Science of Learning Research Center

UC San Diego
“I don’t believe in this business of being behind, better to be in front.”
- Mel Brooks
Our society emphasizes *restoring* mental and physical health, but we do not do enough to “*get it right in the first place*” by understanding what it is that each child needs to learn and flourish.

- Andrea Chiba
  Professor, Cognitive Science
  UC San Diego
This is the Challenge we will meet:

Lead the way for the Science of Learning – for the World
We invite you to join us at the forefront of the Science of Learning – exploring boundless opportunities to make an impact on our world!
Why is the Science of Learning Important?

“Many lament our current education systems were set up like factories, a model that fit the 20th century. Technologies have made the traditional model of teaching obsolete.

The relatively young field of learning sciences draws from multiple disciplines to study the ways in which people acquire knowledge, skills, and competencies and to answer the questions of why some strategies for learning work better or worse than others – and also how they work in the real world.”

From “Science of learning: Why do we care?” by Helyn Kim, Eileen McGivney, and Esther Care
Brookings Institution, March 2017
Our Vision

In seven to ten years, we will significantly advance the science of learning.

We will establish a pipeline from basic science to scalable tools for enhanced learning, which will have measurable, sustainable, and lasting impact on the next generation of education, machine learning, artificial intelligence and health.
Who we are: Our Values

**Trust**
#1 for a reason

**Creativity**
The spark that ignites new ideas and the best science

**Boldness**
Moving beyond the cutting edge, willing to trust, share, persist

**Determination**
To discover and provide scientific proof

**Collaboration**
Blurs the lines between established disciplines to focus on discovery

**Integrity**
In all that we endeavor

**Community**
Diverse, inclusive, and intergenerational for rich, productive, powerful science and translatable discovery
Where we come from:
Science of Learning
at UC San Diego

2006-2017

$70 million NSF Center funded research known as the Temporal Dynamics of Learning Center (TDLC)

Result -> Vast research portfolio of remarkable discoveries and an ingenious, effective community of scientists
How we work: An Interdisciplinary Approach

Our teams include:

• Neuroscientists
• Cognitive Scientists
• Educators
• Psychologists
• Computer Scientists
• Bioengineers
• Machine Learning Experts
Why a Center of Research is Important

It is a bold move for accomplished scientists to share their very best ideas for scientific discovery and development of technology with their network of expert colleagues.

Why do they do so?
Our scientists recognize that the group vision, the whole, is greater than the sum of its parts. More science. Greater impact.

This is the culture of our Science of Learning Research Center.
What we will work on:

*Center Scientific Initiatives*

- Optimizing Learning and Memory
- Technology for Learning
- Music and Arts: Foundations for Learning
- International Educators Network
- Deep Learning to Understand the Brain
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Timeline and Budget

YEAR 1: Scientific research level of 28 Labs $10M
YEARS 2-4: Research growth to 40 Labs $25M
YEARS 5-7: Launch scalable programs $30M
YEARS 8-10: Focus on translation $35M
TOTAL $100M
What will Philanthropy do?

✓ Increase depth and breadth of science
✓ Increase translation; speed up direct application
✓ Create data repository of student learning
✓ Continue upward trajectory of international collaboration
✓ Scale educator network to national level
✓ Train next generation of interdisciplinary scientists

**Importantly:**

*Answers the central questions of how learning works and how to optimize that learning in the real world.*
With Philanthropy –
This is the Challenge we will meet:

Lead the way for the Science of Learning –
for the World
From all of us in Science of Learning Research at UC San Diego –
We invite you to join us!
Thank you!