



HIGH STAKES MANAGEMENT
a partnership for success

SuccessMaker®

**High Stakes Management™
SuccessMaker OnTarget Analysis®**

Somerton School District, Arizona
June 2018

OnTarget Analysis Introduction

The purpose of OnTarget Analysis® is to determine:

- a) the statistical relationship between SuccessMaker® student performance in math and reading for grade three through five and student achievement on the AzMERIT.
- b) SuccessMaker courseware target levels correlating to specific AzMERIT test achievement.

To accomplish these goals, we investigated the relationship between courseware levels SuccessMaker students in Somerton School District achieved at the time of the AzMERIT test (April 2018), and their achievement on the AzMERIT. Using linear regression, we identified specific SuccessMaker courseware levels corresponding to AzMERIT achievement at the 60% and 80% confidence intervals. By combining the forecasting of time needed to reach specified SuccessMaker courseware levels with the relationship between SuccessMaker levels and AzMERIT achievement, the SuccessMaker management system can provide educators with a continually updated forecast of AzMERIT achievement for individuals, groups, or subgroups of students, at any point during the 2018-2019 school year.

OnTarget Analysis Method

To establish reliable courseware target levels for student use during the 2018-2019 school year and beyond, OnTarget Analysis focused on students with acceptable usage of SuccessMaker and their performance in the courseware. The procedure used to filter the student data was as follows:

- Matching individual student SuccessMaker data to AzMERIT test score data
- Filtering out students who did not have a AzMERIT Scale Score or who did not complete Initial Placement in SuccessMaker
- Filtering out students who did not have at least 10 hours in an applicable SuccessMaker Math or Reading courses (however, students who Topped Out of a course with fewer than 10 hours were included)
- Applying linear regression to the data set to calculate 60% and 80% courseware target levels for AzMERIT achievement-level cut-scores (Approaching Proficient and Proficient).
- Calculating correlation coefficients between SuccessMaker courseware levels and AZMERIT scale scores.

Students Included in OnTarget Analysis

Table 1

Number of Students in Math

Grade	Matched Data	Acceptable Time	Acceptable Performance
3	294	269	225
4	338	267	248
5	315	259	232
6	95	43	41

Table 2

Number of Students in Reading

Grade	Matched Data	Acceptable Time	Acceptable Performance
3	301	297	78
4	340	324	191
5	323	309	179
6	266	109	65

Students were included from the following schools:

Desert Sonora ES
Orange Grove ES
Somerton MS
Tierra Del Sol ES
Valle Del Encanto Learning Center

OnTarget Analysis Results

It is useful to compare the AzMERIT achievement between the sample students used to derive the targets and the students to whom the target courseware levels will be applied. *The greater the similarity between the achievement of the students, the more likely the courseware target levels generated will be reliable indicators of future AzMERIT performance* for students in the Somerton School District. The figures below shows the percentage of included students that reached or exceeded Proficient by grade level. Note: Grade 6 Math was not included due to not enough students reaching SuccessMaker usage criteria.

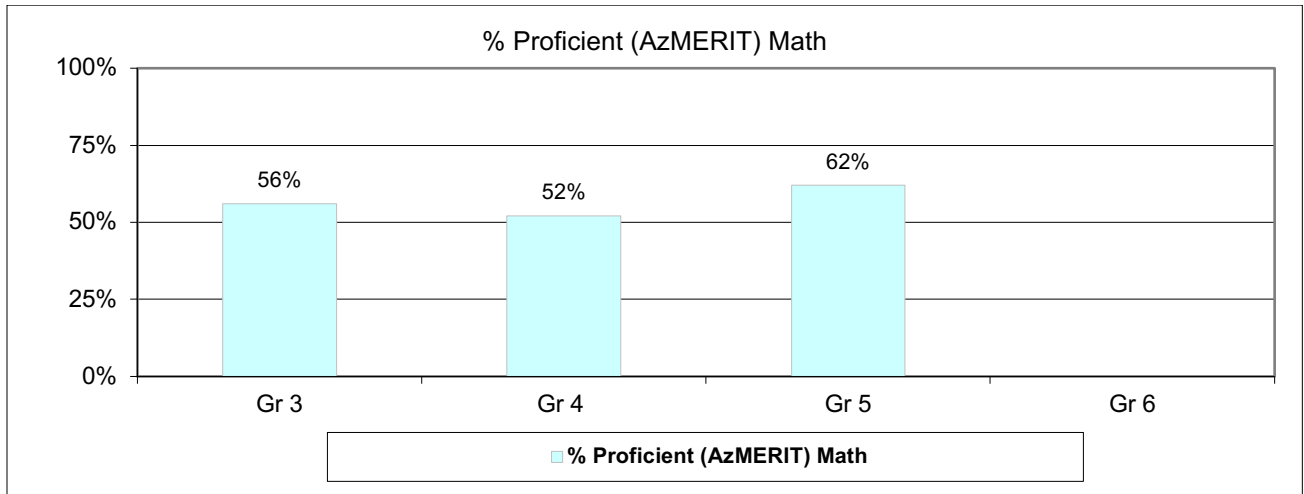


Figure 1. 2018 AzMERIT Achievement of Included Students

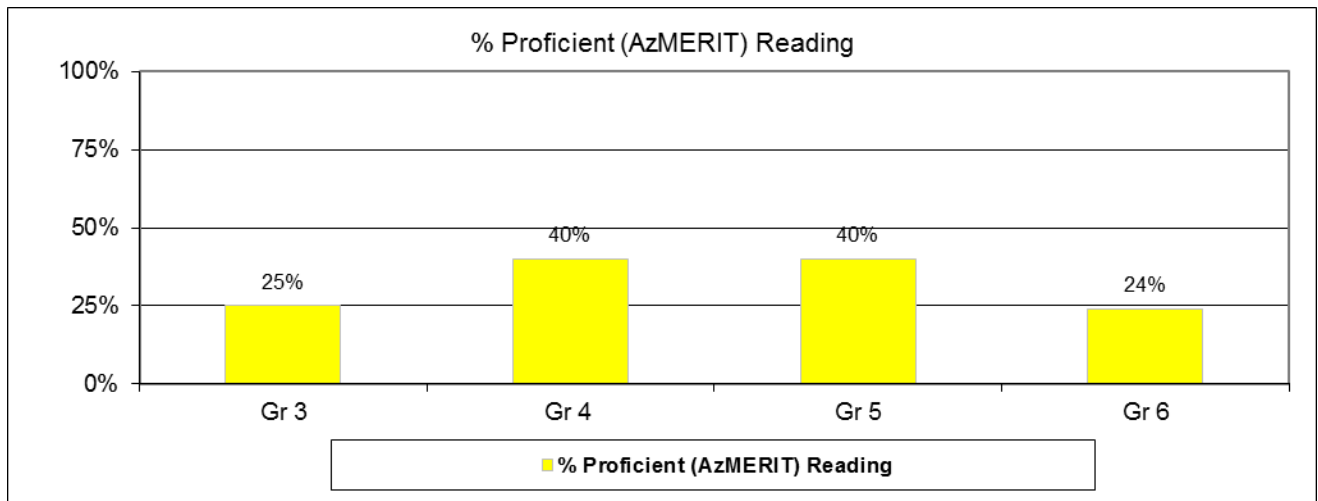
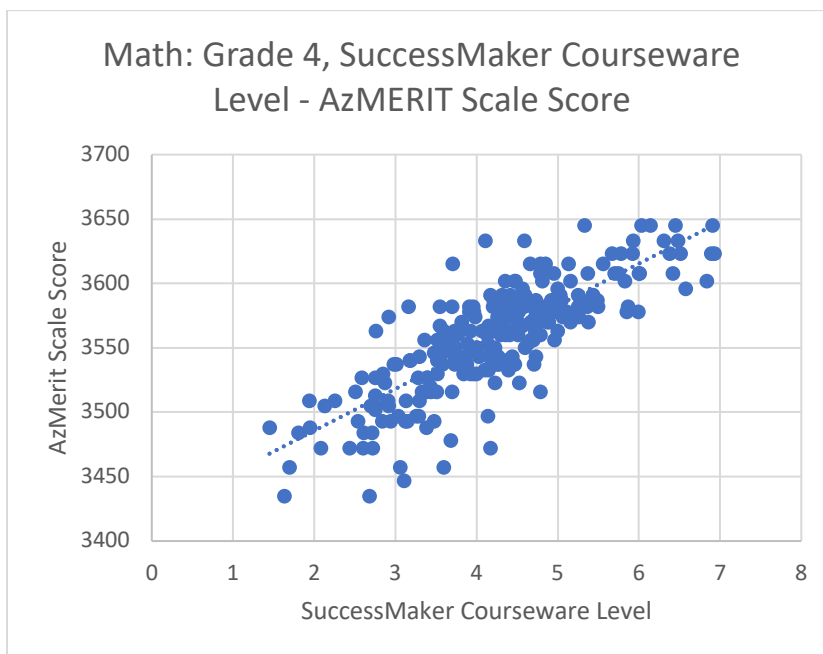
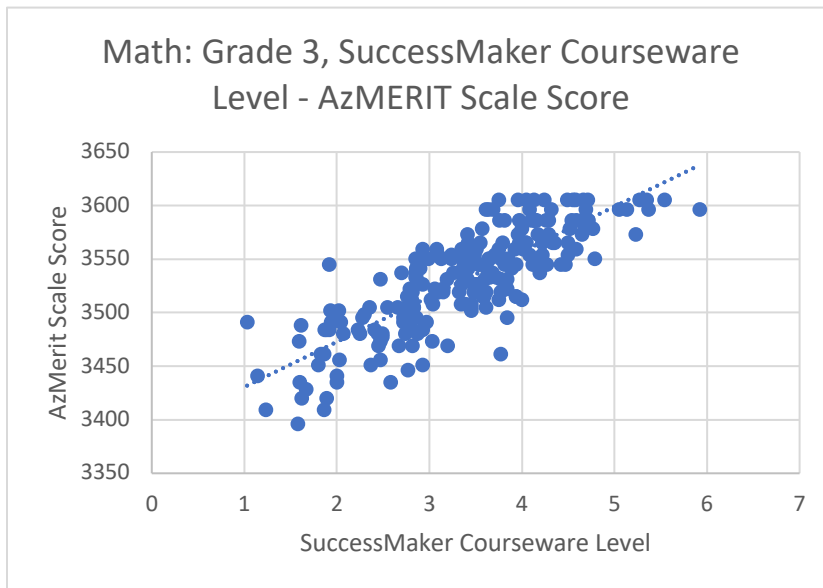


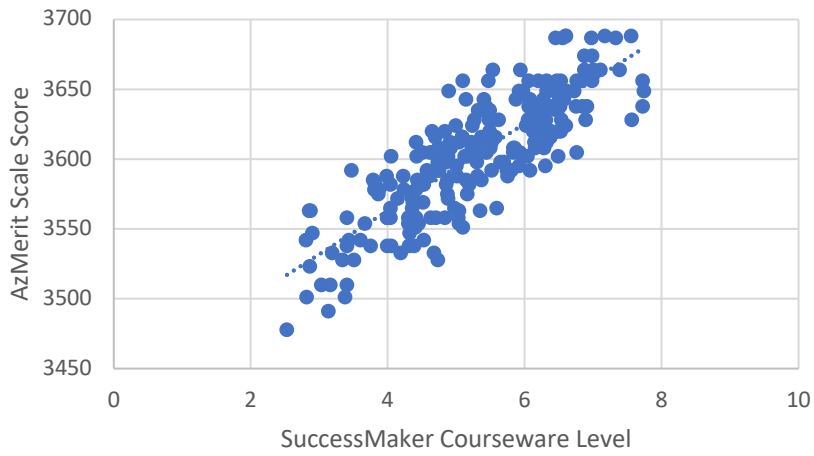
Figure 2. 2018 AzMERIT Achievement of Included Students

Scatterplots

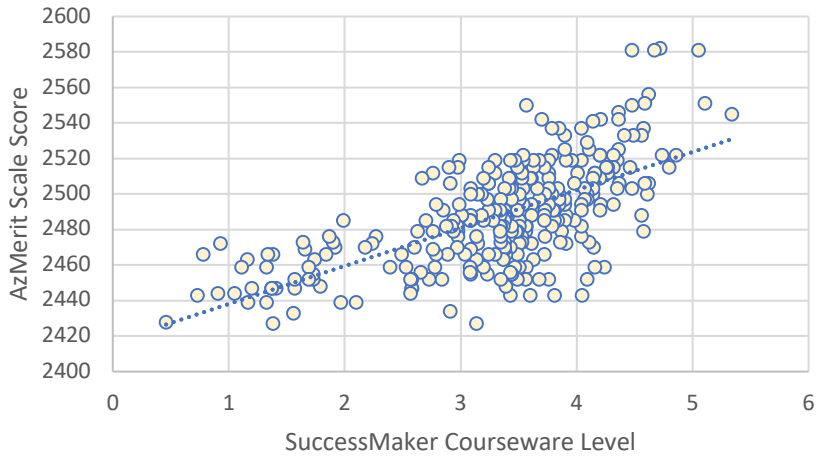
In order to develop a high-level understanding of the relationship between the AzMerit and SuccessMaker, it is useful to reference graphic representations of AzMerit performance varying with SuccessMaker performance. To that end, scatterplots including student AzMerit scale scores and SuccessMaker courseware levels were generated for each Math Grades 3 – 5 and Reading Grades 3 – 6.



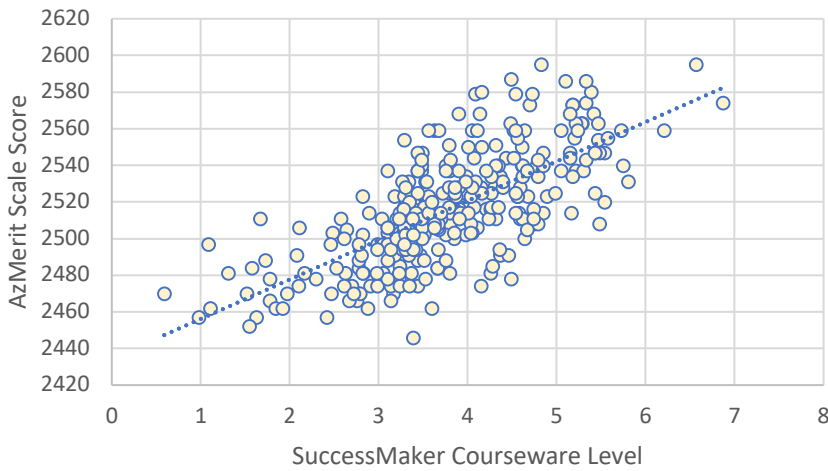
Math: Grade 5, SuccessMaker Courseware Level - AzMERIT Scale Score



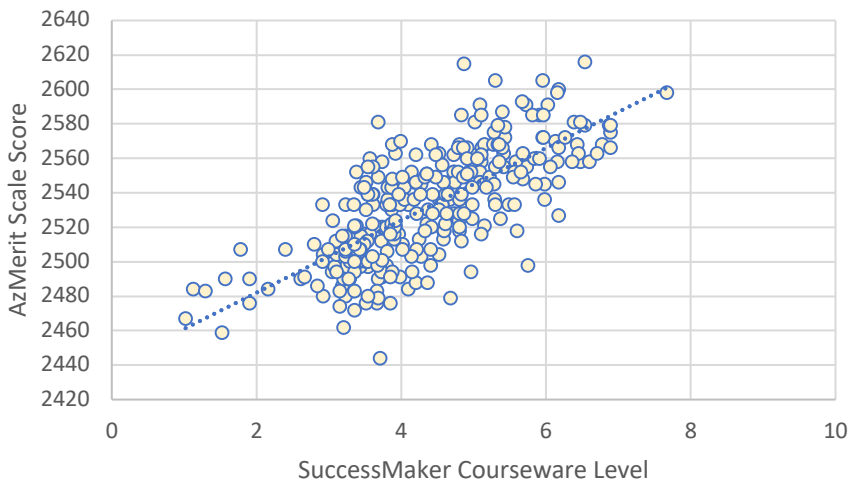
Reading: Grade 3, SuccessMaker Courseware Level - AzMERIT Scale Score



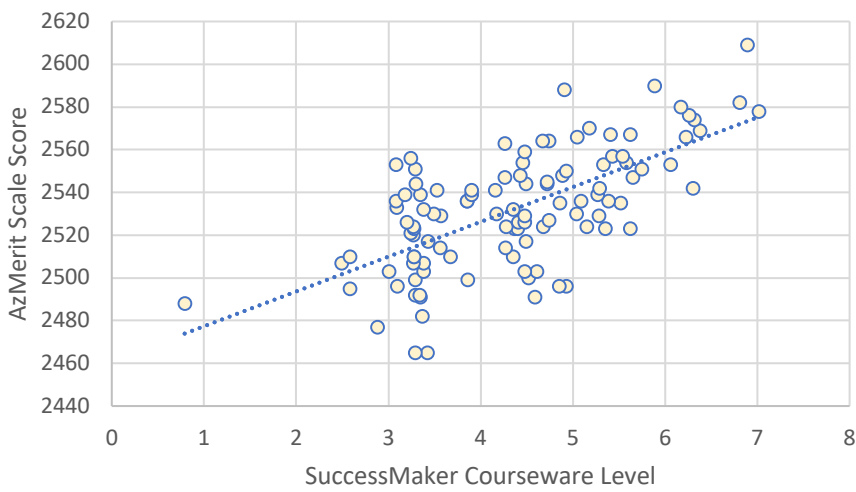
Reading: Grade 4, SuccessMaker Courseware Level - AzMERIT Scale Score



Reading: Grade 5, SuccessMaker Courseware Level - AzMERIT Scale Score



Reading: Grade 6, SuccessMaker Courseware Level - AzMERIT Scale Score



Results from Pearson’s research over the years confirms that when students utilize SuccessMaker math and reading courseware acceptably the following pattern emerges: the higher the level students reach at the time of the high-stakes test in SuccessMaker, the higher they tend to score on the high-stakes test. For example, compare the percentage of students scoring *Level 3 or higher* on the AzMERIT (Figures 1 and 2) between the group of students that reached or exceeded the SuccessMaker 60% courseware target levels and the group that did not (Figures 3 and 4).

Table 3

Number of Students Reaching/Not Reaching SuccessMaker 60% Courseware Target Levels for Level 3 or higher on the AzMERIT in Math

Grade	Math 60% Courseware Target	# Math Students Included	Students Not Reaching Math Courseware Target	Students Reaching or Exceeding Math Courseware Target
Grade 3	3.5	225	117	108
Grade 4	4.5	248	149	99
Grade 5	5.2	232	108	124

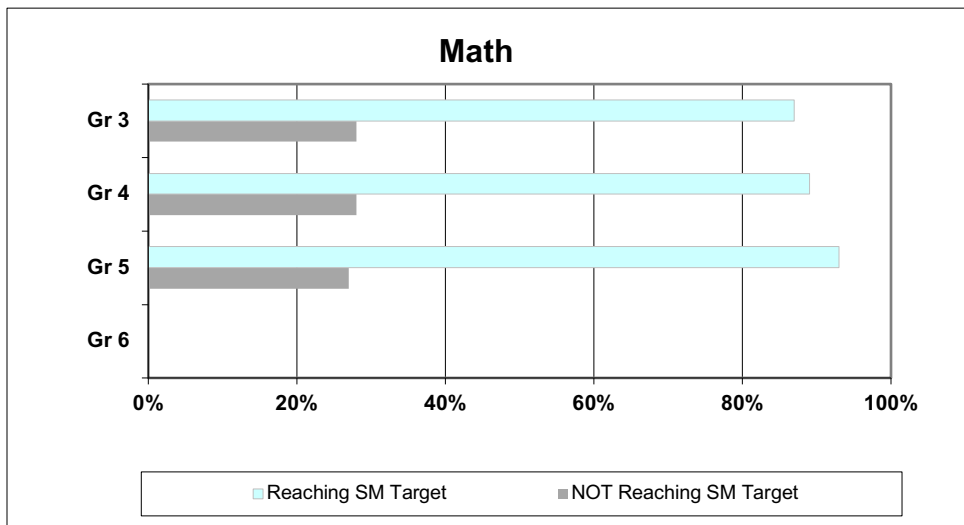


Figure 3. Percentage of Students Scoring Level 3 or higher on AzMERIT

Table 4

Number of Students Reaching/Not Reaching SuccessMaker 60% Courseware Target Levels for Level 3 or higher on the AzMERIT in Reading

Grade	Reading 60% Courseware Target	# Reading Students Included	Students Not Reaching Reading Courseware Target	Students Reaching or Exceeding Reading Courseware Target
Grade 3	4.6	297	286	11
Grade 4	4.7	324	271	53
Grade 5	5.2	309	240	69
Grade 6	6.0	109	99	10

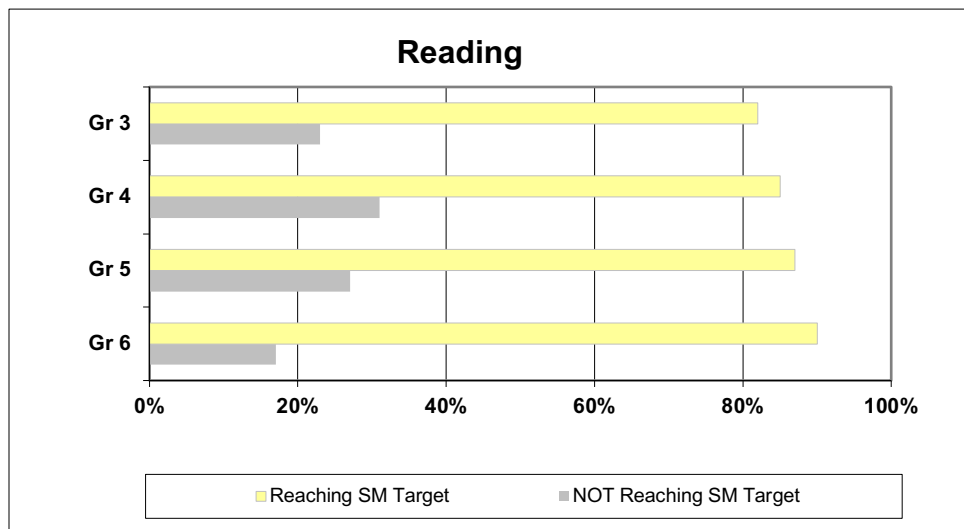
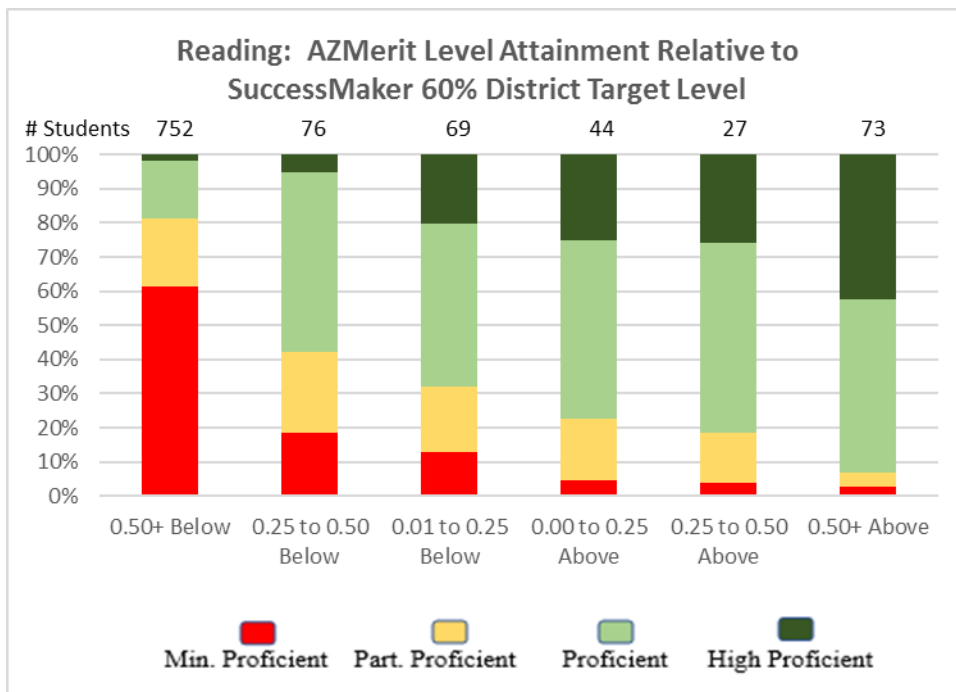
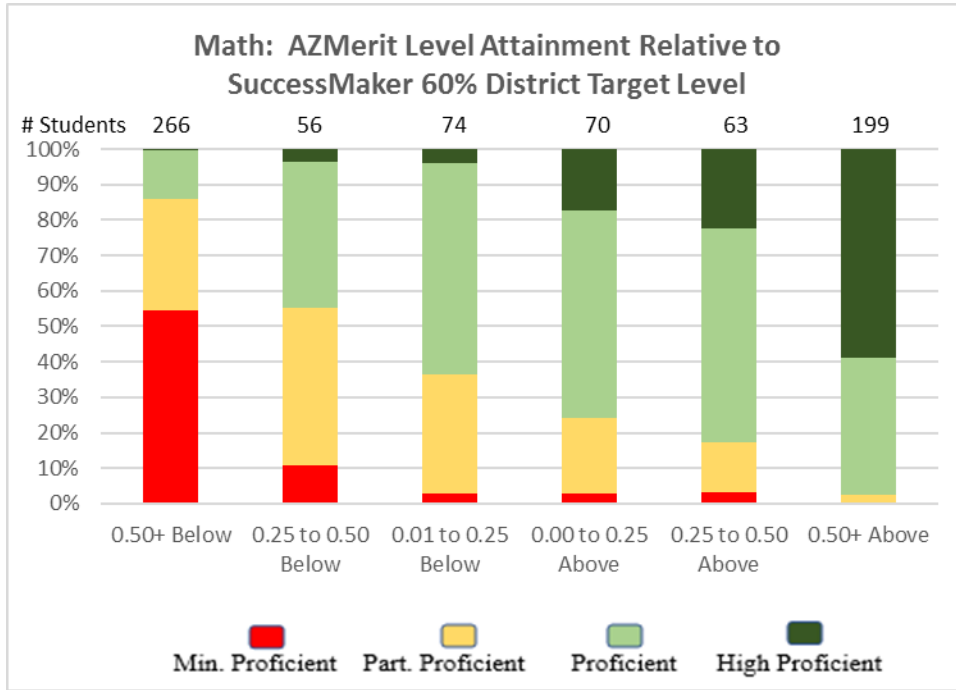


Figure 4. Percentage of Students Scoring Level 3 or higher on AzMERIT

Analysis: Review of AzMERIT Level Achievement – Grouped by SuccessMaker Courseware Level (relative to the AzMERIT 2018 District 60% SuccessMaker Targets)



During the 2017-2018 school year, 5 schools in the Somerton School District participated in this OnTarget Analysis[®] with just over 1,100 students studied in math and reading. The sample that was extracted for the statistical analysis included only students who had completed SuccessMaker's initial placement with regular courseware usage.

The *correlation coefficient* determined from this analysis range from 0.65 to 0.83, showing a strong relationship between the SuccessMaker courseware levels and AzMERIT test scores. Courseware target levels were calculated at the 60% and 80% confidence levels to provide flexibility. The more stringent 80% target level provides greater assurance of desired test outcomes, but may require more time on the courseware than is available. Therefore, we have also provided a 60% target level to help educators maximize outcomes under tighter resource constraints. Target levels are to be used for implementation planning only and not for student evaluation.

2018-2019 Recommended Courseware Target Levels

Table 5
2018-2019 Math Courseware Target Levels

Math	Correlation Coefficient	AzMERIT Partially Proficient		AzMERIT Proficient	
		60% Target	80% Target	60% Target	80% Target
Grade 3	0.82	2.7	3.1	3.5	3.9
Grade 4	0.81	3.6	4.0	4.5	5.0
Grade 5	0.83	4.2	4.6	5.2	5.7
Grade 6	**			6.5	7.0

Table 6
2018-2019 Reading Courseware Target Levels

Reading	Correlation Coefficient	AzMERIT Partially Proficient		AzMERIT Proficient	
		60% Target	80% Target	60% Target	80% Target
Grade 3	0.65	3.8	4.3	4.6	4.9
Grade 4	0.70	4.0	4.6	4.7	5.1
Grade 5	0.73	4.1	4.7	5.2	5.8
Grade 6	0.66	4.7	5.4	6.0	6.7

** : Not enough student usage to generate district targets. 2017 State targets reprinted.

Addendum: OnTarget Review Results (2017 AzMERIT State Targets)

In order to evaluate the reliability of the courseware target levels utilized in the Somerton School District as accurate indicators of AzMERIT performance, we first calculated the number of students who reached or exceeded the courseware target levels at roughly the same time the test was administered. We then calculated the percentage of those students who scored Proficient or higher on the AzMERIT for both the SuccessMaker 60% and 80% confidence level targets.

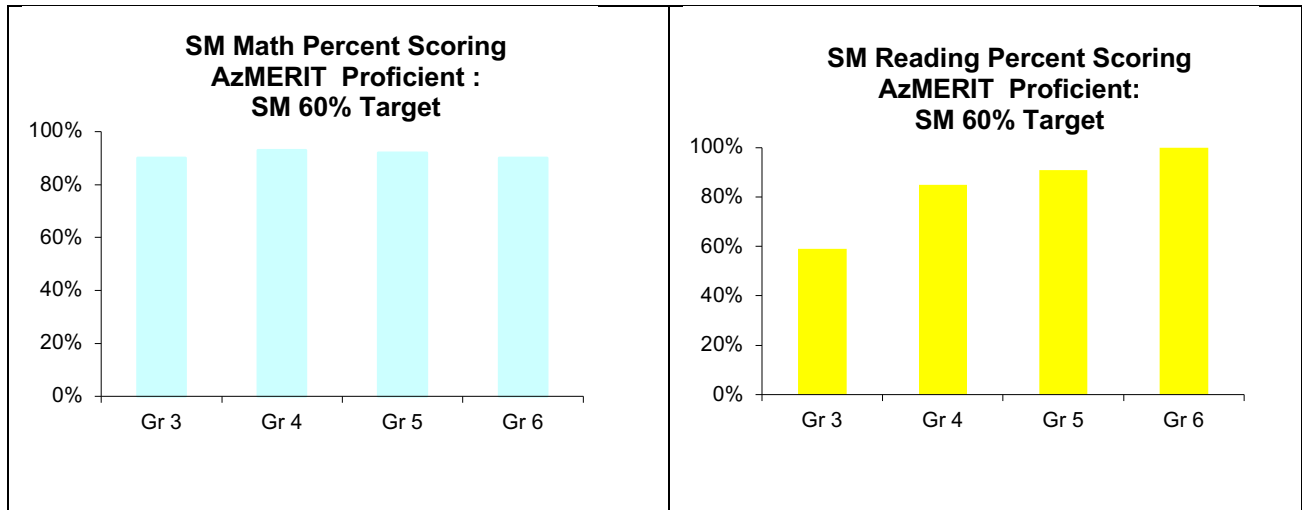


Figure 2. AzMERIT Level 2 Results-60% Target for Students Reaching SuccessMaker Courseware Target Levels

Table 1

AzMERIT Proficient Results – 60% Target

	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading
Grade 3	3.8	81	90%	4.0	66	59%
Grade 4	4.7	84	93%	4.7	53	85%
Grade 5	5.5	114	92%	5.6	46	91%
Grade 6	6.5	10	90%	6.6	5	100%

OnTarget Review Results, *continued*

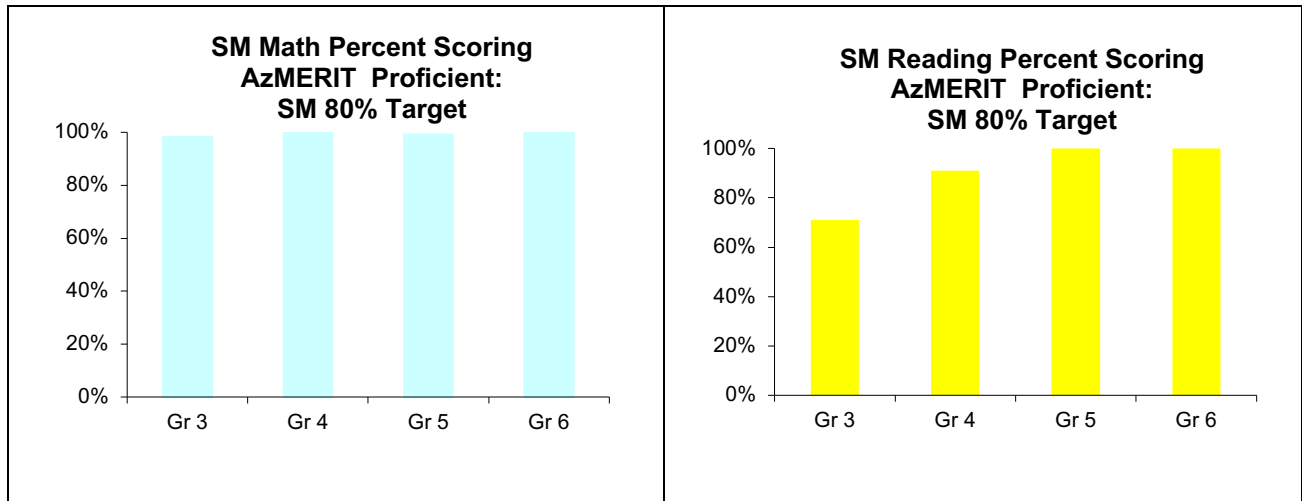


Figure 2. AzMERIT Level 3 Results-60% for Students Reaching SuccessMaker Courseware Target Levels

**Table 2.
AzMERIT Proficient Results – 80% Target**

	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading
Grade 3	4.1	52	98%	4.5	17	71%
Grade 4	5.0	53	100%	5.3	22	91%
Grade 5	6.0	85	99%	6.2	17	100%
Grade 6	7.0	2	100%	7.2	1	100%

Addendum: Desert Sonora Elementary School

The information presented in this OnTarget Review addresses the performance of students in SuccessMaker and on the AzMERIT across the schools in the district for which we had matching data. It can be helpful, however, for school-level administrators to view this information for the students in each particular school in order to support building-level implementation recommendations.

Number of Students Reaching SuccessMaker Courseware Target Levels and Percentage of those Students Scoring Proficient or Higher on the AzMERIT for both SuccessMaker 60% and 80% targets

MATH: 60% Target

MATH: 80%Target

Grade	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math
Grade 3	3.8	13	92%	4.1	5	100%
Grade 4	4.7	36	89%	5.0	24	100%
Grade 5	5.5	36	89%	6.0	29	97%

READING: 60% Target

READING: 80%Target

Grade	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading
Grade 3	4.0	4	50%	4.5	0	--
Grade 4	4.7	26	73%	5.3	11	82%
Grade 5	5.6	15	87%	6.2	6	100%

Addendum: Orange Grove Elementary School

The information presented in this OnTarget Review addresses the performance of students in SuccessMaker and on the AzMERIT across the schools in the district for which we had matching data. It can be helpful, however, for school-level administrators to view this information for the students in each particular school in order to support building-level implementation recommendations.

Number of Students Reaching SuccessMaker Courseware Target Levels and Percentage of those Students Scoring Proficient or Higher on the AzMERIT for both SuccessMaker 60% and 80% targets

MATH: 60% Target

MATH: 80%Target

Grade	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math
Grade 3	3.8	10	90%	4.1	6	100%
Grade 4	4.7	25	96%	5.0	17	100%
Grade 5	5.5	19	89%	6.0	12	100%

READING: 60% Target

READING: 80%Target

Grade	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading
Grade 3	4.0	17	29%	4.5	4	25%
Grade 4	4.7	11	100%	5.3	5	100%
Grade 5	5.6	1	100%	6.2	0	--

Addendum: Somerton Middle School

The information presented in this OnTarget Review addresses the performance of students in SuccessMaker and on the AzMERIT across the schools in the district for which we had matching data. It can be helpful, however, for school-level administrators to view this information for the students in each particular school in order to support building-level implementation recommendations.

Number of Students Reaching SuccessMaker Courseware Target Levels and Percentage of those Students Scoring Proficient or Higher on the AzMERIT for both SuccessMaker 60% and 80% targets

MATH: 60% Target

MATH: 80%Target

Grade	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math
Grade 6	6.5	10	90%	7.0	2	100%

READING: 60% Target

READING: 80%Target

Grade	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading
Grade 6	6.6	5	100%	7.2	1	100%

Addendum: Tierra Del Sol Elementary School

The information presented in this OnTarget Review addresses the performance of students in SuccessMaker and on the AzMERIT across the schools in the district for which we had matching data. It can be helpful, however, for school-level administrators to view this information for the students in each particular school in order to support building-level implementation recommendations.

Number of Students Reaching SuccessMaker Courseware Target Levels and Percentage of those Students Scoring Proficient or Higher on the AzMERIT for both SuccessMaker 60% and 80% targets

MATH: 60% Target

MATH: 80%Target

Grade	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math
Grade 3	3.8	41	85%	4.1	27	96%
Grade 4	4.7	17	94%	5.0	8	100%
Grade 5	5.5	54	94%	6.0	42	100%
Grade 6	6.5			7.0		

READING: 60% Target

READING: 80%Target

Grade	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading
Grade 3	4.0	37	65%	4.5	10	80%
Grade 4	4.7	11	100%	5.3	4	100%
Grade 5	5.6	26	92%	6.2	9	100%
Grade 6	6.6			7.2		

Addendum: Valle Del Encanto Learning Center

The information presented in this OnTarget Review addresses the performance of students in SuccessMaker and on the AzMERIT across the schools in the district for which we had matching data. It can be helpful, however, for school-level administrators to view this information for the students in each particular school in order to support building-level implementation recommendations.

Number of Students Reaching SuccessMaker Courseware Target Levels and Percentage of those Students Scoring Proficient or Higher on the AzMERIT for both SuccessMaker 60% and 80% targets

MATH: 60% Target

MATH: 80%Target

Grade	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math	AzMERIT Proficient SM Math Target	No. Students at or Above SM Math Target	% Students Scoring AzMERIT Proficient or Higher in Math
Grade 3	3.8	17	100%	4.1	14	100%
Grade 4	4.7	6	100%	5.0	4	100%
Grade 5	5.5	5	100%	6.0	2	100%
Grade 6	6.5			7.0		

READING: 60% Target

READING: 80%Target

Grade	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading	AzMerit Proficient SM Reading Target	No. Students at or Above SM Reading Target	% Students Scoring AzMERIT Proficient or higher in Reading
Grade 3	4.0	8	100%	4.5	3	100%
Grade 4	4.7	5	80%	5.3	2	100%
Grade 5	5.6	4	100%	6.2	2	100%
Grade 6	6.6			7.2		