

Assessment 7

Technology in Mathematics Activity

Developing pedagogical skills related to technology involves more than simply using technology in your own teaching, it involves analyzing technological resources, identifying which technology best supports student learning, and then having your students use the technology to enhance and extend their learning of mathematics.

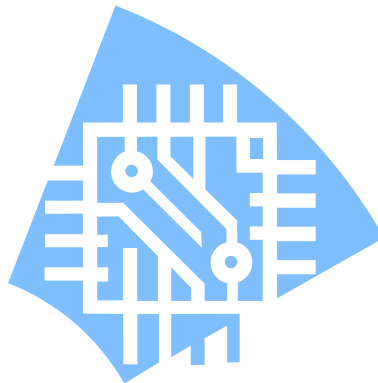
NCTM Standard 6: Knowledge of Technology – 6.1 Use knowledge of mathematics to select and use appropriate technological tools, such as but not limited to, spreadsheets, dynamic graphing tools, computer algebra systems, dynamic statistical packages, graphing calculators, data-collection devices, and presentation software

NCTM Standard 7: Dispositions – 7.6 Use of various teaching tools including technology

NCTM Standard 8: Pedagogy – 8.9 Develop lessons that use technology’s potential for building understanding of mathematical concept and developing important mathematical ideas

To demonstrate your understanding of the appropriate use of technology in mathematics, you will complete the following activity:

Modify or replace an activity in an existing lesson by integrating technology into the lesson. You will need to **turn in both the original lesson and the technology enhanced lesson**. Additionally, you will **submit a typed narrative** discussing the following issues: (1) how the addition of technology enhanced the lesson and extended students’ thinking, (2) the approach to teaching (inductive or deductive) used in each lesson as well as (3) the level of the cognitive demand of the mathematical activity in each lesson according to the “Task Analysis Guide.”



Ohio Wesleyan University

Adolescent to Young Adult (AYA) Mathematics Education Licensure Program

Each category will be scored at the highest level for which you meet all of the criteria listed for the category.

Criteria	EXCELLENT	COMPETENT	ADEQUATE	UNSATISFACTORY
Integration of Technology NCTM 6.1, 7.6, and 8.9	The enhanced lesson requires technology to foster higher levels of thinking by actively engaging students in “doing” mathematic	The enhanced lesson requires technology to foster moderately high levels of thinking by engaging students in a “procedure with connections” activity	The enhanced lesson uses technology; however, the incorporation of technology does not foster higher levels of thinking for the students than what was present in the original lesson.	The enhanced lesson plan could have been completed without technology.
Narrative	Narrative contains <ul style="list-style-type: none"> an accurate explanation of how the integration of technology enhances student learning, an accurate analysis of the approach to instruction in both lessons, a detailed, accurate analysis of the level of cognitive demand in both lessons. 	Narrative contains <ul style="list-style-type: none"> an accurate explanation of how the integration of technology enhances student learning, an accurate analysis of the approach to instruction in both lessons, a <i>somewhat</i> accurate analysis of the level of cognitive demand in both lessons. 	Narrative contains <ul style="list-style-type: none"> an accurate explanation of how the integration of technology enhances student learning, a somewhat accurate analysis of the approach to instruction in both lessons, a <i>somewhat</i> accurate analysis of the level of cognitive demand in both lessons. 	Narrative contains <ul style="list-style-type: none"> an <i>inaccurate</i> analysis about the integration of technology, an <i>inaccurate</i> analysis the approach to instruction in both lessons, an <i>inaccurate</i> analysis of the level of cognitive demand in both lessons.

Overall Grade for Technology in Mathematics Activity

- A =** One category is rated “Excellent,” the other category is rated “Competent” or higher
- B =** One category is rated “Competent,” the other category is rated “Adequate” or higher
- C =** Both categories are rated “Adequate.”
- D =** One category is rated “Unsatisfactory.”
- F =** Both categories are rated “Unsatisfactory.”