High School Administrator Student Learning Objective

An example of a strong Model for a High School Building SLO in Math

Administrator Name: _____   School Name: _____   Academic Year: _____

Baseline and Trend Data

What information is being used to inform the creation of the student learning objective and establish the amount of growth that should take place?

During the 2014-2015 school year, 103 students with IEPs completed the ACT Compass battery of tests over a three-day period. Only ten students of the 103 scored "college ready" in math. Students with an IEP who took the ACT Compass battery in 2014-2015 and were not scored "college ready" would have to complete remedial courses prior to registration for regular college math courses unless their scores improved to the college ready level.

Math remains the major academic barrier to our students with special needs who are preparing for college. While 10 students tested college ready (9 percent), 46 (45 percent) scored near the college ready mark. Another 47 (45 percent) need major remediation in algebra skills. The "near-readiness" group seems to need some remediation to achieve college readiness in math while the lowest group or "not-ready" group needs major remediation to achieve college readiness. Even though eight students were already scoring at Proficient level, no single student topped out, but rather scored between 76 and 85. This allows room for students to grow and become better at the math, with support from their teacher.

All students with IEPs in the building are included on this student learning objective. These students completed the following assessments to establish baseline data.

ACT Work Key Applied Math Pre-test measures skills for workforce including whole numbers, ratios, averages, proportions, decimals, fractions, percentages, volume, perimeter area and problem solving.

ALEKS is "an online assessment and teaching tool for mathematics," that aligns with Ohio's Learning Standards. Complete high school and middle school level programs in all areas of math are available, making this fit naturally to all students with IEPs, at any academic level. ALEKS also has materials explaining how ALEKS fits into RtI and includes supporting materials. This is another reason why it can be a good fit for formative support for all students with an IEP.

Math Skills Review CBM assesses order of operations, decimals, fractions, percentages, and solving for x. Student scores revealed significant deficits in each area. The Math Skills Review CBM is an online mathematics assessment developed at the University of Oregon. Math Skills Review CBM aligns with Ohio's Learning Standards and has benchmark screening and progress monitoring assessments. The assessment is not timed. Reports display raw scores and national percentiles.

Ohio Graduation Test (Math) 2013-2014		
of the 103 students		
Passed	**Basic**	**Limited**
24	44	35

Curriculum Based Math Assessment	
of the 103 students*	
(*may not add to 103 as one student may fit multiple mastery levels and some students none of the levels.)	
Math Skills	**Demonstrated Mastery**
Adding fractions with common denominators	68
Solving for X in an equation	10
Math problems involving percentages	15
Long division problems with multi-digit numbers	22

ALEKS Initial Assessment	
of the 103 students* (*see above)	
Math Skills	**Demonstrated Mastery**
Whole numbers and basic arithmetic	88
Decimals, proportions and percentages	50
Fractions	45
Measurement	63
Real numbers	35
Algebraic expressions and equations	18
Statistics and probability	2
Geometry	13
Exponents and polynomials	0

ALEKS Initial Assessment		
of the 103 students		
Level	**Pre-Assessment Scores**	**Number of Students**
Beginning	0 – 25	43
Developing	26 – 50	27
Emerging	51 – 75	25
Proficient	76 – 100	8
		(no student scored above 87)

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Student Population

Which student population will be included in this SLO? When applicable, include subject, grade level, and number of students. Include the rationale for determining the student population by grade level, content area, or targeted needs, as appropriate.

This student learning objective targets all 103 special education students in this building. All have been in high school for four years. Four students have enough credits to qualify as 10th-graders, 28 as 11th-graders, 71 as seniors. Students will receive accommodations as specified in their IEPs.

Thirty-five of the 103 students have poor school attendance records. Eight students exhibit consistent behaviors that impede instruction. Two students exhibit significant emotional and memory challenges and are often hospitalized.

> Specific student needs that could affect student growth should be specified as based on student IEP's.

> OPES data submission is due on June 1, which allows the May 10 date to be a final data collection.

Interval of Instruction

What is the duration of the student learning objective? Include beginning and end dates.

The interval of instruction is Sept. 17, 2014, through May 10, 2015.

Standards and Content

What content will the student learning objective cover? To what related standards is the student learning objective aligned? Include rationale for selecting comprehensive or targeted content and skills.

In order for students to be successful in math, they must be able to reason, analyze, and problem-solve. The standards emphasized will have the largest impact on the lowest scores of the initial assessment seen in the baseline and trend data.
Ohio's 2014 Learning Standards in Math, applicable to this student learning objective:

Seeing Structure in Expressions
- Write expressions in equivalent forms to solve problems.

Fractions
- Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Arithmetic with Polynomials and Rational Expressions
- Perform arithmetic operations on polynomials.
- Use polynomials to solve problems.

Reasoning with Equations and Inequalities
- Solve equations and inequalities in one variable.

Geometry – Congruence

> Any viable assessment will intentionally align with and measure specific standards. The expectation is that principals will identify the content and standards targeted by the student learning objective. This should include a rational for targeting these standards for the student learning objective. Aligning the content to the assessment is crucial in this process.

- Understand congruence in terms of rigid motions.

Geometry – Similarity, Right Triangles and Trigonometry
- Understand similarity in terms of similarity transformations.
- Apply trigonometry to general triangles.

Geometry – Circles
- Understand and apply theorems about circles.

Statistics and Probability Overview – Interpreting Categorical and Quantitative Data
- Summarize, represent, and interpret data on a single count or measurement variable.
- Summarize, represent, and interpret data on two categorical and quantitative variables.
- Interpret linear models.

Assessment(s)

What assessment(s) will be used to measure student growth for this student learning objective? Specify how multiple assessment measures will be combined, as appropriate (for example, if your student population spans multiple grade levels).

We administered the ALEKS as the pre-assessment and will administer an ALEKS post-assessment. The content of the post-assessment is aligned with Ohio's Learning Standards for mathematics. Both assessments are delivered as multiple choice questions. The test is valid and reliable and supports increased achievement among all student groups. The assessment shows stretch as the computer-generated assessment responds automatically to student strengths and weaknesses helping each student develop particular skills before moving on.

ALEKS is an online assessment that scores student assessments automatically. Because the ALEKS assessment includes supporting materials for RtI, teachers will have additional resources available to help ensure that all students reach their growth targets.

All students with disabilities will receive the appropriate testing accommodations in their IEPs.

Growth Target(s)

Considering all available data and content requirements, what growth targets can students be expected to reach?

The target growth for each student is to score at the next quartile or even higher at year's end. Students scoring at the beginning level will score at the developing level. Those at the developing level will score at the emerging level and so on by the end of the school year.

Level	ALEKS Initial Assessment of the 103 students		Growth Target (based on Post Assessment Score)	Number of Students
	Pre-Assessment Scores	Number of Students		
Beginning	0 – 25	43	0-25	0
Developing	26 – 50	27	26-50	43
Emerging	51 – 75	25	51-75	27
Proficient	76 – 100 (no student scored above 87)	8	76-100	25
			Increase lowest standard area by 10%	8

The 8 students who were already at proficient on the pre-assessment will review their pre-assessment data with their teachers to determine the specific standard areas that are their lowest. The individualized growth target for each of these students will be to increase the score in their specified areas by 10 percent. They will receive enhanced instruction via a mixture of programs and advanced assignments to ensure they are able to attain these targets. This will ensure their growth even though they are in the proficient level again.

Rationale for Growth Target(s)

What is your rationale for setting the above targets for student growth within the interval of instruction? Include rationale for any decisions made at the building or district levels related to selection of the student population, content, assessment and growth targets.

Our school improvement plan is focused on using assessment data to inform instruction, and our district goals include closing all achievement gaps among our students. In addition, one of Ohio's goals for schools is for every student to be college or career ready upon graduating from high school.

The baseline/trend data indicated a need to improve in certain areas of the Curriculum Based Math assessment and the ALEKS Initial Assessment, as some scores on the skills listing were very low (for example, solving for X in an equation; math problems involving percentages; algebraic expressions and equations, statistics and probability; and geometry). The emphasis of the standards with the most impact reflect these math areas.

The building goal with these targeted students is to help them improve and move up one level (completely vacating the beginning level) or to improve in their lowest standard areas. These are strong targets for the building and all students involved. Helping students to reinforce and improve these basic math skills, which apply to college or career-readiness, will help these students in school and beyond their K-12 education.

Analyzing the data growing out of our successes and setbacks in this effort to raise student math achievement will inform our work not only this year but for years to come. As we work together, educators, students, and parents, ever more valuable knowledge and skill will be gained supporting continuous improvement among all members of the school community.

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