Representative Presentations

The Neurological Foundations Of Learning: 
Appreciating The Uniqueness And Power Of The Brain

The greatest of the frontiers to be explored lies within each of us. New understandings of the brain provide fresh insights into the process of who we are and how we learn. In this session, we examine what we know about the brain and how that information can inspire us to understand ourselves and to develop new ways of teaching and learning.

The Cognitive Foundations Of Learning: 
Helping The Mind Deal With The Stream Of Information

The human mind has far more capability than is typically engaged in educational situations. In this session, we examine exciting research on increasing the ability to learn and retain skills that can help dramatically improve our design of learning experiences.

The Behavioral Foundations Of Learning: 
Supporting Behavior Change In The Natural Environment

It is one thing to know how to learn; it is quite another to help learners build habits of learning in these effective ways. In this session, we examine the principles of encouraging effective behavior and self-management.

The Evaluative Foundations Of Learning: 
Using Feedback To Diagnose And Guide Learning

Issues of assessment, accountability, and testing are increasingly being raised about formal learning. In this session, we examine the predictors of performance in learning situations and on required tests. Our focus is on developing an understanding of how the goals of learning can best be achieved with the support of integrated assessment.

Each of these presentations works best when offered in a three-hour block (with short breaks). Four half days are ideal for the four foundations. Two full days also work well, with the neurological and cognitive foundations on the first day, followed by the behavioral and evaluative foundations on the other day.

The learning experience is even more effective when continued for participants after a workshop, through the use of remotely-delivered or on-site master classes and other forms of continued interaction.
Consulting services include

I. Staff and faculty development:
   • enhancing skills in light of recent advances in the brain, cognitive, behavioral, and learning sciences
   • use of technology to support and improve teaching, training, and learning
   • testing and other means of assessing learning outcomes
   • staff training
   • Master Class training for professionals

II. Institutional, program, curriculum, course, and software development:
   • needs and strengths assessment
   • goal definition
   • design
   • development of feedback and assessment instruments and procedures
   • collection and management of data
   • outcome data analytics and visualization
   • communication of results
   • identification of new pathways for future growth and development
Dr. G. Christian Jernstedt is Professor Emeritus of Psychological and Brain Sciences at Dartmouth College, Adjunct Professor Emeritus of Community and Family Medicine at the Geisel School of Medicine at Dartmouth, and Director Emeritus of the Center for Educational Outcomes at Dartmouth. He specializes in human learning. He speaks around the world, translating the complex findings from the cognitive, social, behavioral, and educational neurosciences for use in all areas of endeavor.

At Dartmouth, Dr. Jernstedt taught introductory psychology and undergraduate courses in learning, evaluation research (including statistics, data analytics, and data visualization), the brain and technology, and experimental methods. He received national recognition for his teaching and received both of Dartmouth’s awards for distinguished teaching. In the graduate program at Dartmouth, he taught courses in learning theory, teaching methods, philosophy of science, and experimental methodology (including hardware and software development), and supervised Ph.D. students. He received Dartmouth’s Robert Fish Memorial Prize, which honors career achievement in teaching and scholarship.

Dr. Jernstedt’s research is in the area of learning as it occurs both in formal classroom settings and in natural environments. This research is directed towards understanding the breadth of learning, including its cognitive, behavioral, and affective aspects. He examines what leads to learning, what happens during learning, and what outcomes emerge from learning experiences. He has examined intentional learning, technologically enhanced learning, service learning, and experiential learning programs.

He has been extensively involved with using technology to support learning, thinking, and problem solving. He combines his background in psychological and brain sciences with earlier training in electrical and computer engineering. His earliest technological research examined ways of communicating visual information to blind people through sensors on their arms, effective displays for pilots of terrain avoidance radar information, and human factors design of cameras that the Apollo astronauts took with them to the moon. He has co-founded three high tech companies, where he designed powerful neuroscience-based learning tools for the improvement of global training and education.

He discovered, developed, and has conducted research on computer enhanced collaborative learning. His work has received broad media coverage, including on the Discovery Channel Canada, in Wired Magazine, and in the New York Times.

For many years, Dr. Jernstedt directed the Center for Educational Outcomes at Dartmouth. Founded by Dr. Jernstedt with C. Everett Koop, the former Surgeon General, the Center initially studied programs to improve knowledge and communication skills in health care professionals. Later the Center conducted major longitudinal studies of (1) the impact of the introduction of technology in primary and secondary schools on the lives of students, teachers, parents, and community members, and (2) the role of effective evaluative feedback on the development of competencies in college students and adults in professional practice. As part of its activities in the cognitive and educational neurosciences, the Center developed online software for the design, implementation, and evaluation of learning, including institution-wide systems of assessment and quality improvement for schools and other organizations.

As a consultant, Dr. Jernstedt has advised educational think tanks, corporations, state and city governments, colleges and universities, post-graduate professional schools, public school systems, independent schools, youth development programs, teacher training institutions, non-profit professional associations, and health care organizations. He served as editorial consultant for many publishers, and has written over 100 articles, reports, and papers.

He and his wife have hosted many adventure travel trips to remote areas in the two polar regions and in equatorial marine environments. As a part of those trips, he speaks on the neuroscience foundations of the brains that are required for humans, large mammals, birds, and other animals to survive where life is so intensely challenging.