A Global Science of Learning Network
to Meet the Learning Needs of Our Future

PROPOSAL:
Humanity is poised for its next renaissance and philanthropy has the opportunity to make it happen. The basis of this renaissance is the advancing Science of Learning which has the ability to greatly increase the number of people who are educated and accelerate the speed at which people learn and become expert.

We are seeking funding partners to support the assembly of a select international Science of Learning working group to design a global network of experts focused on developing a deep understanding of learning, including how to overcome the impact of poverty on learning and how to apply that knowledge to meet the needs of future generations. This Global Science of Learning Network would be comprised of a diverse community of established researchers, experts in policy and practice, anti-poverty activists, and philanthropists. It would be primarily funded by private sources. The network would expand upon the decade-long US National Science Foundation-funded Science of Learning Network of Centers that recently reached the end of their funding.

This unprecedented international collaboration seeks to establish a Global Science of Learning Network that will further our understanding of learning, enhance teaching methods, and overcome the impact of poverty on learning. This will be achieved via coordinated programmatic and philanthropic action that furthers the next generation of research while simultaneously mobilizing practitioners and policymakers to ensure implementation.

CURRENT SITUATION:
The Science of Learning (SoL) is a multi-disciplinary science that ranges from the very basic cellular and molecular science of how an organism learns, to how children, and adolescents, use their brains, bodies, and sociality to best learn in cultures and classrooms, to methods for augmenting and restoring the capacity to learn. The trauma of poverty and poor health adds even more complexity, regardless of culture or country. Our growing global population of children exists in disparate cultures and circumstances yet face common challenges requiring coordinated and effective solutions. Great affluence is juxtaposed with extraordinary poverty. Education and health care crises persist in many nations. This is an incredible loss of human potential.

Like the US, many nations focus resources on restoring mental and physical health, but lack sufficient understanding of what every child needs to learn, flourish and prevent later developmental problems. Conserving, restoring, nurturing, and optimizing the most basic ability to learn and thrive, especially for those children exposed to the worst of economic and social circumstances, requires concerted action by a global community of scientists, technologists, educators, policy makers, activists, and philanthropists. While education steadily becomes the passport from poverty to prosperity for both learners and nations, the scientific knowledge to accelerate positive outcomes is still diffuse and mixed in application. Investing in mobilizing this knowledge and scaling its application globally should provide incredible return on investment.

The proposed Global Science of Learning Network will build upon a strong foundation. The US National Science Foundation (NSF) recently completed a twelve-year investment of more than $250 million to fund six U.S. Science of Learning Centers (see Appendix A) designed to establish a common interdisciplinary scientific research base regarding all aspects of learning as a foundation for education. Spanning beyond the United States, the Centers also prompted scientists in Australia, China, Hong Kong, Latin America, and Europe (see Appendix
B) to form functional research and translation networks for sharing their best ideas and development of technology.

The necessary infrastructure does exist to organize meetings and establish a network. The Principal Investigators of the six Science of Learning Centers continue to work together on an informal basis. The focus of the network is to:

- Nurture and enrich the existing connections among the six Science of Learning Centers and others;
- Act as a catalyst for educators, policymakers and other interested parties
- Maintain or accelerate the level of SoL research;
- Grow global communication, coordination, and collaboration with additional research centers, policymakers, practitioners and the growing number of SoL research-based collaboratives—the Social Emotional and Academic Development Commission, Science of Learning and Development Initiative, Adolescent Science of Learning Translation Project, Grantmakers for Thriving Youth, Partnership for the Future of Learning and All4Ed Science of Adolescent Learning;
- Build upon the sophisticated cyberinfrastructure of existing Science of Learning Centers and other global bodies, and add the necessary international sharing and layers of security that co-invention requires; and
- Address the substantive ethical, intellectual property, and multi-government/multi-university layers of interaction.

With the ending of NSF backing for these Centers, there is a crucial inflection point to sustain and extend the work and to prevent a scattering of the community to other disciplines. Funding for the next decade of a large-scale research portfolio that joins with translation and implementation is gravely needed. The intellectual resources, the global community, and the technical opportunities are in place to commence this significant initiative for developing and applying the best science to accelerate human learning to meet the challenges of the future. Independent learning communities will be much stronger if they share resources and knowledge towards common goals. Leveraging the scientific teams, who were recently trained in a cutting-edge and informed SoL for this purpose, represents an unprecedented opportunity for starting such a venture.

This emerging international community is committed to creating a global Science of Learning network, that can be scaled to include additional countries, integrating the U.S. and international research and education sectors toward the goal of understanding learning, meeting the learning needs of our future, and addressing the impact of poverty on learning, thus releasing human potential worldwide.

**FIRST STEPS:**

This proposal seeks $130,000 to organize a convening of a select international working group and to conduct the immediate follow up activities, including virtual meetings and forming a plan that meets the needs of the community of science, policy, and philanthropy to move forward. See Appendix C: Budget

Professor Andrea Chiba, PhD, Department of Cognitive Science and Program in Neuroscience at the University of California San Diego, and founding Science Director of the Temporal Dynamics of Learning Center (representing leadership from each of the six US Science of Learning Centers); Bob Wise, president of the nonprofit Alliance for Excellent Education (All4Ed) and former WV governor and U.S. Representative; and Daniel Leeds, former international technology media executive, philanthropist and co-founder/chair of the National Public Education Support Fund and Alliance for Excellent Education, will serve as the co-conveners of this initial thought-leader planning exercise. Together, these three leaders will represent the perspectives of the key stakeholders – scientists, practitioners, policymakers, advocates, and philanthropists.
The initial Global Science of Learning Network working group will be comprised of 45 representatives from the six NSF-funded learning centers, other noted US and international members of the SoL community, exemplary practitioners, policy and advocacy organizations, and leading education funders. See Appendix D: Invitees. The initial meeting will be conducted with a facilitator, on September 26th and 27th, just prior to the biennial International Mind Brain and Education Conference, at the W Hotel in Los Angeles.

FUTURE VISION:
The forward-focused mission of the Global Science of Learning Network is to achieve maximum worldwide implementation of science-based strategies to meet the learning needs of our global future and to overcome poverty’s impact on learning. A key next focus will be to deeply understand SoL and the extent to which it can be generalized, thereby developing best practices for learning, and education and policy resources that take into account for whom, at what developmental stage, under what conditions, and in what context SoL can be implemented in the world’s distinctive cultures and conditions. Grounded in an environment of trust and co-invention, this Global Science of Learning Network will also be fertile ground for training the very best interdisciplinary scientists, technologists, practitioners, and policymakers to lead the innovation of SoL and education while also benefitting students in poverty.

IMMEDIATE OUTCOMES of GLOBAL SCIENCE OF LEARNING NETWORK CONVENING:
Emerging from this intensive thought-leader engagement will be a consensus statement and action plan for the formation of a Global Science of Learning Initiative. This will include plans for foundational infrastructure, funding, and a mobilization of plans for implementation and acceleration of the current science and future groundbreaking science of learning.

Prior to the meeting, participants will be presented with a set of key topics to be addressed, along with materials to provide the group with a shared understanding and common terms of reference. Discussion drafts and scenario options will be prepared for the main questions. An expert facilitator will guide the sessions, fostering a highly interactive conversation. Participants will be expected to share their expertise and take leadership in shaping the work, directed toward a consensus statement and actionable steps. A rapporteur will capture these outcomes and prepare a report for wide dissemination through the participants’ global networks.

Key topics:
1. What is the current global status of SoL research?

2. How can international scientists best work together to share existing knowledge on the Science of Learning and identify first steps towards a global integration of that science?

3. What are the best starting points for developing Science of Learning that learns from cross-cultural differences while also examining basic principles that generalize across cultures?

4. How can we effectively accelerate translation of Science of Learning to understand the extent to which it can be generalized across contexts and cultures?

5. How can we propagate an infrastructure for implementing Science of Learning in policy and in the classroom?

6. What approach is necessary to have educators, and policy makers be part of the scientific conversation at the outset, such that implementing SoL, and using new science, technology, and research to meet knowledge gaps becomes a well-conceived process?
7. Ultimately, what is the value added of creating a global network-of-networks for Science of Learning that is inclusive of international multi-disciplinary scientists, practitioners, policy makers, and philanthropists?

8. What infrastructure is necessary to form a Global Science of Learning Network?
   a. How will a strategic plan be achieved?
   b. What should be included in a gap analysis of the existing distributed resources: How will initial infrastructure that leverages existing networks be funded, designed, and implemented?
   c. How will additional scientists, practitioners, policymakers, advocates, and philanthropists be recruited to join the network?
   d. What is the optimal composition of the initial Executive Committee?
   e. What are the first steps to continuing the portfolio of research under the current NSF strategic plans while migrating to build the next generation Global Science of Learning Network?
   f. How will we identity the problems and opportunities to receive the greatest priority?

9. What special efforts must be undertaken so that developing countries benefit equitably from SoL and the Global Science of Learning Network?

10. How much will it cost to adequately fund this critical effort to continue and expand globally over the next decade?
    a. How will the funding community align to identify and build the funding sources?
    b. Do we allow governments to help fund?
    c. Do we involve industry?