



Technology Integration: Analyst

Competency

Educator understands and uses data to drive their instruction and support students in achieving their learning goals.

Key Method

The educator applies digital tools to design and implement a variety of formative and summative assessments that accommodate learner needs. Educator analyzes ongoing assessment data to guide progress and communicate with stakeholders to develop student self-direction.

Method Components

Components of Summative Assessments

Create and administer summative assessments with digital tools using alternative ways for students to demonstrate competency. Major components of summative assessments usually include:

- Learning objectives
- Success criteria
- Reliability
- Volume
- Validity
- Variety

Components of Formative Assessments

Keep ongoing monitoring notes and records with digital tools for ongoing assessment and planning. Digital tools to support formative assessments could include:



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- Spreadsheets
- Word processing software
- Note-taking software
- Images of handwritten documents
- Polling
- Gamification results
- Written and verbal digital communication

Components of Student Reflection

Students reflect on learning using digital tools.

- Address connections between technology and overall learning goals
- Students show reflection in video, audio or written form
- Ongoing Socratic discourse

Components of Assessment Analysis

Analyze assessments to drive further instruction.

- Organize data categorically
- Record data

Components of Goal Sheets

Students develop digital tracking of goals based on reflection and data.

- Concrete goals
- Success criteria

Components of Stakeholder Communication

Analysis is communicated with stakeholders via digital tools. Stakeholders include;

- Students
- Parents
- Colleagues, student support groups, and more

Examples of Digital Tools for Assessments

- Google Forms or other surveys for testing
- Recorded data from success criteria according to lesson plans, such as rubrics
- Formal test data
- Growth data from website educational platforms
- Monitoring notes (digitally recorded)
- Online or scanned student reflections

Supporting Rationale and Research

Babette Moeller & Tim Reitzes (2011). Education Development Center, Inc. (EDC). Integrating Technology with Student-Centered Learning. Quincy, MA: Nellie Mae Education Foundation.



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<https://www.edc.org/sites/default/files/uploads/Integrating-Technology-with-Student-Centered-Learning.pdf>

Echazarra, A. (2018). "How has Internet use changed between 2012 and 2015?", PISA in Focus, No. 83, OECD Publishing, Paris, <https://doi.org/10.1787/1e912a10-en>.

Lemke, C., Coughlin, E., and Reifsneider, D. (2009). *Technology in Schools: What the Research Says* (PDF). Culver City, CA: Commissioned by Cisco.
https://www.cisco.com/c/dam/en_us/solutions/industries/docs/education/TechnologyinSchoolsReport.pdf

National Research Council. 2000. *How People Learn: Brain, Mind, Experience, and School: Expanded Edition*. Washington, DC: The National Academies Press.
<https://doi.org/10.17226/9853>.

National Association of Elementary School Principals (NAESP). PDF, "Using Student Achievement Data to Support Instructional Decision Making."
http://www.naesp.org/sites/default/files/Student_Data_0.pdf

OECD (2018). "What does innovation in pedagogy look like?", Teaching in Focus, No. 21, OECD Publishing, Paris, <https://doi.org/10.1787/cca19081-en>.

Paniagua, A. and D. Istance (2018). Teachers as Designers of Learning Environments: The Importance of Innovative Pedagogies, Educational Research and Innovation, OECD Publishing, Paris, <https://doi.org/10.1787/9789264085374-en>

Schifter, C. C., Natarajan, U., Ketelhut, D. J., & Kirchgessner, A. (2014). CITE Journal 14(4). "Data-Driven Decision Making: Facilitating Teacher Use of Student Data to Inform Classroom Instruction."
<http://www.citejournal.org/volume-14/issue-4-14/science/data-driven-decision-making-facilitating-teacher-use-of-student-data-to-inform-classroom-instruction>

U.S. Department of Education, Office of Educational Technology. Understanding the Implications of Online Learning for Educational Productivity, Washington, D.C., 2012.
<https://tech.ed.gov/files/2013/10/implications-online-learning.pdf>

Resources

Standards
[ISTE Standards for Educators](#)



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[ISTE Standards: Students](#)

Articles

[3 Ways Student Data Can Inform Your Teaching | Edutopia](#)

[Framework: ISTE Standards, a Roadmap | EdSurge News](#)

[Educational Technology in and for Jewish Education](#)

[What Is Successful Technology Integration? | Edutopia](#)

Videos

- ▶ [Practical Ways to Integrate Technology in the Classroom \(Without Being An Expert\)](#)
- ▶ [Reimagining Classrooms: Teachers as Learners and Students as Leaders | Kayla Delzer ...](#)

Teaching Resources

[75 digital tools and apps teachers can use to support formative assessment in the classroom](#)

[Digital Citizenship | Common Sense Education](#)

[Exit Ticket - The Teacher Toolkit](#)

[Five Tech Tools for Monitoring Student Understanding - Corwin Connect](#)

[Free Technology for Teachers](#)

[Google for Education Teacher Center](#)

[Kathy Schrock's Guide to Everything](#)

Submission Guidelines and Evaluation Criteria

To earn the micro-credential, you must receive a passing score in Parts 1 and 3 and receive a proficient for all components in Part 2.



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Part 1. Overview Questions (Provides Context)

(300–500 words)

Please answer the following contextual questions to help our assessor understand your current situation. Please do not include any information that will make you identifiable to your reviewers.

1. Why did you choose this micro-credential?
2. Describe your students' access to digital tools in your classroom, school, and at home; i.e. are you 1:1 with devices, does your school have reliable Wi-Fi, etc.
3. Describe your experience using data analysis to drive instruction with and without technology?
4. Describe your experience using technology to assist with data analysis.
5. What student data-driven instructional needs do you have in your classroom?

Passing:

Response provides specific examples to illustrate how data analysis has been applied in the past and to justify the decision to choose this micro-credential.

Part 2. Work Examples/Artifacts/Evidence

To earn this micro-credential, please submit the following **three artifacts** as evidence of your learning. Please do not include any information that will make you or your students identifiable to your reviewers.

Artifact 1: Assessment

Create and submit a grade level appropriate, standards-based classroom assessment that uses digital tools. See Method Components for ideas.

Artifact 2: Assessment Results and Analysis

Administer the above assessment to your students and submit a summary of the results. Please include:

- At least one chart or graph using a digital tool
- Use the data from your assessment to identify the strengths of your class
- Use the data from your assessment to identify next steps for your class based on results

Artifact 3: Lesson Plan

Based on the next steps you outlined in Artifact 2, create a lesson plan that uses digital tools that enhance the lesson delivery presentation and/or student work. Be sure to include:

- Standards being addressed



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- Student success criteria
- Rationale for choosing this lesson
- Timeframe for lesson

Part 2. Rubric

	Proficient	Basic	Developing
Artifact 1: Assessment	<p>Assessment meets all of the following:</p> <ul style="list-style-type: none"> -Uses an appropriate digital tool to create assessment -Grade level is appropriate -It results in identifiable measurable data 	<p>Assessment meets 2 of the following:</p> <ul style="list-style-type: none"> -Uses an appropriate digital tool to create assessment -Grade level is appropriate -It results in identifiable measurable data 	<p>Assessment meets 1 or none of the following:</p> <ul style="list-style-type: none"> -Uses appropriate an digital tool to create assessment -Grade level is appropriate -It results in identifiable measurable data
Artifact 2: Assessment Results and Analysis	<p>Summary includes all of the following:</p> <ul style="list-style-type: none"> -At least one chart or graph -Cites specific data to identify strengths of the class -Cites specific data to justify the identified next steps 	<p>Summary includes 2 of the following:</p> <ul style="list-style-type: none"> -At least one chart or graph -Identified strengths of the class using data from the assessment -Identified next steps using data from the assessment 	<p>Summary includes 1 or none of the following:</p> <ul style="list-style-type: none"> -At least one chart or graph -Identified strengths of the class but does not use data to support the decision -Identified next steps but does not connect the decision to data
Artifact 3: Lesson Plan	<p>Lesson plan is connected to the next steps outlined in your summary of results.</p>	<p>Lesson plan may be loosely connected to the next steps outlined in your summary of results.</p>	<p>Lesson plan is not connected to the next steps outlined in your summary of results.</p>



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	<p>Lesson plan uses some form of digital tool for lesson delivery and/or student work and the chosen tools enhance the lesson.</p> <p>Lesson plan includes: -Standard(s) -Student success criteria - Rationale -Timeframe</p>	<p>The use of digital tools doesn't enhance the lesson.</p> <p>Lesson plan may not include one or more of the following: -Standard(s) -Student success criteria -Rationale -Timeframe</p>	<p>Digital tools are not used.</p> <p>Lesson plan includes none of the following: -Standard(s) -Studentsuccess criteria - Rationale -Timeframe</p>
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Part 3. Reflection

(500-word limit)
 Use the word count as a guide to write a personal reflection about your work on this micro-credential. For tips on writing a good reflection review the following resource:

[How Do I Write a Good Personal Reflection?](#)

1. What methods did you use to record student data? What process did you use to analyze it? In what ways will you apply the analysis to your next lessons?
2. How has this micro-credential influenced your instructional practices?
3. Describe at least one specific way this helped student growth in your classroom?
4. How do you see your work on this micro-credential affecting your digital tools instructional practices in the future?

Passing: Reflection provides evidence that this activity has had a positive impact on both educator practice and student success. Specific examples are cited directly from personal or work-related experiences to support claims. Also included are specific actionable steps that demonstrate how new learning will be integrated into future practices.





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