



Ed Neuro Exhibit Overview

The Ed Neuro project combines the expertise of UCSD neuroscientists, cognitive scientists and experts in education transformation with teachers to develop real-time research projects aimed to close the achievement and opportunity gaps before they open. Additionally, this project takes aim at better aligning academic and social/emotional interventions and support to what actually works for students.

Traditionally, researchers work in silos defining specific queries. Finding subjects and seeing them in the context of their real settings is difficult, inhibiting results, and heightening the risk that research findings will have too narrow an impact to make a real difference for most families. Most importantly, even the best research has traditionally taken years to have a measurable impact on pedagogy.

Through a more direct collaboration approach, teachers define research queries. They collaborate directly with researchers, understanding each other's language, and learning more about the science of learning in the process. It is a cultural shift. Accessibility to subjects and direct entrée to classrooms for real context research improves the probability of quality research and achieves more significant, timely influence on improving teacher pedagogy that leads to improved outcomes for learning.

When research is conducted out of context, it has the risk of producing results that are misleading or that don't generalize to the real world. Inky allows us to study brain activity in real time, as a student is learning, within the real context of the classroom learning environment. And Inky is non-obtrusive. Inky is a character that we introduce the children to and is a cool gadget that kids can wear. It is wireless and lightweight. It records brain activity while kids play game-like exercises on a computer and measures their brain's responses to sights, sounds, and learning challenges.

Our hope for iCERP is that classrooms will become live learning laboratories in that we will be able to understand a student better as they are developing as learners cognitively and emotionally. With this kind of insight to real-time learning, we may be able to prescribe precise interventions that boost learning, socialization, and health and wellness, almost immediately, so that a child benefits right away.

The difference here is the number of disciplines through which we will examine data for solutions. In addition to neuro and cognitive science, we are looking through the lenses of education reform, family and community engagement, and child development and special education. This is a major shift. Rather than narrow research queries, we are shaping the research around the whole child.

A big part of what makes this successful is the collaboration with practitioners. There are three aspects to this collaboration. The first is collaborating with practitioners to define the research so that it fills in real gaps for them. The second is the use of data gathering tools in and outside of the classroom. Third is the immediacy of application of the research findings impacting pedagogy, policy and prescriptive intervention right away. We will then examine if new data-informed approaches are working and how they can be improved.