

Digital Initiatives

Office of Innovation and Technology
Spring 2018

Stanford
GRADUATE SCHOOL OF
EDUCATION

Interactive Media Illuminates Ideological Diversity in the Classroom

Thomas Ehrlich utilizes custom app and data visualizations to counteract stereotyping and promote civic discourse

When considering civic engagement, Prof. Thomas Ehrlich employs a broad perspective. Through various leadership positions and instructional roles, he has come to appreciate how identity, perception, and relationships can shape participation in communities and governments. At the core of all these experiences is a central principle: active and constructive participation is key to a functional society, as it is to effective teaching and learning.

Civic engagement is a theme woven throughout Prof. Ehrlich's career. After leading several federal government agencies, Prof. Ehrlich served as Dean of Stanford Law School, Provost of the University of Pennsylvania, and President of Indiana University. He also helped to help found two major organizations focused on educating college students to be civically engaged. One is Campus Compact, now a network of over 1000 public and private campuses. The other is the American Democracy Project (ADP), a network of some 265 public campuses, which operates as part of the American Association of State Colleges and Universities.

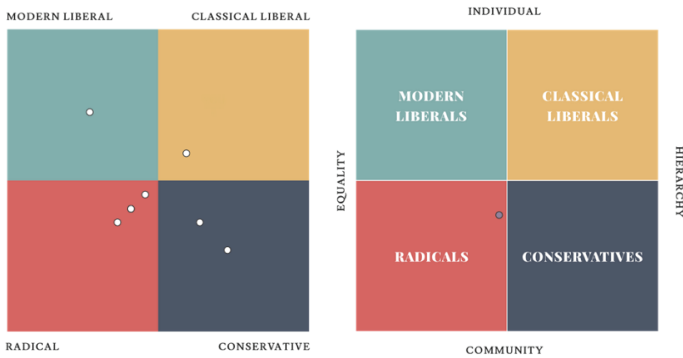
As Adjunct Professor at Stanford Graduate School of Education, Prof. Ehrlich teaches *Democracy in Crisis: Learning from the Past*, a cross-disciplinary course that draws undergraduates, graduate students, and continuing education fellows eager to unpack political concepts and ideological landscapes. Students in the course study a series of case studies of crises in American democracy in order to better understand the current political situation.



While attending an ADP meeting last year, Prof. Ehrlich glimpsed a new avenue for civic education: interactive online media. Faculty from Keene State College in New Hampshire presented an online tool as part of a course on economic inequality. The tool evaluates users' political

ideologies in an engaging manner by identifying a user's preferences on eight independent issues such as fiscal theory, environmental policy, and school funding. Each of these survey questions was meticulously scrubbed for loaded terminology or ideological associations; the phrasing is dry and unemotional. Students indicate how enthusiastic they feel about a policy position, which helps to gauge moderate or extreme tendencies. At the end of the survey, users are shown a scatterplot displaying the distribution of their issue-by-issue responses across a political spectrum — radical, modern liberal, classical liberal, and conservative.

Prof. Ehrlich immediately saw the potential for applying this diagnostic tool in his *Democracy in Crisis* course. "In the current polarized political climate, I saw this instrument as a means to help break down ideological assumptions about others and about ourselves," he explains. Prof. Ehrlich approached the tool's

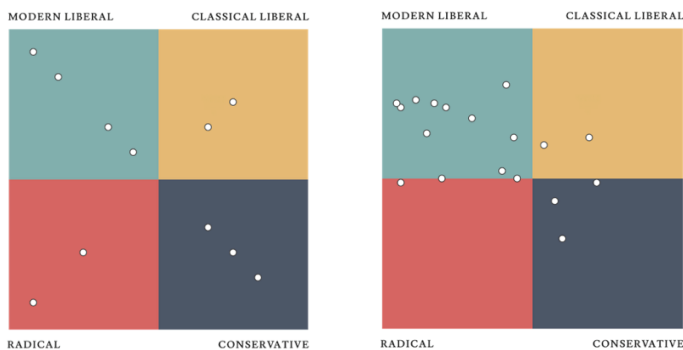


After answering eight issue-related questions, each student saw their responses plotted on a personalized scatterplot (left) and composite score graph (right).

authors, Dr. Patrick Dolenc and Kimberly Schmidl-Gagne, to collaborate on future use. The Keene State faculty were excited to see the diagnostic tool used across more groups, and connected Prof. Ehrlich with program managers at Smart Sparrow, the platform on which the code was built. With code in hand, Prof. Ehrlich reached out to Josh Weiss, Education Technology Specialist at GSE IT, to advise next steps.

With a well-designed research tool at their command, Prof. Ehrlich and Josh developed a part-online approach to leverage the Ideology Diagnostic for the *Democracy in Crisis* course. The tool was used across two consecutive classes one week apart. In the first session, Prof. Ehrlich presented the tool and its purpose while Josh gave a basic demo on how to use the interface. Students were then tasked with engaging with the tool via web browser over the intervening week. After entering their responses, students could see their own issue-by-issue responses, including a scatterplot of all responses and a “composite” score averaging all eight responses.

In the succeeding lesson, Prof. Ehrlich started out by gathering a general impression of the experience. “Not what I expected, but certainly informative,” commented one student. Many nodded heads in agreement. “Let’s take a look at the data,” continued Prof. Ehrlich, gesturing at the projection screen at the front of class.



Class-wide ideological results varied widely. Issue-by-issue scatterplots, such as K-12 school funding (left), and composite scores (right) demonstrated significant variety, leading to rich class discussions.

Prof. Ehrlich displayed varied slices of response data via the tool’s instructor dashboard. First, class-wide data for each of the eight survey responses were displayed, followed by a scatterplot of all composite scores across the cohort. On a continuous basis, Prof. Ehrlich solicited impressions from the class, and peppered the discussion with his own data analysis. “In our stance on education policy, the room’s opinions seem to be quite similar,” he commented at one point, “but I see some variation in the class’s responses with regard to fiscal and employment policy.”

In reflecting on this experience, Prof. Ehrlich appreciates even more how an asynchronous tool can deconstruct ideologies and enable learners to gain insights into their ideological self-stereotyping and their stereotyping of others. The data collected in the tool acts as a primary source for unpacking differences within groups. As he saw in his classroom, this often leads to thoughtful conversations among civic parties: “It shattered the pigeonholing that many of the students fall into about themselves and others.”



As opinions and experiences fragment across digital media, common conversations are increasingly important. The Ideology Diagnostic tool aims to distinguish true commonalities by evaluating beliefs on an unemotional, issue-by-issue basis.

For other instructors looking to implement interactive media in their classroom, Prof. Ehrlich encourages careful planning. First, it is essential to sketch out why and how a tool should be utilized for instruction. “Stanford is seen as place without ideology diversity, but my sense is that underneath the surface there is great variation on the issues themselves,” he notes. Prof. Ehrlich was on the lookout for a tool that could uncover and display this hidden reality. He also emphasizes patience with the iteration process, continually piloting potential uses with new groups. Finally, he notes the importance of having a team familiar with how to construct hybrid learning experiences that incorporate instruction and technology effectively.

GSE Welcomes Entrepreneur-in-Residence Sergio Monsalve

In-house entrepreneur looks to share expertise in industry, startups, and employment landscape



Sergio Monsalve is a Silicon Valley-based investor, consultant, and entrepreneur specializing in education technology startups. With more than 20 years of experience, Sergio has been a part of several innovative educational and consumer

companies such as Udemy, Kahoot!, eBay, and PayPal. He is also active in several non-profit organizations and schools that foster diversity and inclusion within STEM education.

Tell us a bit about yourself and your connection to Stanford.

I grew up in Mexico in a modest middle-class family. My family and I moved to the United States when I was in middle school without knowing English or even knowing anyone in the US. Growing up, I remember two things that mattered to me and my family: innovation and education. Those two areas of focus helped me focus and propelled me to Stanford as a bright-eyed freshman. Stanford opened my eyes to a whole new world of opportunities I would have never have had access to anywhere else. I owe a lot to Stanford and to the great community of educators here.

What are your goals as Entrepreneur-in-Residence (EiR)?

Ideally, the EiR helps the broader GSE community foster new ideas and launch new projects with a focus on social impact and innovations in edtech and the future of work. My mission is to expose the Stanford GSE community to education innovations, technologies, and entrepreneurship outside of Stanford, and to enable collaboration. If nothing else, I want to encourage everyone to expand their base and discover non-traditional career paths.

What inspired you to return to Stanford as EiR?

I'm concerned about the future of learning and work. If you don't focus on education and retraining, folks will continue to be left behind. There are some big questions to be answered in this area and we don't have much time given the unprecedented pace of change we are experiencing in the world today. Does the current model of instruction, especially in higher education, need restructuring? How do we cultivate lifelong learners? How do we imbue traits like courage and creativity into our future leaders? Learning paths are often

rocky, and entrepreneurial traits can make all the difference in a world where we are seeing an acceleration in landscape changes. The pace of change is unprecedented in human history, thanks to technology and globalization.

What topics interest you most?

I'm interested in how technology can improve access, support, and opportunities when done right. One avenue could be big data and predictive analytics to improve education. This goes hand-in-hand with iterative and life-long learning. We need to create engaged, curious, and productive humans.

On a personal note, I'm also interested in exploring the power of learning differences. My daughter was diagnosed with dyslexia, which gave rise to a stronger appreciation of varied methods of instruction and thinking. Some of the most renowned innovators — Walt Disney and Albert Einstein, for example — experienced learning difficulties. Should we be treating these as challenges to learning or as alternative ways of processing information?

What challenges are you looking to address?

Facilitating non-traditional career paths is a big challenge. Stanford has a lot of bright minds, but the post-Stanford pathways are not always clear, especially considering the evolving nature of jobs and employment demands nowadays. There will likely be many jobs in 10 years that do not exist today. How do we prepare our graduates for these new vocations? What avenues are out there to help graduates hone skills or shift expertise for new demands in the workforce? The potential impact in this area is huge.

What unique viewpoints do you bring to the GSE as an entrepreneur?

Thinking as a businessman, people are the most important resource. When looking at startups to invest in, there is no scarcity of ideas or money. These are a dime a dozen. The difficulty lies in finding capable, creative, and courageous leaders who can thrive in ambiguity. We need to cultivate these kinds of people, and to teach the skills that will always be key to success across groups, namely collaboration, empathy, and creativity — qualities, it turns out, that computers and robots have difficulty demonstrating.

In-course Podcast Offers Unique Vantage into English Learner Issues

Claude Goldenberg and David Brazer record informal conversations around leadership, language acquisition, and academic achievement to complement GSE course

When asked why they chose Stanford GSE, many students cite faculty as a primary reason. Incoming learners prize an opportunity to connect with faculty and understand what makes these researchers and practitioners tick. Traditionally, these interactions took place during office hours, post-lecture chats, or even teach-ins. But now, with high-end media production possible on a laptop, many instructors are archiving and broadcasting these informal learning opportunities to complement and enhance their own course material.

Dr. Claude Goldenberg, Nomellini and Olivier Professor of Education, and Dr. David Brazer, Associate Professor (Teaching) and Director, Leadership Degree Programs, are one such case. While designing a course around English Learner issues, Dr. Goldenberg and Dr. Brazer began to consider methods for communicating concepts to on-the-go learners such as graduate students and school district superintendents. Podcasting immediately came up. “One of my students recently confirmed: ‘We’re always listening to podcasts as we’re walking around,’” notes Dr. Brazer. “I think it is a behavior deeply embedded in our students.”



Dr. David Brazer (left) and Dr. Claude Goldenberg (right) discuss learning outcomes for English Learners at an on-campus podcast studio.

The two decided on an interview-style podcast that would delve into the background and research interests of Dr. Goldenberg, an English Learner expert with a varied and intriguing career. Dr. Brazer prepared an outline of possible

topics and questions, and the two worked out production details such as duration, tone, and sequence. In the end, says Dr. Goldenberg, “it was built on many previous conversations we’d had and materials I’d shared.”

Once the content was hashed out, the two instructors reached out to GSE IT to help with setting up a media production environment. For the first go-around, Josh Weiss, Education Technology Specialist, set up recording equipment in Dr. Brazer’s office. A full 15-minute episode was recorded using an iPad, GarageBand, and an external microphone. Throughout the pilot recording, GSE IT’s Digital Media Producer Joe Sherman was on hand to advise on acoustics and audio.

Looking for a more defined acoustic space, the four-person team arranged for a second recording session at an on-campus podcast studio. The NPR-style setup and soundproof booth enhanced the vocal clarity and provided an intimate feel as Dr. Goldenberg further expounded upon important issues in English Learner education, including differentiation, scaffolding, and “the political climate and how that may play out for these students.”

Going forward, Dr. Goldenberg is looking to take asynchronicity to the next level by utilizing Zoom, a web-conference application, to preserve informal discourse across distances. “I just did a 30-minute recorded Zoom while sitting in my living room with a co-instructor, Dr. Annie Kuo, about one of the readings. She’s going to edit it down into something shorter that we’ll post for the class.” Dr. Goldenberg sees audio archiving as a worthwhile venture, although it requires patience: “One concern is that it requires some technical things to get it right. Remains to be seen how it will work in this context. Definitely worth a try.”

Dr. Brazer also looks to leverage the portability and informality of podcasting in interactive learning units in the future. “I’m planning ways to use podcasting to guide participants through an online platform we are creating,” he adds, “and possibly to stimulate thinking while participants are away from the platform.”

Digital Initiatives is a quarterly newsletter that highlights innovative research, design, and implementation around learning technologies at Stanford Graduate School of Education.

Digital Initiatives is written by Josh Weiss (josh.weiss@stanford.edu) and is published by The Office of Innovation and Technology at Stanford Graduate School of Education.

For more information, visit <http://gse-it.stanford.edu>.