

Assurance of Student Learning Reflection 2024-2025	
<i>College of Education and Behavioral Sciences</i>	<i>School of Teacher Education</i>
<i>Elementary Math Specialist Certificate #1764</i>	
<i>Susan Keesey, Director of STE</i>	
Is this an online program? ☐ Yes ☐ No	Please make sure the Program Learning Outcomes listed match those in CourseLeaf. Indicate verification here ☐ Yes, they match! (If they don't match, explain on this page under Evaluation)

Instructions: For the 2024-25 assessment, we are asking you to reflect on the last three-year cycle rather than collect data. It's important to take time to look over the results from the last assessment cycle and really focus on a data-informed direction going forward. In collaboration with your assessment team and program faculty, review each submitted template from 2021-2024 and consider the following for each Program Learning Outcome, add your narrative to the template, and submit the draft to your **ASL Rep** by **May 15, 2025**.

Program Student Learning Outcome 1	
Program Student Learning Outcome	Demonstrate content knowledge for teaching mathematics: a. Demonstrate deep understanding of mathematics for grades P-5 with a consideration of how students progress beyond elementary school to middle grades mathematics in the following areas: Number and Operations; Algebra and Functions; Geometry and Measurement; Data Analysis and Probability. b. Develop further specialized mathematics knowledge for teaching. Create opportunities for learners to develop, apply, and critically evaluate their selection and use of these practices. Diagnose mathematical misconceptions and/or errors as well as design appropriate interventions. Choose and/or design tasks to support the learning of new mathematical ideas or methods, or to test learners' understanding of them.
Evaluation	Using the last three assessment cycles, is this program learning outcome still relevant, or should it be changed? If it has recently changed, please explain. Other things to examine: Is the outcome measurable? Is it double or triple barreled? Does it include measurable verbs following Bloom's Taxonomy? Do you have the appropriate numbers of SLOs to measure regularly? Please consider choosing the most important. The program learning outcome is still relevant as we look at the data from the last cycles. The outcome is multi-aligned. We have streamlined the wording to align with CAEP accreditation standards and SACSCOC guidance. The program outcome is also aligned with the NCTM, AMTE, and state Kentucky Teacher Performance Standards.

Measurement Instruments	Are the measurement instruments actually measuring the outcome? If you change the SLO, is this still the best instrument to use? Is this a direct or indirect measure? Is your artifact appropriate? If not, what other options are there? Will the rise in the use of AI affect the assignment and measurement? If there are rubrics, do they need to be altered to better fit the learning outcome? Does the rubric (if using) work or does it need to be adjusted? Our two direct measurements are: • Math and Technology Growth Plan: <u>Assessment</u> (Key Assessment)-- Strengths and Growth Areas portions • Differentiated CREATE Math Lesson Plan (Key Assessment) AI will provide a starting point for research for both of these key assessments.
Criteria & Targets	Does Criteria for Success (level of performance students will have achieved for your program to have been successful--ex., students will have earned 4/5 for documentation and citation on capstone essays) need to be changed? What about targets? If you have successfully made your targets consistently, consider a more challenging target. Criteria 1: The Math and Technology Growth Plan: <u>Assessment</u> (Key Assessment)-- Strengths and Growth Areas portions Target from 23-24: 80% scoring a 3 of 4 points on each of four rubric categories Criteria 2: Differentiated CREATE Math Lesson Plan (Key Assessment) Target from 23-24: 80% scoring a 3 of 4 points on each of six rubric categories.
Results & Conclusion	Results: Are the results what was expected or not? What stood out in the assessment cycle over the past three years? Explain Conclusions: What worked? What didn't? Why do you think this? For example, maybe the content in one or more courses was modified; changed course sequence (detail modifications); changed admission criteria (detail modifications); changed instructional methodology (detail modifications); changed student advisement process (detail modifications); program suspended; changed textbooks; facility changed (e.g. classroom modifications); introduced new technology (e.g. smart classrooms, computer facilities, etc.); faculty hired to fill a particular content need; faculty instructional training; development of a more refined assessment tool. Results: For the assessments, the following were the most recent performance data collected:

	The Math and Technology Growth Plan: <u>Assessment</u> (Key Assessment)-- Strengths and Growth Areas portions Achieved: 100% of students mastered each indicator with a 3 or 4 of 4 points, and 4 of the 4 indicators showed scores at or above a 3 of 4 for 80% or more the the student population. The Content Categories are: • Professional Strengths • Areas for Professional Growth • Actions for Professional Growth • Impact of Professional Growth Differentiated CREATE Math Lesson Plan (Key Assessment) Achieved: The Content Categories are: • Goals, Objectives and Connections – 100% • Context – 92% • Instruction and Resources – 100% • References – 100% • Impact – 100% • Refinement – 92% Conclusions: For MT Growth Plan: Assessment, 100% of students mastered each indicator with a 3 or 4 of 4 points, and 4 of the 4 indicators showed scores at or above a 3 of 4 for 80% or more the the student population. For Differentiated CREATE Math Lesson Plan, 100% of students mastered each indicator with a 3 or 4 of 4 points, and 6 of 6 indicators showed scores at or above a 3 of 4 for 80% or more the the student population. We want to continue to maintain this excellence.
<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	As we work hard to improve our assessment practices and make them more meaningful and effective, it’s important each program craft a three-year plan for the following assessment cycle (2025-26, 2026-27, 2027-28) – this process assists in “closing the loop.” For example, you may decide to: • collect a more appropriate artifact • create new program outcomes • adjust targets because they are consistently exceeded or not met • need to reconstruct your curriculum map • sequencing of classes might need to be adjusted, or additional class(es) provided Whatever your plan is, provide a narrative, in future tense, that indicates how you will approach future assessments. You will be expected to implement any needed changes before the next assessment cycle.

	For the 2025-2026 - 2027-2028 school years, we plan to keep this learning outcome and use the same measurement items. The measurement tools will have keep the current rubrics. The targets will be the same as we have not consistently met the criteria. We will implement these assessments in the designated courses and will use the current rubrics.
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Program Student Learning Outcome 2	
Program Student Learning Outcome	Demonstrate pedagogical knowledge for teaching mathematics: a. Demonstrate understanding of learners and learning. Utilize and build upon learners’ existing knowledge, skills, understandings, conceptions and misconceptions to advance learning. Create social learning contexts that engage learners in discussions and mathematical explorations among peers to motivate and extend learning opportunities. b. Demonstrate expertise of teaching. Design, select and/or adapt worthwhile mathematics tasks and sequences of examples that support a particular learning goal. Use questions to effectively probe mathematical understanding and make productive use of responses. Model effective problem solving and mathematical practices—questioning, representing, communicating, conjecturing, making connections, reasoning and proving, self-monitoring and cultivate the development of such practices in learners. Analyze and evaluate student ideas and work, and design appropriate responses. Develop skillful and flexible use of different instructional formats—whole group, small group, partner, and individual—in support of learning goals. Manage diversities of the classroom and school—cultural, disability, linguistic, gender, socio-economic, developmental—and use appropriate strategies to support mathematical learning of all students. c. Demonstrate skills in designing and implementing curriculum and assessment. Use learning trajectories related to mathematical topics and apply this knowledge to sequence activities and design instructional tasks. Know the different formats, purposes, uses, and limitations of various types of assessment of student learning; be able to choose, design, and/or adapt assessment tasks for monitoring student learning. Use the formative assessment cycle and be able to find or create appropriate resources for this purpose.
Evaluation	Using the last three assessment cycles, is this program learning outcome still relevant, or should it be changed? Other things to examine: Is the outcome measurable? Is it double or triple barreled? Does it include measurable verbs following Bloom’s Taxonomy? The program learning outcome is still relevant as we look at the data from the last cycles. The outcome is multi-aligned. We have streamlined the wording to align with CAEP accreditation standards and SACSCOC guidance. The program outcome is also aligned with the NCTM, AMTE, and state Kentucky Teacher Performance Standards.

Measurement Instruments	Are the measurement instruments actually measuring the outcome? If you change the SLO, is this still the best instrument to use? Is this a direct or indirect measure? Is your artifact appropriate? If not, what other options are there? Will the rise in the use of AI affect the assignment and measurement? If there are rubrics, do they need to be altered to better fit the learning outcome? Does the rubric (if using) work or does it need to be adjusted? Our two direct measurements are: • Math and Technology Growth Plan: <u>Diverse Learners</u> (Key Assessment)-- Strengths and Growth Areas portions • Math Coaching Interview, Part I & Part II: Leadership (Key Assessment)
Criteria & Targets	Does Criteria for Success (level of performance students will have achieved for your program to have been successful (ex., students will have earned 4/5 for documentation and citation on capstone essays) need to be changed? What about targets? Criteria 1: Math and Technology Growth Plan: <u>Diverse Learners</u> (Key Assessment)-- Strengths and Growth Areas portions Target from 23-24: 80% scoring a 3 of 4 points on each of four rubric categories Criteria 2: Math Coaching Interview, Part I & Part II: Leadership (Key Assessment) Target from 23-24: 80% scoring a 3 of 4 points on each of five rubric categories. Achieved: Content Categories are: • Summary of Interview, including overview of tools – 100% • What you learned about being a coach/leader – 100% • What you learned about the teachers’ mathematical thinking – 100% • Next steps: what growth areas to work on – 100% • Technology use – 100% AI will provide a starting point for research for the Assignments.
Results & Conclusion	Results: Are the results what was expected or not? What stood out in the assessment cycle over the past three years? Explain Conclusions: What worked? What didn’t? Why do you think this? For example, maybe the content in one or more courses was modified; changed course sequence (detail modifications); changed admission criteria (detail modifications); changed instructional methodology (detail modifications); changed student advisement process (detail modifications); program suspended; changed textbooks; facility changed (e.g. classroom modifications); introduced new technology (e.g. smart classrooms, computer facilities, etc.); faculty hired to fill a particular content need; faculty instructional training; development of a more refined assessment tool. Results: The results in 2023-2024 for MT Growth Plan: Diverse Learners in looking at strength areas: The overall success rate for success rate for all students on the Math and Technology Growth Plan: Instruction for Diverse Learners (Key Assessment) will be no less 80% scoring a 3 of 4 points on each of four rubric categories. The Content Categories are: • Professional Strengths – 100% • Areas for Professional Growth – 100%

	• Actions for Professional Growth – 100% • Impact of Professional Growth – 100% For Math Coaching Interview, Part I & Part II: Leadership (Key Assessment) Achieved: Content Categories are: • Summary of Interview, including overview of tools – 100% • What you learned about being a coach/leader – 100% • What you learned about the teachers’ mathematical thinking – 100% • Next steps: what growth areas to work on – 100% • Technology use – 100% Conclusions: For MT Growth Plan: Diverse Learners Plan, 100% of students mastered each indicator with a 3 or 4 of 4 points, and 4 of the 4 indicators showed scores at or above a 3 of 4 for 80% or more the the student population. For the Math Coaching Interview, Part I & Part II: Leadership (Key Assessment): 100% scored at scored at 2 of 3 or above on the 3-point rubric for all 4 indicators. We want to continue to maintain this excellence.
<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	As we work hard to improve our assessment practices and make them more meaningful and effective, it’s important each program craft a three-year plan for the following assessment cycle (2025-26, 2026-27, 2027-28) – this process assists in “closing the loop.” For example, you may decide to: • collect a more appropriate artifact • create new program outcomes • adjust targets because they are consistently exceeded or not met • need to reconstruct your curriculum map • sequencing of classes might need to be adjusted, or additional class(es) provided Whatever your plan is, provide a narrative, in future tense, that indicates how you will approach future assessments. You will be expected to implement any needed changes before the next assessment cycle. For the 2025-2026 - 2027-2028 school years, we plan to keep this learning outcome and use the same measurement items. The measurement tools will have the same rubrics. The targets will be the same as we have not consistently met the criteria. We will implement these assessments in the designated courses and will use the same rubrics.

Program Student Learning Outcome 3	
Program Student Learning Outcome	Apply leadership knowledge and skills: • Plan, develop, implement, and evaluate professional development programs at the school and district level and support teachers in systematically reflecting and learning from practice. • Use leadership skills to improve mathematics programs at the school and district levels.
Evaluation	Using the last three assessment cycles, is this program learning outcome still relevant, or should it be changed? Other things to examine: Is the

	outcome measurable? Is it double or triple barreled? Does it include measurable verbs following Bloom's Taxonomy? The program learning outcome is still relevant as we look at the data from the last cycles. The outcome is multi-aligned. We have streamlined the wording to align with CAEP accreditation standards and SACSCOC guidance. The program outcome is also aligned with the NCTM, AMTE, and state Kentucky Teacher Performance Standards.
Measurement Instruments	Are the measurement instruments actually measuring the outcome? If you change the SLO, is this still the best instrument to use? Is this a direct or indirect measure? Is your artifact appropriate? If not, what other options are there? Will the rise in the use of AI affect the assignment and measurement? If there are rubrics, do they need to be altered to better fit the learning outcome? Does the rubric (if using) work or does it need to be adjusted? Our three direct measurements are: • Math and Technology Growth Plan: <u>Leadership</u> (Key Assessment) • Math Coaching Interview, Part I & Part II: Leadership (Key Assessment) • Math & Technology Assessment Critique
Criteria & Targets	Does Criteria for Success (level of performance students will have achieved for your program to have been successful (ex., students will have earned 4/5 for documentation and citation on capstone essays) need to be changed? What about targets? Measurement 1: Math and Technology Growth Plan: <u>Leadership</u> (Key Assessment) Criteria: 80% scoring a 3 of 4 points on each of four rubric categories. Measurement 2: Math Coaching Interview, Part I & Part II: Leadership (Key Assessment) Criteria: 80% scoring a 2 of 3 points on each of four rubric indicators. Measurement 3: Math & Technology Assessment Critique Criteria: 80% scoring a 2 of 3 points on each of four rubric indicators. AI will provide a starting point for research for the Assignments.
Results & Conclusion	<u>Results</u>: Are the results what was expected or not? What stood out in the assessment cycle over the past three years? Explain <u>Conclusions</u>: What worked? What didn't? Why do you think this? For example, maybe the content in one or more courses was modified; changed course sequence (detail modifications); changed admission criteria (detail modifications); changed instructional methodology (detail modifications); changed student advisement process (detail modifications); program suspended; changed textbooks; facility changed (e.g. classroom modifications); introduced new technology (e.g. smart classrooms, computer facilities, etc.); faculty hired to fill a particular content need; faculty instructional training; development of a more refined assessment tool. Results: For the three assessments, the data in the last assessment cycle showed:

Math and Technology Growth Plan: Leadership (Key Assessment)

This data is collected each year as part of ELED 571. Faculty evaluated this assignment, which requires participants to reflect on the mathematics teaching lens of leadership to determine their professional strengths and areas of growth and actions and impact of professional growth.

The Content Categories are:

- Professional Strengths – 100%
- Areas for Professional Growth – 100%
- Actions for Professional Growth – 100%
- Impact of Professional Growth – 100%

Math Coaching Interview, Part I & Part II: Leadership (Key Assessment)

This data is collected each year as part of ELED 571. Faculty evaluated this assignment, which requires participants to interview and coach a colleague in the school setting to work on the skills to improve the colleague's mathematical thinking and to learn coaching techniques.

The Content Categories are:

- Summary of Interview, including overview of tools – 100%
- What you learned about being a coach/leader – 100%
- What you learned about the teachers' mathematical thinking – 100%
- Next steps: what growth areas to work on – 100%
- Technology use – 100%

Math & Technology Assessment Critique

This data is collected each year as part of ELED 573. Faculty evaluated this assignment, which requires participants to interview and coach a colleague in the school setting to work on the skills to improve the colleague's mathematical thinking and to learn coaching techniques.

The Content Categories are:

- Standards Addressed – 100%
- Reflection – 100%
- Concerns – 100%
- Strengths – 100%
- Improvements – 100%

Conclusions:

The three assignments had the following met the targeted criteria:

Math and Technology Growth Plan: Leadership (Key Assessment)

100% scored at scored at 3 of 4 or above on the rubric.

Math Coaching Interview, Part I & Part II: Leadership (Key Assessment)

100% scored at scored at 2 of 3 or above on the 3-point rubric for all 4 indicators.

Math & Technology Assessment Critique

100% scored at scored at 2 of 3 or above on the 3-point rubric for all 4 indicators.

	*All of the targets will remain in place.
<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	As we work hard to improve our assessment practices and make them more meaningful and effective, it's important each program craft a three-year plan for the following assessment cycle (2025-26, 2026-27, 2027-28) – this process assists in “closing the loop.” For example, you may decide to: • collect a more appropriate artifact • create new program outcomes • adjust targets because they are consistently exceeded or not met • need to reconstruct your curriculum map • sequencing of classes might need to be adjusted, or additional class(es) provided Whatever your plan is, provide a narrative, in future tense, that indicates how you will approach future assessments. You will be expected to implement any needed changes before the next assessment cycle. For the 2025-2026 - 2027-2028 school years, we plan to keep this learning outcome and use the same measurement items. The measurement tools will have the same rubrics. The targets will be the same as we have not consistently met the criteria. We will implement these assessments in the designated courses and will use the same rubrics.

To add more outcomes, if needed, select the table above and copy & paste below. Plan is the following table:

Evidence (course)	a. Data Literacy	b. Research Methods	c. Data Analysis	d. Collaborative Activities	e. Technology Applications	f. Professional Dispositions
EMS						
ELED 571	MT Growth Plan -- Leadership	Leadership Project	Leadership Project	Leadership Project	Leadership Project	YES
ELED 572	MT Growth Plan -- Instruction	Differentiated Lesson Plan				
ELED 573	MT Growth Plan -- Assessment	Mathematics Technology Critique			Mathematics Technology Critique	YES
Choice of 2 Math courses						
MATH 411G						
MATH 507						

MATH 508						
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