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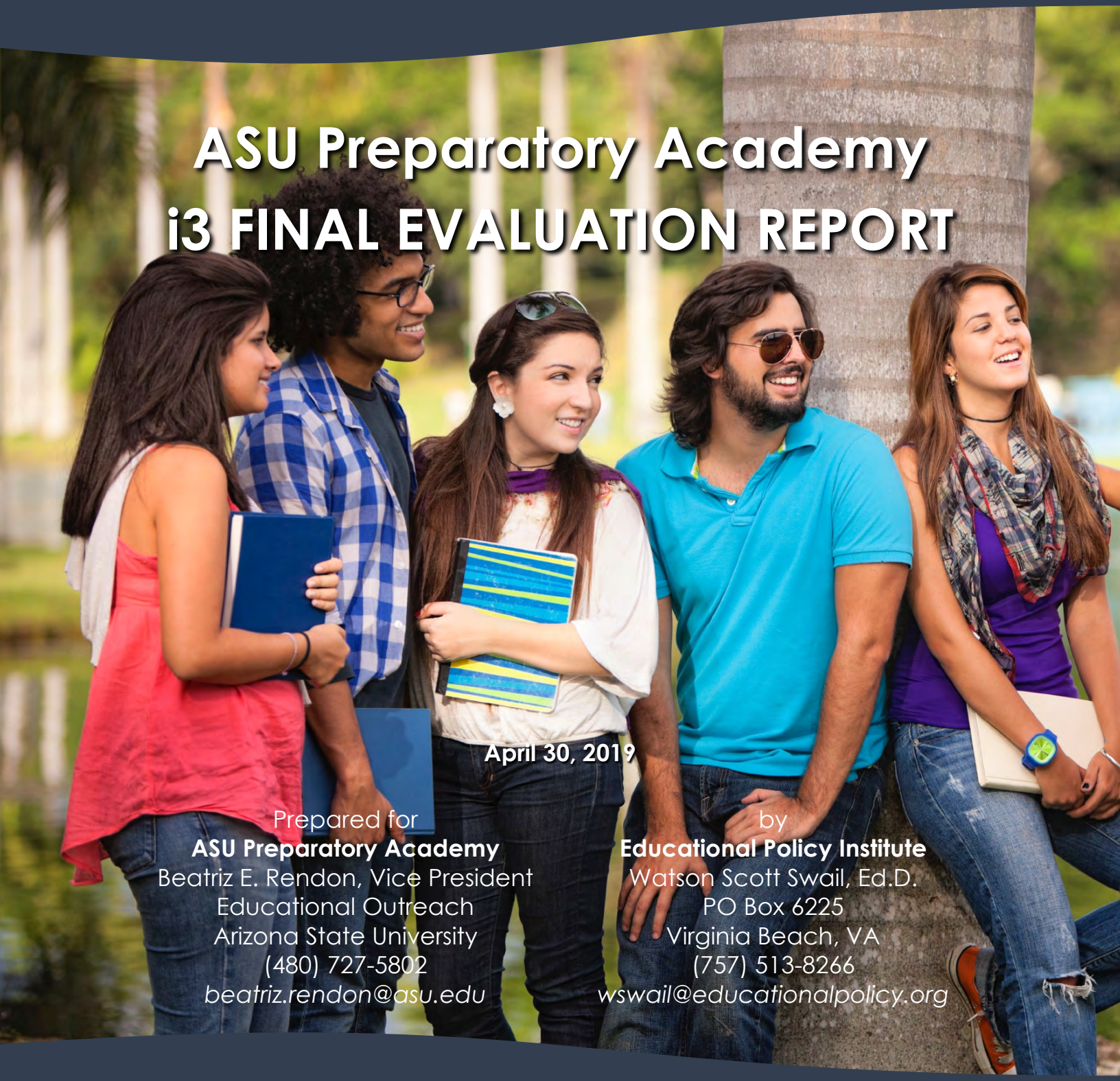

ASU Preparatory Academy
i3 FINAL EVALUATION REPORT

April 30, 2019

Prepared for
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Executive Summary

In 2013, the Arizona State University (ASU) Preparatory Academy (ASU Prep)[1] was awarded an Investing in Innovation (i3) Grant through the U.S. Department of Education.[2] The district applied with an ambitious grant designed to innovate programming for a total of six schools: two elementary (one Kindergarten through grade 5; one Kindergarten through grade 6), two middle (one grades 6 through 8; one grades 7 through 8), and two high schools (grades 9 through 12). In 2014, ASU Prep contracted with the Educational Policy Institute (EPI) to be the external evaluator of the grant through the programming cycle.

This report represents the final report for this grant and provides data from SY14-15 to SY17-18. Included in this report are the final results for the fidelity of implementation and a descriptive analysis of the impact data. As a requirement of this grant, EPI assesses the level of fidelity achieved by ASU for the five years of the grant. All project data were collected by ASU and provided to EPI for analysis. EPI collected additional comparative data from the Arizona Department of Education.

This report was due to include an exploratory analysis comparing the achievement of the treatment and comparison cohorts using statewide assessment data. However, the Arizona Department of Education refused to release comparison school data. Thus, these comparisions could not be made. Instead, descriptive data on the treatment cohorts are included. Key findings for the final report as noted below.

ANNUAL PERFORMANCE REPORT (APR) RESULTS

The percentage of ASU Prep students in grades 3 and 4 who scored proficient in:

- Reading increased from 45 percent (SY14-15) to 62 percent (SY17-18).
- Mathematics increased from 48 percent (SY14-15) to 60 percent (SY17-18).
- Science remained steady at 66 percent (SY14-15 and SY17-18).

The percentage of ASU Prep students in grades 7 and 8 who scored proficient in:

- Reading increased from 42 percent (SY14-15) to 47 percent (SY17-18).
- Mathematics remained steady at 40 percent (SY14-15 and SY17-18).
- Science increased from 49 percent (SY14-15) to 52 percent (SY17-18).

[1] Formerly University Public Schools, Inc.
[2] see http://www2.ed.gov/programs/innovation/index.html.

In addition:

- ASU Prep schools achieved a 98 percent graduation rate compared to the Maricopa county rate of 78 percent and a state rate of 78 percent in SY16-17 (SY17-18 were not available at the time of this reporting).
- ASU Prep students increased in college readiness as measured by the ACT College Readiness Benchmark assessment from 43 percent (SY14-15) to 46 percent (SY17-18).
- ASU Prep achieved a 99 percent post-secondary enrollment rate in SY17-18.

Exhibit 1. Change in APR Data from SY14-15 to SY17-18

APR Data	Decrease	Same	Increase
G3 and 4 Reading			✓
G3 and 4 Mathematics			✓
G3 and 4 Science		✓	
G7 and 8 Reading			✓
G7 and 8 Mathematics		✓	
G7 and 8 Science			✓
Graduation Rates			✓
ACT College Readiness			✓
Post-Secondary Enrollment			✓

FIDELITY OF IMPLEMENTATION

As shown in **Exhibit 2** below, ASU Prep met the threshold set by EPI for the Fidelity of Implementation assessment. These are the final results for this grant.

Exhibit 2. Fidelity of Implementation Final Results

Key Components	Activities and Inputs	Not Met	Met
Professional Development	Staff Development		✓
Instruction	K-12 STEM Focus		✓
	Learning Lab/STEM Exploratory		✓
	Project Based Learning		✓
	Technology Based Learning Management System	✓	
	Hybrid Virtual and Full Virtual Learning Opportunities		✓
	Educational Technology Devices		✓
Family Engagement	Family Engagement Opportunities	NA	
	FOI Assessment Final Results		✓

Introduction

THE ARIZONA STATE UNIVERSITY PREPARATORY ACADEMY I3 PROJECT

The U.S. Department of Education (ED) awards funding under the Investment in Innovation (i3) program as a development grant to explore the effectiveness of a data-driven decision making process that incorporates information technology and specific content-focused interventions (i.e., reading, mathematics, and science) in grades PK-12. Arizona State University Preparatory Academy (ASU Prep) designed Gathering, Reflecting, Owning our Work (GROW) as a five year project to positively influence the academic gains of high poverty, largely Hispanic, student populations in and around Phoenix, Arizona.[3] ASU Prep has identified two elementary schools, two middle schools, and two high schools to be evaluated for the duration of this grant. **Exhibit 3** notes these six schools.[4]

Exhibit 3. Treatment Schools by Name and Grade Levels

Treatment Schools	School ID	Grades
Phoenix Elementary School	90271	K-5
Polytechnic Elementary School	91308	K-6
Phoenix Middle School	92326	6-8
Polytechnic Middle School	91323	7-8
Phoenix High School	91304	9-12
Polytechnic High School	91306	9-12

Project Goals

GROW provides personalized attention in a university-embedded academic program to prepare students for post-secondary success. The guiding objectives of the project are to:

1. Close the achievement gap for low socioeconomic students
2. Improve student achievement in math
3. Improve student achievement in reading
4. Improve student achievement in science
5. Achieve a graduation rate higher than state averages
6. Increase placement of students in STEM-related college majors
7. Increase collage and career readiness based on the ACT College Readiness Benchmarks
8. Increase family engagement in student learning
9. Increase teacher knowledge in integrating technology into core content

[3] The original grant application notes a partnership between University Public Schools, Inc. (UPSI) and Arizona State University (ASU). By approval of ED, the name was changed to Arizona State University Preparatory Academy.

[4] ASU Preparatory Academy's academic year begins in late July and ends in late May of the following year.

Theory of Change

Based upon a four-year theory of change, this project includes three primary components—professional development, instruction, and family engagement. The six short-term outcomes (i.e., increased teacher knowledge; STEM immersion; create a personalized learning environment; create a ubiquitous technology environment; increase family engagement; and connect families and schools) lead to the three long-term outcomes of improving student achievement in mathematics, reading, and science. The theory of change model is illustrated in **Exhibit 4** below.

Exhibit 4. GROW Theory of Change Logic Model

<table>
<tr><th colspan="5">ASU Preparatory Academy- GROW i3
THEORY OF CHANGE LOGIC MODEL</th></tr>
<tr><th>KEY COMPONENTS
WITH
ACTIVITIES AND INPUTS</th><th></th><th>SHORT-TERM OUTCOMES</th><th></th><th>LONG-TERM OUTCOMES</th></tr>
<tr><td>PROFESSIONAL DEVELOPMENT</td><td></td><td></td><td rowspan="10"></td><td></td></tr>
<tr><td><u>Teacher Training</u>
• Teacher "Cluster" training 90 minutes/ per week (ES, MS, and HS)</td><td>→</td><td>Increased teacher knowledge in integrating technology into core content</td><td rowspan="2"></td></tr>
<tr><td>INSTRUCTION</td><td></td><td></td><td rowspan="9">Improved student achievement in math</td></tr>
<tr><td><u>K-12 STEM Focus</u>
• STEM focused instruction and lab experiences (Grades K-6)
• Students design teaching models to share with younger students and their families (Grades 7-8)
• Students utilize ASU Science and Technology labs to support hands-on learning (Grades 9-12)</td><td>→</td><td rowspan="2">STEM immersion (Grades K-12)</td></tr>
<tr><td><u>Learning Lab/STEM Exploratory</u>
• Learning Lab 60 minutes/day (Grades K-12)
• STEM Exploratory Class 90 minutes/daily (Polytechnic Middle School Grades 7-8)</td><td></td><td rowspan="7">Improved student achievement in reading</td></tr>
<tr><td><u>Project Based Learning</u>
• Integrate STEM Habits of Mind in the annual Summative Project for all students (Grades K-8)
• Capstone Project (Grades 9-12)</td><td>↗</td><td rowspan="3">Create a personalized learning environment</td></tr>
<tr><td><u>Technology-Based Learning Management System</u>
• Learning Management System (LMS) linked to students (Grades K-12) unique student portfolio (Grades K-8 utilizes the Cambridge International Education Curriculum; Grades 9-12 uses the Board Examination System)</td><td>→</td></tr>
<tr><td><u>Hybrid Virtual and Full Virtual Learning Opportunities</u>
• All students will have continuous access to digital learning opportunities (Grades K-12)

<u>Educational Technology Devices</u>
• All students are provided with a portable educational technology device (Grades K-12)</td><td>→</td><td>Create a ubiquitous technology environment campus-wide</td><td rowspan="4">Improved student achievement in science</td></tr>
<tr><td>FAMILY ENGAGEMENT</td><td></td><td></td><td></td></tr>
<tr><td rowspan="2"><u>Family Engagement Opportunities</u>
• Families participate in the 10-week program offered
• 30 volunteer hours/ per year on their child's campus (Grades K-12)
• Technology closes the communication gap between parents and schools</td><td>→</td><td>Increased family engagement in student learning</td><td rowspan="2">↗</td><td></td></tr>
<tr><td>→</td><td>Connects families and schools</td><td></td></tr>
</table>

SCOPE OF THE EVALUATION

The evaluation of the ASU Prep i3 Project entails assessment of the progress on all project goals, including annual assessment of progress on all project objectives as reported to ED through Annual Performance Review (APR), a Fidelity of Implementation Evaluation, the National Impact Evaluation.

As shown in **Exhibit 5** below, APR data are collected and reported for each year of the grant inclusive of the Year 4 (SY17-18). The Option Year 5 (SY18-19) was not awarded. Fidelity of Implementation was evaluated during the first two years of the grant and this report provides impact data for the grant.

The first report (Day 1 of SY14-15), EPI included baseline APR data and baseline impact evaluation data. This report (Year 4, SY17-18), includes Fidelity of Implementation and impact data.

Exhibit 5. Evaluation Summary

Evaluation Year and School Year (SY)	Day 1 of SY14-15	Year 1 Spring SY14-15	Year 2 Spring SY15-16	Year 3 Spring SY16-17	Year 4 Spring SY17-18
Annual Performance Review	✓	✓	✓	✓	✓
Fidelity of Implementation Evaluation	—	✓	✓	—	✓
Impact Evaluation	Baseline	—	—	—	Confirmatory

Methods

A mixed-methods evaluation design was utilized for this evaluation. The aim of the assessment is to detail both program implementation and impacts. A description of each form of methodology used is detailed in the corresponding sections of the report.

THIS REPORT

The evaluation summarizing key components of the ASU Prep i3 grant project performance from baseline to the final year, 2017-18. These key components include progress on all performance measures listed above and implementation fidelity. This report includes a final review of student academic outcomes as well as review of the fidelity of implementation.

Academic Data Analysis

This section details the student outcomes measured over the five years of the grant performance period for both annual reporting (internal to ASU Prep School District and external to the U.S. Department of Education) and for the National Impact Evaluation. This section addresses the primary goals related to student outcomes and is divided accordingly. The six primary goals related to student outcomes are:

1. Increase the number of students who perform reading at grade level
2. Increase the number of students who perform mathematics at grade level
3. Increase the number of students who perform science at grade level
4. Achieve a graduation rate higher than state averages
5. Increase student college and career readiness
6. Students enroll in a post-secondary program after graduation

In the SY13-14, the state of Arizona utilized AIMS (Arizona's Instrument to Measure Standards) as its assessment for public school students. In SY14-15 (Year 1), the state of Arizona changed the statewide assessment for public school students to the AzMERIT exam for mathematics and reading (i.e. English language arts). AIMS continued to be used as the assessment for science (see **Exhibit 6**). The purpose and content of these two tests are very different. AIMS was designed and intended to serve as an exit exam for high school graduation and measured the state standards before 2010. AzMERIT, in contrast, was designed to measure college-readiness and is not being used as a high school exit exam because the content is more difficult.[5] These differences in content and purpose are illustrated in the decline in test scores across the state of Arizona. According to the online publication Arizona Central, part of the USA Today network, most students failed the inaugural AzMERIT exam.[6]

Exhibit 6. State of Arizona Assessment by Year and Subject

Evaluation Year and School Year (SY)	Day 1 of SY14-15	Year 1 Spring SY14-15	Year 2 Spring SY15-16	Year 3 Spring SY16-17	Year 4 Spring SY17-18
Mathematics	AIMS	AzMERIT	AzMERIT	AzMERIT	AzMERIT
Reading	AIMS	AzMERIT	AzMERIT	AzMERIT	AzMERIT
Science	AIMS	AIMS	AIMS	AIMS	AIMS

In addition to the changes in test content and purpose, AzMERIT also differ from AIMS in its proficiency definitions. AIMS defined proficiency levels as “exceeding,” “meeting,” “approaching,” or “falling far

[5] Arizona Central, Arizona Republic; USA Today Network. Accessed March 17, 2016. http://www.azcentral.com/story/news/local/arizona/education/2015/11/30/azmerit-scores-most-students-failed-inaugural-test/76561998/
[6] Arizona Central, Arizona Republic; USA Today Network. Accessed March 17, 2016. http://www.azcentral.com/story/news/local/arizona/education/2015/11/30/azmerit-scores-most-students-failed-inaugural-test/76561998/

below" proficiency levels. In AzMERIT, students cannot "exceed" proficiency standards but instead, they are categorized as "highly proficient." See **Exhibit 7** below for the definitions and categories for AzMERIT as compared to AIMS. For ASU Prep's evaluation, students who scored a "4" or a "3" in reading, mathematics, and science were categorized as proficient. Conversely, students who scored a "2" or a "1" were categorized as not proficient.

Exhibit 7. Changes in Testing Proficiency Levels

AIMS Proficiency Levels	AzMERIT Proficiency Levels
4= Exceeds proficiency standards (E)	4= Highly proficient
3 =Meets proficiency standards (M)	3= Proficient
2 =Approaching proficiency standards (A)	2= Partially proficient
1 = Falls far below the proficiency standards (FFB)	1= Minimally proficient

Quantitative Data Analysis Methodology

This evaluation utilized the Arizona state assessment AzMERIT for mathematics and reading and AIMS science. [7,8] Because not all grades take the science portion of the test, mathematics is used as a proxy for those grades that do not take the science portion in a given year. Grades 4, 8, and high school take the AIMS science exam. For all other grades, mathematics scores are used as a proxy for science. EPI and ASU Prep recognize the challenges with using a different test and a different subject as a proxy for science. When the grant was first awarded, the State of Arizona used AIMS for all subjects. However, the first year of the grant, the State changed the assessment. There is no evidence to suggest that the State is committed to AzMERIT and will not change assessments again before the conclusion of this grant. EPI will continue to monitor these changes as they arise.

Exhibit 8 shows the grades, state assessment, and academic subjects.

[7] "Students in 3rd through 8th grade will take AzMERIT in English language arts and mathematics at their grade level. In high school, students will take AzMERIT end-of-course tests in English language arts and math. The test will be administered to students enrolled in English classes in 9th through 11th grade, and Algebra I, Geometry, and Algebra II." Source: https://www.expectmorearizona.org/arizona-aims-higher/assessments/faq/

[8] "AIMS Science is a Standards Based Assessment that measures student proficiency of the Arizona Academic Content Standard in Science. It meets federal requirements for student assessment. It is administered in the spring to students in Grades 4, 8, and high school." Source: http://www.azed.gov/assessment/aims-sci/

Exhibit 8. APR Subjects, State Assessments, and Grades

State Assessment and Academic Subject	Grades			
	3	4	7	8
Mathematics AzMERIT	✓	✓	✓	✓
Reading AzMERIT	✓	✓	✓	✓
Science AIMS	AzMERIT mathematics used as proxy for AIMS science	✓	AzMERIT mathematics used as proxy for AIMS science	✓

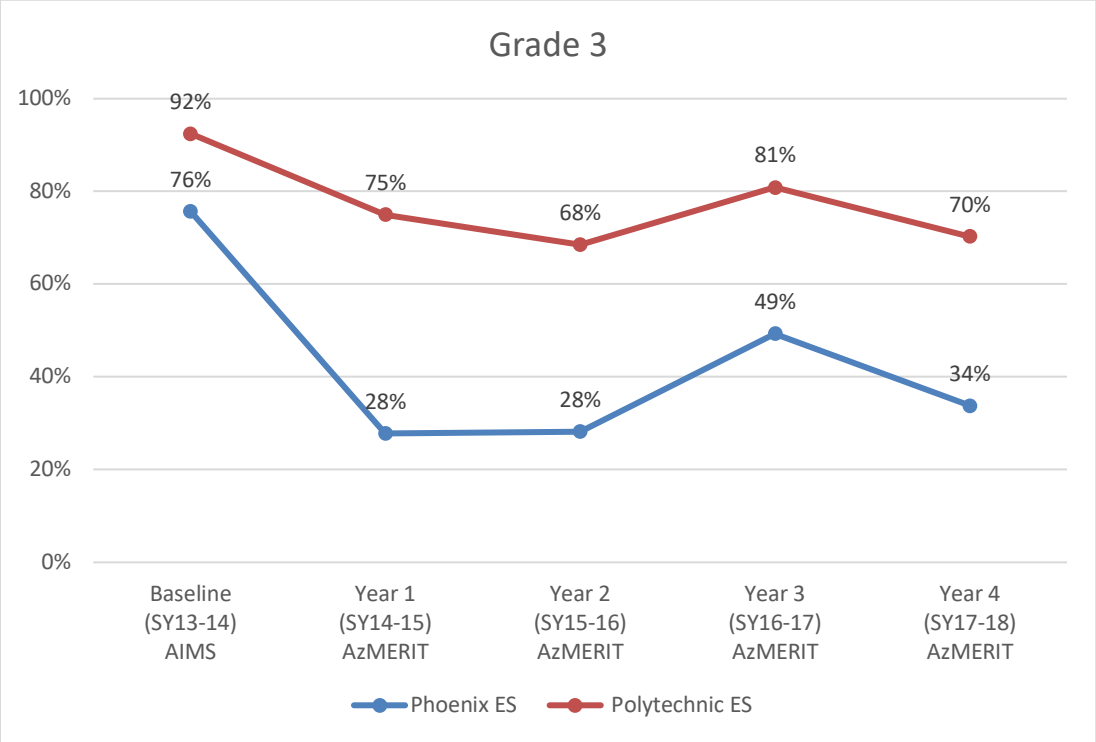
INCREASE THE NUMBER OF STUDENTS WHO PERFORM READING AT GRADE LEVEL

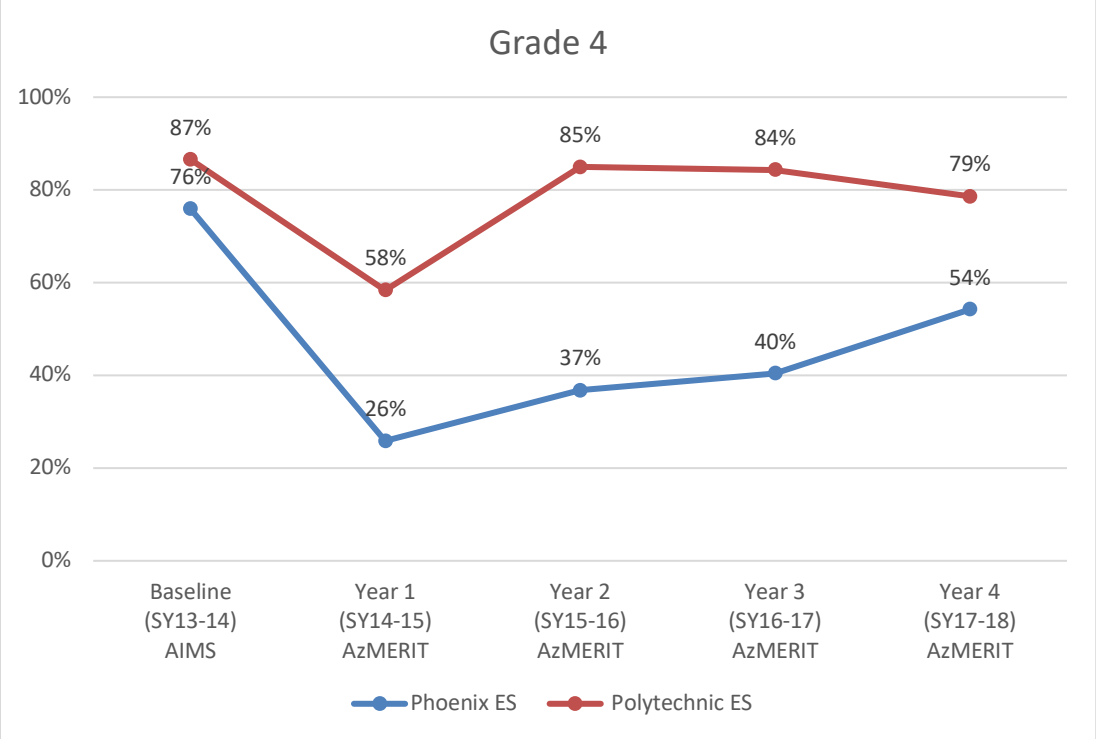
This measure captures the percentage of students in grade 3 and 4 who scored proficient (e.g., a "3" or "4") on the state grade level reading exam. **Exhibit 9** shows how Polytechnic and Phoenix students performed on the reading portion of the state test administered in a given year. Important to remember is that the measures changed from baseline in 2013-14, which used AIMS tests for reading and mathematics to AzMERIT. Thus, the baseline figure is not a trusted number for these two categories.

By the end of the grant period, the percentage of third grade students who scored proficient in reading remained similar. Polytechnic students moved from 75 percent in SY14-15 (Year 1) to 70 percent in Year 4 (SY17-18), while Phoenix students exhibited a slight increase from 28 to 34 percent during the same time period. There was a rise in both schools in Year 3, but the percentage deemed proficient decreased in the final year. Fourth grade students, however, exhibited large increased from Year 1 to Year 4. The percentage of Polytechnic students who were proficient increased from 58 to 79 percent in Year 4, while Phoenix students increased from 26 to 54 percent.

Overall, both schools showed an increase when grades 3 and 4 were combined. The percentage of Polytechnic students who scored proficient in reading increased from 66 percent (SY14-15) to 86 percent (SY17-18). The percentage of Phoenix students who scored proficient in reading increased from 27 percent (SY14-15) to 40 percent (SY17-18). Assessing both schools and grades together, ASU Prep students increased their proficiency in reading from 45 percent (SY14-15) to 62 percent (SY17-18).

Exhibit 9. Grades 3 and 4—Proficient in Reading





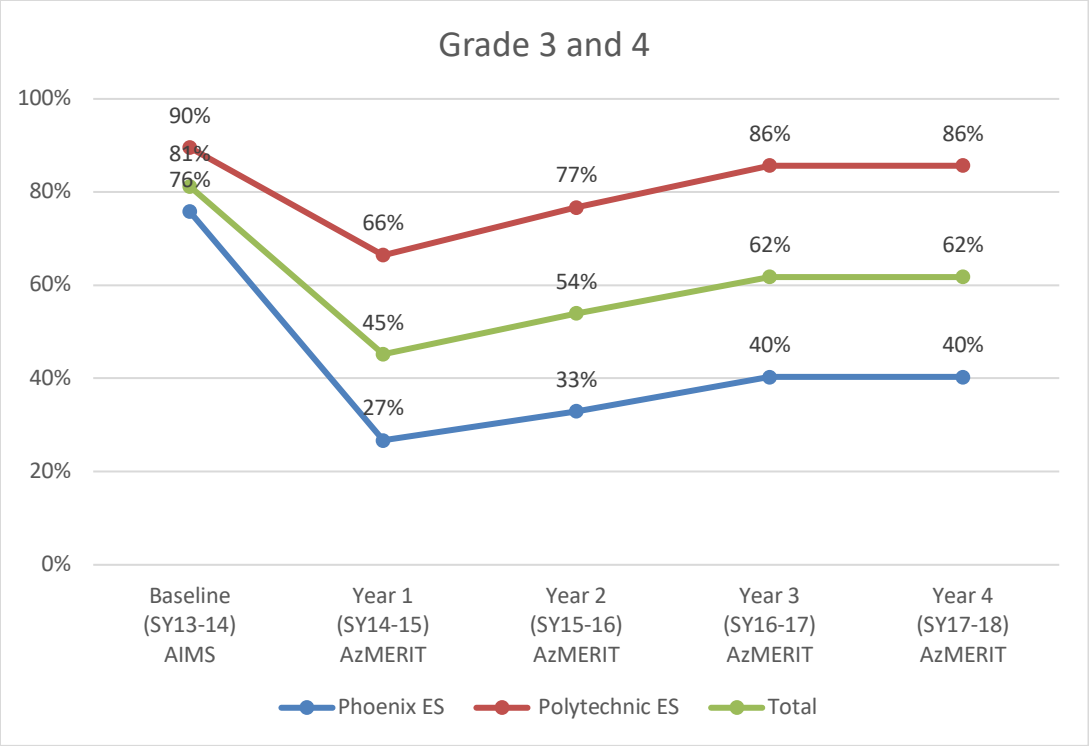
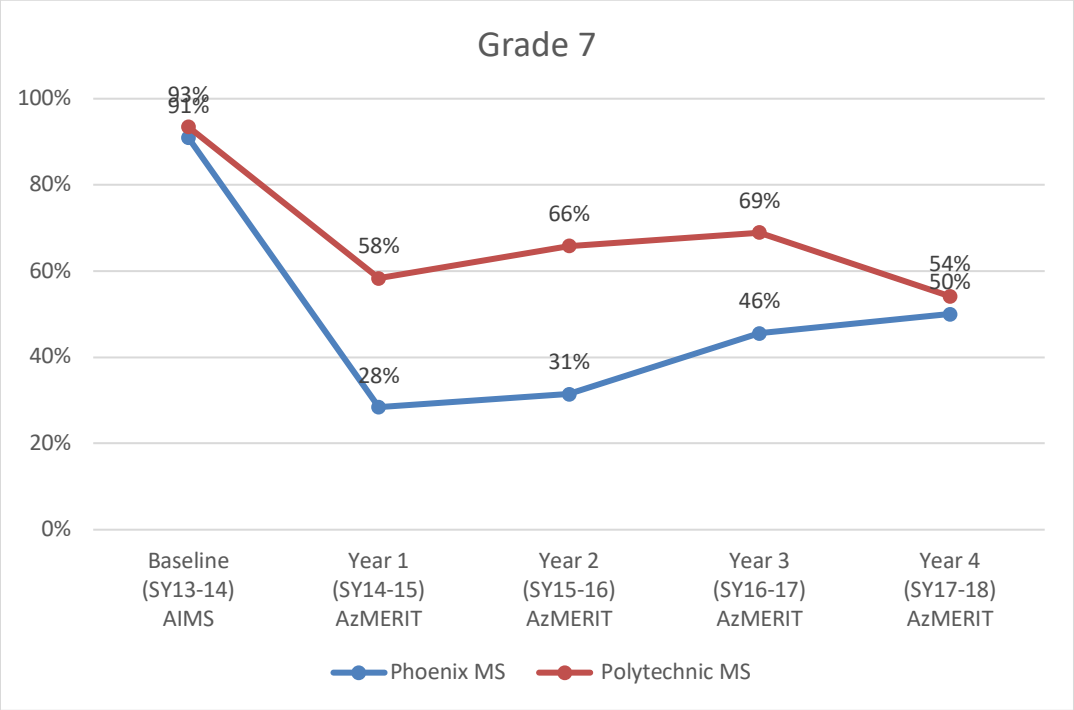
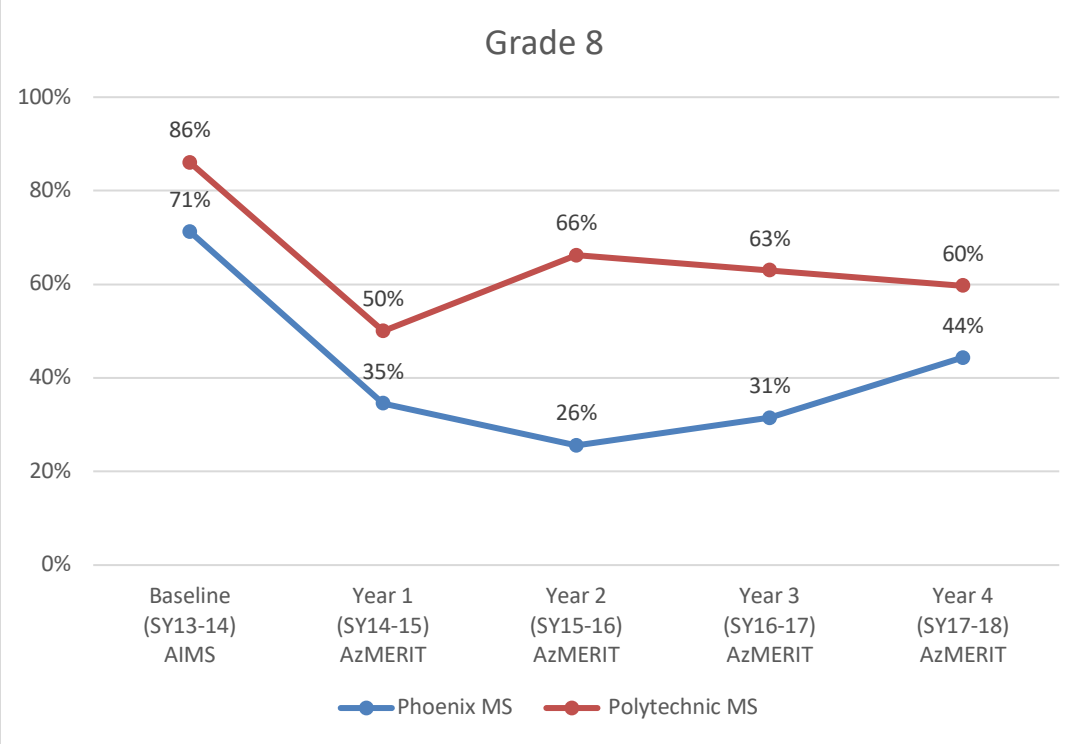


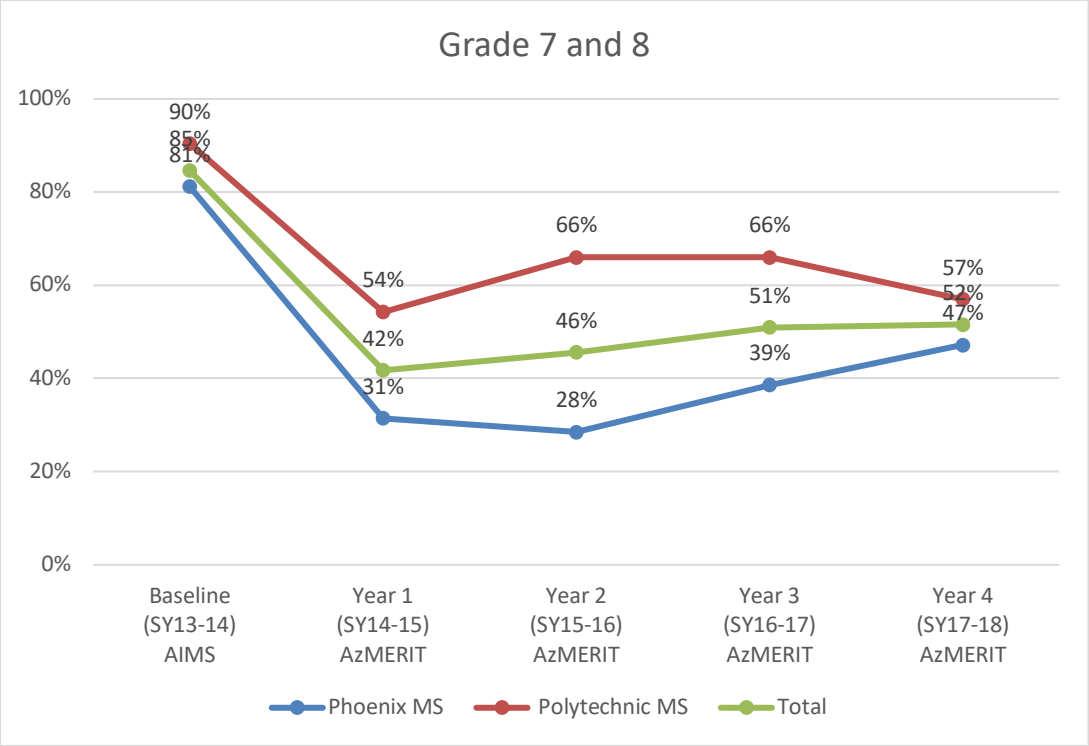
Exhibit 10 details the percentage of 7th and 8th grade students who scored proficient (e.g., a "3" or "4") on the state grade level mathematics exam. Between Year 1 and Year 4, Polytechnic seventh grade students realized a reduction in proficiency from 58 to 54 percent, although the decrease occurred in only the last year of the grant. The percentage of Phoenix students who were proficient in reading increased from 28 percent to 50 percent. In the eighth grade, Polytechnic students increased from 50 percent to 60 percent between Year 1 and year 4, compared to an increase for Phoenix students from 35 to 44 percent.

When the two grades are aggregated, Polytechnic students moved upwards from 54 to 57 percent in the four years and Phoenix students increased from 31 to 47 percent in seventh and eighth grade mathematics. Together, the schools moved upwards from 42 percent in Year 1 to 52 percent in Year 4.

Exhibit 10. Grades 7 and 8—Proficient in Reading





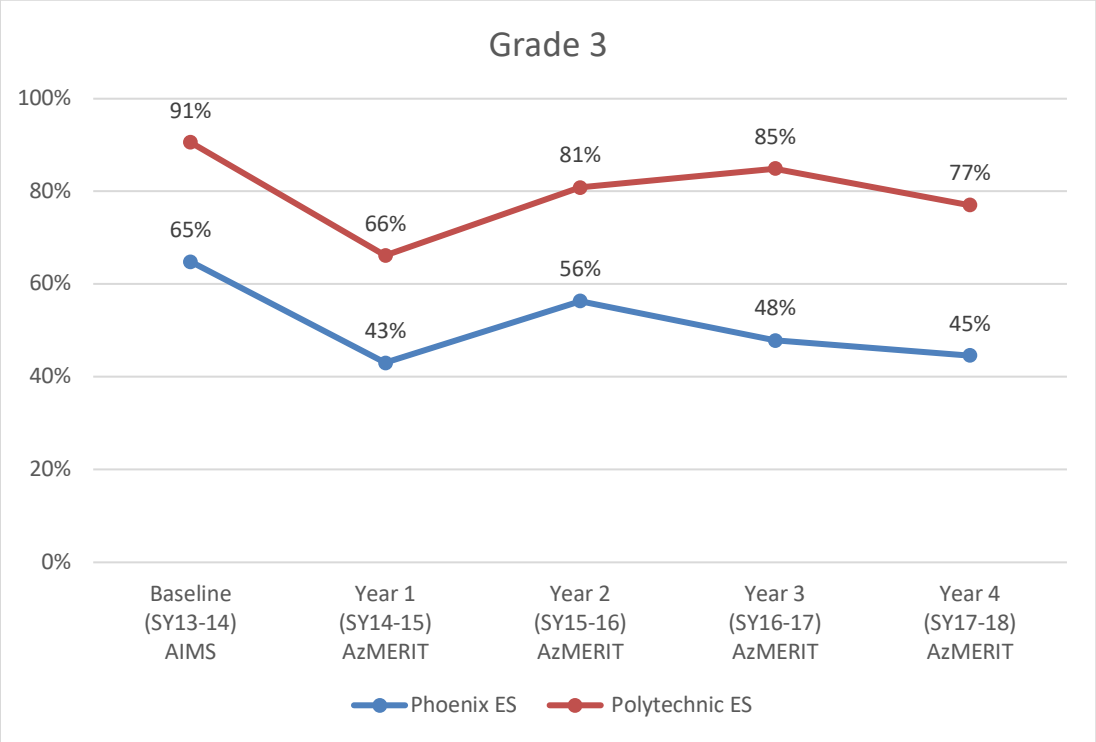


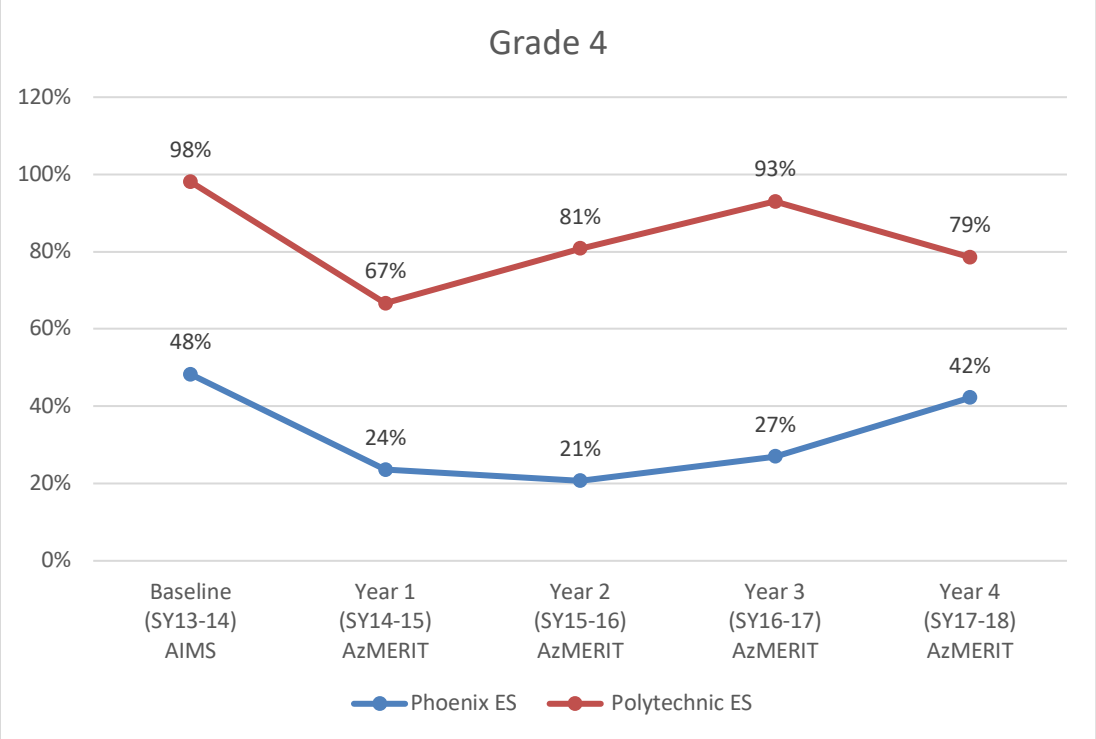
INCREASE THE NUMBER OF STUDENTS WHO PERFORM MATHEMATICS AT GRADE LEVEL

Exhibit 11 details the change over time in students proficient in mathematics for grades 3 and 4 cohorts for the life of the grant. The percentage of third grade students at Polytechnic increased from 66 to 77 percent between Year 1 and Year 4, while Phoenix students increased slightly from 43 to 45 percent. The percentage of fourth grade students at Polytechnic meeting proficiency in mathematics rose from 67 to 79 percent, with a high of 93 percent in Year 3. Phoenix students increased from 24 to 42 percent.

Taking both grades 3 and 4 together, both Polytechnic and Phoenix demonstrated an increase in the percentage of students who scored proficient in mathematics. Polytechnic students rose from 66 to 78 percent, and Phoenix rose from 32 percent to 43 percent. In aggregated form, both schools saw an increase from 48 to 60 percent of students meeting proficiency levels in mathematics between Year 1 and Year 4.

Exhibit 11. Grades 3 and 4—Proficient in Mathematics





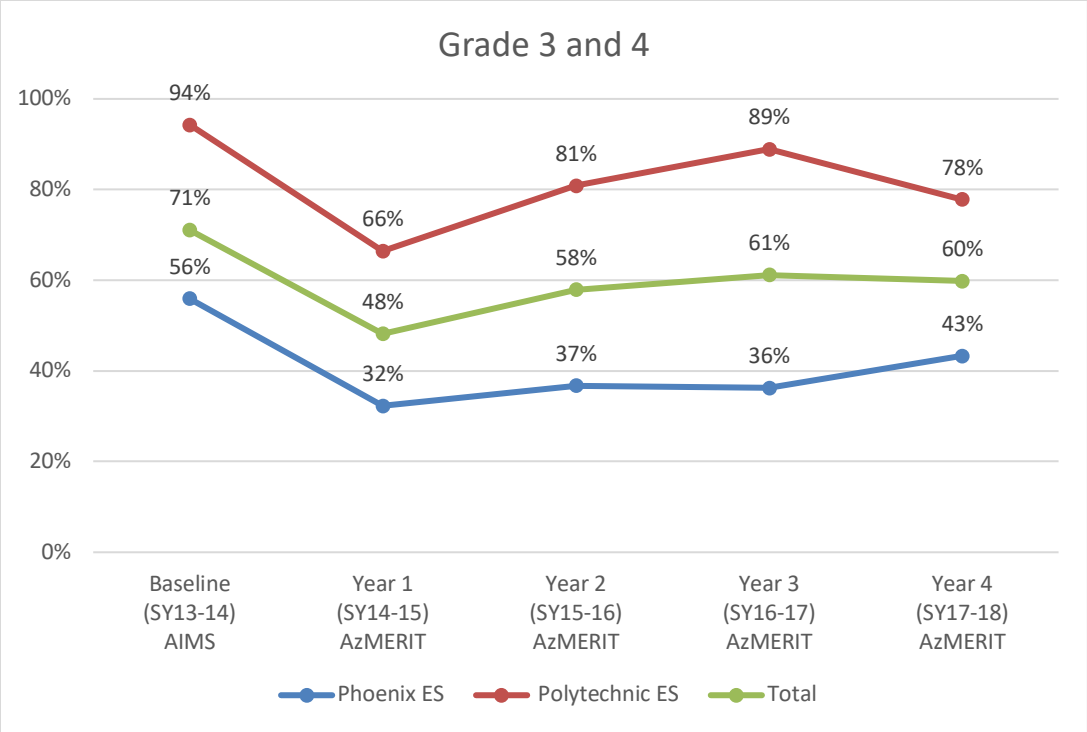
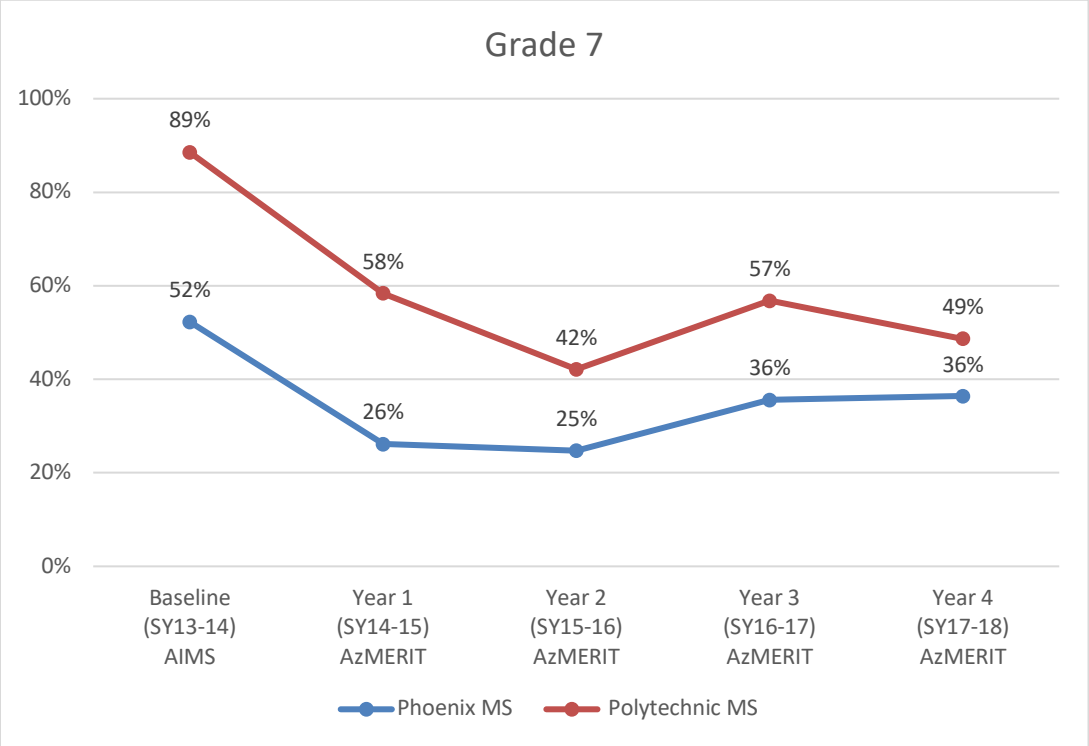
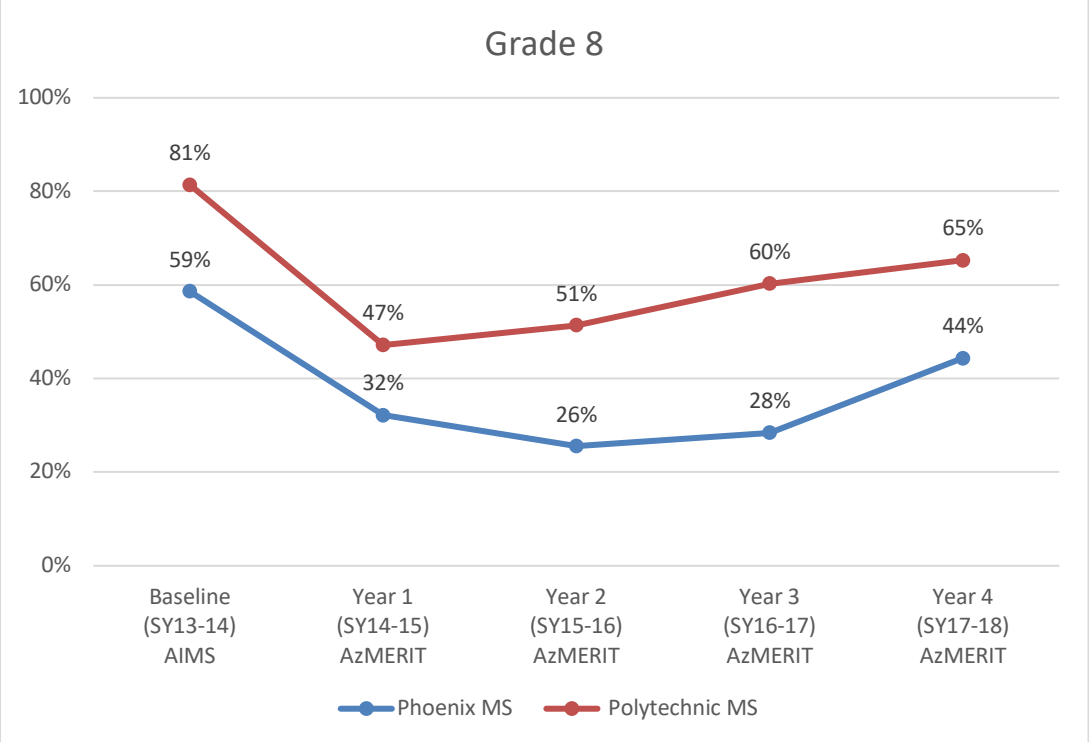


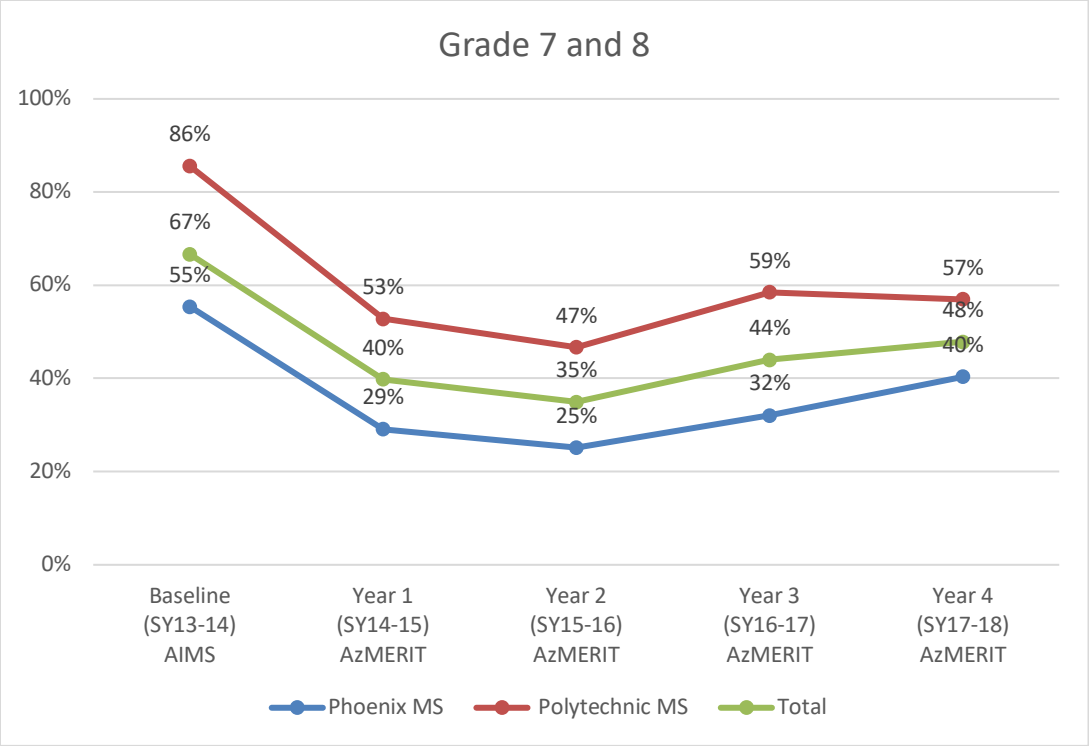
Exhibit 12 details the change over time in students proficient in mathematics for grades 7 and 8 cohorts for the grant. The percentage of seventh grade Polytechnic students who met proficiency levels decreased from 58 to 49 percent between Year 1 and Year 4. At Phoenix the percentage rose from 26 to 36 percent. With respect to 8th grade students, both schools posted increases in proficiencies. The percentage of Eighth grade Polytechnic students meeting proficiency in mathematics increased from 47 to 65 percent, compared to a more modest increase from 32 to 44 percent for Phoenix students.

With grades seven and eight combined, Polytechnic proficiency in mathematics increased modestly from 53 to 57 percent and Phoneix students from 29 to 40 percent. The combined proficiency level for both grades rose from 40 to 48 percent.

Exhibit 12. Grades 7 and 8—Proficient in Mathematics







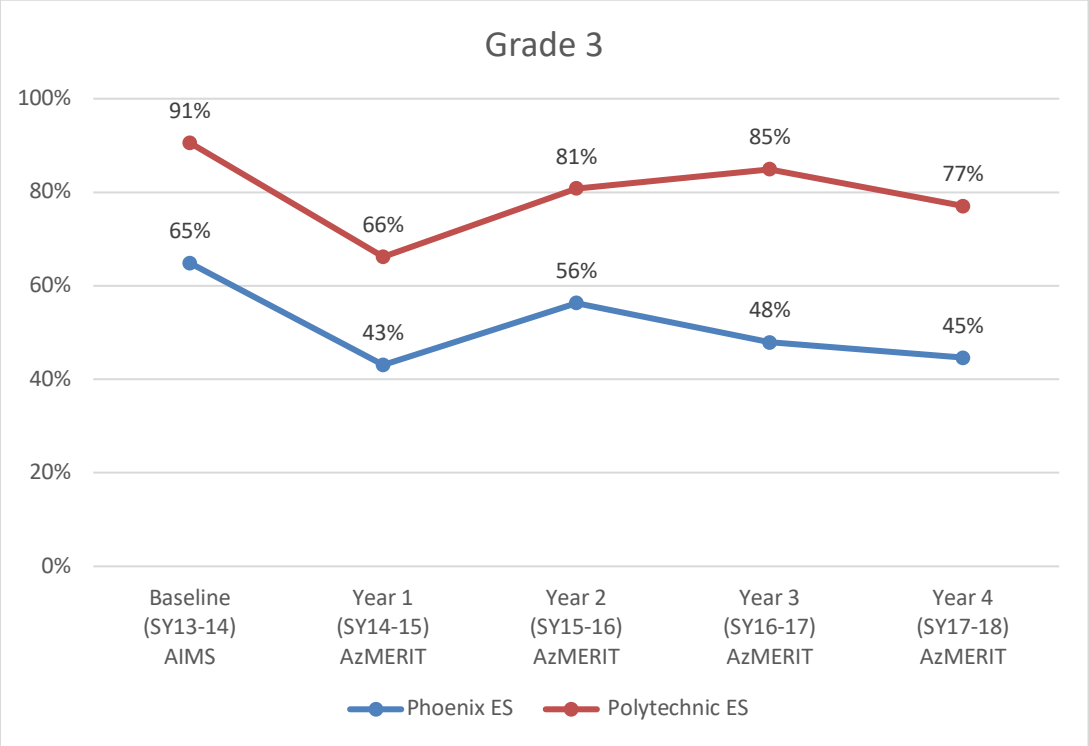
INCREASE THE NUMBER OF STUDENTS WHO PERFORM SCIENCE AT GRADE LEVEL

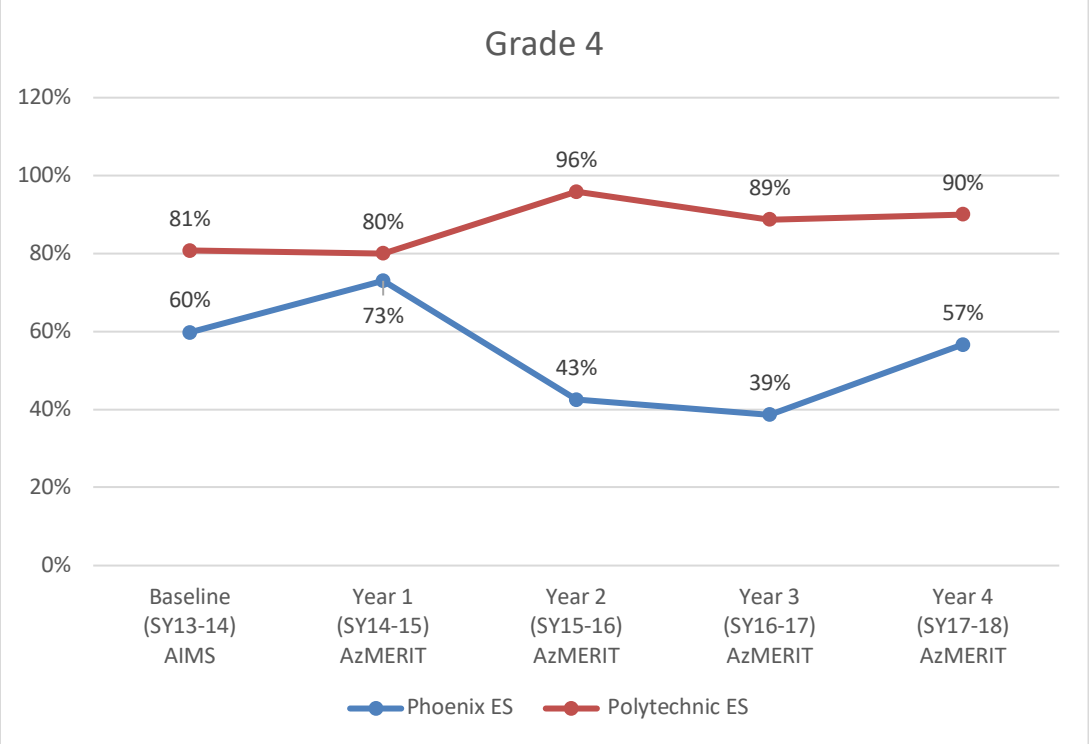
Exhibit 13 details the change over time in students proficient in science for grades 3 and 4 cohorts for the grant. Grades 4, 8, and all of high school take the science portion of the AIMS assessment and not the AzMERIT science assessment. Because grades 3 and 7 do not take the science exam, the AzMERIT mathematics is used as a proxy. Therefore, the charts shown for grades 3 and 7 below are simply the mathematics charts repeated.

Fourth grade students at Phoenix and Polytechnic performed quite differently between Year 1 and Year 4. At Polytechnic, the percentage of students meeting proficiency in science increased by the second year before declining by the fourth year. Polytechnic students started at 80 percent proficiency in science, rose to 96 percent in Year 2, and then fell back to 90 percent by Year 4. Students at Phoenix, however, had a first-year proficiency rate of 73 percent, but declined to 43 percent in Year 2 before rising back to 57 percent in Year 4. Overall, then, Phoenix proficiency rates in science dropped from 73 to 57 percent between Year 1 and Year 4.

Taken together, Polytechnic grades 3 and 4 ended up where it started with a 66 percent science proficiency rate.

Exhibit 13. Grades 3 and 4—Proficient in Science





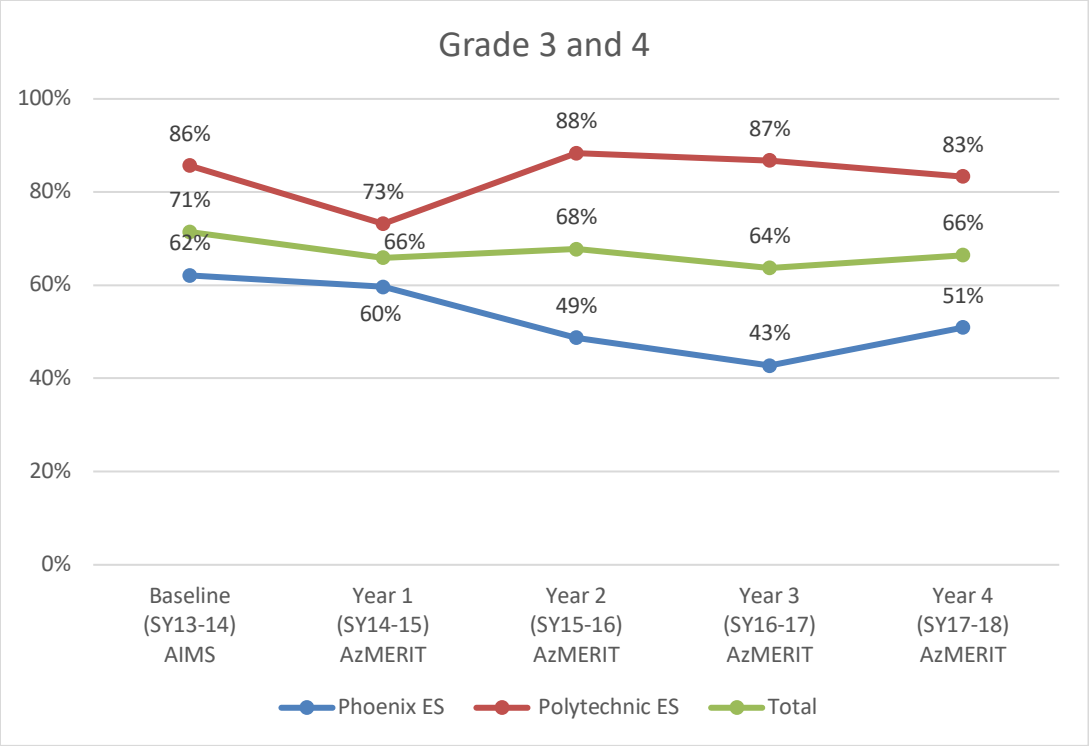
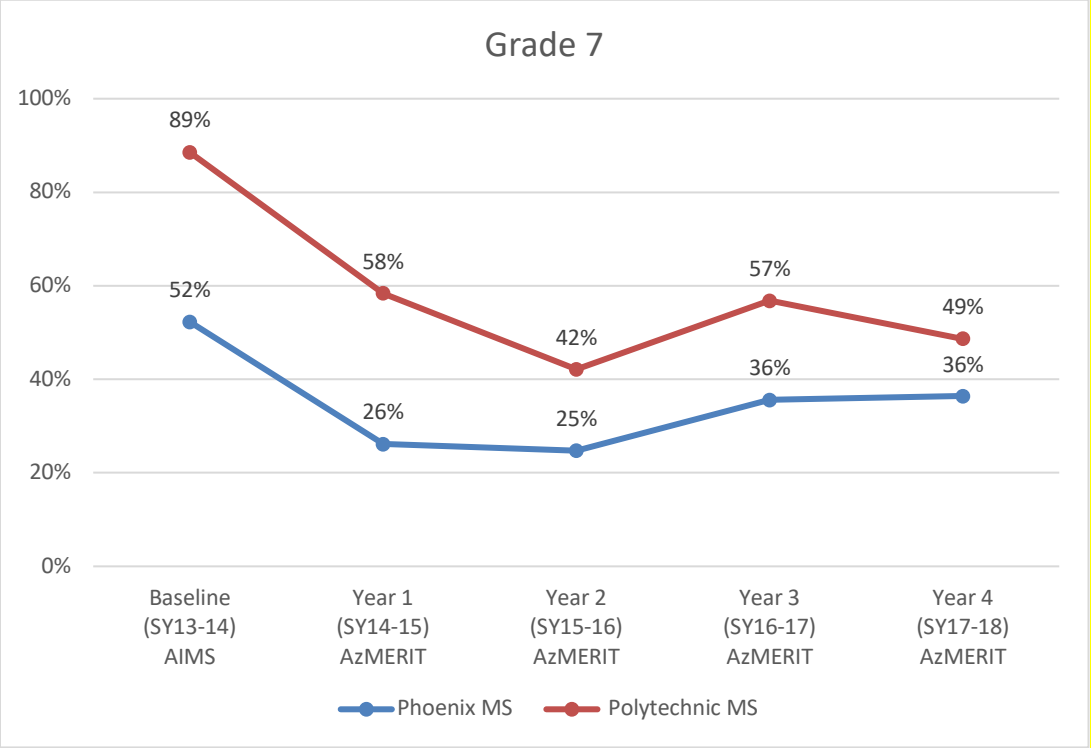


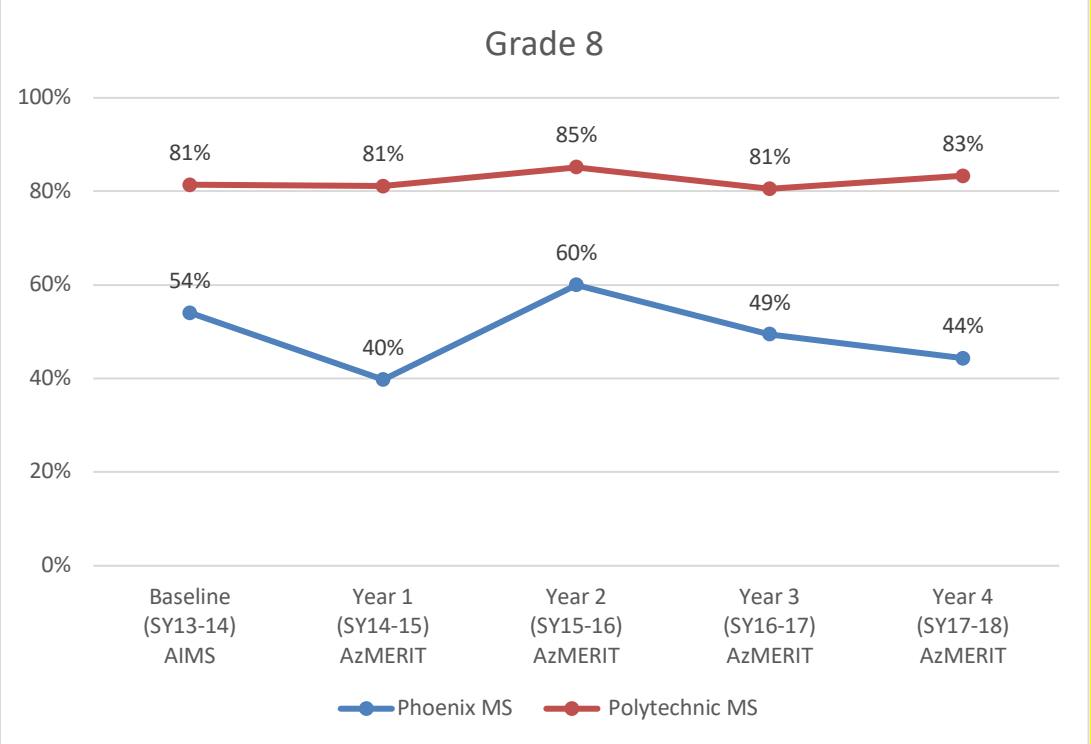
Exhibit 14 details the change over time in students proficient in science for grades 7 and 8 cohorts for the grant. Similarly with grades 3 and 4, grade 7 displays the results for the AzMERIT mathematics exam and grade 8 shows the results for the AIMS science assessment.

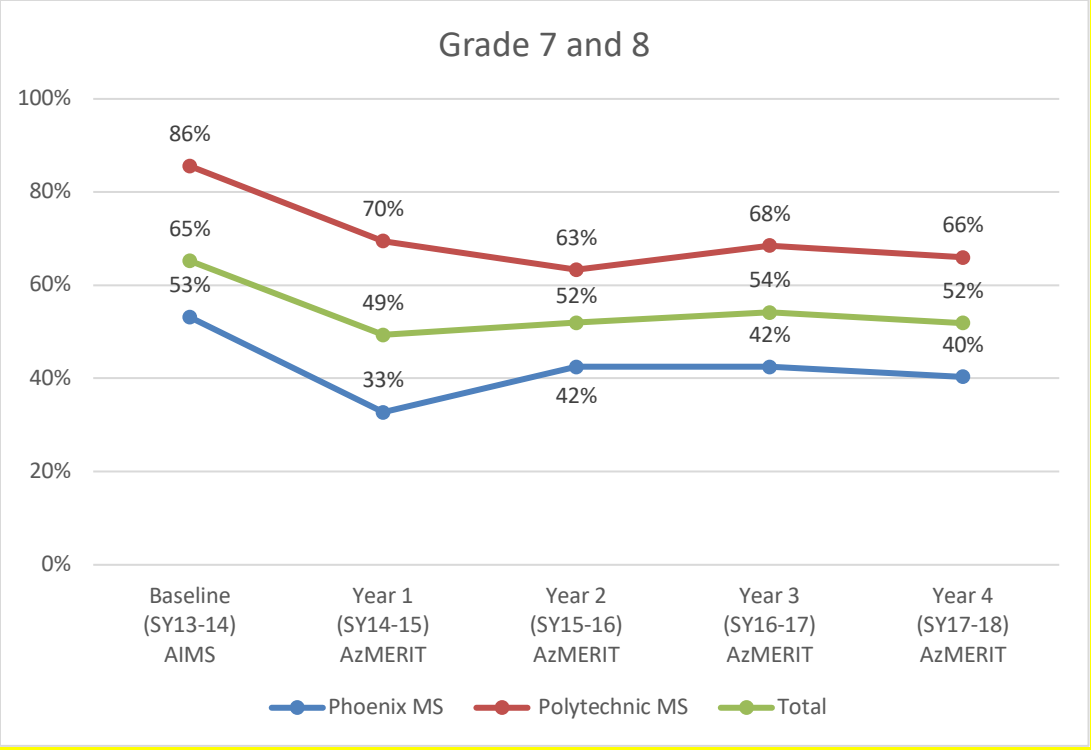
With regard to the science exam, the proficiency rates for Phoenix and Polytechnic eighth grade students remained relatively stable between Year 1 and Year 4. At Polytechnic, the proficiency rating rose two points from 81 to 83 percent and the rate at Phoenix rose from 40 to 44 percent. Phoenix did jump to 60 percent in Year 2, but that increase was not sustained the following year.

Combined, the proficiency rate for seventh and eighth grade Polytechnic students decreased from 70 to 66 percent between Year 1 and Year 4. The Phoenix rates increased from 33 to 40 percent. Aggregated, science proficiency rates from the seventh and eighth grades at both schools increased marginally from 49 to 52 percent.

Exhibit 14. Grades 7 and 8—Proficient in Science





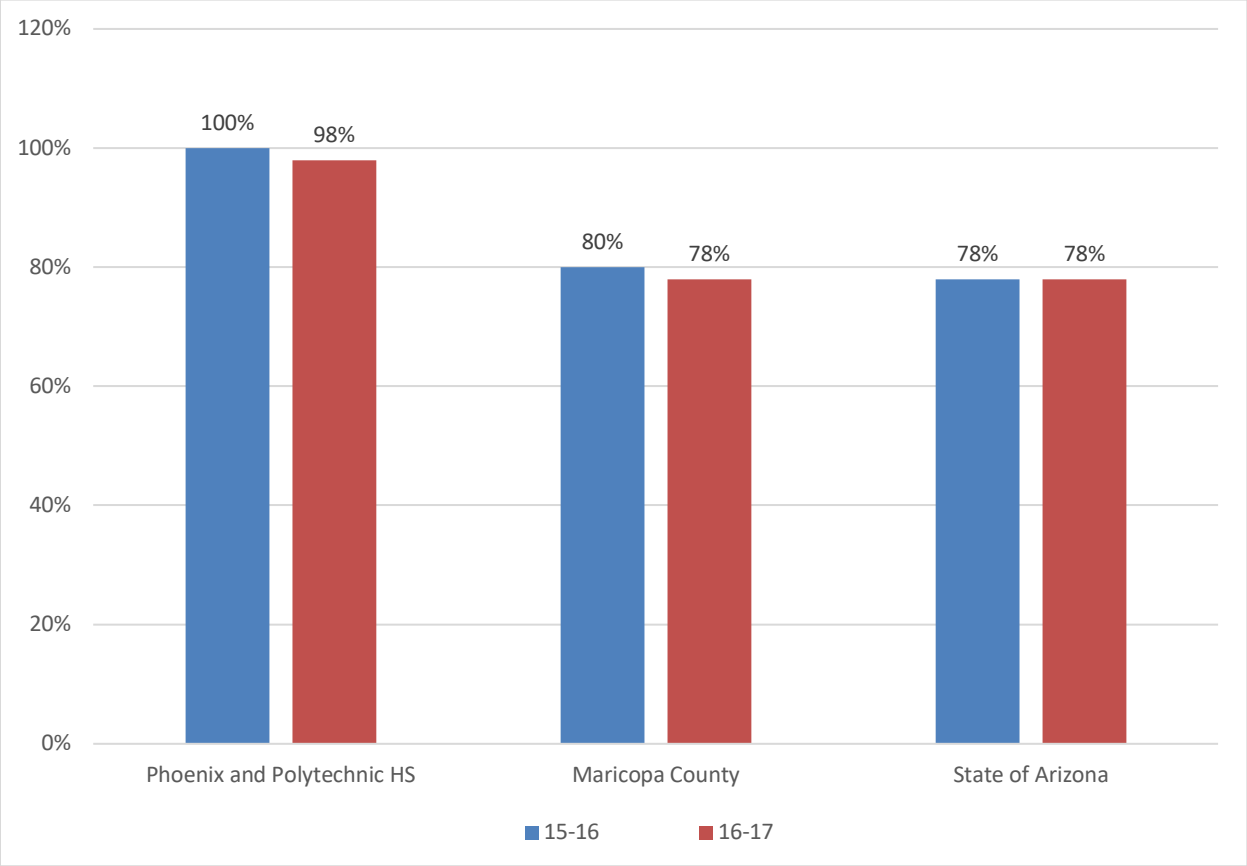


ACHIEVE A GRADUATION RATE HIGHER THAN STATE AVERAGES

Exhibit 15 details the change in graduation rates for the treatment schools as compared to graduation rates in Maricopa county[9] as a whole and the State of Arizona for Year 2 and Year 3 of the grant. Year 4 data were not available at the time this report was prepared due to State of Arizona protocol regarding data releases.[10] As illustrated, the ASU Prep schools had a combined graduation rate of 98 percent in 2016-17 (Year 3). Students within Maricopa County and at the state level graduated at 78 percent.

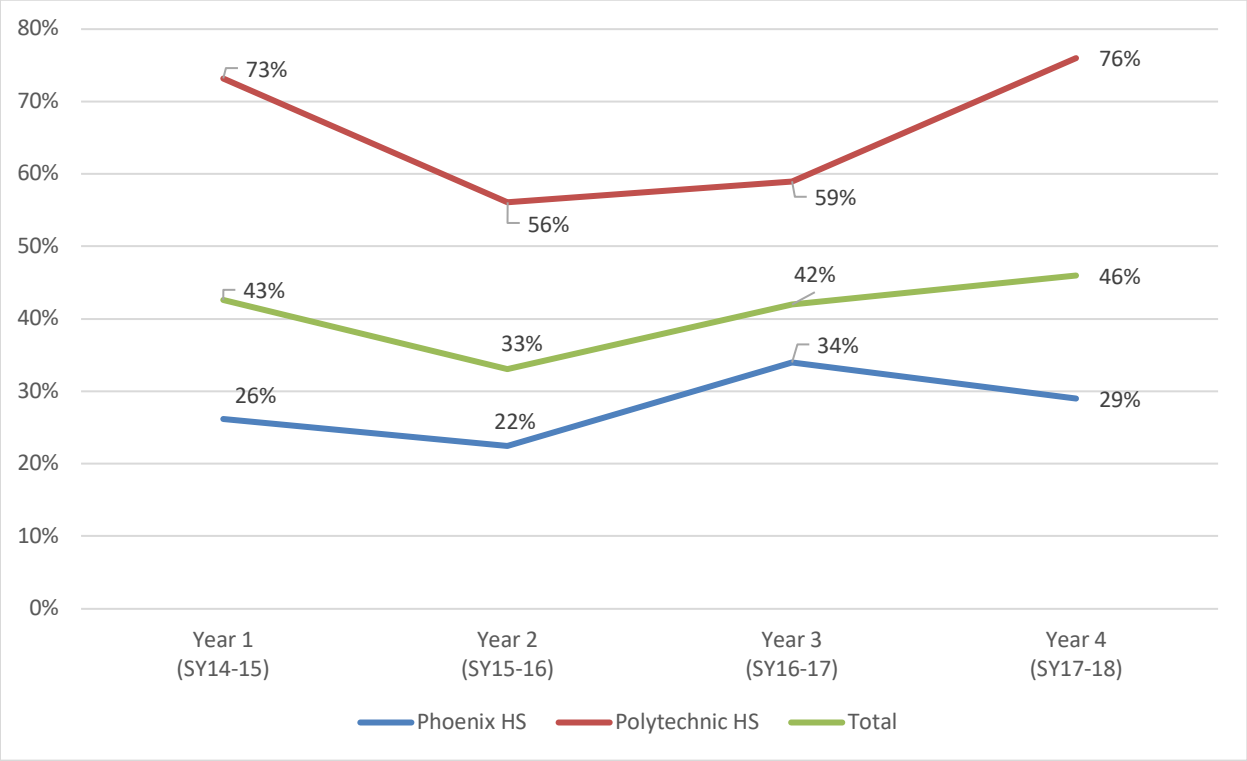
[9] Representing multiple school districts. Not to be confused with singularly Maricopa Unified School District.
[10] State of Arizona Department of Education Graduation, Dropout & Persistence Rate Technical Manual, (nd), pg. 14.

Exhibit 15. Graduation Rates for Target High Schools, County of Maricopa, and State of Arizona Year 2 and Year 3 (SY16-17)



ACT developed a College Readiness Benchmark to help determine how well prepared students are for college-level studies. ACT makes these data available to schools by request. Exhibit 16 illustrates that students at both Polytechnic and Phoenix saw their readiness scores decrease during Year 2 of the grant only to recover by Year 4. Averaged out, the benchmark score increased from 43 percent to 46 percent for students in both schools between year 1 and year 4.

Exhibit 16. ACT College Readiness Benchmark



STUDENTS ENROLL IN A POSTSECONDARY PROGRAM AFTER GRADUATION

All data regarding post-secondary enrollment are gathered by ASU Prep Guidance Office. This performance measure assesses the percentage of students who graduate from one of the treatment schools and enrolls in a post-secondary program within six (6) months after graduation. Year 1 enrollment rates serve as the baseline for this measure. **Exhibit 17** shows that ASU Prep schools began the program with an average matriculation rate of 91 percent. By Year 3 (SY16-17), almost all students matriculated to some form of postsecondary program, iwht a 98 percent rate for Phoneix and 100 percent for Polytechnic.

Exhibit 18 provided additional information about matriculation to postsecondary education. By Year 3, 97 percent of Polytechnic students matriculated to a four-year institution, with 88 percent admitted to ASU. Sixty-seven percent of Phoenix students ended up at a four-year institution, with 61 percent enrolling at ASU. As well, over 90 percent of seniors at either high school had completed the FAFSA. Eighty-three percent of Polytechnic seniors received one or more scholarships, compared to 49 percent of Phoenix seniors.

Exhibit 17. Enrollment in a Postsecondary Program Six Months after Graduation

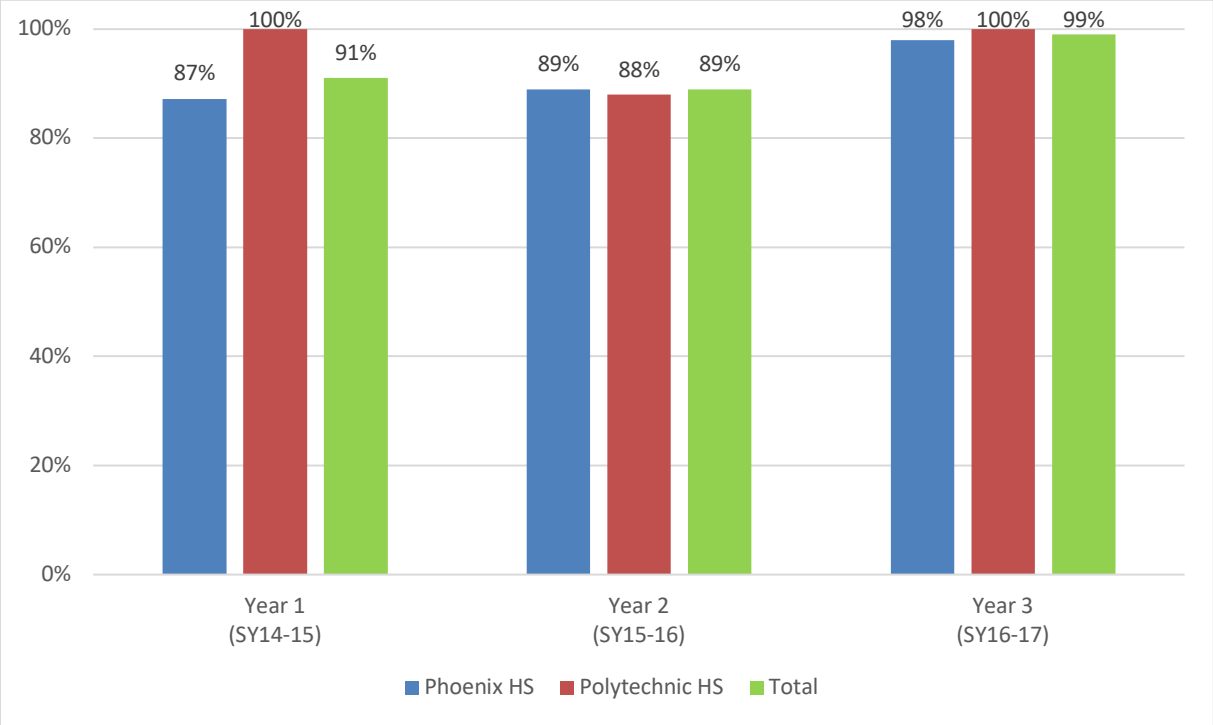


Exhibit 18. Enrollment in a Postsecondary Program Six Months after Graduation

College Going Class of 2018	Phoenix High School	Polytechnic High School
Percent of Seniors admitted to ASU*	61%	88%
Percent of Students Admitted to Any Four Year University	69%	97%
Percent of Students Admitted to Any Four or Two Year College or University	69%	100%
Percent Seniors Admitted to Any Postsecondary	98%	100%
Percent of Seniors who have completed FAFSA	91%	93%
Percent Seniors with one or more scholarships	49%	83%

Fidelity of Implementation

The ASU Prep set ambitious goals through this i3 grant project. As mentioned earlier in this report, at the outset, the district worked closely with the evaluation teams to ensure their ability to track fidelity for implementation of the grant in order to effectively achieve the goals. As outlined above, the district's ability to impact student academic outcomes has been a major success of the grant implementation. To implement the grant, the district set nine (9) guiding project objectives to achieve these positive student outcomes.

The guiding objectives of the project are to:

1. Close the achievement gap for low socioeconomic students
2. Improve student achievement in math
3. Improve student achievement in reading
4. Improve student achievement in science
5. Achieve a graduation rate higher than state averages
6. Increase placement of students in STEM-related college majors
7. Increase collage and career readiness based on the ACT College Readiness Benchmarks
8. Increase family engagement in student learning
9. Increase teacher knowledge in integrating technology into core content

A Fidelity of Implementation matrix was prepared by the evaluation team and ASU Prep district to assess progress toward these overarching goals (see Appendix). The assessment was divided into three major components: 1) professional development, 2) instruction, and 3) family engagement. This section details the specific implementation of the grant according to the nine (9) objectives and the three (3) fidelity of implementation components.

Qualitative Data Analysis

At the outset of the grant, ASU Prep has worked closely with the external evaluator, EPI, to develop a set of measures and methods to assess the fidelity of grant implementation and achievement of all project goals (outlined above). ASU Prep aimed to use the i3 grant to enhance district processes, strengthen the teaching base and educational performance, in order to strengthen student outcomes. While the majority of data collected and assessed to address overall performance measures and the national impact evaluation entail an analysis of quantitative data only, a mixture of qualitative and quantitative data was collected to assess the fidelity of implementation to the grant. This includes data regarding program implementation such as professional development training outlines, examples of curriculum developed under the project and survey results. All fidelity data is provided by ASU Prep through a secure online account to house and share the implementation data with the evaluators. Details regarding individual data reviewed for the fidelity of implementation is included later in this report.

ACCOMPLISHED PROJECT OBJECTIVES

Fidelity toward goals were assessed through three major components: 1) professional development, 2) instruction, and 3) family engagement. The fidelity matrix was developed prior to the implementation of the program and used to assess Year 1 (SY14-15) and assessed for Year 2 (SY15-16). **Exhibit 19** below highlights accomplishments from each of the three assessed components. ASU Prep met the fidelity threshold level for this project for both years that fidelity was measured.

Exhibit 19. Implementation of Project Objectives

Key Components	Activities and Inputs	Scoring	Year 1 (SY14-15)	Year 2 (SY15-16)
PROFESSIONAL DEVELOPMENT				
Staff Development	Teacher "Cluster" Learning Management Systems (LMS) training 90 minutes/ per week(ES, MS, and HS)	1=Met 0= Not Met	1	1
		1=Met 0= Not Met	1	1
Fidelity Threshold Score		**Met=>1 Not Met=0**	**2**	**2**
INSTRUCTION				
K-12 STEM Focus	STEM focused instruction and lab experiences (Grades K-6)	1=Met 0= Not Met	1	1
	Design teaching models for younger students (Grades 7-8)	1=Met 0= Not Met	1	1
	Utilize ASU Science and Technology labs (Grades 9-12)	1=Met 0= Not Met	1	1
Learning Lab/ STEM Exploratory	Learning Lab 60 minutes/day (Grades K-12)	1=Met 0= Not Met	1	1
	STEM Exploratory Class 90 minutes/daily (Polytechnic Middle School Grades 7-8)	1=Met 0= Not Met	1	1
Project Based Learning	Integrate STEM Habits of Mind (Six STEM Proficiencies) in the annual Summative Project for all students (Grades K-8)	1=Met 0= Not Met	1	1
	Capstone Project (Grades 9-12)	1=Met 0= Not Met	1	1
Technology Based Learning Management System	Learning Management System (LMS) (Grades K-12)	1=Met 0= Not Met	0	0

Hybrid Virtual and Full Virtual Learning Opportunities	Continuous access to digital learning opportunities (Grades K-12)	1=Met 0= Not Met	1	1
Educational Technology Devices	1 per classroom Educational Technology Devices(Grades K-12)	1=Met 0= Not Met	1	1
Fidelity Threshold Score		**Met =>8 Not Met=<7**	**9**	**9**
FAMILY ENGAGEMENT				
Family Engagement Opportunities**	Volunteer Commitment- 30 volunteer hours/ per year on their child's campus (Grades K-12)	Monitored but not assessed	NA	NA
	Parent and school communication	Monitored but not assessed	NA	NA
Fidelity Threshold Score		**NA**	**NA**	**NA**
Total Fidelity Threshold Score		**Met =>9 Not Met=<8**	**11**	**11**

*This measure was pushed to Year 2 and Year 3 due to delays in purchasing. ASU's ED contact was informed of this adjustment.

Appendix 1. Fidelity of Implementation Plan

Key Components	Activities and Inputs	Operational Definition	Criterion for Adequate/High Fidelity of Implementation	Scoring	Data Type	Data Collection Timeline
PROFESSIONAL DEVELOPMENT						
Staff Development	Teacher "Cluster" Learning Management Systems (LMS) training 90 minutes/ per week(ES, MS, and HS)	Teachers will gain knowledge on the integration of technology into the curriculum, particularly as it impacts teaching and instruction, pedagogical innovation, the interpretation of curriculum goals and objectives, and assessment practices.	80 percent of Grades 4-12 teachers will attend 80 percent of the training 90 minutes/per week	1=Met 0= Not Met	Quarterly attendance records (one per semester for each grade Grades 4-12)	September (Q1), December (Q2), March (Q3), June (Q4) (Years 1 and 2 of the grant)
			10 percent of participating teachers (Grades 4-12) given pre and post surveys (averaging over 80 percent agreement in knowledge gains in technology integration into the curriculum)	1=Met 0= Not Met	Annual pre and post survey data (Grades 4-12)	Pre- Survey collection in August /September Post- survey collection in May /June (Years 1 and 2 of the grant)
Fidelity Threshold Score				**Met=>1 Not Met=0**		

Learning Lab/ STEM Exploratory	Learning Lab 60 minutes/day (Grades K-12)	Students work independently with a personalized Play List of educational games, skill builders, and test preparation tools in the school computer lab and a highly qualified teacher prepared to deliver one-on-one instruction as necessary. Each Play List is assigned by classroom teachers, based on the Learning Management System recommendations.	80 percent of students (Grades K-12) participate in Learning Lab	1=Met 0= Not Met	Quarterly access records (one per classroom per Grade 4-12)	September (Q1), December (Q2), March (Q3), June (Q4) (Years 1 and 2 of the grant)
	STEM Exploratory Class 90 minutes/daily (Polytechnic Middle School Grades 7-8)		80 percent of students (Grades 7-8) will participate in STEM Exploratory Class for 90 minutes/daily	1=Met 0= Not Met	Annual attendance records (one per classroom per Grade 7-8)	June (Years 1 and 2 of the grant)
Project Based Learning	Integrate STEM Habits of Mind (Six STEM Proficiencies) in the annual Summative Project for all students (Grades K-8)	Students will learn how to build tech apps to meet specific needs, and will train others to use them through Tech Prep U.	80 percent of students (Grades K-8) will demonstrate at least two STEM proficiencies in Summatives and Capstones	1=Met 0= Not Met	Quarterly grading Records (one per classroom per Grade 4-8) Quarterly STEM Proficiency Rubrics - Content analysis (one per Grade 4-8 per school)	September (Q1), December (Q2), March (Q3), June (Q4) (Years 1 and 2 of the grant)
	Capstone Project (Grades 9-12)	High school students will pursue an authentic learning experience demonstrating content from all core subjects with opportunities to receive guidance from ASU graduate students, faculty, and industry experts as appropriate to their selected Capstone topic, both in person and virtually.	80 percent of students (Grades 9-12) will complete a Capstone Project	1=Met 0= Not Met	Annual Capstone Project Grading records (one per classroom per Grade 9-12)	June (Years 1 and 2 of the grant)

INSTRUCTION						
K-12 STEM Focus	STEM focused instruction and lab experiences (Grades K-6)	Students will receive STEM-focused instruction K-6, with classroom instruction and authentic lab experiences. Students will explore concepts and careers in sciences, technology, engineering and mathematics.	100 percent of students will receive STEM focused instruction weekly (Grades K-6)	1=Met 0= Not Met	Walk through protocol (one per Grade 4-6per treatment school for mathematics and science)	September (Q1), December (Q2), March (Q3), June (Q4) (Years 1 and 2 of the grant)
	Design teaching models for younger students (Grades 7-8)	In addition to STEM focused instruction, students will develop their own teaching modules to share core curriculum concepts with younger students and their families.	80 percent of STEM Academy students (Grade 7 and Grade 8) will develop a teaching model	1=Met 0= Not Met	Quarterly grading records one per classroom (Grades 7-8)	September (Q1), December (Q2), March (Q3), June (Q4) (Years 1 and 2 of the grant)
	Utilize ASU Science and Technology labs (Grades 9-12)	In high school, in addition to STEM focused instruction, UPSI students utilize the ASU state of the art Science and Technology labs to support hands-on learning.	80 percent of Polytechnic students (Grades 9-12) will utilize the ASU lab weekly	1=Met 0= Not Met	Quarterly attendance Records (one per classroom per Grade 9-12)	September (Q1), December (Q2), March (Q3), June (Q4) (Years 1 and 2 of the grant)

Technology Based Learning Management System	Learning Management System (LMS) (Grades K-12)	The program will be linked to unique student portfolios that follow students throughout their educational career, and subsequent individual learning plans. (For Grades K-8, the LMS is aligned to the framework of the Cambridge International Curriculum; high school students will be monitored according to the Board Examination System)	Data Dashboard will be functional and demonstrate an alignment to the grade appropriate framework	1=Met 0= Not Met	Annual content review of Data Dashboard site (one evaluation per Grade 4-12 per treatment school)	June (Years 1 and 2 of the grant)
Hybrid Virtual and Full Virtual Learning Opportunities	Continuous access to digital learning opportunities (Grades K-12)	Students will be able to access and integrate technology into any subject in the classroom.	80 percent of classrooms (Grades K-12) will utilize digital learning opportunities for classroom instruction (Frequency?)	1=Met 0= Not Met	Quarterly access records (one per class per Grade 4-12 per semester)	September (Q1), December (Q2), March (Q3), June (Q4) (Years 1 and 2 of the grant)
Educational Technology Devices	1 per classroom Educational Technology Devices (Grades K-12)	Each classroom will be provided a portable device for student use, bringing new on-the-go applications featuring video and games to build concept fluency.	80 percent of classrooms (Grades K-12) have received a portable device	1=Met 0= Not Met	Annual distribution records (one per classroom per Grade 4-12)	June (Years 1 and 2 of the grant)
Fidelity Threshold Score				**Met =>8 Not Met=<7**		

FAMILY ENGAGEMENT						
Family Engagement Opportunities	Volunteer Commitment- 30 volunteer hours/ per year on their child's campus (Grades K-12)	Families can monitor their movement towards their annual required commitment of volunteer hours on their child's campus.	Families complete the required 30 hours of volunteerism on their students campus: Yr1: 30 percent Yr2: 35 percent Yr3: 40 percent Yr4: 45 percent Yr5: 50 percent	1=Met 0= Not Met	Quarterly parent volunteer records (one per classroom per Grade 4-12)	September (Q1), December (Q2), March (Q3), June (Q4) (Years 1 and 2 of the grant)
	Parent and school communication	Technology closes the communication gap between parents and schools	90 parents in total from the treatment schools (n=5 from each grade for each treatment school)for each treatment school will be given a pre and post surveys; 3 administrators (one from one elementary school, one from one middle school; one from one high school) will be given pre and post surveys Approval scores will average at least 75 percent each year	1=Met 0= Not Met	Annual Pre and Post Surveys	Pre- Survey collection in August /September Post- survey collection in May /June (Years 1 and 2 of the grant)
Fidelity Threshold Score				**Met=>1 Not Met=0**		