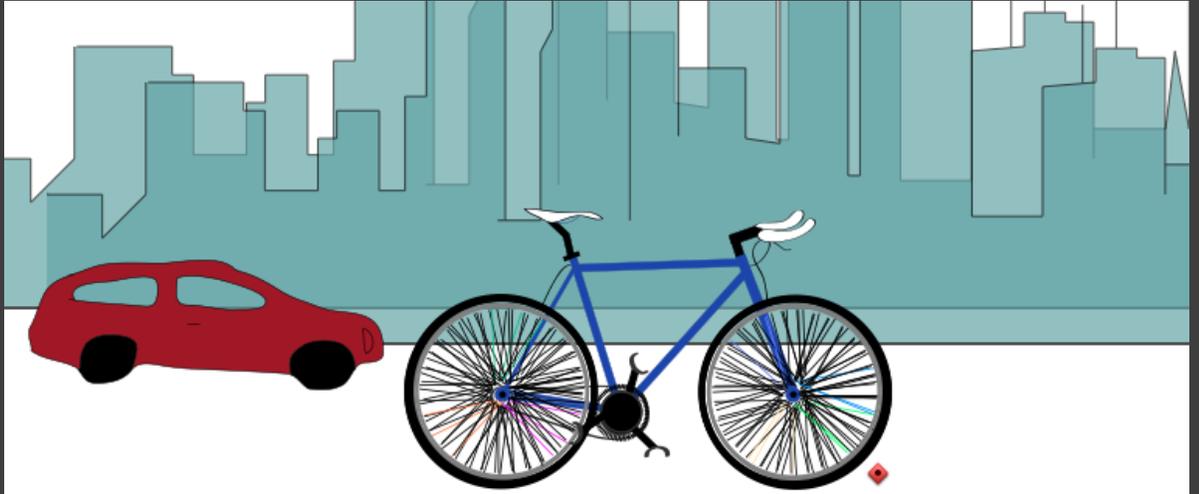


IPAD MINIS ON WHEELS: ENGAGING FAMILIES IN SCIENCE

Shelley Goldman, Social Science Research Associate Megan Luce, and LSTD student Tanner Veal have been setting up stationary bikes with handlebar-mounted iPad Minis around the Bay Area to get children and families talking about science. The interactive, Bike to Scale, connects the physical experience of pedaling a bike with a digital education activity on the concept of energy. Originally designed by 2012 LDT alumna Stephanie Chang, Goldman, Luce, and Veal are developing and adapting the prototype within their research on family science learning under a grant from the Gordon and Betty Moore Foundation.

Riders have ‘pedaled their way to understanding energy’ on Bike to Scale installations at the Lawrence Hall of Science and the Tech Museum of Innovation, where they ride for 2-3 minutes while navigating a tutorial on units and comparisons of energy use, displayed in the Keynote iPad app. The setup triggers a lot of interest amongst children and adults, and helps learners construct meaning and relevance within the topic of energy in a fun and tangible way.



Alongside the digital display, the team has begun mounting a GoPro camera on the bike to capture video for research. “It’s self-contained—we have the bike, the iPad Mini, and the camera—so the researcher can turn on the camera, step back, and let the families do their own thing,” says Luce. “We are learning a lot about how families are engaging with the concept of energy: some people want to shift the gears, some want to pedal as fast as they can, some discuss what kinds of energy power different forms of transportation. People make the activity their own.”

The team is also currently experimenting with using Apple TV to mirror the digital display to a larger screen behind the rider, so that it’s easier for entire families to see and interact simultaneously with the tutorial. This summer they plan to bring Bike to Scale to local farmer’s markets, festivals, and parks.

Bike to Scale is a project within Stanford’s Research in Education and Design Lab (REDlab), whose mission is to study the impact of design thinking in K-12, undergraduate and graduate education. To learn more about Bike to Scale, visit biketoscale.wordpress.com.

iPads Helping Reduce Barriers for Students with Special Needs

With a wide array of built-in accessibility features and thousands of education apps addressing the needs of children with disabilities, the iPad is breaking new ground in special education.

Single-purpose assistive technologies (AT) have long existed that help improve the functional capabilities of, and reduce the barriers for students with special needs. Increasingly, educators and service-providers can leverage the portability, connectivity, touchscreen and multisensory capabilities of the iPad and the variety of innovative applications taking advantage of these features, to deliver similar or complimentary benefits in a multi-functional device—often also at a lower price.

This quarter, Pamela Levine is working with STEP’s Elementary and Secondary cohorts in Dr. Ericka Fur’s EDUC 285 course, Supporting Students with Special Needs, to examine iPad and web-based applications that teachers can use to ‘enable’ their curricula. In a series of interactive demonstrations, students will examine apps for communication and language development, emotional development, seeing, hearing, fine motor skills, organization, literacy, reading, writing, and mathematics, and will use an evaluation framework to guide AT selection, planning, implementation, and assessment.



ARI KELMAN USING IPADS FOR MOBILE ETHNOGRAPHIC RESEARCH

Mobile devices with features such as built-in cameras, microphones, GPS capability, and extended battery life, are expanding the instruments that field researchers can use to collect data. Many are seeing the potential of these portable and multi-functional technologies as ethnographic tools, and with apps for tracking and mapping geo-referenced data, live fieldnoting, and media creation, some argue that they are even creating new research methodologies.



This summer, Ari Kelman will be using iPad Minis for ethnographic research at the Jewish Culture Festival in Krakow, Poland.

Kelman is interested in research at the intersection of Education and Jewish Studies, and will be capturing festival goers' experiences through observation, interviewing, and collecting digital artifacts. "Insofar as the Festival stages Jewish culture for Jewish and non-Jewish participants, it is involved in an overtly educational process, but what and how people learn there has remained somewhat elusive" says Kelman.

QUALITATIVE DATA ANALYSIS SOFTWARE PACKAGES

The following table compares the main features of various qualitative analysis software packages. More detail about supported file formats and availability at GSE can be accessed at: <http://stanford.io/17Lkko0>

Qualitative Analysis Software	Nvivo (v 10)	HyperResearch (v 3.5.2)	Studiocode (v 5)	Atlas.ti (v 7)	Tams Analyzer (v 4.45b2h)
Supported OS	Win XP SP2 or later	Win XP SP2 or later; Mac OS X 10.3.8 or later	Mac OS X 10.6 or later	Win XP SP2 or later	Mac OS X 10.4 or later
Text Coding	●	●		●	●
PDF Coding	●			●	●
Video Coding	●	●	●	●	
Audio Coding	●	●		●	
Image Coding	●	●		●	●

“ Armed with iPads Minis, three Polish graduate students and I will be filming, taking photos, conducting interviews, writing field notes, conducting survey research, and documenting as much of a participant’s experience as we can.”

- Ari Kelman

His project is in pursuit of the larger research question: how do people learn about being Jewish?

Kelman is consulting with GSE-IT on iOS apps, workflows, and logistical considerations for mobile data collection and backup in the field. “Armed with iPads Minis, three Polish graduate students and I will be filming, taking photos, conducting interviews, writing field notes, conducting survey research, and documenting as much of a participant’s experience as we can.”

STANFORD INSTRUCTIONAL DESIGN SPECIAL INTEREST GROUP

The Office of the Vice Provost for Online Learning’s Pedagogy Team has launched an online teaching- and learning-focused special interest group for people involved or interested in instructional design and online education at Stanford.

Follow the conversation and find out about events by signing up for the *Stanford_ID_SIG* listserv at mailman.stanford.edu.



IPADS AND IPAD MINIS ARE NOW AVAILABLE

Interested in using the GSE iPads or iPad Minis for your teaching or research?

Contact Debbie Belanger at belanger@stanford.edu

PROMOTE YOUR EVENT

Submit your event to promote it on the GSE online event calendar, visit:

ed.stanford.edu/events

Contact GSE webteam (gse-webteam@gse.stanford.edu) with questions about submitting an event.

TRAINING

GSE-IT’s Shawn Kim offers on-demand qualitative research software consultations and training for you and your research team.

For more information, contact Shawn at shawnkim@stanford.edu.