

GLOBAL
SCIENCE OF LEARNING
NETWORK

ANDREA A. CHIBA

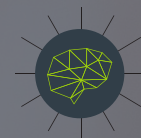
UNIVERSITY OF CALIFORNIA, SAN DIEGO

Professor, Dept. of Cognitive Science and Program In Neuroscience

Science Director and Co-Director, Temporal Dynamics of Learning Center

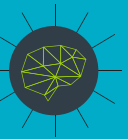
SETTING THE STAGE FOR A GLOBAL SCIENCE OF LEARNING NETWORK

IMAGINE THE POSSIBILITIES



SCIENCE OF LEARNING MOVEMENT

- 1998 APS Santa Barbara Summit on Learning and Education
- 2003, 2004 APS Testimony to Congress
- House appropriations approved funds for the NSF Science of Learning Centers
- NSF took a broader view of the SoL





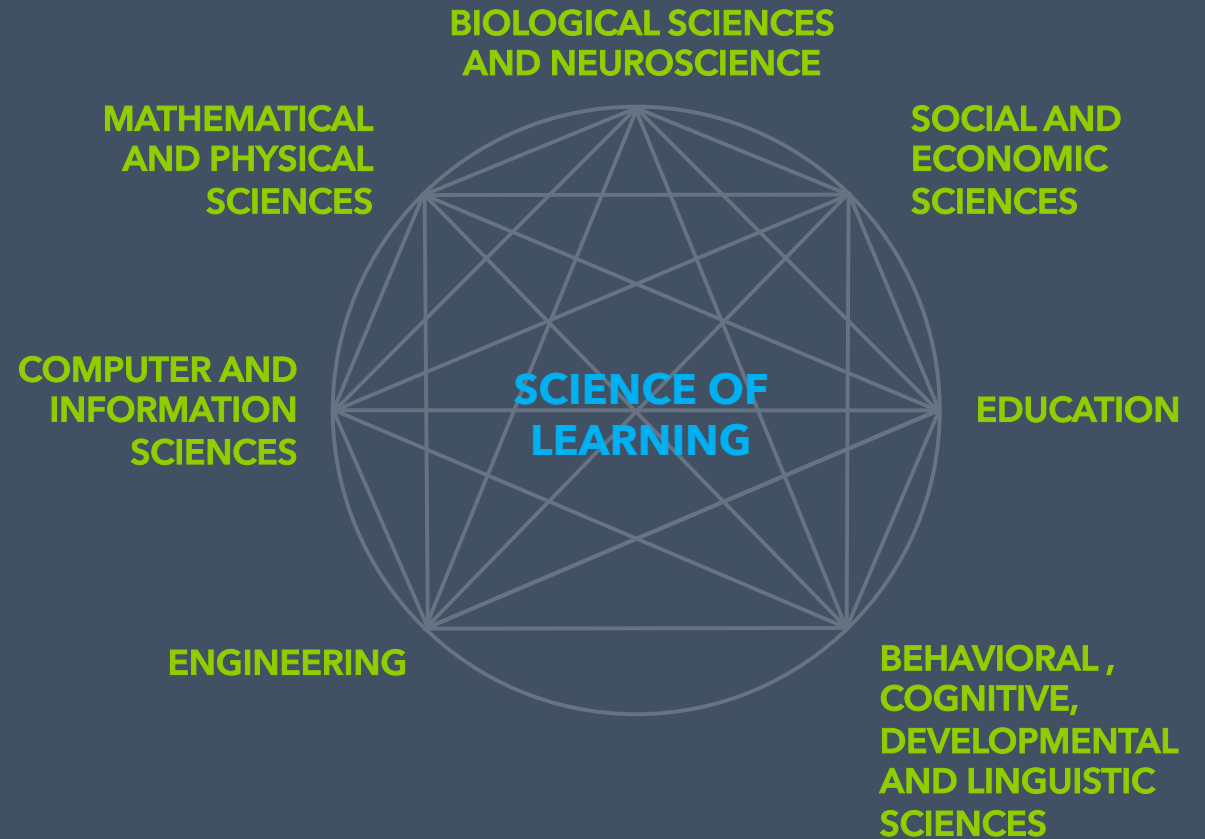
A SCIENCE OF LEARNING THAT CROSSES BOUNDARIES

SOO-SIANG LIM, PH.D

PROGRAM DIRECTOR

US SCIENCE OF LEARNING CENTERS

www.nsf.gov/slc



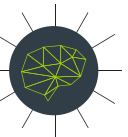
US NSF SoL CENTER PORTFOLIO

2004 COHORT

- CELEST: Center of Excellence for Learning in Education, Science and Technology (Boston U)
- LIFE: Learning in Informal and Formal Environments (U of Washington)
- PSLC: Pittsburgh Science of Learning Center (Carnegie-Mellon U)

2006 COHORT

- SILC: Spatial Intelligence and Learning Center (Temple U)
- TDLC: Temporal Dynamics of Learning Center (UC-San Diego)
- VL2: Visual Language and Learning Center (Gallaudet U)

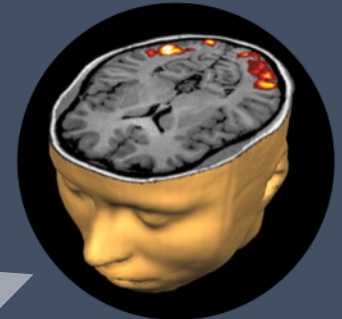
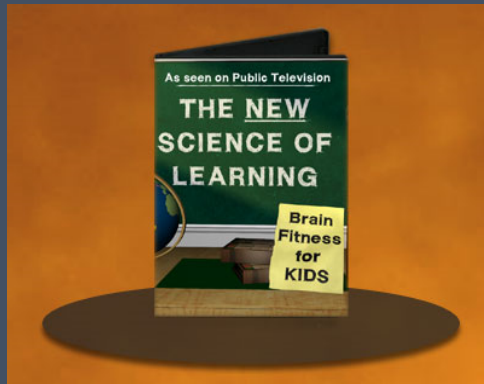


INITIAL CENTERS JOINING THE NSF INITIATIVE

- Johns Hopkins Science of Learning Institute
(Johns Hopkins University)
- Science of Learning Centre
(University of Queensland, Brisbane, Australia)
- Centre for Science of Learning @ACER
(Australian Research Council)
- Science of Learning Strategic Research Theme
(University of Hong Kong)
- Center for Global Education/Science of Learning
(Asia Society/ Led by: Hong Kong and
Shanghai/ECNU)
- Science of Learning Center (Brazilian Network of
Science for Education)



FOUNDATIONS FOR A NEW SCIENCE OF LEARNING CIRCA 2009



**NEW
SCIENCE OF
LEARNING**

**ANDREW N. MELTZOFF, PATRICIA K. KUHL,
JAVIER MOVELLAN, TERRENCE J. SEJNOWSKI**



2015 CONGRESSIONAL BRIEFING ON THE SCIENCE OF LEARNING

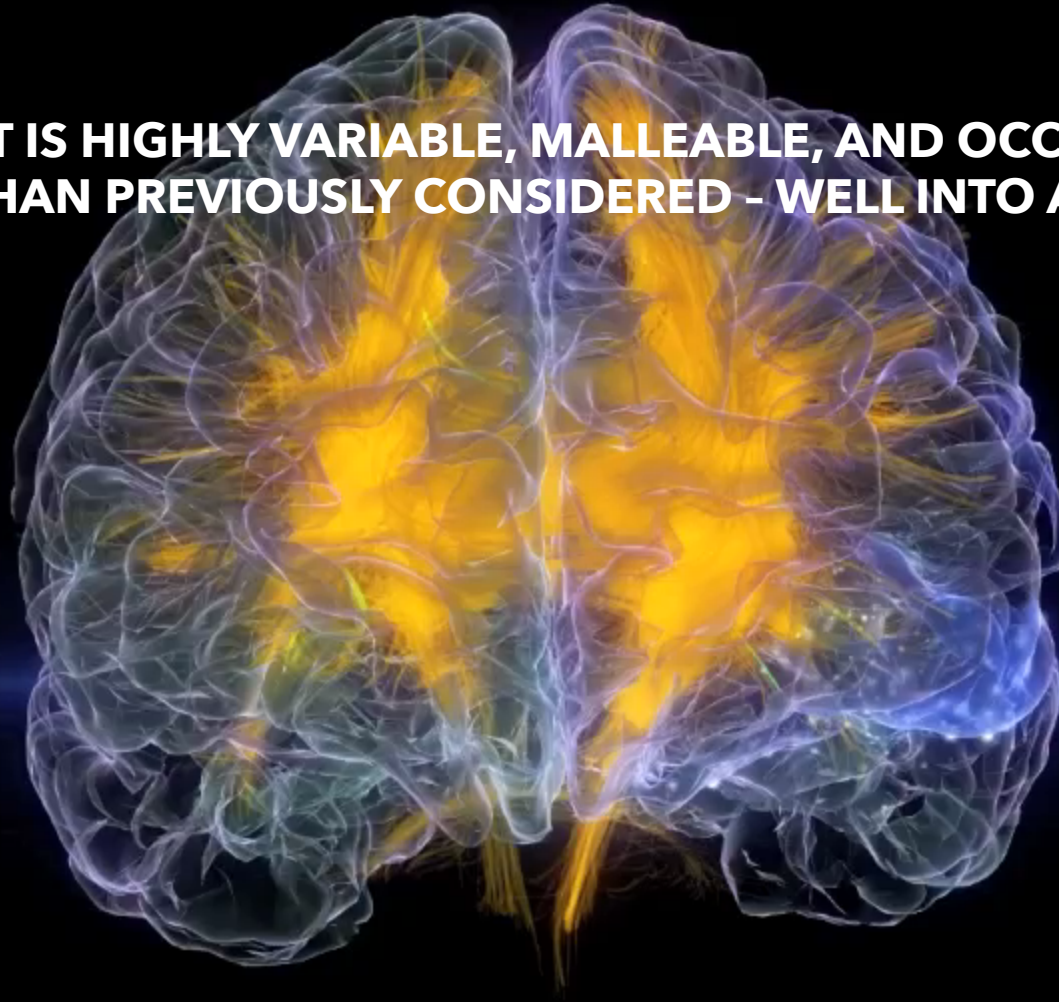
Building a Science of Learning as a Foundation For Education

Simply Makes Sense:

- It provides an opportunity to remember that individuals in the classroom are dynamic biological organisms situated in a social environment.
- Considering this at the outset and approaching the task as scientists, allows us to parse the basic principles. We can work with educators to reconsider basic practices and to create new ones.
- Getting it right in the first place is the best course for the individual, the community, society, and for the economy.



BRAIN DEVELOPMENT IS HIGHLY VARIABLE, MALLEABLE, AND OCCURS OVER A MUCH LONGER TIMESPAN THAN PREVIOUSLY CONSIDERED - WELL INTO ADULTHOOD!



Source: Tim Mullen

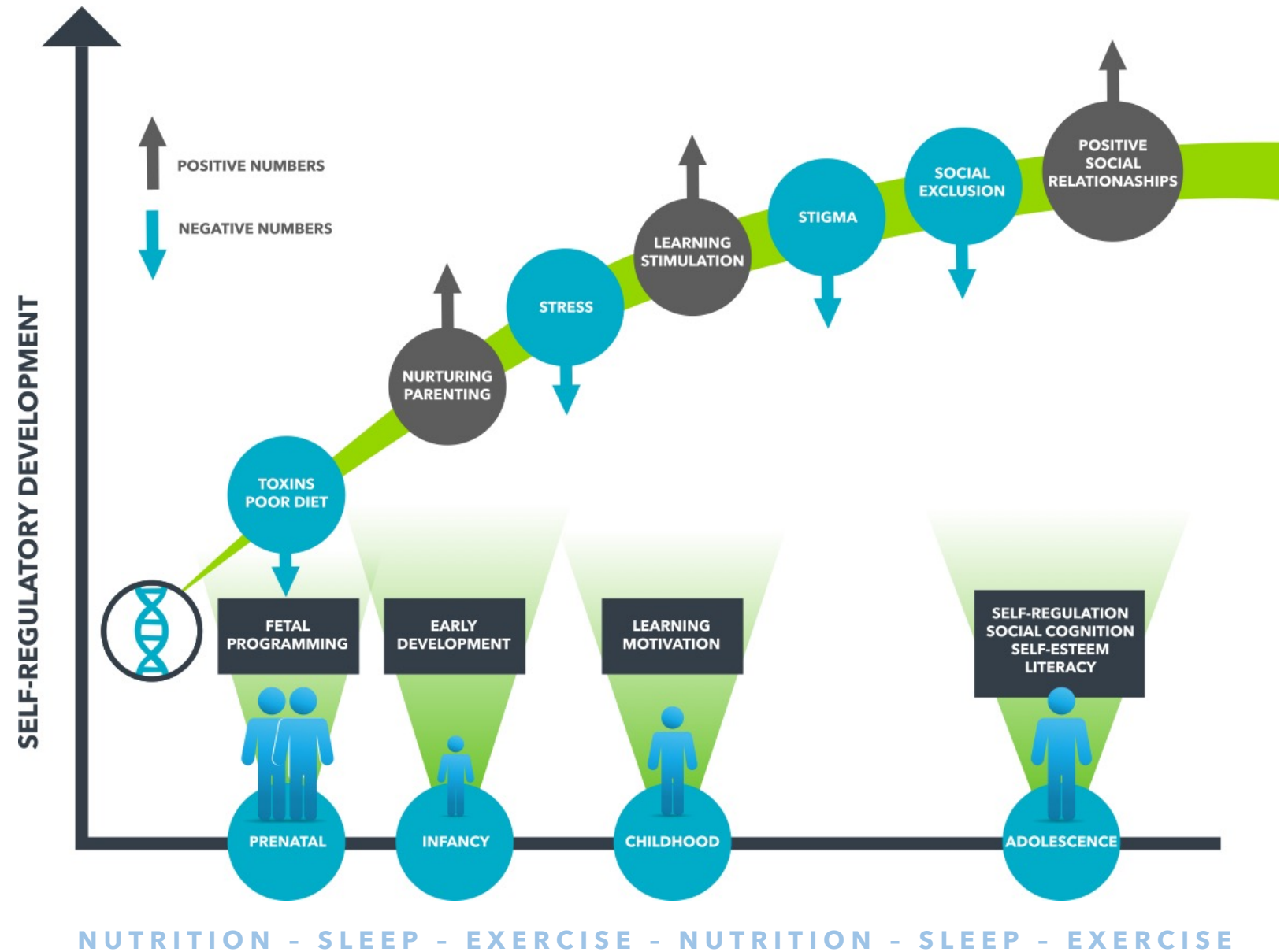


THIS IS CAUSE TO RETHINK THE "ONE-SIZE-FITS-ALL" APPROACH TO EDUCATION

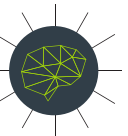


A SINGLE EXAMPLE: MULTIPLE DETERMINANTS OF SELF-REGULATORY DEVELOPMENT

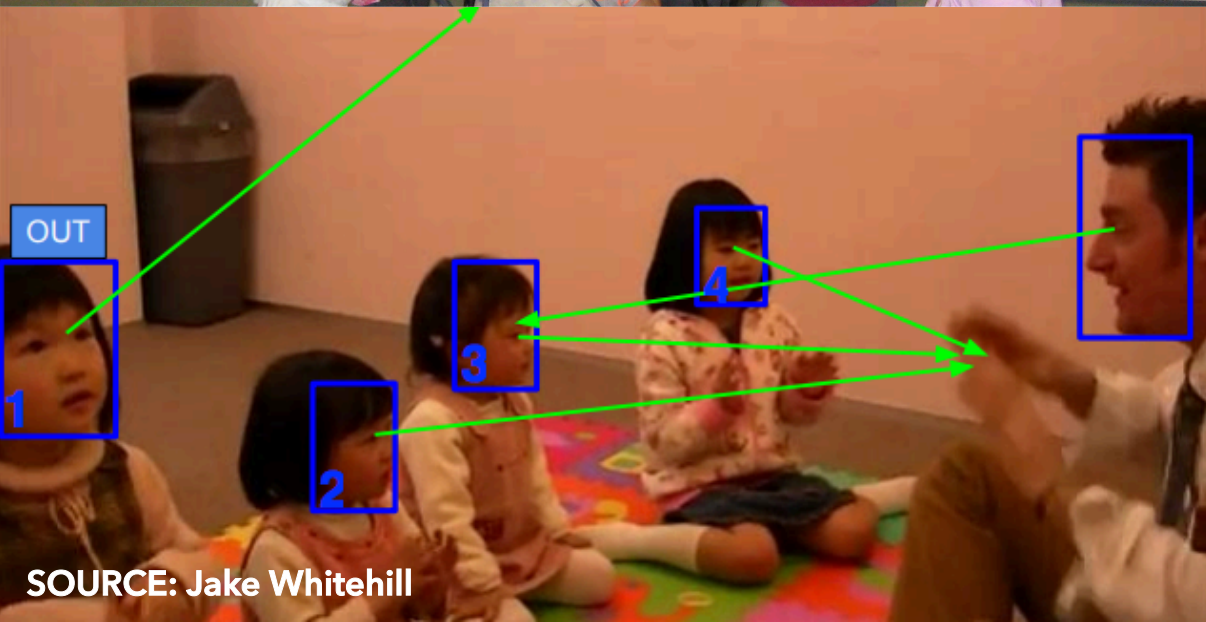
Many groups working
on programs and
interventions



SOURCE: Beddington et al., 2008; Lipina, 2016, 2018.



A SINGLE EXAMPLE: BUILDING TOOLS TO STUDY CLASSROOM LEARNING



SOURCE: April Benasich



Many groups working on functional
technology for science in context



A GLOBAL EFFORT MEANS USING TOOLS TO BRIDGE TIME AND SPACE

- This is happening now
- We can share our science, our ideas, our technology, our data, and our cultures to enter a cycle of science and education all based on learning
- A network of networks is a good starting point



DREAM



THANK YOU.



TAKE A LOOK

London EWF 2018

**Educating students for their future,
rather than our past**

Andreas Schleicher
Director for Education and Skills

