

The Crescendo of EML

a mini-workshop experience that is designed to **delight** and **surprise**

Meeting Location: [insert campus here]

Meeting Room: [insert meeting room here]

feel free to adjust the timing and topics according to your needs

Sample Day I Schedule

4pm

The Value Proposition of EML

a highly interactive session with EML stories, unique perspectives on what EML is, and how EML is so transformative for students, classrooms, and universities

Sample Day II Schedule

9am

The Curious Power of Curiosity

the exploration of the two unique types of curiosity through interactive “experiential learning” activities along with actional classroom techniques

10am

The Science of Student Attention with EML

a visual exploration of the neuroscience of human attention with experiential activities (through art, music) with EML intervention ideas that are applicable to any classroom

11am

The Student Perception of Value

a curious exploration on how student perception impacts engagement and learning with DEI-infused teaching strategies

About the Speaker

Dr. A. L. Ranen McLanahan is a Program Director and national speaker for the Kern Family Foundation. He started in industry working on a floating factory ship in Alaska in 1999. From there, he’s done computational modeling work, micro-electrical mechanical system design, and R&D work through a device prototyping and innovation center that he co-founded in 2013. He has served as a faculty member of general and mechanical engineering for 12 years with the UW-Platteville Engineering Partnership and worked as an industrial consultant and research affiliate through his company Critical Flux LLC. In 2016, Ranen was invited to the Wisconsin State Capitol to give a workshop on Solidarity to the Wisconsin Legislators. Topics from this workshop became his 2019 book, *The Science of Solidarity*. Over his career, Ranen has earned multiple educational awards and nominations for his teaching, outreach, and innovation.



How this works

- Contact Ranen McLanahan (rmclanahan@kffd.org) to schedule an in-person workshop day on your campus, complimentary of The Kern Family Foundation.
- Mix and match 3-5 topics from our modular 50-minute topical collection, below.
- Schedule topics around instructor's teaching schedules.
- Invite instructors to participate according to their availability and interests.
- Watch instructors be **surprised** and **delighted** by a selection of sessions that are 100% unique, engaging, and impactful.

The Value Proposition of EML

A quick start guide for why EML is so transformative for students, student engagement, and learning outcomes. Learn about innovations by bisociation, hear the Kern Family Foundation story, see the engineering gulf, and discover the power in the value proposition of EML. This session contains novel ideas and perspectives on EML. It is appropriate for those at all EML experience levels.

The Curious Power of Curiosity

How often do we realize the transformative power of a single curious question? This **premier session** offers actionable classroom techniques to nurture student curiosity. During the session, you'll engage in hands-on "experiential learning" to better explore your own brain's mechanisms of curiosity and elevate your teaching by fully tapping into this essential human drive.

The EML Intervention Creation Workshop

What makes something EML? How do you change the way students think while also still teaching technical skills? This highly interactive session will present some rules of thumb, ideas, and methods for creating your very own EM learning intervention for your own course. Note: although this session can be completed in 50 minutes, an extended 75-minute session will give instructors more time to co-create together.

The Student Perception of Value

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- welcome to a most unusual restaurant
- but is a classroom like this restaurant?
- leveling up the engineering bread
- adaptable recipes



The Student Perception of Value

If different students care about different things, what does that mean for creating value in the classroom? In this DEI-friendly offering, come learn about the student perception of value, and how we can use perception to create teaching leverage for ourselves and our topics.

The Surprising Consequences of Self-Awareness

Did you know there are two distinct types of self-awareness and that these can be understood entirely independently of each other? Also, does an increase in expertise and power make someone *more* self-aware or *less* self-aware? Come learn about the four categories of self-awareness, how it can change the trajectory of a career, the surprising consequences of expertise and power, and the data-driven recommendations about what it can mean for you, personally, as well as what it means for your students.



The Less-Stress Grading Structure

This more advanced topic is recommended as a later topic, or even scheduled as a virtual lunch-and-learn in the months following a face-to-face workshop day.

Does it matter what grading structure you choose? For example, can the choice of a grading structure:

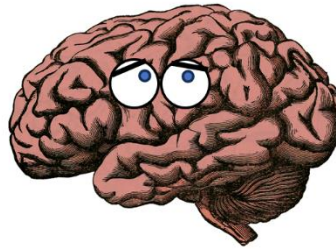
- put the emphasis on learning rather than on merely passing tests, quizzes, and exams?
- improve general assessment accuracy?
- increase the percentage of on-time student submissions?
- substantially reduce the instructor's grading workload?
- easily provide students with useful, instant feedback?
- get the lower quartile to *actually look at* where they made a mistake on homework?
- reduce student stress throughout your entire course?

Come learn about this novel method, the theory behind it, and the lessons learned from its implementation.

The Science of Human Attention

Student attention can be slippery to pin down. It flows and ebbs throughout the day, week, and semester. Sometimes, when we need to capture it most, it also becomes the most vaporous and difficult. So, what are the mechanics behind human attention? Are there ways we can capture it consistently through EML? And how can we use EML in our face-to-face and virtual classrooms? This highly experiential session explores the science of human attention in a variety of ways.

Without these Elements, we get Mind Wandering



Mind Wandering...

"...[is] in fact quite vigorous and consists of a mixture of freely wandering past recollection, future plans, and other personal thoughts and experiences that appear to be loosely linked."

Andreasen, N. C., O'Leary, D. S., Cizadlo, T., Arndt, S., Rezai, K., Watkins, G. L., ... & Hichwa, R. D. (1995). Remembering the past: two facets of episodic memory explored with positron emission tomography. *American Journal of Psychiatry*, 152(11), 1576-1585.

Escaping the Classroom Mindset

Every setting, from the dentist's chair to an airport lounge, evokes distinct feelings and behaviors. Similarly, university classrooms often summon a predefined "classroom mindset" in students. But what is this mindset, and does it hinder dynamic learning? This workshop delves deep into the understanding of these ingrained patterns and equips you with innovative techniques to liberate your students from conventional classroom confines.

Other Sessions in Development (coming soon!)

- A Student-Friendly Approach to the Ill-Defined Problem of Communication
- A Novel Approach to Academic Integrity
- The Vital Importance of Having Fun when Teaching
- Innovative Innovations: Practical (and outside-the-box) Teaching Ideas and Structures
- The Science of Solidarity with EM classroom applications
 - Applied EM lessons from McLanahan's 2019 book *The Science of Solidarity*