



*Great Public Schools for Every Student*

## **Technology Integration: Analyst**

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 a summative assessment with digital tools using alternative ways for students to demonstrate competency.

- Learning objectives
- Daily success criteria
- Google Forms

#### **Components of Formative Assessments**

Keep ongoing monitoring notes and records with digital tools for ongoing assessment and planning.

- Spreadsheets
- Word processors
- Purchased note-taking software
- Scan handwritten documents
- Monitoring notes

#### **Components of Student Reflection**

Students reflect on learning using digital tools.

- Address connections between technology and overall goals
- Students show reflection in reviewable document
- Ongoing Socratic discourse

### **Components of Assessment Analysis**

Analyze assessments to drive further instruction.

- Organize data categorically
- Record data
- Use digital tools

### **Components of Goal Sheets**

Students develop goal sheets based on reflection and data.

- Concrete goals
- Success criteria

### **Components of Stakeholder Communication**

Communicates analysis with stakeholders via digital tools.

- Students
- Parents
- Education stakeholders

### **Examples of Digital Tools for Assessments**

- Google Forms tests
- Recorded data from success criteria according to lesson plans
- Formal test data
- Growth data from website educational platforms
- Monitoring notes (digitally recorded)
- Online or scanned student reflections

## **Supporting Research**

Babette Moeller & Tim Reitzes (2011). Education Development Center, Inc. (EDC). Integrating Technology with Student-Centered Learning. Quincy, MA: Nellie Mae Education Foundation. <https://www.nmefoundation.org/wp-content/uploads/2020/05/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>.

Integrating Educational Technology into Teaching (6th Edition)

<https://wtqbrkxbw05.storage.googleapis.com/MDEzMjYxMjl1OQ==05.pdf>

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](https://www.cisco.com/c/dam/en_us/solutions/industries/docs/education/TechnologyinSchoolsReport.pdf)

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](http://www.naesp.org/sites/default/files/Student_Data_0.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>.

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

<https://www.iste.org/standards/for-educators>

ISTE Standards for Students

<https://www.iste.org/standards/for-students>

### Articles

Integrating Educational Technology into Teaching (6th Edition)

<https://wtqbrkxbw05.storage.googleapis.com/MDEzMjYxMjl1OQ==05.pdf>

Framework: ISTE Standards, a Roadmap

<https://www.edsurge.com/news/2017-10-29-framework-iste-standards-a-roadmap>

What is Successful Technology Integration?

<https://www.edutopia.org/technology-integration-guide-description>

Technology Integration and Blended Learning

<https://www.digitallearning.org/technology-integration-and-blended-learning>

Alber, Rebecca (2011 & 2017). "3 Ways Student Data Can Inform Your Teaching." Edutopia.

<https://www.edutopia.org/blog/using-student-data-inform-teaching-rebecca-alber>

## Videos

Reimagining Classrooms: Teachers as Learners and Students as Leaders | Kayla Delzer  
[https://www.youtube.com/watchtime\\_continue=1&v=w6vVXmwYvgs](https://www.youtube.com/watchtime_continue=1&v=w6vVXmwYvgs)

Gwynn's Technology Integration Playlist  
[https://www.youtube.com/watch?v=AgLNRKQR3AI&list=PLJHRhVsWVgYxkPWJ6-514Fdf3\\_K1DFFJ7](https://www.youtube.com/watch?v=AgLNRKQR3AI&list=PLJHRhVsWVgYxkPWJ6-514Fdf3_K1DFFJ7)

## Teaching Resources

Common Sense Media-Digital Citizenship  
<https://www.commonsense.org/education/digital-citizenship>

Five Tech Tools for Monitoring Student Learning  
<http://corwin-connect.com/2016/10/five-tech-tools-monitoring-student-understanding/>

Kathy Schrock's Guide to Everything  
<http://www.schrockguide.net/>

Google for Education Teaching Center  
[https://edu.google.com/teacher-center/?modal\\_active=none](https://edu.google.com/teacher-center/?modal_active=none)

FreeTech4Teachers  
<https://www.freetech4teachers.com/>

Teacher Toolkit – Exit Ticket  
<http://www.theteachertoolkit.com/index.php/tool/exit-ticket>

The Ultimate List – 65 Digital Tools and Apps to Support Formative Assessment Practices  
<https://www.nwea.org/blog/2018/the-ultimate-list-65-digital-tools-and-apps-to-support-formative-assessment-practices/>

## Submission Guidelines & 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.*

### Part 1. Overview Questions

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. What student data-driven instructional needs do you have in your classroom?
4. Describe your experience using technology to assist with data analysis.
5. Describe your experience using data analysis to drive instruction without technology.
  - **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

To earn this micro-credential, please submit the following **three artifacts in one document** 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 using 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

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

null

Proficient

Basic

Developing

null	Proficient	Basic	Developing
Artifact 1: Assessment	<p>Assessment meets all of the following:</p> <p>Uses appropriate digital tool to create assessment</p> <p>Grade level is appropriate</p> <p>It results in identifiable measurable data</p>	<p>Assessment meets 2 of the following:</p> <p>Uses appropriate digital tool to create assessment</p> <p>Grade level is appropriate</p> <p>It results in identifiable measurable data</p>	<p>Assessment meets one or none of the following:</p> <p>Uses appropriate digital tool to create assessment</p> <p>Grade level is appropriate</p> <p>It results in identifiable measurable data</p>
Artifact 2: Assessment Results and Analysis	<p>Summary includes all of the following:</p> <p>At least one chart or graph</p> <p>Cites specific data to identify strengths of the class</p> <p>Cites specific data to justify the identified next steps</p>	<p>Summary includes 2 of the following:</p> <p>At least one chart or graph</p> <p>Identified strengths of the class using data from the assessment</p> <p>Identified next steps using data from the assessment</p>	<p>Summary includes 1 or none of the following:</p> <p>At least one chart or graph</p> <p>Identified strengths of the class but does not use data to support the decision</p> <p>Identified next steps but does not connect the decision to data</p>

Artifact 3: Lesson Plan	Proficient	Basic	Developing
	Lesson plan is connected to the next steps outlined in your summary of results.	Lesson plan may be loosely connected to the next steps outlined in your summary of results.	Lesson plan is not connected to the next steps outlined in your summary of results.
	Lesson plan uses some form of digital tool for lesson delivery and/or student work and the chosen tools enhance the lesson.	The use of digital tools doesn't enhance the lesson.	Digital tools are not used.
	Lesson plan includes: -Standard(s) -Student success criteria -Rationale -Timeframe	Lesson plan includes: -Standard(s) -Student success criteria -Rationale -Timeframe	Lesson plan includes: -Standard(s) -Student success criteria -Rationale -Timeframe

## Reflection

500-word limit

Please answer the following reflective questions. Please do not include any information that will make you identifiable to your reviewers.

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? How do you see this affecting your digital tools instructional practices in the future?
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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