Measuring Educational Quality and Improvement in College and Career Pathways:

THE SECONDARY STUDENT EXPERIENCE

OCTOBER 17, 2017
CLARK KERR CAMPUS | UNIVERSITY OF CALIFORNIA, BERKELEY

COLLEGE AND CAREER PATHWAY RESEARCH SYMPOSIA SERIES

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Introduction

College and career pathways represent a significant national educational reform movement supported by federal, state, and philanthropic funders. High school pathways combine career and technical education with rigorous academics, work-based learning, and student supports to provide equitable access to postsecondary opportunities. Strong research evidence supports this specific combination of interventions as a means to interrupt the opportunity gap and address the underlying causes of disparate high school outcomes. *Measuring Educational Quality and Improvement in College and Career Pathways* was an opportunity to reflect on what we know about student outcomes in pathways, determine what is yet to be learned, and begin to propose research to accomplish that work.

This symposium, the first of a planned series of four symposia focused on pathways research, is a joint effort by multiple research-based organizations active in policy development: College and Career Academy Support Network (CCASN), UC Berkeley; WestEd; SRI International; the California State University (CSU) Teacher Education programs, and the CSU Collaborative for the Advancement of Linked Learning; Jobs for the Future; the Learning Policy Institute, ConnectEd; the Linked Learning Alliance, PACCCRAS (Promoting Authentic College, Career, and Civic Readiness Assessment Systems) Working Group; and MDRC.

Structure and Goals for the Day

Forty-two (42) participants attended the day-long symposium, representing research and advocacy organizations and institutions of higher learning (see Appendix 1). The day was structured with plenary presentations on four strands of the student experience in college and career pathways, then subgroups by strand to map the current knowledge base, identify gaps, and prioritize focal questions for further research. After a policy overview at lunch, researchers then broke into new subgroups to collaborate and plan research projects. The agenda for the day is included in the program the follows this section.

Based on their expertise, attendees had been assigned to one of the four student experience strands that we selected to begin the day. These were:

- Data use in pathway interventions and design
- Student achievement in pathways
- Addressing opportunity gaps through student supports and access
- Student engagement in pathways

Attendees completed pre-work prior to the symposium, submitting bibliographies of research in their assigned strand. This work was compiled by strand as a foundation for sub-group work mapping the knowledge base to identify knowledge gaps. This bibliography is included as Appendix 2.
AGENDA

<table>
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<tr>
<td>8:00 – 8:45</td>
<td>Registration &amp; breakfast</td>
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<tr>
<td>8:45 – 9:00</td>
<td>Welcome: Introduction to symposium &amp; goals for the day</td>
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<td>9:00 – 10:00</td>
<td>Four plenary speakers outline the state of the field</td>
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| 10:00 – 10:30 | Plenary discussion of the strands for the morning session:  
  • Student engagement in pathways  
  • Student achievement in pathways  
  • Addressing opportunity gaps through student supports and access  
  • Data use in pathway interventions and design |
| 10:30 – 10:40 | Coffee break & transition to break-out rooms |
| 10:40 – 11:40 | Strand subgroup break-out session: Map existing studies & identify priority gaps in the research |
| 11:45 – 12:30 | Strand subgroups report out |
| 12:30 – 1:30 | Lunch speaker: California Assembly member Dr. Shirley Weber |
| 1:30 – 3:10 | Plenary activity: Attendees reflect on patterns, overlaps, and opportunities presented by strand groups, and form new focal groups |
| 3:10 – 3:20 | Afternoon break & transition to break-out rooms |
| 3:20 – 5:30 | Focal working groups: Draft and post research proposals |
| 5:30 – 7:30 | Wine reception and dinner buffet: Gallery walk – feedback and networking |

LUNCH KEYNOTE SPEAKER

**ASSEMBLY MEMBER SHIRLEY WEBER** was elected in November of 2012 to represent California’s 79th Assembly District, which includes the cities of Bonita, Chula Vista, La Mesa, Lemon Grove, National City and San Diego.

Born to sharecroppers of Hope, Arkansas, Shirley Weber has lived in California since the age of 3. She attended UCLA, where she received her BA, MA and PhD by the age of 26. Prior to receiving her doctorate, she became a professor at San Diego State University (SDSU) at the age of 23. Dr. Weber also taught at California State University at Los Angeles and Los Angeles City College before coming to San Diego State University.

Dr. Weber chairs the Assembly Budget Subcommittee on Public Safety. She also serves as a member of the Assembly Standing Committees on Education, Higher Education, Elections, Budget, and Banking and Finance.
KEYNOTE SPEAKERS

KATHY BOOTH is a Senior Research Associate at WestEd where she translates research findings so that practitioners can apply them to pressing concerns and facilitates opportunities for community college leaders to develop action plans based on evidence. Her recent projects include developing the LaunchBoard – a data system that links educational, labor market and employment outcomes data; facilitating the creation of assessment competencies for the California Community College Common Assessment Initiative; and documenting employment outcomes for skills-builders – students who engage in short-term course-taking to advance their careers.

Previously, Booth served as the Executive Director of the Research and Planning Group for California Community Colleges (RP Group). There she played a lead role in activities such as developing the Career and Technical Education Outcomes Survey, expanding research on the use of high school data to inform placement into basic skills courses, and documenting effective approaches to student support. Booth received a BA in women's studies, with a focus on integrating diversity into progressive politics, from Wesleyan University.

DR. JAMES KEMPLE is the Executive Director of the Research Alliance for New York City Schools and Research Professor at the Steinhardt School of Culture, Education, and Human Development at New York University. As Executive Director, Dr. Kemple provides guidance and oversight for all Research Alliance work. He also serves as the Principal Investigator on a range of Research Alliance studies including those examining the efficacy of on-track indicators for different grade levels; performance trends in NYC high schools; and the effects of school closure.

Prior joining the Research Alliance, Dr. Kemple spent more than 18 years at MDRC. He served as the Director of MDRC’s K-12 Education Policy Area and specialized in the design and management of rigorous evaluations, including randomized controlled trials of educational and other social policy reforms. He was the Principal Investigator for MDRC’s Career Academies Evaluation, as well as a number of other key studies. Dr. Kemple holds an Ed.D. and Ed.M. from the Harvard University Graduate School of Education, with a concentration in Administration, Planning, and Social Policy for Community and Urban Education, as well as a B.A. in Mathematics from the College of the Holy Cross.

DR. TAMEKA McGLAWN is the Chief of Strategy, Learning and Collective Impact for the Leading for Equity Collective Network, an organized, complex and dynamic leadership collaborative that builds coherence and alignment across systems to optimize performance, strengthen capacity and produce impactful results. She has provided servant leadership to learning and leading communities for nearly 25 years, and is considered a seasoned collaborator and evidence-based strategist and advisor. Having served in a myriad of settings and professional roles, Dr. McGlawn offers a unique perspective on implementing systemic and complex initiatives, tactical strategies to achieving equity-based outcomes and effective institutional and organizational practices. Her actionable research interests where she has served and facilitated professional learning and development include strategic reform implementation, systemic accountability and institutional equity, culturally responsive pedagogy and leadership, and building network alliances through innovative collective impact initiatives.

Dr. McGlawn is a proud graduate of both the CSU San Diego’s Community Based Block Multicultural & Social Justice Master’s Program, and the Rosnier School of Education at the University of Southern California where she earned her doctorate in Educational Leadership. She also has credentials in Administrative Services and Pupil Personnel.
An effective consensus builder and action-oriented research practitioner, Dr. McGlawn brings an ideal synthesis of research savviness, practical application and a deep commitment to increased structural opportunities for all.

**DR. REGIE STITES** is a senior researcher in SRI International’s Center for Education Policy. He has two decades of experience in the design and management of large-scale educational research and evaluation in the areas of literacy education, integrated academic and career-technical education, college and career readiness, and workforce development. Major projects include the Evaluation of the California Community College Linked Learning Initiative, the Evaluation of the California Linked Learning District Initiative, the Evaluation of the Oakland Health Career Pathways Project, and the Equipped for the Future National Work Readiness Credential Assessment Development and Validation.

Stites holds a doctorate in education from UCLA, a master’s degree in cultural anthropology from the University of Wisconsin, a master’s degree in English/TEFL (teaching English as a foreign language) from San Francisco State University, and a bachelor’s degree in anthropology from the University of Illinois.
Highlights from Key Presentations and Discussions

The role of the key participants was to provide an overview of their strand, reflecting on critical research issues related to measuring the student experience. The role of the lunchtime keynote speaker was to provide a policy context for our task of determining the high-leverage research to pursue.

Kathy Booth spoke on the challenges of data use in various contexts. Regarding school systems, data are not often provided to teachers and administrators in time to make any changes for the students from whom data was collected. Often educators have little control over how information is presented to them, nor do they necessarily get the level of granularity that they desire to contextualize information and make actionable decisions. Booth also noted that there is little reliable information on meta-cognitive and socio-emotional outcomes, college knowledge, or even on key experiences like work-based learning. Once students transition out of a school system, it is even more difficult to track students although longitudinal data systems are being developed by many states.

Using data requires an institutional willingness to engage bad news, to change existing practices, to scale what works even when it requires reallocating resources, and to persist in reform efforts when they do not generate immediate results. Data usage is thus a cultural issue.

Booth described some of the general barriers to answering important research questions around pathways, e.g., inaccurate information on which students are participating in which pathway and inadequate access to information on outcomes after the student has moved from one K-12 institution to another, enrolled in college, or entered employment. The challenges of obtaining and matching data include the difficulty of obtaining social security numbers, misunderstanding of FERPA requirements, and the fragility of data sharing systems developed through personal relationships.

Dr. James Kemple began by defining student achievement broadly, including socio-emotional indicators as well as traditional academic ones. He proposed organizing and prioritizing outcomes by their proximity to the pathway components, following a theory of action.

In education research, there is systematic variation in outcomes depending on non-malleable characteristics such as race, gender, and income. Some interventions are designed to “un-correlate” outcomes with background characteristics, but there is little evidence of the degree to which interventions like pathways can reduce that systematic variation. Our priority should be to examine added-value outcomes—the distinctive influence that pathways have on outcomes over and above what students would likely have achieved in other high school alternatives that were available to them. This is important because pathways typically require additional resources, involve multiple actors and systems outside of the school system, and can be complicated and burdensome to implement well. These additional resources and efforts should be justified by knowing what we get as an added value to outcomes in ways that alternative options are not likely to achieve. Given prior research indicating mixed impacts on educational attainment and achievement outcomes, and somewhat more consistent effects on labor market outcomes (when they are available), Dr. Kemple suggested placing a greater emphasis on labor market outcomes in an emerging theory of action.

Dr. Tameka McGlawn addressed opportunity gaps and outcome gaps. She asked her colleagues to consider the role of the research community in disrupting patterns of inequity; to
explicitly identify and call out structural policies and practices that perpetuate opportunity and outcome gaps.

Research shows that when implemented with fidelity, Linked Learning pathways, California Partnership Academies, and NAF career academies show promise in providing expanded and equitable access to rigorous college and career preparation. However, there is considerable variation in implementation, suggesting a need for establishing and disseminating core goals and best practices.

Dr. McGlawn argued for the importance of research-practice partnerships, student/family voice, and distributed leadership in college and career pathway research, practice, and policy. She suggested that methodologies such as DBIR (design-based implementation research) and PAR (participatory action research) are important qualitative tools, as valuable as “gold standard” methods (i.e., experimental designs) for making college and career pathway research useful to both policymakers and practitioners. Dr. McGlawn exhorted attendees to consider how researchers can help translate findings into measurable practice and action, create structures, and design policies that will eliminate opportunity and outcome gaps.

Dr. Regie Stites discussed three topics around student engagement. First, the field must be able to define and measure student engagement. The definition must be multi-dimensional and include behavioral, socio-emotional, cognitive, and metacognitive factors. The indicators of engagement must be able to serve several purposes: formative feedback, continuous improvement, effectiveness and outcomes analysis, and accountability.

Second, Dr. Stites suggested that the student choice of career theme, the integrated curriculum, and work-based learning experiences are pathways components that are associated with positive impacts on student engagement. Regarding work-based learning, research could help outline the barriers to student access to high quality experiences and could determine the optimum dosage, or range and number of work-based learning experiences, needed in order to engage all students.

Finally, other features of pathways, such as the availability of industry recognized credentials, should be explored for their value in increasing student engagement. Dr. Stites concluded by noting that pathways could serve as an effective model for engaging out-of-school youth, but for them, the standard 3- or 4-year pathway is not feasible. He challenged researchers to look at how specific components of pathways could be delivered to re-engage these youth.

Dr. Shirley Weber, Assemblymember from California’s 79th Assembly District in the San Diego area, was our lunch keynote speaker. A former university professor and school board member, she serves on the education and higher education committees in the legislature and is known for her advocacy to close the achievement gap and provide an excellent education for all children.

Dr. Weber began her discussion of the policy context of college and career pathways research with the intentionally provocative statement that research results actually matter very little in the decisions that policymakers make. She provided examples of education policies with very strong research behind them, such as the benefit of a later start time for high school students, yet legislators in Sacramento did not support such legislation--for political reasons.

Dr. Weber’s comments invited the attendees to remember why pathways were developed in the first
place, and for whom. She noted that sometimes an intervention shows promise and people want to scale it up, but a) it might not work for everyone, b) it was not designed for everyone, and c) scaling up might ignore the original population it was intended for. She cited a recent effort to get cybersecurity pathways funded, but no budget for outreach or inclusion efforts was included—in a field that is overwhelmingly male and white. It was not difficult for her to imagine which students would enter that pathway and be successful. Not every effort is a step forward in our efforts toward equitable outcomes in school. The measure of success of an educational intervention, she said, is how well it serves students who would not otherwise be successful.

She concluded her remarks saying that policymakers need to be pushed to believe that they can make the kinds of changes that can improve schools. She exhorted the researchers in the room to go to their state capitols, push their agenda, and push it hard. Researchers need to use research to empower, engage, and build a movement that will settle for nothing less than equitable outcomes from schools.

Plenary discussions after the key participants and keynote speaker invariably returned to issues of equity and how pathways could improve outcomes for traditionally underserved populations. Pathways were developed to provide equitable access to postsecondary and labor market opportunities, but outcome gaps remain. The speakers enumerated some of these gaps, as well as possible directions for evidence-based solutions. Equity thus became a central, overarching theme of the day as attendees asked whether the educational quality and improvement promised by pathways was being fulfilled equitably across population groups.

**Final Research Themes**

Once attendees had “mapped and gapped” the literature on college and career pathways and discussed the issues, they regrouped themselves according to potential work that could be done to address the gaps, and spent quality time developing collaboration and research proposals. They created new subgroups based on key research topics that emerged:

- Engaging stakeholders through data
- High quality college and career pathways
- Measurement
- Policy
- Equity and access

Working together in these subgroups, participants developed an overarching question related to their topic as well as individual research questions. We provided a proposal template form (see Appendix 3) in order to have a consistent final session. The form consists of a Proposal Development template for the overarching research question, and an Individual Proposal template for each research question generated that was developed into a proposal. The first research theme below is presented using these templates; the remainder provide the same information but somewhat condensed in order to save space, as some groups laid out several research project ideas around their key research topic.

The day resulted in a set of research topics and collaborative proposals that could lead to research to fill knowledge gaps. They represent the first step in what the Planning Committee hopes will be a continued collaboration among the participating organizations. Attendees left the symposium tired but appreciative of the deep conversations that were crystallized in the proposals. Each subgroup named a convener to schedule the next step, usually a conference call to further the ideas and discuss funding. The work and
next steps of each subgroup is described below.

1. Engaging Stakeholders Through Data

Proposal Development Template

1) OVERARCHING RESEARCH QUESTION:
   Can inquiry by students, parents, educators, community members, and other stakeholders promote more equitable access and outcomes in pathways in high schools?

2) SPECIFIC RESEARCH SUB-QUESTIONS:
   • How can we “the researcher” look at data differently + flip it. School system as place of inquiry.
   • What are existing assets and data platforms that can be used for inquiry?
   • Students: What do students think should be measured? “Course” image.
   • Teachers & Project Staff
   • Parents: Using data at local level – doing research and promoting findings
   • Humanizing the data and sharing the story: helping parents and students connect the dots with existing data

Individual Proposal – Engaging Parents in Pathway Inquiry and Advocacy through Data

Research Question: Can inquiry by parents promote more equitable access and outcomes in pathways in high schools?

Implications for Policy & Practice:
   • Increase parent engagement in their children’s schools
• Empower parents to advocate for their children
• Develop parent to parent connections around common goals
• Increase equitable pathway programming and access within a given district
• Increase the number and quality of pathway options for all students within a given district

Methodology:
• Data collection and analytical methods:
  o Enlist parents in formulating research questions for their children’s’ inquiry into pathways and also serving as respondents’ in their children’s’ research (e.g., bringing the parent perspective on pathways into their children’s’ research as interviewees).
  o Work with parents to help them make sense of available quantitative and qualitative data on pathways (drawing on research and analysis conducted by their own children).
  o Work with parents to help them develop and share stories of their children’s’ experiences in pathways, and provide them with data for advocating for their children with their local school boards (e.g., through LCAP stakeholder engagement process) and for bringing other parents on board with the pathway approach.
• Connection to other research on the same overarching question:
  o This will be connected to the student research on the same topic.

Case/Site Selection Criteria:
• We will select X number of California districts with pathways as the focus of this work. We will work with our partner organizations, such as the state PTA, to identify local PTA groups that would be interested in being a part of this effort.
• Feedback: Many parents are engaged. Could take place in a PTA setting, for example.

Key Activities:
• Identify the districts with pathways that will be the target of our research
• Identify the schools/districts in which the student research component will take place.
• Identify additional partners beyond the state PTA.

Key Partners: State PTA, PIQE (Parents for Quality Education in San Diego), OCO (Oakland Community Organizations)/PICO, Parent Revolution, local school districts willing to collaborate and share data

Plan for Development of Logic Model, Refined Proposal, and Ongoing Collaboration:
• Student effort has to take place first and the logic model should encompass the other related stakeholder engagement work.
• The student research proposal has to be developed first to inform the parent engagement component.

In addition, the Engaging Stakeholders through Data subgroup prepared proposal templates for studies involving two other stakeholder groups—students and the larger community:

Individual Proposal – Students Engaging through Data

Research Question: Can inquiry by students promote more equitable access and outcomes in college and career readiness in high schools?
Implications for Policy & Practice:
1. Uncover and elevate issues of inequity and work toward more equitable policies and practices at the school, district, and state level
2. Strengthen student agency for the students participating in the program and their peers
3. Change practices and culture in schools to expect that students have an active voice in decision making

Issues: Data access; old data that is not aggregated

Methodology:
1. Literature review around student participatory action research - Review previous examples
   a. Center X
2. Review existing data sets and/or platforms that can engage students
3. Curriculum development (Social justice / researcher pathway)
   a. Theory
   b. Data
   c. Data analysis / statistical analysis
   d. Asking questions / initial findings
   e. Qualitative data collection – focus groups, interviews
   f. Presenting findings to multiple audiences – advocacy lens
      i. Peers
      ii. Educators
         iii. Policy maker - School administration, District administration
4. Implementation (& refinement)
   a. High school
   b. Nonprofit
   c. In partnership with post-secondary (college credit / dual enrollment)
5. Data collection on impact
   a. Qualitative data – mindset
      i. Student surveys / interviews
      ii. Educator surveys / interviews
      iii. Policy makers surveys / interviews
   b. Document analysis -- Do policies and practice documents change?
   c. Data change over time – Do student opportunities and outcomes change?

Individual Proposal – Engaging the Community through Data

Research Question: Can inquiry by community members including civic, employer, and postsecondary promote more equitable access and outcomes in pathways in high schools?

Implications for Policy & Practice:
To expand stakeholder involvement in using data to improve equitable access to college and career readiness with long-term goal of impacting policy at the state level.

Methodology:
- Data collection and analytical methods:
  o Use existing data
  o National landscape review to identify existing efforts
  o Learn more about identified programs/practices
Identify sites in CA with existing programs/practices to determine what data they are analyzing and how they are disseminating and using it to create more equitable access and researchers support them to broaden the scope of data used and their outreach capacity by documenting their practice and identifying ways to tell their story to a wider audience.

- Connection to other research on the same overarching question:
  - Communication across stakeholder groups (parents, students, teachers) to share data

Case/Site Selection Criteria:
- Invite communities in CA that were identified in the landscape review that express interest in refining and increasing activities to promote equitable access to college and careers based on data.
- Invite communities that expressed in pursuing conversations and activities to use data to promote equitable access to college and careers.

Key Activities:
- Survey the national landscape to identify communities where community members are already engaging in effective conversations using data to achieve equitable access.
- Identify communities interested in pursuing conversations and activities to use data to promote equitable access to college and careers.

Next Steps: The Engaging Stakeholders through Data subgroup met on Nov. 16, 2017. They discussed whether to develop separate proposals for each stakeholder group (i.e., students, parents) or one proposal including all stakeholder groups. They decided that there might be greater support for a comprehensive proposal examining the various ways that different stakeholders would identify the information they need, learn where to get it, and produce something that would have impact related to their specific concerns. Also, logistically, the difficulty of accessing school data might justify having all stakeholders under one study umbrella. Members described their current work and how it related to the subgroup topic. One noted new work being done in her K-12 school district to build a course piloted through the local UC campus that plans to utilize and leverage district data. She thought that her colleagues would like to have research partners in the work. Before the end of 2017, the convener agreed to draft a statement about what this group is about and what they would like to do.

2. High Quality College and Career Pathways

Overarching Question: What is the impact of high quality college and career pathways, for whom and under what conditions?

Research Questions:
- What is a high quality career pathway?
- What are the essential components or combination of components that are essential for high quality pathways (and interaction effects among the components)?
- What does it take to implement the essential components?
- What are the supplemental components over and above the essential components?
- What is the needed dosage within each component to achieve desired results?
- (sidebar question) What is the return on investment (ROI) of the program for employers and the district?
Methodology:
Begin by reviewing documentation about existing high quality programs. It might be difficult to construct an experimental study, so consider beginning with small descriptive and comparative case studies, perhaps isolating specific pathways components.

Individual Proposal – High Quality College and Career Pathway Components

Research Question: What are the essential components or combination of components that are essential for high quality pathways (and interaction effects among the components)?

Methodology:
- Comparative case study approach -- look at variation and the antecedents -- exploring naturally occurring variation
- Additive experimentation -- experimental variation - like qualitative A-B testing -- testing different implementation strategies simultaneously. Qualitative researchers would inventory sites; sites would then be offered additional strategies and support implementation; then test the variation (induced variation); a test of coaching or professional development (based on the inventory, components or dosage would be added)

Notes: This would not be starting at ground zero (Like ECCO project); it could start with small interventions, using a pre-post model, try to randomize schools

Case/Site Selection Criteria:
- Need to look at outcome and component pairs
- Need to look at the outcomes that are very close to the treatment, at the implementation level;
- Take the measure after the intervention; pre-post, comparative, around the additional components (e.g., WBL) as the value added intervention, with 21st Century skills as one of the outcomes that need to be measured
- Offer to implement ECCO (which includes working closely with supervisors to ensure they are supporting behaviors that are being measures, such as collaboration) at two schools; the impact is increased internships as the output -- are more internships are being offered; then examine student outcomes
- Need to pair with student outcomes -- did ECCO intervention?
- Comparative time series; mixed method; follow-up would use assessments and look at sustainability (a Phase Three)
- Site selection: Programs that are in the “middle of the pack”
  - Start with sites with cups partly full; based on self-assessment (e.g. NAF pathway assessment)
  - What does it take to turn a school rated 4 into one rated 6 (find components that do not have a large fixed cost)

Key Activities:
- Needs assessment: design the intervention
- Data collection: document review, field work, collection of survey data

Key Partners: Districts, pathway intermediaries
Next Steps: This subgroup will meet on Dec. 13, 2017.

3. Measurement

Overarching Question: What are the measures of engagement and short-term outcomes associated with pathways students’ long-term success?

Research Questions:
- What are the jobs of the future and the skills they demand?
- How can we measure the benefits of employers’ participation in career pathways?
  - ROI
  - Employers’ perceptions
- What are the measures and milestones of students’ engagement in a pathway experience that lead to life success?
- What are the constructs we should use to measure career readiness that are generalizable across occupation types? Sector-specific?
- How should we measure whether students are developing 21st Century skills that are in demand by the workforce?
  - Mindsets
  - Self-regulation
  - Intra
  - Inter
  - Teamwork, collaboration

Individual Proposal – Measures and Milestones of Student Engagement: Implementation Study

Research Question:
1. What are the key components (behaviors, mindsets, values, abilities) of engagement in a high school pathway that predict future life success (college and career readiness)?
   a. What are the best sources of evidence (extant data, tasks, situations) of engagement?
   b. How do we interpret evidence of engagement for the purpose of identifying impact of pathway experiences on engagement?
2. What aspects of the pathway experience are associated with high-levels of student engagement?
3. What strategies for implementing pathways lead to high-levels of student engagement?
4. What are the key milestones that indicate high-levels of student engagement in a high school pathway?
   a. What, if any, are important early indicators (first or second year) of engagement in pathway?
   b. What, if any, are important late indicators (third or fourth year)?

Implications for Policy & Practice:
- Results would inform efforts to develop constructs and measures of student engagement in pathways that could be used to evaluate and improve quality of pathways.
- Better measures of student engagement in pathways could be used to evaluate and improve pathway design and implementation
Methodology:
- Identify cohorts of students across multiple sites currently enrolled in pathways
- Survey and interview about engagement, interest, etc.
- Explore engagement and career-readiness construct development
- Follow-progression forward in time

Case/Site Selection Key Activities and Partners: The group discussed various available datasets such as NAF, California Partnership Academy, and SRI datasets.

Individual Proposal – Measures and Milestones of Student Engagement: Retrospective Study

Research Question: What are the measures and milestones of students’ engagement in a pathway experience that lead to life success? What effect does student engagement in a high school pathway have on postsecondary and career success?

Sub-questions:
1. Did successful adults who completed a high school pathway experience higher levels (or different forms) of engagement in high school compared with comparable adults who were not in a pathway?
   a. Do successful adults who were in a high school pathway say they experienced a high-level of engagement in the pathway? What was the nature of their engagement (or lack of engagement) and what aspects of the pathway experience do they feel best explain their level of engagement?
   b. In what ways was the high school engagement of a comparable group of adults who were not in a high school pathway similar or different from that of pathway completers?
2. What are the implications of the experience of successful adults for identifying key components (behaviors, mindsets, values, abilities) of engagement in a high school pathway that are associated with future life success?

Implications for Policy & Practice:
- Results would provide evidence of the association of student engagement in high school pathways with positive college and career trajectories.
- Results would inform efforts to develop constructs and measures of student engagement in pathways that could be used to evaluate and improve quality of pathways.

Methodology:
- Data collection and analytical methods:
  o Identify students who have already graduated from a pathways experience and are in college and careers
  o Interview/survey students about reflections on pathway experience and what mattered
  o Use extant data to analyze students’ progression through pathways and examine what predicts students’ long-term outcomes

- Connection to other research on the same overarching question:
  o A retrospective study could inform development of an engagement construct to guide design of measures of engagement to be used in other studies
  o Depending on sequencing of studies, a retrospective study could also be used to validate measures of engagement
**Next Steps:** The measurement subgroup met on a conference call on Nov. 21, 2017. Between the symposium and the conference call, members drafted a logic model for the implementation proposal. Members agreed to refine the key research questions and fill out the Individual Proposal template for them. The most developed ideas will be put on Google Drive so they can be accessed and edited by all. The group discussed methodology, site selection, and the types of data needed to develop indicators and answer questions on student engagement.

## 4. Policy

**Overarching Question:** How are school districts leveraging local, state, and federal policy to develop, implement, and sustain high quality college and career pathways that serve students to and through postsecondary education?

**Individual Proposal – Interpreting College and Career Pathways Policy at the Local Level**

**Research Question:**
- How can a school district’s vision for college and career pathways drive local interpretation of local, state, and federal policy?
- How can policy be changed to promote the integration of rigorous academics and career and technical education?

**Implications for Policy & Practice:**
- Community civic engagement and leadership around college and career pathways were hypothesized to define a local vision that drives policy interpretation and impacts college and career pathway implementation.
- This study would trace the impact of vision on a few key components of implementation: equitable access to postsecondary options, and the extent to which rigorous academics and career and technical education are actually integrated.
- This study could examine the range, character, and priorities embedded in visions for college and career pathways, developed by engaged community leaders in various contexts, and could investigate the links between their vision and their interpretation of local, state and federal policy. This would have value for district leaders trying to figure out how to implement college and career pathways, as it would development of leadership that can leverage local, state and federal policies.

**Methodology:** A mixed-methods study is called for, including:
- Document analysis (e.g., local control plans and process documentation),
- A survey of district leaders, particularly those involved in the development of district vision statements, and
- Case studies of specific districts including interviewing school board and PTA members, district staff and leaders, and site and pathway leaders.

**Case/Site Selection Criteria:** Case selection would focus on districts with a stated commitment to college and career pathways, and to integrating academics and career and technical education. Districts serving highly vulnerable, underserved populations would also be prioritized.
Next Steps: Because this proposal meshes well with the capacity building symposium scheduled for 2018, this subgroup decided that the proposal would be further developed at that time.

5. Equity and Access

Overarching Question: What does equitable access to pathways look like and how does it work?

Research Questions:

- To what degree is there equitable access to high quality college and career pathways?
  - What students have access to what pathways – themes and quality of the pathway?
- How does the process work?
  - What do schools do to inform students to make decisions about pathways and what role do state and local policies play?
  - How do students and families make decisions about pathways?
  - How do these patterns vary by gender, race, and subgroup status (socioeconomic status, EL, migrant students, etc.)
- Process questions:
  - What is the process by which students make decisions about selecting a pathway?
  - To what extent is the counselor, parent, teacher, student, etc. involved?
  - How does the school structure that process?
  - Is there a selection criteria?
  - Are these processes differential as it relates to who has access to information?
  - Does the location of a pathway matter in the decision-making process?
  - When do students begin to make decisions? (Exposure and awareness)
- Equity lens:
  - Who is in what pathway? Race, socioeconomic status
  - What can make a difference?

Methodology:

- Begin by describing the status quo: examine state-level data to see which pathways currently exist where
- Case study – LBUSD and 2 other districts
- Multi-case study comparing pathway choice process across districts.
- Access study: Is there a difference across districts?

Case/Site Selection Criteria: Districts must be willing to provide data

Next Steps: As noted above, equity issues came to be seen as foundational to all subgroup research ideas. The Equity and Access subgroup developed ideas that they then found embedded explicitly or implicitly in other subgroups’ proposals. At the final gallery walk, everyone saw that attention to equity had to inform and shape how each research proposal was framed. The foundational work by this subgroup is helping the Planning Committee reframe the next symposium on teaching and learning in pathways: the entire symposium will use an equity lens to examine pedagogical issues in college and career pathways. Equity is not a stand-alone issue but rather an overarching one that influences all aspects of pathways and pathways research. Some of the issues raised by this group will be reserved for a more focused examination at a later symposium.
New Organizational/Institutional Collaborations Developed

Collaboration across organizations and institutions does occur, but not usually across as many as were represented in each subgroup formed at the symposium. In addition, at the time of the symposium, no funding for any of these projects was available. However, each attendee saw the value of the work, and one outcome was a commitment to pursue funding and continue collaborating. Prior to the break-out of the focal research subgroups, the following paragraphs were projected in the plenary room for discussion:

Every organization here has dedicated tremendous resources to this work because we are committed to transforming education systems to be more equitable. But all of us are also to some extent competing for resources and we are also facing difficult times. As these working groups will be developing layered sets of research proposals around the strategic focal areas we’ve identified, we want to take a minute to address the question of who owns those proposals:

By collaborating in developing these ideas, we intend to promote research in these high priority, high leverage areas, but we are also making a collaborative commitment to each other. Four organizations and five individuals may envision a project that interconnects with three different possible studies. One of those may be funded first for one organization. Another may be attacked with a doctoral study. We hope for a commitment from each of us here to work on opening up opportunities for each other, so that we can build on the work done today. We are asking for a commitment to join forces wherever possible to make what we plan here become a reality. We hope this symposium provides a foundation for working groups that will continue to meet to discuss logic models, share protocols, collaborate in the field, build upon each other’s data sets, and expand upon each other’s findings.

The organizers of this symposium series would like this same sense of opening up new collaborative spaces to be present among funders too, including government as well as philanthropic sources, such that they entertain proposals from several parties. Indeed, funding sources should also consider collaborating on their giving such that a suite of related studies addressing a complex issue could be funded.

As a result of attending the symposium, representatives from two participating organizations are currently engaged in conversation with a foundation official about a proposed new method for assessing the 21st Century skills that students display in project-based learning, internships, and other kinds of practice-based learning -- a hallmark of college and career pathways. These three new partners are developing a white paper and seeking additional funding for a pilot using new measures.

We encourage all symposium participants and their organizations to continue the commitments begun here to see fruition of their research ideas for the betterment of student outcomes in college and career pathways. Some of the topics developed in the first symposium will carry over into the second symposium, on equity issues in college and career pathway teaching and learning, and others will be picked up in the third symposium on capacity building. Collaborative research communities of practice that promote strategic research on college and career pathways were initiated at this first symposium, and are expected to continue to evolve over the course of the four symposia.
Symposium Participant Feedback

An online survey gathered feedback on the symposium. The response rate was 38% and reflected similar findings to those voiced in debrief conversations. In general, respondents indicated that the process used in the symposium was effective. (76% rated the process a 4 or 5, with 5 indicating “very efficient.” 23% rated the process a 3, with 0 respondents rating the process as 1 or 2.) Respondents were also satisfied with the outcomes of the day. (70% rated the outcomes 4 or 5, with 5 indicating “very satisfied.” 30% rated the outcomes as a 3, with 0 rating outcomes as a 1 or 2.)

Process Feedback
Overall, participants appreciated the organization of the day and the opportunity to discuss issues and collaborate with a group of well-informed scholars.

- “I think that the day was well balanced between opportunities to learn, to collaborate, and to present individual ideas and perspectives.”
- “Very well organized and productive day.”
- “The process was efficient and focused.”

Outcomes Feedback
Participants noted that the most important outcomes of the day were the “opportunities to connect with colleagues and those working in the field,” discuss potential research topics, future collaborations, and research proposal development. Several participants also indicated that they benefited from connecting with prominent individual researchers and scholars in the field.

- “Several of us came up with a potentially great cross-organization project idea…”
- “The most valuable outcome for me was to develop a proposal.”
- “Connecting with the individuals in the group was extremely beneficial. Many connections. Great participant list and perfect size group.”
- “Overall, I thought this was a very valuable symposium on an important topic.”

Suggestions for Future Symposia
Most suggestions related to the pace and length of the symposium. There was a tension between trying to cover a substantial amount of material and opportunities for deep and thoughtful discussion. There was also a desire for more substantial framing of the broad purpose of the symposia and connecting the various activities that comprised the process of the day.

- “The pace of the agenda constrained opportunities for sufficient discussion of the topics.”
- “My only suggestion for the next one is to simplify some of the group work tasks so that they can be completed in the available time.”
- “It was very, very long.”
- “Future symposia should be either a two-day event or a slower pace with a less intense agenda.”

There were suggestions for improving the efficiency of the process in order to provide time for valuable discussions during the symposium:

- “Proposal development process was overly ambitious given time - spend more time on priority topic identification instead and follow up after meeting.”
• “Get more of the review of the literature done in advance, to get more quickly to the identification of high priority gaps. Also, build off of/integrate some of the proposals initiated in the first symposium.”

Additionally, participants wanted a clearer sense of the expected commitment for future work beyond the symposium:

• “Be clear at the outset what the expectations for work after the symposium will be. Provide an overview of what the whole process will entail. Provide more of a grounding in the motivation of the symposium and what it is supposed to accomplish (and how) over time.”
• “I would have benefited from an explanation of the broader process that this first symposium was intended to start. There were various references throughout the day to what the focus of future symposia would be, but the broader process was not clear.”

General Feedback

One participant commented on the need for a greater social media presence such as a symposium hashtag, as a “vehicle for momentum and communicating how much this work means to so many partners.” Many representatives of important educational institutions and organizations were in the room, and most of these organizations have very public and active social media handles to which these symposia need to link.

Another participant was greatly interested in the role of teacher capacity to implement college and career readiness, indicating to the organizers the importance of the future planned symposia on teaching and learning and capacity building. “I think learning from teachers about issues related to their capacity to do everything on their plate (e.g., implement Common Core standards, prepare students for college and career readiness, mentor students, connect them to internships, provide work-based learning opportunities, work with higher education partners, take part in regional partnerships, prepare students for assessments, understand students’ key cognitive strategies, etc.), specifically related to college and career readiness, would be fantastic. What kinds of professional learning opportunities have they found to be most valuable? What other supports do they need? Where are they stuck - or where do they need help the most?”

Many attendees appreciated the opportunity to set aside time to talk to colleagues and dig in to questions that are not often asked and engage in such a deep level of conversation. These include issues of equity and social justice which were raised by the key participants.

Many attendees also expressed hope that these conversations would continue and despite everyone’s schedules, that the collaboration could continue. They noted that often there is excitement at such an event, but then it dissipates afterwards. There is lots of potential, one attendee said, “but it needs our attention.”

Addressing the Feedback in Subsequent Symposia

Our chief take-away for subsequent symposia is the foundational role that equity issues play in pathways work. This has re-conceptualized how we look at subsequent symposia: Issues of equity need to be the lens through which all pathways topics are explored and proposals developed, throughout this symposium.
series.

Next time we will also incorporate social media better in order to catch the attention of potential funders, and, should a funder be present, they too can share impressions on social media. We plan to have a hashtag so that attendees can share information with followers in real time.

We are currently exploring ways to increase attendees’ pre-work so that they arrive at the next symposium further along in the identification of research topics. This allows groups more time to develop research collaborations at the symposium. It is difficult to find such unrestricted time after the symposium, so we determined to provide more time during the day to create and refine these ideas. We also broadened our conception of research collaboration, beyond development of specific proposals, to also encompass sharing data, creating common metrics and definitions, and leveraging each other’s work.
# Appendix 1: List of Participants and Their Affiliations

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<tr>
<th>Keynote Speakers</th>
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<tr>
<td><strong>Name</strong></td>
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<tr>
<td>Kathy Booth</td>
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<td>James Kemple</td>
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<td>Tameka McGlawn</td>
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<tr>
<td>Regie Stites</td>
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<td>Shirley Weber</td>
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<th>Symposium Participants</th>
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<td><strong>Name</strong></td>
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<tr>
<td>Monica Almond</td>
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<td>Felicia Anderson</td>
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<td>Kyra Caspary</td>
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<td>Anthony Dalton</td>
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<td>Neal Finkelstein</td>
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<td>Edward Fletcher</td>
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<td>Lynn Goldsmith</td>
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<td>Stephen Hamilton</td>
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<td>Elisabeth Hensley</td>
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<td>Jordan Horowitz</td>
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<td>Catherine Imperatore</td>
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<td>Heather Lattimer</td>
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<td>Will Marinell</td>
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<td>Nan Maxwell</td>
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<td>Russ Rumberger</td>
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<td>Marisa Saunders</td>
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<td>Katherine Shields</td>
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<td>Patti Smith</td>
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<td>Cherie Solian</td>
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<td>Joel Vargas</td>
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<td>Julian Vasquez Heilig</td>
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<td>Andrea Venezia</td>
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<td>Mary Visher</td>
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**Planning Committee Members**

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<th>Name</th>
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Appendix 2: Bibliography


Willett, T. & Stern, B. (2007). The difference between knowing the path and walking the path: Predicting student persistence in science from community college to the university. Presentation at CCC Student Success Conference. Available from IEBC.


Appendix 3: Overarching and Individual Proposal Templates

PROPOSAL DEVELOPMENT TEMPLATE

1) OVERARCHING RESEARCH QUESTION:

2) SPECIFIC RESEARCH SUB-QUESTIONS:
   1. 
   2. 
   3. 
   4. 

3) METHODOLOGY: What types of data collection and analytical methods could be used to address these questions? Which sub-questions could best be addressed by which methods?

As the graphic below illustrates, define a set of interlocking studies that could address the research question from different angles.

4) SITE/CASE SELECTION CRITERIA: For each of the studies proposed, discuss site/case selection criteria. Use the expertise of the practicing scholars to build proposals grounded in rich learning contexts.

INDIVIDUAL PROPOSAL TEMPLATE

PROPOSAL TITLE:

RESEARCH QUESTION(S):

IMPLICATIONS FOR POLICY & PRACTICE:

METHODOLOGY:

- What types of data collection and analytical methods do you plan to use?
- How is this research connected to other research on the same overarching question?

CASE/SITE SELECTION CRITERIA: If applicable, include specific site/context proposals

KEY ACTIVITIES:

KEY PARTNERS:

PLAN FOR DEVELOPMENT OF LOGIC MODEL, REFINED PROPOSAL, AND ONGOING COLLABORATION WITH WORKING GROUP.
About the College and Career Pathways Research Symposia Series

CCASN, in conjunction with other nationally renowned research-based organizations, is hosting a series of four symposia, each of which will convene experts on topics related to college and career pathways. We will map what we know, identify gaps in the research, and pinpoint key strategic foci for moving policy and practice forward. The four symposium topics are: 1) the secondary student experience, 2) teaching and learning, 3) systems alignment, and 4) capacity building.

The second symposium, which will address Equity Issues in Teaching and Learning in Pathways is currently being planned for April 2018.

The planning committee for the symposia series includes representatives from the following organizations: