Fostering a Growth Mindset

Competency

Educator explores growth mindset with students to support student understanding of various modes of learning to understand new concepts and acquire new knowledge and skills.

Key Method

The educator uses pre and post assessments through the multiple intelligences framework to help students foster a growth mindset about their learning.

Method Components

How can Educators Encourage a Growth Mindset?

To build a learning environment that encourages growth mindset and to make allowances for various learning needs, the teacher develops learning experiences that engage learners in collaborative and self-directed learning.

Why is a Growth Mindset Important?

Primary to this process is understanding the diverse ways students learn. While every student approaches thinking and learning differently, most people are naturally inclined to have a more developed strength in one or two learning strategies. By developing our ability to learn in ways that are not our strengths, we can become more flexible learners and obtain tools to look at concepts from different perspectives. In line with growth mindset skill development, students have the ability to strengthen and develop multiple learning styles. By diversifying instruction and assessment strategies, the educator can help students to learn to approach problems

from different perspectives. One tool that can be used to frame this is Howard Gardner's multiple intelligences theory (Gardner).

Howard Gardner's Eight types of Intelligence

According to Gardner, the following are various types of intelligence:

- *Verbal-linguistic* intelligence refers to an individual's ability to analyze information and produce work that involves oral and written language, such as speeches, books, and emails. Verbal-linguistic modality learners work best by taking active reading notes, discussing, and public speaking.

- *Logical-mathematical* intelligence describes the ability to develop equations and proofs, make calculations, and solve abstract problems. Logical-mathematical modality learners work best by exploring patterns and relationships (flowcharts) and designing experiments using the scientific method.

- *Visual-spatial* intelligence allows people to comprehend maps and other types of graphical information. Visual-spatial modality learners work best by actively imagining, drawing, designing, building things, and creating movies.

- *Musical* intelligence enables individuals to produce and make meaning of different types of sound. Musical modality learners work best by listening to music, humming, and using mnemonic devices.

- *Naturalistic* intelligence refers to the ability to identify and distinguish among different types of plants, animals, and weather formations found in the natural world. Naturalistic modality inclined learners work best by observing, categorizing, testing, and seeing patterns.

- *Bodily-kinesthetic* intelligence entails using one's own body to create products or solve problems. Bodily-kinesthetic modality learners work best by doing, moving around, dancing, talking through their process, and using repetition.

- *Interpersonal* intelligence reflects an ability to recognize and understand other people's moods, desires, motivations, and intentions. Interpersonal modality learners work best by discussing, sharing, teaching, and working in a cooperative group.

- *Intrapersonal* intelligence refers to people's ability to recognize and assess those same characteristics within themselves. Intrapersonal modality learners work best by working alone, journal writing, using inner speech, and taking time to think.

The Difference Between Multiple Intelligences and Learning Styles

One common misconception about multiple intelligences is that it means the same thing as learning styles. However, the multiple intelligences represent different intellectual abilities. According to Howard Gardner, learning styles are the ways in which an individual approaches a range of tasks. They have been categorized in several different ways – visual, auditory, and kinesthetic, impulsive and reflective, right brain and left brain, etc.

Everyone has all eight types of the intelligences listed above at varying levels of aptitude, and all learning experiences do not have to relate to a person's strongest area of intelligence. For example, if someone is skilled at learning new languages, it doesn't necessarily mean that they prefer to learn through lectures. Learning is fluid and complex, and it's important to **avoid labeling students as one type of learner.**

What Multiple Intelligences Theory can Teach Us

While additional research is still needed to determine the best measures for assessing and supporting a range of intelligences in schools, the theory has provided opportunities to broaden definitions of intelligence. For an educator, it is useful to think about the different ways that information can be presented to students while also not classifying students as specific types of learners. People have many different intelligences, and strength in one area does not predict weakness in another.

Supporting Rationale and Research

Claro, Susana, David Paunesku, and Carol S. Dweck. "Growth Mindset Tempers the Effects of Poverty on Academic Achievement." Proceedings of the National Academy of Sciences 113.31 (2016): 8664-8668.
http://www.pnas.org/content/113/31/8664.short

Dweck, Carol. "Carol Dweck Revisits the 'Growth Mindset.'" Education Week on Sept 23, 2015
https://www.stem.org.uk/system/files/community-resources/2016/06/DweckEducationWeek.pdf

Dweck, Carol. "Developing a Growth Mindset"

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https://www.youtube.com/watch?v=hiiEeMN7vbQ

Haley, M. H. "Understanding Learner-Centered Instruction from the Perspective of Multiple Intelligences." Foreign Language Annals 34.4 (2001): 355-367. doi:10.1111/j.1944-9720.2001.tb02068.x
https://gse.gmu.edu/assets/docs/forms/mirs/foreign_language_annals--understanding_learner-centered_instruction_from_the_perspective_of_multiple_intelligences.pdf

Kuusisto, Elina, Sonja Laine, and Kirsi Tirri. "How Do School Children and Adolescents Perceive the Nature of Talent Development? A Case Study from Finland." Education Research International 2017 (2017).
https://www.hindawi.com/journals/edri/2017/4162957/abs/

Smith, Mark. "Howard Gardner and Multiple Intelligences." The Encyclopedia of Informal Education(2002, 2007).
http://sts.schools.smcdsb.on.ca/UserFiles/Servers/Server_97729/File/St.Thomas%20Aquinas%20Catholic%20Secondary%20School/Staff%20Links/Ms.Whelton/Gardners%20MI%20by%20Smith.pdf

Resources

Howard Gardner: 'Multiple Intelligences' Are Not 'Learning Styles

Multiple Intelligences Self-Assessment

Differentiating Instruction for Multiple Intelligences and Learning Styles

Focus on Student Learning – Instructional Strategies Series Book Two: 60 Formative Assessment Strategies." Regier Educational Resources 2012.

4 Ways to Encourage a Growth Mindset in the Classroom

Howard Gardner

Multiple Intelligences: What Does the Research Say?

Submission Guidelines & Evaluation Criteria

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

Part 1. Overview Questions (Provides Context)

(150-250 words)
Please use the suggested word count as a guide to answer the following contextual questions. This will help our assessor understand your current context for working on this micro-credential.

Please do not include any information that will make you identifiable to your reviewers.

1. Describe the demographics and the diverse learners in your classroom (English Language Learners, Gifted Learners, Special Education Students)
2. How have you encouraged a growth mindset in your students? Your examples can be before, during, or after applying for this micro-credential.

Passing: Response provides reasonable and accurate information that justifies the reason for choosing this micro-credential to address specific needs of both the teacher and the student. A learning goal that describes what they hope to gain from earning this micro-credential needs to be clearly stated.

Part 2. Work Examples/Artifacts/Evidence

To earn this micro-credentials 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: Lesson or Unit Plan
A lesson plan or unit plan in your content area that includes:

- A learning preference pre- and post-assessment (this can be Gardner's Multiple Intelligences Inventory or another similar tool)

- A menu of assignments matched with the learning styles on your pre/post assessment. This should have at least two ways for students to demonstrate learning for each type of intelligence or other frameworks. Your students will choose two different assignments

from different learning styles, one way they matched with and one they did not match with.

- Explain how you modified or accommodated the menu for your diverse learners.

Artifact 2: Self Reflection
A teacher self-reflection that can be presented in a video (up to five minutes) or a written analysis (600-word limit) that includes the following information:

- Why did you choose the topic for the unit of study?

- How did you develop the menu of learning activities?

- What did you notice about the students as they worked on the assignments?

- What did you notice about your diverse learners as they worked on the assignments?

- Did the students become more flexible learners and thinkers as a result of working on the same concept in two different ways?

Artifact 3: Three Student self-reflections
Submit three student self-reflections (written or audio/video recording)

- These may be done orally as an audio or video recording (two-min. max for each) or in writing (200 words max)

- Include at least one student reflection from a diverse learner.

In a grade level appropriate way, students will reflect on how demonstrating their learning in two different ways helped them to develop new approaches to learning or new ways of thinking about the concepts. They should also reflect on how they were able to apply a growth mindset to developing a new learning style.

Part 2. Rubric

	Proficient	**Basic**	**Developing**
Artifact 1: Lesson or Unit Plan	Includes a learning style pre- and post-assessment Is grade level appropriate and the following is true:	Includes only pre- or post-assessment Students were given only 1 way to demonstrate understanding for each modality, or	Students were not offered a choice of learning modalities and were assigned these by the teacher

	Students were given at least 2 choices for each modality to demonstrate understanding Items on the assignment menu are aligned with the learning modality	students were not given a choice on which modality to work on	
Artifact 2: Teacher Self-reflection	Rationale is grounded in research and best practice and based on student needs Educator perspective is logical and clearly states why he/she chose to utilize the particular strategies Educator included observations about students' learning experiences for both an area of strength and one they were developing Reflection includes thoughts on how students became more flexible in their thinking and learning	Rationale may not be grounded in research or best practice Student needs were not part of the lesson design process Reflection may not include specific examples or reference student observations No mention of students becoming or not becoming more flexible with their thinking and learning	Missing any of the required parts and/or the following: Rationale goes against current research or best practice Teacher showed little to no thoughtfulness when developing strategies Reflection is vague and does not include any observations or thoughts about flexible thinking and learning
Artifact 3: Three student self-reflections	Students were able to articulate how each assignment	Students may have articulated how they approached or felt	No connection made to growth

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	helped them learn or think about the concept Students can describe how it felt to do an assignment based on their strength and how it felt to do an assignment not based on their strength Students were able to discuss how they could apply growth mindset to learning modalities	about each assignment but were unable to make connections to growth mindset and developing new approaches to learning or how the different assignments helped them see things from a different perspective	mindset or flexible thinking strategies

Part 3 Reflection

(700-750 words)
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?

Please do not include any information that will make you identifiable to your reviewers.

Submit a graph that identifies students' learning modality growth areas and answer the following questions:
- How did your thinking about fixed versus flexible learning styles evolve and possibly change?
- Will the results of this unit of study make you a more student-centered teacher? Why or why not?

Passing: Graph shows pre- and post-learning modality growth areas for all students and is easy to read. The questions are answered completely and reference the specific data shown in the graph.

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