

Micro-Course Learning Objectives

After completing each micro-course, learners will be better positioned to ...

TRACK 1: LEARNING ENVIRONMENTS



Teachers as Brain Changers

- Embrace the concept of neuroplasticity, and that all educators are brain changers
- Recognize 'neuromyths' that may appear in your teaching practice and address them
- Identify any implicit biases based on race, gender, or other identifiers that may be affecting your teaching practices



Classroom Design

- Understand the impact the classroom environment has on working memory and attention
- Design a classroom that facilitates and tells the story of the learning that happens there, and reflects the students' voice
- Understand how to create more space for students to visually show their thinking



Classroom Culture

- Describe the relationship between emotion and cognition
- Strategically implement the use of positive emotion in the learning environment
- Understand that social belonging and academic belonging are different and manage both for students
- Depersonalize and normalize struggle, so students can see their successes and challenges as separate from stereotypes

TRACK 2: CURRICULUM DESIGN



Planning for Forgetting

- Describe the relationship between working memory and long-term memory
- Design your curriculum to teach study strategies alongside content
- Apply retrieval practice, spacing, and interleaving in curriculum design
- Balance direct instruction and assigned projects to build knowledge that is durable, usable, and flexible



Practice Made Perfect

- Explain why quality of homework is more impactful than the quantity of homework
- Design high-quality homework
- Reduce cognitive load for students when they are away from the classroom setting
- Make homework a time for independent practice and mistake-making



Building for Every Brain

- Understand the importance of designing curriculum for learning variability
- Identify core competencies in advance, and have scaffolds prepared to help students with them
- Be prepared to choose teaching modalities based on content, not on perceived "learning styles"

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TRACK 3: PEDAGOGY & ASSESSMENT



Learning Made Memorable

- Identify strategies to create usable, flexible and durable knowledge
- Design assignments with elements of retrieval practice, spaced practice and interleaving
- Use formative assessments to gain insight into students' knowledge and aptitude
- Maintain awareness of cognitive load and the limitations of active working memory in lesson and unit planning



The Engaged Brain

- Design classes to incentivize thinking hard
- Use multiple modalities for teaching and assessment
- Apply novelty, relevance, and choice to increase student engagement
- Explain the benefit of struggling during the learning process, and design lessons where students make and learn from mistakes



Feedback Loops

- Articulate the difference between formative assessment and summative assessment
- Be able to give high-quality feedback
- Design opportunities for students to act on feedback soon after receiving it
- Understand the differences between feedback given at the start of the year versus the end of the year

TRACK 4: STUDENT SUCCESS & WELL-BEING



The Science of Study

- Teach study strategies in class, alongside content, and include time to practice them
- Recommend study strategies that aid in deeper retention or are more efficient
- Advise students on effective learning environments and study methods to use outside of school



Thinking Outside the Brain

- Know that building metacognition could be one of the most impactful learning strategies
- Understand the difference between metacognitive knowledge and metacognitive skills
- Include activities that aid in the development of metacognition
- Use modeling to help students develop their metacognition



The Brain at 100%

- Describe the relationship between emotion and learning, and design effective lessons with this in mind
- Understand the relationship between habits such as sleep, nutrition, and physical activity and the ability to learn
- Design activities that have value and purpose, and which build motivation and students' self efficacy