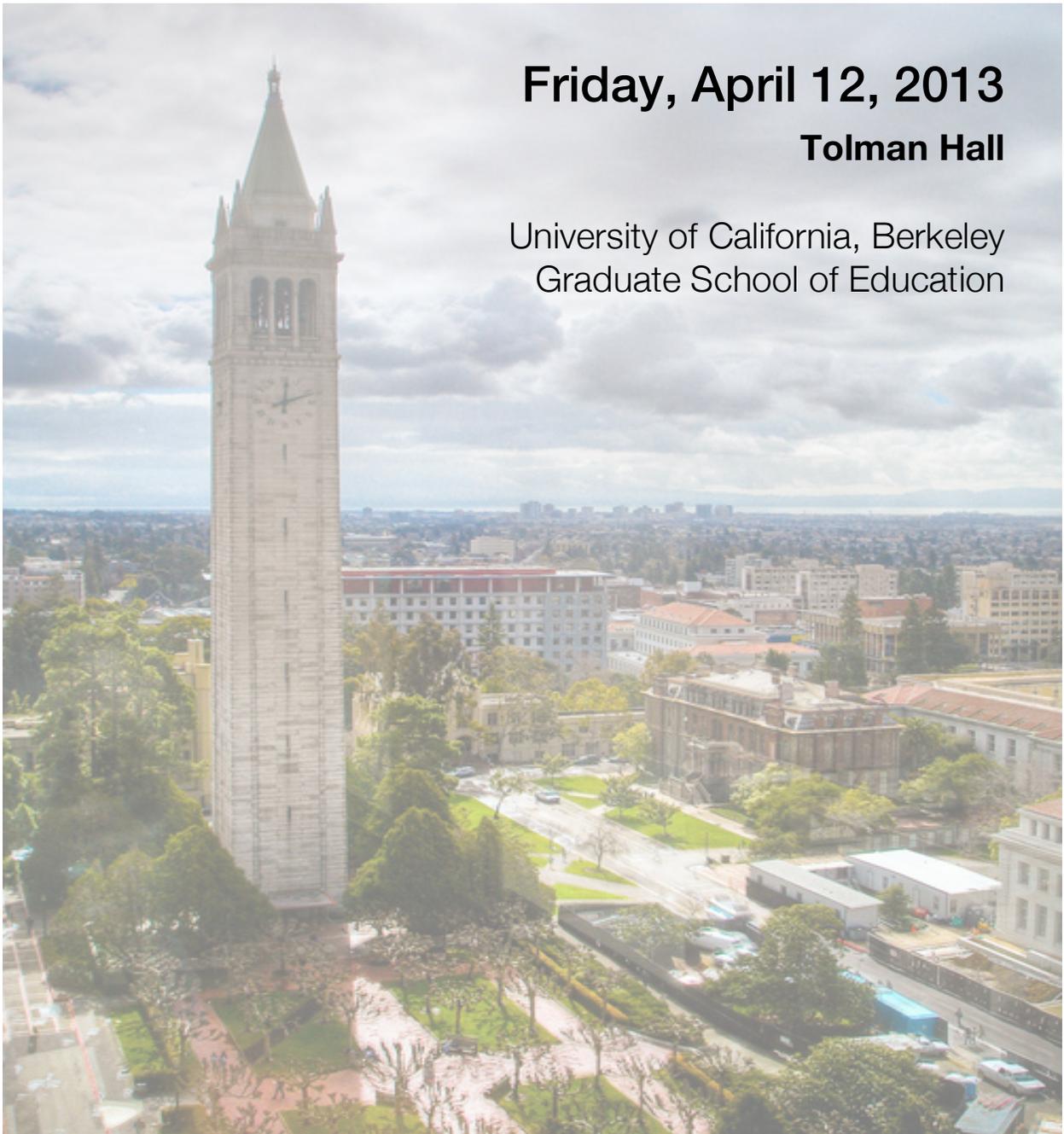


13th Annual GSE Research Day

Friday, April 12, 2013

Tolman Hall

University of California, Berkeley
Graduate School of Education



Program Overview

8:45 – 9:10	Sign-in and Morning Refreshments, 2 nd Floor Tolman Hall East
9:15 – 9:25	Opening Remarks: Judith Warren Little and Dan Perlstein, <i>Education-Psychology Library</i>
9:35 – 10:50	Session I: Tolman Hall – Rooms 2319, 2320, 2326, 3515
11:00 – 12:15	Session II: Tolman Hall – Rooms 2319, 2320, 2326, 3515
12:15 – 1:00	Lunch (for registered presenters & attendees), <i>Education-Psychology Library</i>
1:00 – 2:15	Session III: Tolman Hall – Rooms 2319, 2320, 2326, 2515
2:20 – 3:00	Session IV: Tolman Hall – Room 2515, <i>Education-Psychology Library</i>
3:00 – 4:30	Reception and Celebration, <i>Education-Psychology Library</i>

Presentation Formats

Short Papers	These sessions provide authors an opportunity to present an abbreviated version of their work. The 'paper' presented may be a finished product or a work in progress.
Group Presentations	Presentations are grouped according to a common theme, with each presentation adding a complementary or supplementary perspective on the topic.
Workshops	These are presentations in which others can learn from the presenters' experiences with a tool, technique, or process of graduate school, of research, or of writing.
Consultations	Consultations allow maximum interaction with the presenters. Individual presenters are assigned tables in a large meeting room where interested persons may gather for a discussion with the presenter about his or her paper or project, or they may move among a variety of tables.
Posters	Poster sessions combine graphic display of materials with the opportunity for individualized, informal discussion of the presenter's research. Attendees are welcome to move among the posters to see the breadth of research taking place in the Graduate School of Education.

Participating GSE Programs

Cognition and Development (CD)	Language, Literacy, Society, and Culture (LLSC)	Policy, Organization, Measurement, and Evaluation (POME)
<ul style="list-style-type: none"> • Education in Math, Science, and Technology (EMST) • Human Development and Education (HDE) • School Psychology • Joint Doctoral Program in Special Education 	<ul style="list-style-type: none"> • Language, Literacy, and Culture (LLC) • Social and Cultural Studies (SCS) 	<ul style="list-style-type: none"> • Policy and Organizations Research • Quantitative Methods and Evaluation (QME) • Principal Leadership Institute (PLI)
<ul style="list-style-type: none"> • Graduate Group in Science and Mathematics Education (SESAME) 		

Session Descriptions

Session I 9:35 – 10:50

Session I.A, Short Papers, 2319 Tolman

Dinorah Sanchez Loza, LLSC-SCS

Latino/a Youth Perceptions of Political Participation

Utilizing in-depth, semi-structured interviews with four Latino young adults, this study explores how youth make meaning of political participation. Deficit thinking and subtractive schooling practices (Valenzuela, 1999) create environments where Latinos disengage from school. This paper explores the transferability of these concepts to civic participation. Participants revealed internalization of deficit by discursively categorizing themselves as non-participants yet detailing actions and community cultural wealth (Yosso, 2005) that proved otherwise. Research must explore the relationship between schooling and civic engagement lest this burgeoning demographic be left out the political conversation and the representative nature of American democracy continually be called into question.

Tadashi Dozono, LLSC-SCS

Experiencing the Haitian Revolution in the World History Classroom

This paper approaches a curriculum unit on the Haitian Revolution, produced by Brown University's Choices curriculum program, through the historical frameworks of Fredric Jameson, the Subaltern Studies group, and Michel-Rolph Trouillot. This curriculum unit is typical of many social studies curricular resources in the way it masks both the political relations of power within the historical moment being studied, and the political notions of power within the project of historical study and production of historical knowledge itself. Through this interrogation, I propose a reformulated curriculum that attempts to better account for these political layers.

Session I.B, Short Papers, 2320 Tolman

Jennifer Wang, SESAME

Ingenuity Lab: Making and Engineering through Design Challenges at a Science Center

The Ingenuity Lab is a novel learning space for families of all ages to tinker and engineer solutions to design challenges. Yet, upon peeking in and hearing the word "engineering," many visitors immediately respond with "Oh, my kid is too young for this" or "I have a girl; I don't think she'll be interested in this." Perceptions like these have contributed to the perpetuation of a disappointingly low number of aspiring engineers and a lack of diversity among engineers. Through observations, surveys, and interviews, I study learners' engineering-as-"tinkering" experience, persistence in the activities, and potential consequences for long-term interest.

Nicole Leveille Buchanan, Jennifer Collett, and Maryl Gearhart, CD-School Psychology, LLSC

Teachers' Orientations to a Research-Based Mathematics Curriculum

Teachers' pedagogical beliefs impact instructional decisions, including the use of research-based pedagogy to support equitable instruction. We investigated shifts and continuities in 11 fourth and fifth grade teachers' beliefs and practices during and after implementation of a supplemental mathematics curriculum designed to engage all students through discourse. When implementing other curriculum, teachers reported that their use of discussion strategies was only partially sustained, shifting in frequency and function. These findings add to prior research highlighting the importance of curriculum

materials and professional development that intentionally support teachers' practices and beliefs regarding research-based equitable pedagogy.

Session I.C, Short Papers, 2326 Tolman

Jennifer Johnson, LLSC

Re-articulating Culture in a Place In-between: Exploring the Multimodal Experiences of Hearing Mothers of Deaf Children

Culture has been commonly understood as something we have acquired through membership into a community rather than something socio-ideologically situated that we do bodily in and through language. Through videotaped interviews with hearing mothers of deaf children discussing their language experiences in the visual world of their deaf child, I attempt to shape an emergent notion of culture as a site of struggle which includes multiple modes of communication via speech, sign and sensory production of meaning-making.

Michelle LaMar, POME-QME

Inferring Student Understanding in an Educational Game using Markov Decision Processes

Educational games provide opportunities for students to engage in complex problem solving. Data from such games, however, are difficult to model given their interdependent nature. Taking a cognitive perspective, we propose modeling student decision-making in such tasks as a Markov decision process (MDP), a type of dynamic Bayesian model. We define hypotheses about student understanding of the content material as different formulations of the MDP and infer the student's most likely beliefs based on their record of play. We apply this approach to data from an educational game about cell biology to infer student understanding of cell organelle function.

Session I.D, Workshop, 3515 Tolman

Dor Abrahamson and Research Group, CD

Student Projects from Design-Based Research Forum (290C)

Fall 2012 and Spring 2013 students in the 290C practicum "Design-Based Research Forum" (Abrahamson) will present their artifacts, explain their design rationales, share pilot findings, and preview future modifications. Attendees will be encouraged to interact with the artifacts and critique the work. Most of the projects are in progress.

Session II 11:00 – 12:15

Session II.A, Short Papers, 2319 Tolman

Aaminah Norris, LLSC

21st century critical literacies, and identity processes in an urban classroom

This qualitative study documents and analyzes ways that a history teacher guided her sixteen low-income sixth grade Latina and African American girls in developing critical literacy as expressed through the implementation of design thinking methodologies. This case study also examines the ways girls negotiated their gender and racialized identities as they were facilitated in using digital media to create projects with a focus on valuing difference within their formal schooling contexts. Design thinking is a conceptual framework that helps students develop mindsets that are important for learning that include human centeredness, empathy, and mindfulness of process.

Paul F. Lai, LLSC-LLC

Reflexivity of Teacher and Students in a Chinese Foreign Language Class

The principal researcher collaborated with a Chinese 1 teacher and two undergraduate students to conduct a discourse analytic investigation of the cultural and interactional context of foreign language learning in a university classroom. The teacher and students engaged in reflexive action, adapting their positions and participation as members of a language learning community to accommodate its diversity. This action was oriented toward the shared creation of imagined Chinese-speaking worlds within which participants could construct an authentic Chinese-speaking self. Yet these imagined worlds developed through work and play, both revealing and disrupting layered power dynamics unearthed by culturalist discourse analysis.

Session II.B, Short Papers, 2320 Tolman

Claudia von Vacano, POME

The Subjects Matter for Teacher Professional Development Focused on English Learners

This session introduces participants to the complexities of designing and sustaining a cross-subject professional development program at the secondary school level focused on the enhanced achievement of English Learners. The session begins with a presentation of a recent qualitative case study of a cross-subject teacher professional development program at an urban middle school. Participants share their own experiences in improving teacher knowledge and practice, placing special emphasis on subject area pedagogical differences and how these can be overcome. Participants reflect on recommendations from the study along with their own experiences.

Leah Faw and Huriya Jabbar, POME

Poor Choices: The Sociopolitical Context of "Grand Theft Education"

In recent years, districts have paid special attention to the common practice of "district hopping," the act of sending a child to a school across district lines. In several high-profile cases, mothers who engaged in district hopping were charged with "grand theft" of educational services. Situating these cases in the broader political trajectory of market-based reforms, we find that the issue of education theft cuts across disciplinary and conceptual traditions. Despite the richness of existing literature on school choice, we argue that research has so far failed to present a coherent sociopolitical framework for understanding the context of these parents' choices and the severity of districts' responses. We propose such a framework to enhance our understanding of poor parents' decision-making.

Session II.C, Short Papers, 2326 Tolman

Joseph Jay Williams, Psychology

Using Online Educational Resources to Bridge Laboratory Studies and Real-World Education

Online educational resources bring authentic student learning into a digital medium that supports controlled laboratory experiments, and I present research that uses this strength to bridge research and practice. Studies that modify Khan Academy's mathematics exercises by (1) including messages teaching a "Growth Mindset" in which intelligence is malleable and (2) adding explanation prompts to foster understanding of underlying principles, show how cognitive science insights and laboratory studies can generalize to a practical resource. Such changes to online exercises can be instantly tested and disseminated to help thousands of students.

Anthony Johnston, LLSC-LLC

Finding Yourself in a Book: Engagements with Literacy and Marginalized Adolescent Identity Development

This dissertation examines the tensions, agreements, variances and divergences of identity displays by students in an urban High School. Over six months, ethnographic methods and a layered case study approach followed a junior level English class including six focal participants: three Latina females, one male Latino and two African American males. A unique approach of mapping identity while students engaged literary activities and two differing approaches to teaching literature adds to a growing scholarship on the relationship between adolescent identity and learning. Researcher explores the activities and spaces that nudge these “marginalized” adolescents towards a projected academic identity trajectory.

Session II.D, Group Presentation, 3515 Tolman

Maryl Gearhart, Nicole Leveille Buchanan, Jennifer Collett, Kenton deKirby, Ronli Diakow, Bona Kang, Marie Le, and Geoffrey Saxe, CD

Engagement in mathematical discussion: Linking practices and outcomes

This symposium features findings from Learning Mathematics through Representations, a curriculum design research project that uses the number line as a representational context for supporting students’ understandings of integers and fractions. Two premises are that (a) students build insight through discussions in which they represent their reasoning and resolve intellectual conflicts, and (b) the practices of constructing and applying mathematical definitions support mathematical insight. An efficacy study of the LMR intervention revealed strong student learning gains for LMR students, and this symposium focuses on analyses that help us interpret these gains.

Session III 1:00 – 2:15

Session III.A, Group Presentation, 2319 Tolman

Rekia Jibrin, Mahasan Chaney, and Laura Pulido, LLSC-SCS, POME

School Discipline and/as School Violence

This presentation engages educational debates around school discipline and school violence within urban and rural school contexts. In the context of school practices that consign disproportionate numbers of students to the juvenile justice system, we investigate and challenge the ways that schools increasingly mirror prisons. We are specifically interested in how disciplinary and violence prevention practices interfere with the social goal of providing educational access, equalization and services to all children.

Session III.B, Short Papers, 2320 Tolman

Kelly Campbell, CD-HDE

Early Writing Development: Lines Becoming Letters

What do we know about young children’s (3-5 year olds) writing development in English? Intensive research has contributed to better understanding the developmental nature and processes involved in children’s oral language and early reading skills; fewer studies have investigated the development of children’s writing. How do children go from drawing scribble lines at age 2 to writing words at age five? A combination of alphabet knowledge and phonological awareness in constructing invented spellings is implicated. Current recommendations for providing instructional support and

activities for early writing development in preschool will be included, with an emphasis on the Head Start classroom.

Kristin Alvarez and Rebecca Cheung, POME-PLI

From Skeptics to Believers: Creating an online learning environment for leadership development

Online learning is increasingly embraced in K-12 teaching, professional development, as well as graduate education, and the interactive tools and platforms of Web 2.0 offer new distance learning opportunities that did not exist just a few years ago. But can the depth of learning and connection that can be derived from face-to-face interactions be replicated in the online environment? Presenters from the Principal Leadership Institute will discuss what they have learned from their partnership with High Tech High's Graduate School of Education and findings from the pilot of a web-based critical friends group for school leaders. Participants will discuss the opportunities offered by online leadership support for early career leaders, as well as consider the potential for using Web 2.0 in the Principal Leadership Institute and to support more seasoned school leaders.

Session III.C, Workshops, 2326 Tolman

Andrew Galpern, POME-QME

Research Workshop: How To Measure Practically Anything You Want To In Only 30 Minutes

This is a 30 minute workshop on how to measure practically anything...guaranteed! As you know, in almost every area of educational research, we are interested in some quality, phenomenon, behavior, ability or structure that explains a part of the learning process. This workshop will introduce you to a framework for measuring ANY variable of interest. It could be student achievement, self-efficacy, meta-cognition, social capital, math anxiety, reading comprehension, creativity, etc....if you can describe it, you can measure it, and this workshop will teach you how!

Marina Everri, Department of Psychology, University of Parma, Italy

'Manufacturing' video-data: procedures for the analysis of interactions

The collection and analysis of video-recorded material is often complex and time consuming, especially when the researcher's attention is drawn toward the interactions among multiple participants. This workshop illustrates a systematic procedure for the collection, transcription and analysis of video data, providing examples taken from clips of family and peers interactions.

Session III.D, Consultations, 2515 Tolman

Alison Miller Singley, Nicole Leveille Buchanan, and Chloe Green, Psychology

Assessment Data as Illustration of Learning Trajectories (LMR curriculum)

Over the course of the Learning Mathematics Through Representations (LMR) curriculum pilot, participating 4th and 5th graders completed four assessments, of which several items were identical. These common items afford the opportunity to trace students' growing understandings of fractions, from incorrect responses through partial understandings to correct responses.

Catherine Miller, CD

Digital Vygotsky: Translating sociocultural theories to online spaces

Emerging online learning environments introduce an exciting new tool for classroom learning. In particular, the affordances of interactive technology on digital texts seems to hold promise as an aid for reading comprehension instruction with children just learning to read. However, the use of digital texts does not automatically solve some of the cognitive challenges of learning to comprehend text. Using a

socio-cognitive lens to explore what we know about comprehension instruction and digital learning tools, how might we design instruction to use digital text in the early elementary classroom to surmount persistent challenges in comprehension development for novice readers?

Session IV 2:20 – 3:00

Session IV.A, Consultations, 2515 Tolman

Catherine Lipson, Joint Doctoral Program in Special Education

Literacy interventions for students who use augmentative communication devices

The purpose of this paper is to describe evidence-based literacy strategies for students who use augmentative and alternative communication, with a focus on scaffolding techniques, guided participation, and guided practice. Comparing instructional strategies described by studies conducted with typically-developing students to strategies observed during ongoing interventions with atypically developing students will provide insight into how teaching and learning methods can be adapted to the special needs of those who use augmentative and alternative communication. The goal is to establish the rationale for instructional strategies that promote students understanding of text, and support their ability to demonstrate their understanding.

Jaran Shin, LLSC-LLC

History and Memory: Teaching History in the English Language Development Classroom

Traditionally, learning grammatical patterns, expanding vocabulary, and practicing conversational phrases have been emphasized in language classrooms. With this narrow but prevalent way of conceptualizing the obligations of language class, few teachers could envisage themselves teaching culture. Thus, arguing the necessity of teaching cultural elements in language classrooms has been provocative. Accordingly, the MLA Ad Hoc Committee on Foreign Languages (2007) has promoted teaching historical and political consciousness with functional language abilities in a language classroom. For the GSE Research Day, I would like to (a) discuss how historical perspectives can be integrated into a high school English Language Development (ELD) class, (b) analyze some empirical classroom data whether teaching history in a language classroom enables ELLs to reconstruct their sense of values and identities and to visualize alternative ways of understanding a historical event while learning the target language, and (c) think about the implications of providing students with history-related class materials.

Jenny Zhang, LLSC

Room to Read Girls' Education Program Post-Secondary Study

This study looks at the challenges and successes of alumnae from the Girls' Education Program in Cambodia, India, Nepal, and Vietnam. Both females who were currently in secondary school and those who had graduated were interviewed for the study.

Session IV.B, Posters, Education-Psychology Library

Nicole Louie, CD

Who and What is "Good at Math": How Teachers (Re)Frame Smartness

Increasingly, education researchers and practitioners recognize the importance of identity work in mathematics classrooms, in particular for students with histories of marginalization. One approach to this identity work argues that it is necessary to expand traditional notions of what it means to be "smart," highlighting specific ways that low-status students are competent contributors to their classroom learning communities (Cohen & Lotan, 1997). This poster investigates two questions: 1) How do high

school mathematics teachers attempt to reframe and expand what counts as smart” in their classrooms? and 2) What tensions do teachers face as they engage in this challenging work?

Josh Sussman and Yukie Toyama, CD, POME

Developing Classroom Assessments to Study Learning Progressions of Scientific Mechanism

Supporting Scientific Practices in Elementary and Middle School Classrooms is a multisite NSF-funded project to develop an empirically supported integrated learning progression for different aspects of scientific practice, namely argumentation, explanation, and modeling. The work presented in this poster focused on one progress variable identified as key in student performance and understanding of science practices: attention to mechanistic versus descriptive accounts of scientific phenomena. A Rasch IRT model was used to link assessments across multiple content domains and to address the following research questions: 1) Did student understanding of scientific mechanisms differ between items that focused on a scientific explanations verses scientific modeling? 2) Did student understanding of scientific mechanisms differ when items focused on science content that was taught in a recent curriculum unit versus items that focused on science content that had not yet been taught? 3) Was teacher experience associated with higher scores? Limitations and future directions are addressed.

Randi Engle’s Research Group, CD

Transfer-of-Learning in an Expansively Framed High School Biology Classroom

This research investigates the relationship between framing and transfer. Our hypothesis is that transfer can be promoted by framing learning contexts in an expansive manner in which students are positioned as contributing to larger conversations that extend across time, places, people, and topics. Drawing from our classroom study data, we investigate how student perceptions of framing are interrelated with student transfer. A regression analysis is used to determine which aspects of expansive framing predict transfer assessment scores.

Evra Baldinger, CD-EMST

Toward an Understanding of Learning Trajectories of Mathematics Teachers: characterizing moments of development in equity-centered pedagogical reasoning

This study examines teachers’ pedagogical reasoning as they participate in conversations with coaches in the context of an extensive, equity-focused mathematics professional development (PD) program. Analysis seeks to (1) characterize teachers’ in-the-moment reasoning as they engage with coaches in making sense of their practice, (2) identify patterns of reasoning for teachers who have engaged in the PD for different amounts of time, and (3) begin to sketch possible learning trajectories for teachers working to build equitable teaching practices. Findings will contribute to the field’s understanding of mathematics teacher learning for equity and suggest directions for future research.

Adam Mendelson, LLSC

Instructional, interactional, and mediational framing: Three sources of intercontextuality that differentially influence transfer

This work further specifies the relationship between framing and transfer (Engle et al.) by exploring the influence of different types of framing on the communicative norms students transfer in to computer-mediated foreign language instruction, and the outcomes that transfer out to subsequent face-to-face interactions. I discuss three forms of framing: 1) instructional framing through which instructors attempt to establish intercontextuality between learning and transfer contexts; 2) interactional framing through which the goals and expectations of learning activities dynamically emerge; and 3) mediational framing through which students’ prior associations with communication technologies influence their engagement in learning activities.

Euiyoung Kim and Tae Hoon Kim, Mechanical Engineering, Electrical Engineering and Computer Science

Intuitive Plug & Play circuit board platform for inexperienced engineering students in introductory electronics classes

There are many college students who struggle in building circuits in their first circuit class or students without electrical engineering background. Our motivation for this research is making a new platform of simple circuit elements, so students with no background knowledge can learn/build circuits easily. We hope that this new platform will have positive educational effect for these inexperienced students. Moreover, there are also current trends such as Fablab, Techshop and Maker faire which encourage student's interest in science and engineering. We think this project shares similar vision with those movements and provide better learning experience for them.

Huriya Jabbar, POME

Perceptions of Competition Among School Leaders in New Orleans

School choice policies are based on the idea that competition will lead to better outcomes for all students. School leaders are expected to respond to market pressure by improving the effectiveness and efficiency of their schools. Yet this theory of action does not address how perceptions and politics shape market processes. Using concepts from the sociology of markets and multiple methods, including network analysis and qualitative interviewing, I examine principals' competition sets, the schools they view as rivals, which schools are and are not included, and the degree to which school type, quality, and location matter in New Orleans, the most advanced education market in the U.S.

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Thank you to all of the research groups and student volunteers who provided planning, registration, refreshments, set-up, and clean-up support. A special thanks to Elizabeth Arnett and Andrew Galpern for their leadership in making Research Day happen.

This year's conference is dedicated to Professor Randi Engle, an excellent teacher and researcher and an enthusiastic supporter of this event.

And thank you to all for presenting and attending, keeping this research tradition alive and well at the GSE. See you next year!