



Science of Learning - Online

DEVELOPING SOPHISTICATED LEARNERS

PD for Educators



*"...not only can we put cognitive science discoveries into practice, but I believe we're ethically obligated to do so; the benefits of cognitively friendly instruction are so profound that **inaction at this point would be tantamount to malpractice**. We have knowledge that can **help students realize a lifelong love of learning**. It's time to put that knowledge to work."*

Prof. Sanjay Sarma
Vice President for Open Learning, MIT

PROGRAM OUTLINE

Co-developed with the world's leading experts on human learning, this online professional development provides compelling research and insightful application to bolster teaching efficacy and improve your students' ability to learn. The program is complemented with live synchronous group collaboration, assignments and application hours to support educators. With **200+ evidence-based strategies** to enhance learning, educators will have a rich toolkit to empower students and drive meaningful outcomes.



45 hours
(customizable)



12 Modules



Synchronous
+ Asynchronous



MODULES



Module 1: Developing Sophisticated Learners

Students become sophisticated learners when we teach them in a way that fosters learning, while also developing their ability to learn independently. Understand the characteristics of a sophisticated learner and how to design your lessons to ensure students learn optimally.

What You'll Learn

- A framework for successful learning that is rooted in cognitive science
- The differences between a traditional education and one based on learning science
- The definition of a sophisticated learner and benefits for learning outcomes



Module 2: Capture Student Attention

Attention is a core cognitive skill that plays a critical role in learning. While students are often told to “pay attention,” they are rarely taught how. Learn how to capture, keep, and gauge your students’ attention.

What You'll Learn

- The core cognitive skills essential for processing information
- Common causes of inattention
- Strategies to capture your students' attention



Module 3: Addressing Processing Speed

Processing speed refers to a learner’s ability to perceive, integrate, and respond to visual, auditory, or motor information. Learn how to discern and tailor your teaching to accommodate variations in processing speeds within your classroom.

What You'll Learn

- Common symptoms of slow and fast processing speed on learning
- Teaching methods and modifications that support the variety of processing speeds that exist in any given classroom
- The relationship between processing speed and emotional wellbeing



Module 4: Leverage Working Memory

It is difficult to identify a learning task that does not rely on working memory, the ability to mentally juggle information. Become well versed in the ins and outs of working memory and learn classroom strategies that support and strengthen it.

What You'll Learn

- How to work with the content being taught, considering working memory and avoiding cognitive overload
- Strategies that students can use to optimize working memory
- The science of effective multimedia learning and methods to improve multimedia teaching



Module 5: Support Executive Function for All

Executive function skills predict academic and career success. Learn meaningful strategies to support your students' acquisition of executive function, considering also executive dysfunction.

What You'll Learn

- A framework for executive function skills before, during and after goal-directed behaviors
- How to work with symptoms of executive dysfunction
- Classroom strategies to support motivation, planning, emotional regulation, processing regulation, self-monitoring, and self-regulation



Module 6: Teach for Mastery I (Encoding Techniques)

Studies show students rely on ineffective strategies to learn resulting in superficial learning (at best). Learn how to foster your student's ability to acquire knowledge using proven techniques that facilitate memory encoding and consolidation.

What You'll Learn

- The architecture of human memory and its importance to learning
- Commonly held illusions, misbeliefs, and memory myths
- 8 evidence-based memory techniques that help students encode information effectively



Module 7: Teach for Mastery II (Retrieval Strategies)

Traditional instruction is focused on getting information into students' brains. Compelling research reveals that pulling information out of the brain enhances learning. Learn how to incorporate retrieval practice into your teaching.

What You'll Learn

- The role of retrieval practice in forming durable and deep learning
- How to activate prior knowledge to aid memory
- Classroom strategies for integrating retrieval strategies into curriculum and lesson plans



Module 8: Foster Metacognition

Teaching metacognitive reflection is an effective strategy to accelerate student achievement. Learn how to provide students with practical strategies that foster metacognitive awareness and create the foundation for learning independently, effectively, and efficiently.

What You'll Learn

- How to measure your students' metacognitive skills
- How to capitalize on mistakes to promote learning success
- Classroom strategies to develop your students' ability to monitor and manage their own learning behaviors



Module 9: Provide Effective Feedback

Research suggests effective feedback, formative assessments, and peer-based learning are among the most effective ways a student can learn information. Learn how to integrate and apply these concepts into your classroom.

What You'll Learn

- How to use feedback to bolster self-esteem and encourage higher-level thinking
- How to use formative assessment effectively
- The power of peer-based feedback and learning in your classroom



Module 10: Teach for Belonging I (Emotions & Relationships)

Develop a better understanding of the interdependencies between cognition, emotion, and behaviors to better support your students. Learn how to foster positive emotions and behaviors that increase student engagement, effort and learning outcomes.

What You'll Learn

- Core components of Social-Emotional Learning, Positive Education, and Trauma-Sensitive Education
- Key student mindsets such as growth, belonging, and purpose/relevance.
- Classroom strategies to support positive emotions, engagement, and relationships in learning



Module 11: Teach for Belonging II (Engagement & Motivation)

Student engagement often decreases with every year of schooling. Yet, student learning requires their engagement and motivation. Learn what research reveals about the most effective ways for teachers to foster student motivation and engagement in the classroom.

What You'll Learn

- How to engage students using theories from cognitive science
- How to tap into intrinsic motivation including Self-Determination Theory
- Classroom strategies and methods that motivate students



Module 12: Understanding Cognitive Diversity

Every classroom is cognitively diverse. Learn how to associate learning difficulties to cognitive skills, as well as refine your approach to how you teach through appropriate strategies to support students' areas of difficulty.

What You'll Learn

- How to understand cognitive diversity, also known as neurodiversity or neurodivergence
- Signs and accommodations for the most common learning differences in classrooms today including dyslexia, autism, twice-exceptional, non-verbal learning disabilities, and emotional and behavioral disorders
- How to target and strengthen cognitive skills to improve learning



HOW YOU LEARN

We practice what we teach: Our programs incorporate the scientific principles of human learning into our instructional design. Learning is active, engaging, collaborative, and application-based. Carefully designed program elements and ongoing guidance and support empowers educators and students to apply what they've learned.

Expertly Led Guidance & Support



COGx Program Leaders

Program Leaders are assigned to support the learning journey. They monitor the program and respond to questions.



Application Hour

Coaching and collaboration sessions will be held during the program to allow participants to clarify any questions about the program content.



Discussion Boards

Modules include Discussion Forums to share ideas, collaborate, and provide and receive valuable peer feedback. Program Leaders are also constantly available to seek clarity or ask a question on any topic throughout the learning journey.

Research-Informed Instructional Design



Priming Activities

Priming quizzes and open-ended interrogatories are used to get learners to think about the subject matter they are about to learn.



Pre-Teaching Terms

Teachers interact with digital flashcards that cover content-specific terminology at the start of each module.



Retrieval Practice

To foster durable, flexible, and enduring learning, we apply retrieval strategies throughout the program, including elaboration, spacing, self-testing, and interleaving.



Dual Coding

We apply dual-coding theory throughout our programs by including images and graphics as well as in our micro-videos.



Active Learning & Transfer



Classroom Application Guides

Takeaway posters are provided throughout the modules to guide the effective implementation of the concepts covered.



Peer-Based Feedback & Reflection

Learners receive and provide peers with anonymized feedback on lesson plan application assignments for deeper learning.



Alumni Practitioner's Platform

Program alumni (Science of Learning Practitioners) can join an online platform to share resources and strategies for ongoing application of concepts and guidance.

GLOBALLY RECOGNIZED

COGx was honored as the world's Top Science of Learning solution at the Reimagine Education Awards among 1100+ entries, impressing a panel of 650+ judges. In addition, COGx was recognized as the Top EdTech innovator (USA) to promote college-readiness at the LatinX Conference. The Dubai Future Foundation recognized COGx as one of the world's Leading EdTech organizations.





WHAT EDUCATORS ARE SAYING...

COGx did a remarkable job of breaking down the science into digestible pieces which allowed our educators to apply in real time their learning. It was amazing seeing the impact on our learners who started to understand who they were as a learner. Our cohort presented their learning to all of our educators which led to an additional cohort starting. COGx is one of the few silver bullets in education that will benefit learners and educators equally.

Dr. Cory Steiner, Superintendent, Northern Cass School District

“COGx is the finest example I’ve encountered of cutting edge research applied to educational methodology. All educators should be required to learn effective strategies to develop the foundational cognitive skills students need to engage in the critical thinking and creative problem solving that 21st century education demands.”

Sara Edward, EdD., Educator, Jemicy School

This program really connected a lot of dots on work I’ve been doing both intentionally and intuitively. I feel like I am armed with some really useful strategies for the future.

Evan Downey, Educator, St. Luke’s School

