Instructional Modules Overview

Deans for Impact

At Deans for Impact, we believe knowing how to teach begins with understanding how people learn. But too often, teachers begin their careers without this knowledge, and that has implications for the learning opportunities afforded to the generations of students they will serve. Our work is grounded in a belief that teachers can create challenging, affirming, and equitable learning experiences that enable all students to thrive if they have a firm understanding of the science of learning.

Over the past few decades, research in the fields of learning and development has shed new light on how young people learn. And yet, that research hasn't been accessible to many teachers. Through our **Learning by Scientific Design Network** we have worked in partnership with teacher-educators across the country to change that reality. **The Learning by Scientific Design instructional modules translate learning science research into instructional practice, providing practice-based, actionable learning opportunities for teachers and those that prepare them.**

Each set of instructional modules supports the development of educator knowledge and skill related to a core teaching practice grounded in the science of learning. Each is sequenced into pedagogical stages aligned with the research base on learner development. The instructional modules for each teaching practice should be taught in sequence aligned with the pedagogical stages, because each builds on the materials before to scaffold learning.

Learning Science-Informed Teaching Practices

How can teachers put their understanding of how students learn into practice? These specific teaching practices are a good place to start:

Drawing attention to meaning:

Teachers' questions and tasks require students to focus attention on the meaning of content.

Prompting connections to prior knowledge:

Teachers prompt students to call up important prior knowledge and explicitly connect it to new ideas.

Prompting effortful thinking:

Teachers' questions and tasks require students to engage in effortful thinking.

Modeling and think aloud:

Teachers scaffold student understanding through carefully designed instruction that includes modeling and thinking aloud.

Using examples and non-examples:

Teachers prompt students to connect (and distinguish) varied examples and contrasting non-examples.

Retrieval practice:

Teachers space and interleave practice opportunities to assist students in building automaticity.

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Pedagogy Stages

The curricular materials for each teaching practice are sequenced into pedagogical stages, below. Materials should be taught in sequence because each builds on the materials before to scaffold learning.

Foundations
~1.5 hours

Introduces the teaching practice to learners with grounding in cognitive science and implications for the classroom through key readings/videos, scenarios that provide explicit examples and non-examples, and interactive processing opportunities

Analyze
~2.5 hours

Supports learners in distinguishing between effective and less effective enactment of the teaching practice through the introduction of key criteria and vignette and video analysis tasks

Modify
~3 hours

Supports learners in applying the teaching practice through guided and independent practice modifying lessons and tasks to align with effective enactment

Rehearse
~2 hours

Introduces a protocol for structured, low-stakes opportunities for learners to practice and get feedback on their enactment of the teaching practice and ends with an opportunity to put that protocol into practice through a rehearsal of a small lesson segment

Instructional modules are available for each teaching practice across a range of grade bands and content areas. All instructional modules are designed to be taught synchronously and includes a full suite of downloadable session materials, including:

- Course Session Overview and Facilitator Guide
- Pre-Reading/Tasks
- Course Session Slides
- Learner Note-Taking Tool
- Exit Ticket and Exemplar Responses

Interested in accessing these modules and additional instructional resources? Contact us at **info@deansforimpact.org**.