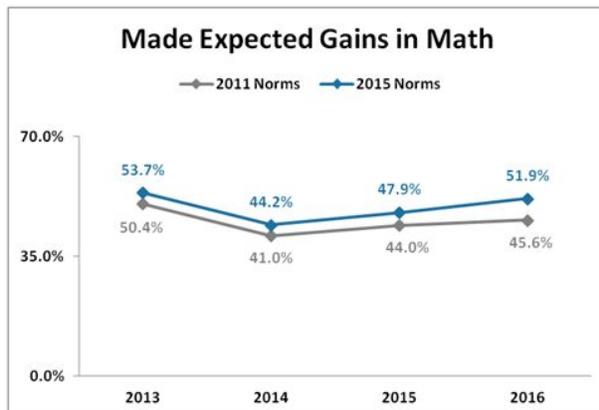
RAD also recommends that the Board begin using NWEA’s 2015 norms study (Thum & Hauser, 2015) in place of the 2011 norms study (Thum & Hauser, 2011) currently used to calculate the percent of students making expected gains and the percent of students at or below the 25th percentile. This action will align District 65’s performance standards with those of NWEA and ensure that the District’s performance measures are based on the latest and most statistically rigorous research.

NWEA’s new norms are based on a 2015 study of student achievement status and growth. While this new study uses the same basic methodology that NWEA used to set norms in the past, it employs some additional statistical techniques that improve the precision of model estimates and also increases the time span over which the growth model is constructed. These statistical refinements and additional years of data collection ensure that the new standards for making expected gains and score percentile are the most accurate available.

Impact of recommendation

The charts below show the impact of the new definitions on the District’s performance trends. In no case does a trend reverse direction; only the magnitude of the trends are affected. For more detail on the District’s performance under the 2015 norms, an updated 2015-16 District Scorecard with 2015 norm figures is attached to this memo.





The trends above are presented in table form below. Note that between the 2011 and 2015 norms, the one-year and three-year changes follow the same patterns of increase and decrease. In several instances, this change is less pronounced under the 2015 norms, indicated by the presence of more yellow color coding that indicates changes of less than one percent.

Under 2011 Norms:		Measure	Under 2015 Norms:	
Change from '15 to '16	Change from '13 to '16		Change from '15 to '16	Change from '13 to '16
-2.38	-4.83	Meeting CRBs - Math	-0.79	-2.70
1.56	-4.80	Making Expected Gains - Math	4.03	-1.78
-2.32	-1.33	Below 25th Percentile - Math	-0.80	-0.14
1.46	-2.13	Meeting CRBs - Reading	0.59	-1.77
4.26	4.48	Making Expected Gains - Reading	4.80	4.84
-3.16	-1.11	Below 25th Percentile - Reading	-1.75	0.01

Updating performance targets

RAD modeled five-year strategic outcome targets using data based on the 2015 norms and benchmarks in order to determine if the recommended updates to the norm and benchmark definitions would also necessitate an adjustment to the targets. This was done using the same method used to set the original targets (Goren & Godard, 2015): measuring the average annual percentage change of the top five schools for each metric and then projecting a 5-year percentage change based on the assumption that the district as a whole would incrementally approach the bar set by the top five schools. Both the original analysis using the 2011 norms and benchmarks and the

new analysis using 2015 norms and benchmarks looked at outcomes for four years: 2012 through 2015. The targets modeled through both analyses are included in the table below.

Measure	2011 Norms & Benchmarks			2015 Norms & Benchmarks		
	2015 Baseline	Modeled target	Recommended target	2015 Baseline	Modeled target	Recommended target
Meeting CRBs in math	39.1%	3.5%	5.0%	56.9%	3.8%	5.0%
Meeting CRBs in reading	49.8%	1.0%	6.5%	61.4%	-0.2%	6.5%
Making expected gains in math	44.7%	-2.0%	5.0%	47.9%	5.5%	7.0%
Making expected gains in reading	37.7%	3.5%	6.5%	38.0%	4.8%	7.0%
At or below 25th percentile in math	15.6%	-3.4%	-3.5%	14.1%	-3.5%	-3.5%
At or below 25th percentile in reading	16.1%	0.5%	-2.0%	14.6%	0.5%	-2.0%

The table below summarizes RAD’s recommended targets and why they are changing or staying the same.

Measure	Current 5-Year target based on 2011 norms	Recommended 5-Year target based on 2015 norms	Rationale for keeping or changing target
Meeting CRBs in math	5.0%	5.0%	New modeled target is similar to existing target
Meeting CRBs in reading	6.5%	6.5%	New modeled target is negative, so we’re keeping the existing positive target
Making expected gains in math	5.0%	7.0%	New modeled target is significantly higher than existing target
Making expected gains in reading	6.5%	7.0%	New modeled target is significantly higher than existing target
At or below 25th percentile in math	-3.5%	-3.5%	New modeled target is similar to existing target
At or below 25th percentile in reading	-2.0%	-2.0%	New modeled target is similar to existing target

Bibliography

Godard, P. & Goren, P. (2015, August). Strategic plan scorecard targets/Board goals. Evanston, IL: District 65. Retrieved from: <https://v3.boardbook.org/Public/PublicItemDownload.aspx?ik=37624309>.

Theaker, R. & Johnson, C. (2011). College readiness linking study: A study of the alignment of the RIT Scales on NWEA's MAP assessments with the College Readiness Benchmarks of EXPLORE, PLAN and ACT. Portland, OR: Northwest Evaluation Association.

Theaker, R. & Johnson, C. (2013, January). Measuring growth toward college readiness: Using MAP (Measures of Academic Progress) to predict success on the ACT test benchmark scores. Poster session presented at the 2012 meeting of The American Educational Research Association, Vancouver, BC .

Thum Y. & Hauser, C. (2011, September). RIT scale norms: For use with Measures of Academic Progress (MAP) and MAP primary grades. Portland, OR: Northwest Evaluation Association.

Thum Y. & Hauser, C. (2015, August). NWEA MAP norms for student and school achievement status and growth. Portland, OR: Northwest Evaluation Association. Retrieved from: http://www.sowashco.org/files/department/rea/2015NormsReport_Reading.pdf.

Thum, Y. & Matta, T. (2015). MAP College Readiness Benchmarks: A research brief, NWEA research report. Portland, OR: Northwest Evaluation Association. Retrieved from: <https://www.nwea.org/resources/map-college-readiness-benchmarks/> .