REPORT OF ACTIVITIES
2015–2016 Academic Year
Stanford Graduate School of Education
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I. Initial Activities

TELOS staff hired:

Amber Levinson, Research Associate (50% time, July 2015)

Angela Estrella, Professional Development Associate (30% time, July 2015)

Christine Bywater, Clinical Associate, Educational Technology (Full Time, May 2016)

Part-time support from other GSE staff include website services from Hiep Ho (CEPA webmaster), Caitlin Martin (designer) and the GSE IT department; administrative support from Javier Heinz (CSET) and financial support from Sarah Mandudzo (CSET).

Partnerships developed:
Digital Promise
Silicon Valley Education Foundation
Joan Ganz Cooney Center
discussions begun with Redwood City SD
Mission Graduates
SFUSD (via Stanford-SFUSD partnership program) – advising the Making Connections pilot program.

TELOS Advisory Board formed and convened, including 10 GSE faculty in addition to the Co-Leads Brigid Barron and Janet Carlson. The board includes: Linda Darling-Hammond, Shelley Goldman, Paulo Blikstein, Carl Wieman, Ira Lit, Jennifer Langer-Osuna, Sean Reardon, Roy Pea, and Guadalupe Valdés.

TELOS Logo and Website Designed/Developed
Website development included organizing GSE faculty work into “Featured Work” sections that detail existing GSE projects at the intersection of equity, technology and learning.
II. Diverse Families and Media Launch

*TELOS Goals: Shaping the discourse; facilitating design, building, testing*

Day-long launch event (panel & design workshop), October 30, 2015

On October 30, 2015, TELOS co-hosted the launch of *Diverse Families and Media: Using Research to Inspire Design* along with the Joan Ganz Cooney Center at Sesame Workshop and Digital Promise. This designer-facing publication shares cases of low-income families and their technology use, which are crafted to give designers and practitioners a window into the home lives and media practices of under-served families. The resource is available for free download on the Joan Ganz Cooney Center website.

*Publication Abstract: For the past two years, Families and Media project researchers have been studying low-income and language-minority communities in California, New York, Arizona, Colorado, and Illinois. This research-based guide is created for educators and media designers who create programs for children and families. Diverse Families and Media offers stories of family media use that were documented in our studies, and raise design-relevant questions as well as suggest design principles that can be applied more broadly. The goal of the guide is to help producers and designers gain insight from our research with families, particularly those from underserved groups, and help refine existing programs or give rise to new concepts.*

The daylong event at Stanford on October 30th, 2015 brought together researchers, practitioners and designers from industry around issues of diversity, equity, learning, and technology.

The day opened with two interactive panels: The first panel, Designing for Diverse Families, featured Dr. Kevin Clark (George Mason University), Claudia Haines (Association of Library Services to Children) and Aaron Morris (PBS Kids), moderated by Michael Levine of the Joan Ganz Cooney Center at Sesame Workshop. The second panel, Supporting Home-School Connections Using Technology, focused on Latino families and featured Dr. Carmen Gonzalez (University of Washington), Eric Cuentos (Mission Graduates) and Dr. Margaret Caspe (Harvard Family Research Project).
Following the panels, a sub-group of 50 invitees met at the Stanford d.school for a design thinking workshop using case-based design challenges from the publication to spark discussion, new ideas and cross-sector connections. Each of the eight teams in the workshop was intentionally composed of a mixture of education practitioners, designers and researchers. These included experts from universities, think-tanks, children’s media production companies, and child advocacy organizations, including among many others, representatives from Common Sense Media, Sesame Workshop, WGBH, KQED, PBS KIDS Digital, Google, SRI International, Launchpad Toys, Motion Math, Kidaptive, the Center for Children and Technology at EDC, Stanford University, Northwestern, Arizona State, Boston Medical Center, and San Jose State University.
III. Stanford Course: Child Development and New Technologies

*TELOS goals: Prepare PK-12 educators and leaders; Facilitate design*

In winter of 2016, Brigid Barron and Amber Levinson led the course “Child Development and New Technologies,” introducing a new focus on equity.

**Enrolled in the course were:**
- 13 GSE graduate students (Masters)
- 7 Stanford undergraduates: majors included computer science, symbolic systems, math
- 1 Stanford Computer Science Masters student
- 1 Stanford Medical School student

The course includes child development theory in dialogue with research on learning and technology, as well as a final design project (individual or group) which is supported throughout the quarter by design activities. This year’s course focused on equity in readings and mini-lectures, as well as in many of the design activities that invited students to envision solutions for under-served students. The teaching team also facilitated connections to lower income families for students to interview, via the non-profit Literacy Lab.

**Guest speakers included:**
- Meredith Downing, Literacy Lab (local non-profit using technology to support preschoolers and families)
- Komal Dadlani, Lab4U (technology start-up aiming to democratize science education through mobiles)
- Andy Russell, Google/Launchpad Toys (founder of Launchpad Toys, creator of Toontastic app)

**Student projects included:**
- FamilyNet – a tool for bilingual/bicultural families to engage in digital family storytelling
- An online tool to encourage girls in digital creation
- Vibe – a wearable device for tracking collaborative communication in the classroom (became the student’s Masters project)
- App & wearable to help adolescents track their well being
- A “parent engagement layer” for involving parents in young children’s app use
Education’s Digital Future: Equity by Design

TELOS Goals: Shaping the discourse; Preparing PK-12 educators and leaders

Weekly Seminar
Spring quarter, 2016
Primary organizer: TELOS
Partners: Silicon Valley Education Foundation; Digital Promise

Education’s Digital Future: Equity by Design was a weekly seminar held in the spring of 2016 with weekly invited speakers as well as “campfire chats” for post-seminar discussion. The seminar was free and open to the public, with specific outreach done to recruit participation from local educators. Our aim was to bring together leading scholars and practitioners to share ideas, foster discussion and shape discourse at the intersection of equity, technology, and learning, as well as offer a professional development opportunity for educators (continuing education credit was offered through CSET), and facilitate new partnerships within and across sectors (education practice, research, and technology industry). Our partners Silicon Valley Education Foundation and Digital Promise helped to promote the seminar among their networks, and particularly SVEF’s participation led to strong participation by school-based educators and administrators.

Seminar description: Digital technologies are rapidly evolving and reorganizing the way we play, learn, and work. Significant questions have emerged about how digital and networked information technologies might be both narrowing and widening gaps in access to learning opportunities. It is becoming clear that technology alone will not catalyze the forms of equity that are so essential for preparing young people and their families for a rapidly changing future. Instead we need to deeply rethink and intentionally redesign the social organizations and tools that provide learning opportunities (schools, workplaces, community organizations, libraries) and study these innovations at a regional as well as national level. In this course and public seminar, designed to foster new forms of collaboration and innovation, we will engage these
questions through a series of invited conversations with a broad range of stakeholders including researchers, educators, and industry representatives.

**Audience and Reach**

- 308 unique audience members attended (signed in at the event), in addition to 36 speakers.*
- Participants attended between 1 and 9 sessions each (average per participant was 2 sessions)
- 35 working educators took the seminar for continuing education units (CEUs)
- 12 Stanford students took the seminar for credit
- Partnerships with SVEF and the Year of Learning were influential in boosting participation from across and beyond Stanford.

*this number only reflects participants who signed in at the event check-in. There were likely additional participants did not complete the sign in process due to late arrival or other reasons.

Who attended?
PreK-12 Educators
School administrators
School district leaders
Non-profit professionals
Industry professionals
Graduate & Undergraduate Students
Scholars/Researchers
Others (freelancers, community members, university staff, etc.)

What organizations did they represent?

➢ **36 different schools & school districts**
Educators came from locations across the Bay area, from San Francisco to Gilroy

Graham Middle School
Santa Clara County Office of Education
San Mateo Union High School
Loma Verde Elementary School
Los Altos High School
Hogeschool Rotterdam, Netherlands
Alpha Public Schools
San Mateo Union High School District
Pacifica School District
Marshall Pomeroy Elementary
Lakeside School
ESUHSD
EESD
Redwood City School District
Campbell Union School District
Amesti Elementary
Mountain View Whisman School District
Berryessa USD
Santa Clara County Office of Education
Cupertino Union School District
Marshall Pomeroy Elementary School
Hillbrook School
Gilroy Unified School District
Peninsula School
Mistral Elementary School
Los Altos School District (LASD)
Los Altos High School
East Side Union High School District
Portola Valley - Corte Madera School
Morgan Hill Unified School District
Cristo Rey San Jose Jesuit High School
Democracy Prep Public Schools
Connect Community Charter School
Frank L. Huff Elementary
Palo Alto Unified School District
Christopher High School

Map of schools & districts educators came from.  
Red=CEU enrolled educators; Yellow=not enrolled

- 11 universities/colleges

Stanford University (multiple areas/institutions across campus)
  - Stanford Graduate School of Education
  - Stanford GSB
  - Stanford d.school
  - Lemann Center
  - Stanford Medical School Admissions
  - mediaX (Stanford)
  - STEP (Stanford Teacher Education Program)
  - Transformative Learning Technologies Lab (TLTL)
  - John Gardner Center
  - Center to Support Excellence in Teaching
  - VPTL (Vice Provost of Teaching and Learning)
  - SLAC
Old Dominion University
University of São Paulo (Brazil)
University of San Francisco School of Education
University of Rotterdam
UC Berkeley History-Social Science Project
Middle College
Peralta community college district
San Jose State University
Krause Center for Innovation, Foothill College
Continuing Education of the Bar

➢ 4 research organizations
California Education Partners
SRI
Galbi Research
WestEd

➢ 16 companies (Ed Tech and other industries)
Coursera
Deloitte
Google
One Market Capital
The Learning Accelerator
Redbird Advanced Learning
Apple
Learn Alley
Ford Motor Company
Front Row Education
Silicon Valley CTE (MetroED)
Arduino and Rogue Making
MathCrunch
LearnWithTyler.com
Meedow Education
Fujitsu Labs of America

➢ 22 community organizations/non-profits/other
San Jose Public Library
Silicon Valley Education Foundation
Digital Promise
Growing Strong Teachers, Inc.
Building Skills Partnership
Office of Congressman Mike Honda
Jump Into Writing
Freelance Writer/Educator
Office of Assemblyman Rich Gordon
Designing Courses for an Audience of One......Institute
GLO
Jeffrey Chin
EdSurge
SGI
CCSR
Aziksa
Grupa O
Reddere Foundation of the Silicon Valley Community Foundation
Computer History Museum
SCPD
Literacy Lab
Trusiness

Map of organizations that local attendees represented.
Remote views
Videos recorded of each session and archived here for public access. Week 8's session has been viewed 240 times, other sessions have view counts ranging from 18-150 views. Week 9 was viewed the least number of times, possibly due to being the last session before the end of the series.

Outreach
Participants were recruited through professional and student networks at Stanford as well as Joan Ganz Cooney Center, Silicon Valley Education Foundation and Digital Promise. SVEF was particularly active in recruiting working educators and school leaders from the region. The email recipient list from the prior EDF seminar was also used to invite individuals interested in the topic.

Email invitations were sent to a steadily growing mailing list, which incorporated new participants who RSVP'd each week. The seminar was also promoted via a Facebook page, and a private community was established for the enrolled educators to share ideas.
# Seminar Content

## Sessions

### Week 1: Technology for Equity in Learning Opportunities

*Explored opportunities for technology to increase equity in learning opportunities and agency for youth and communities, as well as risks that technology poses to widen divides.*

Some key ideas & takeaways:
- Access to social/learning resources are needed in addition to technology access to achieve equity (tech alone is not enough)
- Need to consider access and resources available not only in school but in home and community settings
- Need to create more equity in STEM and opportunities to “design, innovate, intervene.” (Watkins)

### Week 2: Making Technology Work for Underserved Students in Schools

*Shared lessons from the 2014 report Using Technology to Support At-Risk Students’ Learning will share the lessons from the report, highlighting successful models and outlining implications for practice.*

Some key ideas & takeaways:
- Integrating technology to benefit underserved students is a feat of coordinating different moving parts (like “double dutch”) into a learning ecosystem.
- Technology can help structure authentic tasks with an authentic audience (as opposed to assignments only seen by teachers).
- Professional development to support meaningful technology use is vital.
- Some districts may have minimal technology staff available, which is not viable.

### Week 3: Equity and Innovation: Lessons from the Department of Education

*Two former leaders of the US Department of Education Office Educational Technology discussed key ways in*
which technology can increase equity in education and ways that practitioners and policy can pursue them.

Some key ideas & takeaways:

- 1:1 technology as a goal, and BYOD policies as a source of inequity. (Culatta)
- The importance of using tech to create and design rather than for rote learning.
- Importance of district leadership support in implementing meaningful technology integration.
- Technology has the potential to provide access to courses and resources not available to students in many areas or to students with particular special needs.
- Distinction between equity and equality.
- Educators themselves need to feel confident with technology, not only rely on technology leaders in the school or district.

Karen Cator (Digital Promise; Former US Dept of Ed)

Lightning speaker:
Kristen Swanson, EdCamp

Resources:
- National Educational Technology Plan
- Ed Tech Developer’s Guide

Week 4: Web Literacy as a Barrier And Pathway to Equity

Considered how differences in people's Web use skills influence what they do online. What inequalities have been shown in research and how can we increase equity in this area? How can we broaden access to meaningful web skills that equip individuals and communities for full participation in the digital age?

Some key ideas & takeaways:

- Belief in one’s ability to succeed in a task (self efficacy) online has positive outcomes for actual success.
- Studies reveal women believe their WL skills are lesser even when they are not.
- Socioeconomic status is highly correlated with web literacy skills.
- The myth of the “digital native” – even people who have grown up with the internet still need support to learn.
- Mozilla provides free web literacy resources (see link in right column).

Eszter Hargittai (Northwestern)
An-Me Chung (Mozilla Foundation)

Resources:
- Mozilla Learning Network
- Eszter Hargittai: Research

Week 5: Technology in Schools: Now What?

Changes in Policy and Links to Outcomes in California

Michael Kirst focused on how recent policy decisions regarding school funds, technology, assessments, and

Speakers:
Michael Kirst (Stanford GSE), Darryl Adams (Coachella School District)

Lightning speaker:
measures of school quality are impacting schools (computer-based standardized assessments, blended learning, online charter schools, nano degrees for educators). Darryl Adams presented on innovations in his district, Coachella Valley, including providing equitable access to digital technologies.

Some key ideas & takeaways:
- examples of innovation to increase digital equity in a poor district including using buses to provide wi-fi in/out of school
- students, educators and parents/families need learning opportunities to support their technology use.

Week 6: Broadening Access to High Quality Teacher Professional Learning

Considered the role of technology in supporting teachers to develop practices that focus on outcomes in the classroom, particularly via the example of the Hollyhock Fellows program which leverages remote coaching via video.

- Characteristics of an effective PD include teacher leadership, a learning community, contextualized learning, sufficient time for a given PD, practice-based strategies, and an authentic source.
- Video can be an effective tool to support continued teacher mentorship.
- Teachers in Hollyhock have benefited from building a learning community, being continuously assessed, having an interlinking combination of trust, safety and relationships (with each other & coaches).
- These types of PD supports can boost teacher retention.

Week 7: Equity in Making and Creating with Technology

This session focused on broadening access to creating and making with technology, from research and practice perspectives.

Key ideas and issues:
- Ask students, "What did you make today?" rather than, "What did you do today?" (Okada Takara)
- We need diversity in STEM fields, however should be about giving students opportunities to be exposed to powerful

Speakers:
- Janet Carlson, Angela Estrella, Tammy Wu Moriarty (Stanford GSE)
- Sadie Skiles (Oakland Technical HS)
- Paulo Blikstein (Stanford GSE)
- Nichole Pinkard (DePaul University)
- Rafranz Davis (Lufkin School District, TX)
- Betsy Corcoran (EdSurge)

Lightning talk: Corinne Okada Takara

Resources:
- Video feature on Coachella Valley innovation (Adams)
- Hollyhock Fellows Program
- Meaningful Making (book)
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<tr>
<th>Week 8: The Future of Reading and Writing</th>
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<td><strong>Considered critical literacy and text production among youth and their communities that is often overlooked, and share successful experiences with guiding youth to read and write the world around them in ways that are relevant to their own realities. Lightning talk by educator Catlin Tucker.</strong></td>
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**Key issues and ideas:**
- Importance of teaching students about the “digital afterlife” of their work.
- Students can be motivated by writing for a public space/audience
- Resources such as google docs, newsela, TEDEd Clubs, and diigo can have powerful classroom applications
- “Decolonize” writing and afford more control to students.

**Speakers:**
- Lissa Soep (Youth Radio)
- Adam Banks (Stanford GSE)
- Cherise McBride (UC Berkeley)
- Petra Dierkes-Thrun (Stanford)

**Lightning talk:** Catlin Tucker

**Resources:**
- Book: *Digital Griots* (Banks)
- Youth Radio
- Catlin Tucker

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<th>Week 9: Supporting Home-School Connections through Technology</th>
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<td><strong>Technology can be an extremely powerful tool for connecting people and broadening participation. At the same time, family engagement with children's schooling has been shown to benefit students and communities. How might digital technologies help support home and school connections for families with young children? Presenters shared models currently in the field and discuss further avenues to explore.</strong></td>
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**Key issues and ideas:**
- Latino parents use media strategically to learn and teach language
- Texting information to preschool parents can be a way of connecting home and school, potentially increasing school readiness.
- Mentor and leverage influential parents (parent leaders).
- Technology can help families understand schools, and also help educators understand families.

**Speakers:**
- Carlin Llorente (SRI International)
- Eric Cuentos (Mission Graduates)
- Ben York (Stanford GSE)
- Amber Levinson (Stanford GSE; Joan Ganz Cooney Center)

**Lightning talk:** Seth Hubbert, OTX West

**Resources:**
- *Diverse Families & Media* guide (Levinson/Cooney Center)
- *Ready4K*
- *Report: Math learning and Peg+Cat (SRI)*
Universities represented by speakers:
University of Texas, Austin, Stanford University, UC Berkeley, Northwestern, DePaul University

School districts/County offices:

Other Organizations
Silicon Valley Education Foundation, Mozilla Foundation, Digital Promise, Rhode Island State Government, Youth Radio, SRI, Mission Graduates, EdSurge

Lightning speakers
Each seminar session featured 1-4 main speakers, and in addition to those presentations, 6 of the 9 sessions opened with “lightning talks” by local practitioners and designers.
Week 2: senior at Overfelt High School
Week 3: Kristin Swanson, EdCamp founder, educator
Week 5: David Cohen, educator
Week 7: Corinne Okada Takara, teaching artist
Week 8: Catlin Tucker, educator, Sonoma county
Week 9: Seth Hubbert, OTX West
Equity by Design

Kris D. Gutiérrez
Graduate School of Education
University of California, Berkeley
March 28, 2023
Post-seminar survey feedback

- The post-seminar survey was distributed by email to all participants who attended the seminar or who RSVP’ed, following the last session of the seminar.

- The survey yielded 49 responses; a low response rate given the number of unique participants who attended.

- 43 per cent of respondents to the survey worked in K-12 schools, mostly as classroom teachers but also as technology leads or school/district leaders. The remainder were very much distributed across different roles, About a quarter of respondents were university students, university staff or scholars/researchers.

- The average number of sessions each survey respondent attended was between 4 and 5 sessions, however the numbers were largely polarized—many either attended 8 sessions (which was also the number required to earn 2 CEUs) or only 1-2 sessions.

Which best describes your role? (49 responses)

- Classroom teacher (PreK-12)
- Out of school educator (public libra...
- Researcher/scholar
- University staff
- Graduate or Undergraduate student
- School/district leader (principal, sup...
- Technology coordinator or technolo...
- Non profit professional
- Industry professional
- Interested community member
- Other

Takeaways and Overall Impressions

- Responses indicated the seminar series was beneficial for enrolled educators, with the majority citing concrete takeaways they would use in their work.

In general, educators who enrolled for units provided positive feedback and a majority who responded to the survey cited takeaways or practices that. These educators attended the sessions and also participated in “campfire chats” at the lobby tables after the sessions which allowed greater opportunities to engage with other participants around the topic.
This seminar was phenomenal. The idea that we should focus on training teachers more rather than acquiring more tech equipment was crucial for me. Most school districts focus on acquiring iPads, chrome books etc. but still lack a clear focus on training teachers to use these tech tools efficiently. In addition to this, I was inspired by the innovate practices of other schools, principals, etc. especially by the Coachella superintendent who went above and beyond to bridge the tech gap in his district. Other initiatives that were inspiring were the Ready to Learn program from PBS that help bridge the home-school connection. Lastly, the many discussions that focused on the need to implement personalized learning, student-driven and project-based learning in the classroom.

- Angeles López, classroom teacher, enrolled for credit

Lots of great ideas and resources came from my discussions during campfire chats. I learned about new edtech programs to use with my students and other great resources available to help students create with technology. I also learned about lots of new organizations doing amazing work and can learn from their models.

- Keya Lamba, kindergarten teacher, enrolled for credit

- Some educators did not find sessions practical/useful – they wanted specific practices they could use in the classroom

One challenge of the series was in trying to target multiple audiences, including both researchers and practitioners, which made some of the content less targeted. “Please less research data and more solutions to known problems.” One educator who attended two sessions (Weeks 1 and 5) indicated there were “not many” lessons the he/she could take into the classroom, and suggested “less academic, more practitioner-focused work.” This sentiment was echoed by another educator who attended two sessions (Week 2 and Week 6). When asked for takeaways that could be used in his/her work, the educator responded:

I did not find the seminars that useful. I was looking for actual things I could implement in the classroom. Instead I felt like I was just listening to people giving presentations on their research, without any useful information I could bring back to my school.

- Educators expressed appreciation for treatment they received, including the food served.

Feedback on Format

- The seminar format was traditional, not highly interactive, and sometimes too crowded with multiple speakers.

One participant pointed out that although the content was important, the format was not interactive enough:

“There needs to be more of these. The format, though, is archaic. Are there experiential ways to engage in this work that doesn't have the audience sit and listen?”
The above comment does not appear to consider the “campfire chats,” however does point out that the main 1.5 hour session was largely formatted in a traditional way, with speakers presenting and audience members interacting only in the last 20-30 minutes. Audience interaction was typically a simple Q&A format with microphones passed to participants for questions.

Others noted that **squeezing in multiple speakers in the short timeframe was problematic** and did not allow enough time to engage deeply with the subject matter

I think it is best to have only one speaker per hour seminar instead of a panel. This reduces the time wasted reading bios and other introductory overhead. Please do not have a photographer at future events because it is distracting. You did a great job getting awesome speakers.

Having four speakers (plus the lightning talk) seemed a bit much. It may have been better to have no more than three speakers in an evening (one being the lightning talk) and letting them go deeper into their talks.

One participant suggested using social media to bolster more and deeper interactions:

You may wish to include an asynchronous component with interaction among participants, such as a Facebook group. You may wish to lean more heavily into social media as a stimulant for back channel discussion during and after an event.

Finally, one participant, who identified as a researcher/scholar, lamented that the room was set up for using devices during the session, which many people did, and they felt that this took away from engagement with the speakers.

**Networking and community**

- A majority of survey respondents reported that they had either formed new professional partnerships as a result of the series, or met people they would collaborate with.

31 out of the 49 respondents who attended the seminar, whether only one to two times or for several of the sessions, indicated that they had either made new professional partnerships, met people they thought they would collaborate with, or both.

Of the 14 participants who indicated they did not meet others outside their networks, the majority (11) had attended either one or two sessions, however three of them had attended between five and eight sessions and still did not feel they had met others outside their networks.
Suggestions for improvement and future events

- **Facilitate networking and provide more time that is less structured**

Participants appreciated the networking time that was offered and also recommended some more ways we might develop this aspect. Two participants mentioned this, and suggested specific challenges and practical tool-oriented sessions that could also provide this interactive time with other participants.

Facilitated workshops that bring people together around on a specific challenge might be an interesting next step. Something even less structured might help to foster connections and provide ample time for networking.

I wonder if it might be possible to offer some more extended sessions to help teachers use some of the technology that we are learning about.

I appreciated the way the networking session was set up. I thought the organization made extremely good use of our time. The food was terrific. I feel that we were treated very well and given valuable information as well as productive formats for interacting.

- **Involving students/youth**

Participants enjoyed hearing from a high school student in Week 2, and proposed that more sessions could have involved youth. However, one respondent, a student, suggested that we give more guidance to the young people who may come to speak, and in general felt that speakers should have been encouraged to take a strengths-based framing and avoid a deficit one:

The African-American young man from the program should have been sharing what he learned from the experience, some artifacts of his creation, not talking about being just a poor boy from the 'hood. I also think that the speakers need to be more careful in how they frame disadvantaged, underserved, and
underrepresented populations. Overall, we need the series to be more explicitly focused on building on the strengths, not what they don't have or don't do. More on what they can and will do if provided the opportunity.

Another participant suggested sponsoring events that would draw in local communities, not only the educators, researchers and professionals but (seemingly) families of diverse ethnicities:

I think it would be game-changing if everything presented by TELOS could be converted into a free, one-day event targeting low SES and marginalized communities, with some amount of translation - Spanish, Tagalog, Mandarin, Samoan, Tongan.

➢ Off-site opportunities/excursions

While many educators requested more practical, targeted training for practitioners, one respondent suggested doing this by taking groups to tour schools that are successfully integrating technology.

Topics respondents want to learn about

Cited by multiple respondents:
- Project based learning (applied to secondary English, and in general)
- Arts/STEAM/maker education/innovation

Additional topics:
- Technology throughout the grades
- Technology & learning differences
- Technology for service learning
- Technology for building professional learning networks
- Social Emotional Learning
- Free educational technology for empowering teachers to release control and develop student-centered learning
- MOOCs
- Hybrid online/offline learning
- Instructional design
- When learning-by-doing is best (experiential education?)
- Using social media in the classroom.
- Empowering student voice.
- Vendors i.e. Google, Apple, Microsoft speaking about their role in education.
- Equity and cultural/global relevance in the classroom
Suggested future speakers:

- **Scholars**
  Linda Darling Hammond, Jenny Langer-Osuna, Carol Dweck, David Kelley, Brene Brown, Jo Boaler, Someone from Understanding Language

- **Practitioners**
  Catlin Tucker, anyone from the Media Arts Program at Saratoga HS, STEM directors (in general), Robert Provonost, Eileen Smith (? Marin educator)

- **Other organizations:** San Jose Area Writing Project Advanced Seminar teachers, Udacity, Coursera.

- **Industry:**
  Dell’s education department has a classroom environment specialist (newly hired); Educational app developers

- **Other:** Japanese, Finnish speakers known to be successful and innovative in the education field.

Which Kinds of Events are you most likely to attend in the future?

Among the kinds of events respondents most frequently cited were “a monthly seminar series” (32) and “design challenge” (31). Teacher professional learning course a common response among the practicing educators and may not have garnered as many votes because not all respondents were teachers.
Summary of Lingering Questions by Week

Week 1
- What are some documented solutions to the equity issues posed in the session at the classroom and policy levels?
- How should schools balance the need to provide learning experiences with technology, and other pressing needs that are also unmet?
- What are the health and attention-related concerns related to technology use by children?
- How does the trend toward blended learning affect communities of color in particular?
- What are some [more] in-practice examples of the types of practices Craig and others mention?
- How do learning differences and/or special needs fit in to this intersection?

Week 2
- Who (in school districts) is responsible for setting the supports/processes described in motion? What are some starting points?
- How to involve students?
- How can educators keep pace with changes in technology?
- What are some more specific examples or anecdotes beyond the broad strokes presented in the session?
- What resources are available for educators who struggle to implement technology? How can schools/districts obtain the PD needed?
- What are the actual tools/applications that we might use to allow students to create their own "stories" around topics/concepts?
- How can educators allow students to use the technology they naturally gravitate to but still hold them accountable for product, or monitor proper usage.

Week 3
- How can educators and leaders take concrete action to work towards 1:1 technology? What can educators do advocate when leadership does not?
- How can educators encourage more diverse and purposeful uses of technology when students may come to school accustomed to gaming and entertainment?
- What role should research play in the classroom?
- Which are the technology programs that are currently available to teachers/students that enable empowering technology opportunities?
- What do innovative districts/schools in underserved/communities of color have in common - how did they become innovative?
- How do we prepare pre-service teachers to engage in technology use in their classrooms? What is most important to teach in the limited time we have with them?
How much of an alignment is there btw the policy/need and what is on offer/coming out of EdTech industry?
How can educators balance what students are interested in learning with what may be required of them (e.g. college level math)?

Week 4
- Are there web literacy materials for elementary students?
- What are concrete ways to teach and promote web literacy skills [beyond resources presented]?
- What are the reasons why women contribute less on Wikipedia?
- How much time should young children (e.g. Kindergarteners) spend on computers?
- How can a teacher assess students' internet skills in the classroom? What are some practical resources for assessment?

Week 5
- How might another district replicate what Dr. Adams achieved in Coachella Valley? What are the specifics? How might we fund it elsewhere?
- How do we develop consistency in teacher preparation?
- How do we know if technology, e.g. 1:1 iPad, actually does improve engagement and academic performance? How is this measured? Qualitatively? Quantitatively?
- Would we see more push back against blended learning in a high income district?
- What is different between how Los Angeles and Coachella Valley are using iPads?

Week 6
- What research is available showing the relationship between PD and teacher retention?
- What makes a good coach and how does someone become one?
- How can programs like Hollyhock be scaled?
- How can we overcome student privacy issues to engage in classroom video sharing?
- What low-cost, commercially available platforms exist for uploading videos for coaches?
- In what ways can we inspire "more experienced" teachers to improve their teaching practices while at the same time acknowledging and not discounting their work histories?
- What PD resources are available for teachers who are no longer new to the profession?

Week 7
- How can educators make school/district leaders aware of the importance of creating/making?
- How do we justify making when our students are 2-5 grade levels behind?
- How do we make it easy for teachers in low income schools who are already overworked and don't have time to plan?
- Can maker type activities be integrated into academic areas not traditionally associated with technology (History, ELA)?
How to implement Nichole's ideas in coed classrooms?

Week 8
- What degree of public publishing is appropriate for elementary aged students?
- What can we do in the primary grades to help the future of reading and writing balance between paper/pencil and technology?
- How should we teach young students about the "Digital Afterlife"?
- How is reading and writing in the 21st century, using technology different from reading an actual book and writing using paper and pen? How does this impact learning?
- What does decolonizing writing look like in practice?
- How do we increase the literacy spark of students whose reading levels are below grade level?
- What are the new skill-sets that teachers need to develop in order to teach effectively in today's classroom?
- What are effective ways that we can alleviate the fears of?

Week 9
- Do I have resources and programs similar to the ones I've heard about today in my district? Is my district using ready4k?
- Is there a text messaging program for older grades that parents can use over the summer to avoid summer slide?
- What resources are available in Spanish for parents in dual language programs for home-school connections?
- What are the sociological implications of "reverse parenting" where older children find they have to support parents who have less English and education?
- How can you make media less intimidating to parents?
- How do we engage our families without being paternalistic?

Across all sessions:
- Participants requested more examples of success and concrete strategies for change applicable in their schools/districts.
V. TELOS Grants for Research and Innovation

TELOS Goals: Catalyze Collaborative Research; Facilitate design, building, testing

In Spring of 2016, TELOS launched our first request for proposals, which included a call for:

- GSE faculty projects (up to $100,000 each)
- doctoral student proposals (for grants up to $7500 each); and
- masters student proposals ($2500 each, due fall 2017)

The purpose of the grants Projects could include research as well as costs for developing technologies and/or new courses. Faculty proposals received all included research activities however many also included the development of new technologies for learning and/or research on learning.

We received 7 student proposals and 10 faculty proposals. Of these, TELOS awarded grants to 5 doctoral students and 4 faculty, including two senior faculty and two junior faculty members.

GSE Faculty Grants:

- Researching the impact of an online course designed to transform student engagement and achievement in mathematics
  PI: Jo Boaler
  Areas: Math, Teacher Professional Development, Online Learning, STEM equity
  An online course called “How to Learn Math” through Stanford’s OpenEdX platform (http://scpd.stanford.edu/ppc/how-learn-math-teachers), taught by Professor Jo Boaler, translates important research on mathematics teaching and learning, mindset and brain science into practical teaching ideas, using technology to reach over 50,000 teachers over the last 3 years. The most successful cases of teacher change come about when teachers are supported by administrators, colleagues and resources. Thus, TELOS funding will help Dr. Boaler and her team study system wide support for using the online course as a basis for instructional change. Starting in the summer of 2016 (Phase 1), they will begin to study the course in operation and analyze 100 teachers’ practices after taking the course in Manhattan Beach district and in the Tulare County Office of Education. They will also gather data from 150 school leaders participating in our Summer Math Leadership Summit. The group is also planning and seeking additional research funding for a second phase: a controlled experiment in the 2017-18 school year with approximately 300 teachers, to gauge the impact of the online course, comparing teachers’ practices and student learning after taking the course with more traditional forms of professional development.

- A Design Experiment for Teaching Students to Take Bearings on the Web
Although the Internet has the potential to democratize access to information, it puts enormous responsibility on individuals to evaluate the trustworthiness of information. If young people are not prepared to critically evaluate the content they encounter online, they are apt to be duped by false claims and misleading arguments. To improve equitable access to online information, the Stanford History Education Group will conduct a two-year design experiment to create and field-test curriculum that helps young people become thoughtful consumers of digital content. The d.school's K12 Lab Network will support the creative process of designing new materials, which will be refined through iterative rounds of collaborative piloting with San Jose high school teachers and students. During year two of the project, teachers will integrate lessons into their social studies classes and student progress will be tracked. At the project's conclusion, these materials will be free to download from the Stanford History Education Group's website (sheg.stanford.edu).

- **Eye Tracking and Lacuna Stories**  
  PI: Sarah Levine  
  Areas: Reading, literature, eye tracking technology, equity  
  In the U.S., students of color who attend high-poverty schools are less likely than their white wealthy counterparts to have engaging and challenging literary reading experiences. One of the many reasons for this inequity is English Language Arts teachers' lack of understanding of their students' cognitive and affective reading processes, and the related tendency to assume that they are "struggling readers." The TELOS grant allows us to use new reading platforms and eye-tracking technology, along with more traditional think-aloud interviews, to better understand how high school students deemed struggling readers approach not only canonical literary texts but also "everyday," popular literary texts. We will use the same design to study those deemed expert literary readers. We hypothesize that struggling readers may read more like experts, depending on text and context. We hope to learn more about students as literary readers, and we hope also to help teachers leverage their students' everyday literary practices to support more canonical literary reading.

- **Development of a Searchable Repository of Language-Based Interactions: A Tool for Research on Equity and Fairness in Linguistically Diverse Classrooms**  
  PI: Guillermo Solano-Flores  
  Areas: English learners, classroom interactions, qualitative research, research tools.  
  Leveraging the technology of MOOCs and crowd sourcing, our team will build a research-oriented, searchable repository and platform that collects, archives, and engages with language-based interactions from linguistically diverse classrooms across the K-12 sector. A repository and platform of this kind has great potential to aid and inform the study of student language development, and to help generate techniques and practices that address concerns surrounding language-based inequity in classrooms. The data collection and storage dimensions of the repository will present a clearer picture of the actual language used by students and the ways in which interactions take place in classrooms. It will also lay the
necessary foundation for researchers to engage with the data—using specialized analytic tools to interrogate the data according to a variety of research topics and methodologies—to deepen the understanding of classroom language at every level. By exposing the patterns of language actually used by school children, it will be possible to gain new perspectives on the nature of language itself; more practically in the immediate future, insights gained from such research will help to answer and address, from a sociolinguistics perspective, the connection between language and equitable learning opportunities.
Student Awards:

Chris Proctor
My project proposes to treat Computer Science as a literacy, and explores whether pedagogies designed for English/Language Arts could also be effective for teaching Computer Science. I will use a design-based approach to develop a web-based platform for reading and writing interactive fiction, a genre of participatory stories somewhere between story and game. Interactive Fiction combines elements such as conditional branching, loops, variables, and functions, and so could be an ideal way of introducing students to Computer Science as a literacy. There is a broad call to make Computer Science part of primary and secondary education. This project could help connect Computer Science to other well-established literacies within a school curriculum.

Holly Pope
The purpose of my study is to examine the interactions of underserved students with their teacher and each other as the class engages in playing the digital game Wuzzit Trouble on iPads. With a combination of video, classroom observations, and student interviews, I will shed light on the affordances and barriers to learning from complex digital games within the classroom environment. I will also measure the development of mathematical thinking and number sense using a pre-post written assessment. The goal is to bring attention to the varied ways children experience digital math games in the classroom.

Soren Rosier
Peer tutoring—one type of peer assisted learning—has been found to increase learning for both tutors and tutees and spur more positive attitudes toward subject matter. However, studies continually find that tutors tend to do much more explaining than tutees, use shallow or procedural questioning, and rarely stimulate deep-level reasoning or monitor the understanding of tutees. With the aid of technology, I hope to facilitate peer tutor training that prepares tutors to use research-based talk moves and shifts their conceptions of good teaching—and eventually their behaviors—from knowledge-telling to strategic questioning and from didactic to dialogic teaching.

Aekta Shah
Technological innovation is transforming the flow of information, the impact of social action, and is giving birth to new forms of bottom-up innovation that are capable of expanding and exploding old theories of reproduction and resistance because “smart mobs”, “street knowledge”, and “social movements” cannot be neutralized by powerful structural forces in the same old ways. This research will investigate the concept of YPAR 2.0 (Akom, 2016) in which new technologies enable young people to visualize, validate, and transform social inequalities by using local knowledge + technology in new ways that deepen engagement, democratize data, expand educational opportunity, inform policy, and mobilize community assets. Specifically this research aims to investigate how a digital technology—a mobile, mapping and SMS platform called Streetryze—may impact youth/community sense of agency, self-esteem, civic/educational engagement, environmental stewardship, and investment in community.

Xavier Monroe
To determine if culturally responsive STEM learning activities during the summer months can serve as interventions for underrepresented youth, I will investigate how culturally responsive interventions influence students’ participation and motivation related to STEM, and what key experiences and associated factors encourage student agency with respect to their learning and persistence in STEM. The TELOS-funded project will support me in offering a summer STEM opportunity for local middle school students, and also explore whether students transfer acquired interests to their formal learning environment during the academic school year. The study will also build off of work that considered how a group of urban elementary school instructors made sense of a new district STEAM policy (STEM with Arts included). This research aims to advance discovery and understanding by designing to transform student learning, training, and teaching in Science, Technology, Engineering and Mathematics (STEM), particularly using Robotics Technology.

Congratulations!
VI. Summer Teacher Professional Development Opportunities

TELOS goal: Preparing PK-12 educators and leaders

In summer of 2016, the Center to Support Excellence in Teaching (CSET) offered courses in technology and equity to inservice teachers as part of the Stanford Summer Teaching Festival.

- Engaging Today’s Learners with Technology

Course Objective: By the end of the course, teachers will design and share two lessons that make effective use of technology to engage students in dynamic discussions and encourage both a close reading and critical analysis of an informational text.

Course Description:
Lack of student engagement is a frustrating reality for many teachers. This course will focus on two aspects of learning where lack of engagement is particularly prevalent: discussion and reading/analyzing informational texts.

This summer, we will explore how online discussions can be used to give every student a voice. We’ll delve into question design, strategies aimed at helping students to say something substantial online, and methods for weaving online conversations back into the classroom.

In addition, the course will explore strategies to help students actively engage with informational texts online. As students read more text online, it’s crucial that educators teach them how to transfer their active reading strategies to the digital environment. We’ll examine how technology can be used to pair texts with students at different reading levels, and we’ll explore creative strategies for driving analysis around informational texts using technology tools.

Participants will leave with a firm understanding of how to design dynamic online discussions that will enhance real time conversations in the classroom. They will build toolkit with a collection of online resources they can use to connect students with informational texts at their reading level and drive creative analysis of those texts.

Course Dates: August 1 - 5

Course Facilitator: Catlin Tucker is a Google Certified Teacher, bestselling author, international trainer, and frequent Edtech speaker, who currently teaches in Sonoma County where she was named Teacher of the Year in 2010. Catlin’s first book Blended Learning in Grades 4-12 is a bestseller and her most recent book Creatively Teach the Common Core Literacy Standards with Technology was published in June 2015. Catlin writes the “Techy Teacher” column for
ASCD’s Educational Leadership as well as an internationally ranked education blog at CatlinTucker.com.

Catlin has been teaching for 15 years and training teachers for 7 years. She earned her BA in English from the University of California, Los Angeles and her MA in Education from the University of California, Santa Barbara.

Audience: Designed for grades 6 - 12 Cross Curricular

Transforming Teaching & Learning with Technology
Course Objective: By the end of this course, teachers will create a video tutorial for a technology tool and share a robust rationale for integration that is content-focused, pedagogically-grounded and technologically sound.

Course Description:
We live in an increasingly digital world. Digital technology is all around us, and used in a myriad of ways by our students, heightening the need for fluency in 21st century literacies. This course will facilitate a participatory learning space where we can explore the literacies afforded and deepened by these technologies. We will engage in a recursive trajectory of research, tinkering, and publication that leads to the creation of our own digital artifacts and the thoughtful design of learning experiences for our students. Teachers will leave with tools for designing their own digital pedagogy in their diverse contexts—ones that exploit the affordances of the social, multimodal, and #connected features of the technologies often right at our fingertips.

Course Dates: June 13-17

Course Facilitator: Cherise McBride is a Ph.D. student in the Graduate School of Education at the University of California, Berkeley. She teaches courses in the Multicultural Urban Secondary English Master’s and credential program on Digital Pedagogy and Practicum field supervision. She is also a Teacher Consultant with Bay Area Writing Project where she provides instructional coaching and professional development to in-service teachers. With a decade of experience teaching English in at the high school, adult school and community college levels, Cherise is committed to training urban educators to consider the multiple literacies and strengths that youth bring with them to the classroom, and to consider the ways that literacy is shifting in the 21st century.

Audience: Designed for teachers in grades 3-12 who are intermediate-level technology users. Individuals who have some familiarity and comfort using software like Google Drive and devices like iPads, but who may not yet be incorporating these tools into classroom instruction, will benefit most from this course.
Hollyhock Fellowship Program: Equity in Education Conference
Date: Tuesday, July 19, 2016

New Literacies: How Technology Is Expanding What It Means to Be Literate & Teach Literacy
Cherise McBride, supervisor/lecturer at UC Berkeley

We are at a critical juncture in literacy studies as technological and information literacy represents a new "divide" at the institutional and individual levels. This workshop will offer a framework for understanding the importance of this new divide, as well as design principles for navigating it in our instruction. Teachers will leave with concrete ideas to promote digital equity via engagement (classroom), advocacy (institution), and continued conversation (professional learning network).

Length of Session: 75 minutes

Bringing All Students into the Discussion with Backchanneling
Angela Estrella, educator and professional development associate at Stanford University

This session will introduce participants to backchanneling as a means to increase student engagement and participation during class discussion. What is backchanneling? Participating in an online discussion about an activity (e.g. presentation, discussion) that is taking place simultaneously. Backchanneling can be an effective practice to engage all students in a meaningful class discussion online and offline at the same time. Participants will learn strategies on how to lead a successful backchannel using free online tools.

Length of Session: 75 minutes
During the 2015-2016 Academic year, a national search was held for a new TELOS faculty member. Three finalists visited campus and presented job talks. An offer was extended to Antero Garcia, Assistant Professor at Colorado State University, and the offer was accepted in summer 2016. We look forward to working with Professor Garcia on advancing the TELOS goals. The description for his job talk and brief bio follow.

“Good Reception: Mobile Media, Play, and Civic Engagement in an Urban High School”

In this presentation, Antero Garcia describes findings from a year-long ethnographic study examining mobile media and gameplay in an urban high school in South Central Los Angeles. Though schools across the country are rapidly adopting one-to-one laptop and tablet programs in classrooms, there is a significant absence of data about what youth are already doing with these technologies in schools. Through conducting focus groups with students and observing on-campus uses of mobile media, Antero looked at how phones mediate student social interaction and how the use of mobile media differs from more widely documented social use of these devices by teens outside of school. Using these preliminary findings and working directly in a ninth grade English
classroom, Antero developed a standards-aligned Alternate Reality Game that relied on mobile devices for civic engagement. This Youth Participatory Action Research project (YPAR) found students engaging directly in community-discourse and sharing recommendations to increase critical literacies and educational equity for the local South Central community. Though there have been significant studies looking at the extracurricular practices of youth engaged in connected learning, little research has focused on this context of youth engagement with mobile technologies and play within schools. By focusing on students in one urban school in the U.S., Antero Garcia’s work sheds new light on youth in-school mobile media device use, offers direct contributions for teacher pedagogy, and illustrates ways that classroom practice could change to meet the demands of the 21st Century.

Antero Garcia is an Assistant Professor in the English Department at Colorado State University. Prior to moving to Colorado, Antero was an English teacher at a public high school in South Central Los Angeles. Antero’s research focuses on increasing equitable teaching and learning opportunities for urban youth through the use of participatory media and gameplay. This exploration into the role of equity and play in school contexts guided Antero to co-design the Critical Design and Gaming School - a public high school currently open in South Central Los Angeles. Further, in 2008 Antero co-developed the Black Cloud Game. A Digital Media and Learning Competition award recipient, the Black Cloud provoked students to take real time assessment of air quality in their community. Using custom-developed sensors that measure and send data about air quality, students critically analyzed the role pollution played in their daily lives and presented recommendations to their community. Today, these sensors are now installed on Google Street View cars.