

Building Integrated Logic Models: Student Pathways, Institutional Change, and Educational Equity

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Overview

- Research, practice, and policy for educational equity
- Integrated Logic Models: What are they? How are they useful?
- A collaboration of P-20 alliances building ILMs with 3 strategies
 1. *Aligning converging theories of change and research*
 2. *Aligning activities and outcomes across programs*
 3. *Aligning outcomes with individual-level longitudinal data*
- Towards a common language: Sketching an ILM in your alliance
- Bridging Multiple Worlds Alliance: An invitation

Integrated Logic Models:

What are they? How are they useful?

- Aligning mission, activities, and outcomes builds fidelity and sustainability and unifies equity work that is often fragmented and fragile
- Building an ILM with longitudinal and shared databases provides formative and summative evaluation for programs and alliances
- Synergy among programs, partners, and activities increases impact and broader institutional change for student success
- Clearer roadmaps for students, families, programs, partners, and funders towards equity for student pathways and institutional change

A Collaboration of P-20 Alliances Building Integrated Logic Models

P/K-Elementary MS HS Community College and 4-year University Grad/Prof -> Career

4th Gr -----7th Gr-----Algebra 1-----College-prep-----College-----Community College-----College and Career & college aspirations Courses Apply-acceptance-enroll Transfer, degrees Career

- **Santa Cruz County College Commitment (S4C)**

- **UC Office of the President (UCOP)**

4th grade >----->to and through college

- **UC Santa Cruz Educational Partnership Center**

6th grade >----->to and through college

- **Cabrillo Advancement Program (CAP)**

6th grade >-----> to and through community/4-yr college to careers

- **University of Colorado - Colorado Springs**

7th grade STEM >-----> to and through college to careers

- **UC Santa Cruz Hispanic Serving Institutions**

to college--->cc transfer--->graduation

- **Santa Cruz County Adult Education Block Grant**

Adult Ed>->community college>->CTE to careers

Strategy 1: Aligning Converging Theories of Change

- **Six College-Going Conditions (Oakes, 2003)** - how equity and access to college preparation and success require: 1) *college-going school cultures*; 2) *academic rigor*; 3) *qualified teachers*; 4) *intensive academic and social supports*; 5) *students developing multicultural college and career identities*; and 6) *family-neighborhood-school connections*
- **Diverse Learning Environments (Hurtado et al., 2012)** – how *social-historical, policy, institutional, and community contexts*, including staff and faculty identities, define campus diversity climates; *curricular and co-curricular learning environments* shape *student retention and achievement*, which can strengthen *social equity and democratic and economic outcomes*
- **Bridging Multiple Worlds (Cooper, 2011)** - how culturally diverse youth navigate resources and challenges across family, peer, school, and community worlds on pathways to college and careers: *demographics* of youth navigating through school; *college/career/cultural identity pathways*; *math and language pathways*; *challenges and resources across worlds (brokers and gatekeepers)*; and *cultural research partnerships* that boost resources youth draw across worlds

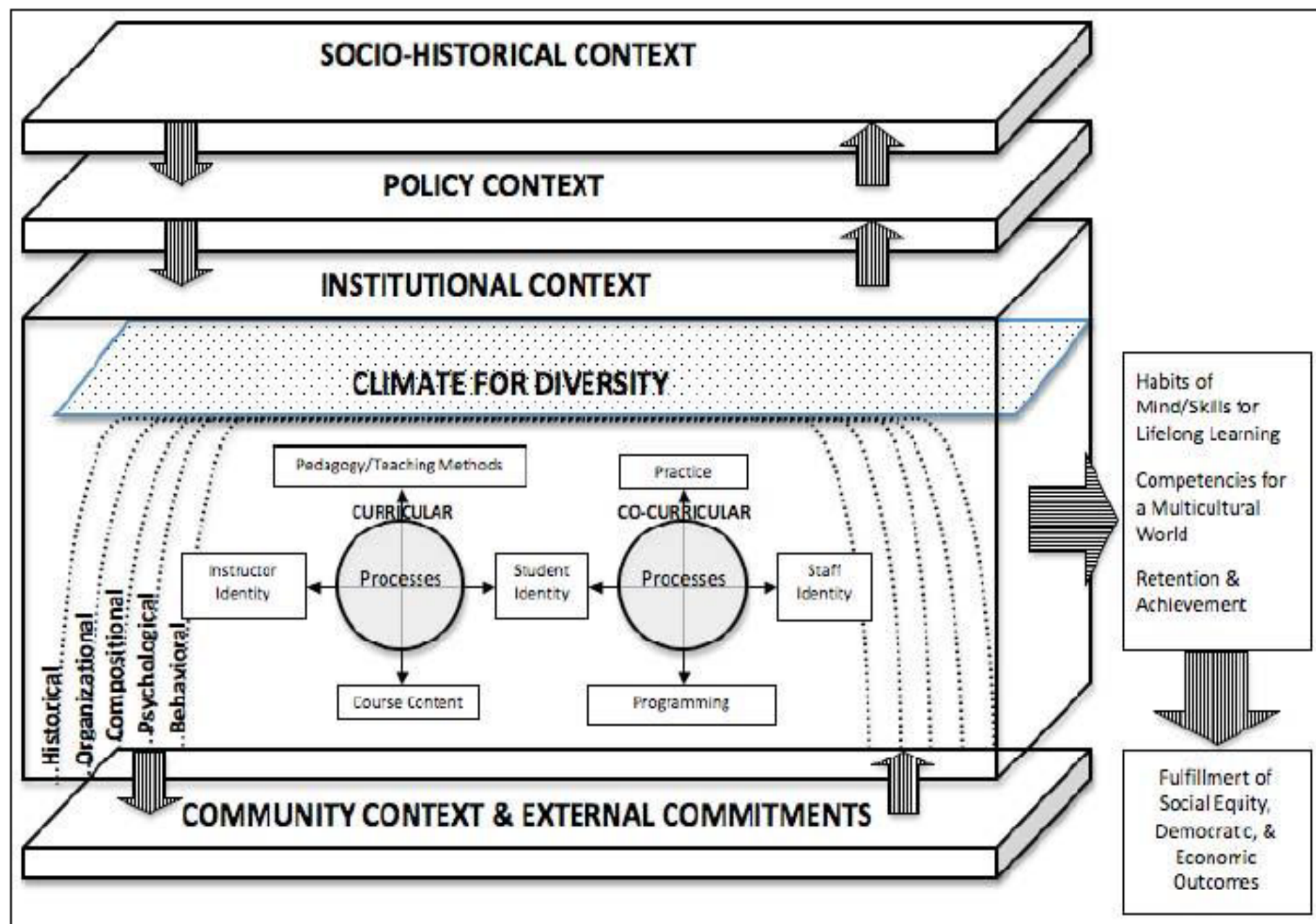
Oakes (2003) Framework in P-20 Research, Policy, and Practice in the 10-campus University of California System

(Cooper, 2011; Cooper, Mehan, & Halimah, 2007; Oakes, 2003)

7 Conditions for Equity and Diversity in College Access (Oakes, 2003)	PreK	Elementary	Middle	HS	Community College & University	Graduate & Prof. schools
Safe and Adequate School Facilities	1	1	3	3	1	1
College-Going School Culture	3	4	8	9	6	3
Rigorous Academic Curriculum	3	5	9	8	4	2
Qualified Teachers	3	7	9	8	5	4
Intensive Academic and Social Supports	1	3	9	8	5	
Opportunities for Multi-Cultural College-Going Identity	1	4	9	8	4	3
Family-Neighborhood-School Connections	3	6	9	9	5	

Number of UC campuses (of 10) reporting activity

Figure 3. Multicontextual Model for Diverse Learning Environments (Hurtado, et al., 2012)



Bridging Multiple Worlds Theory (Cooper, 2011)

The Academic Pipeline

1 Demographics of families navigating through the academic pipeline from childhood to careers

Preschool and Kindergarten

Primary School

Middle School

Secondary School

College/Careers/
Family

2 Youth developing aspirations and identities

3 Math and language academic pathways

Families

Peers

Schools

Community
Programs

Sports

Religious
Activities

4 Evolving constellations of resources and challenges across cultural worlds

5 Cultural Research Partnerships and Alliances from Preschool through College (P-20)

2: Aligning Activities and Outcomes across Programs

UCSC Educational Partnership Center: EAOP, MESA, GEAR UP, and Cal-SOAP

Inputs		Implementation		Outcomes and Impact		
Needs	Resources	Activities	Outputs	Short-term	Long-term	Impact
Families High % low-income, limited English, low <i>educational attainment,</i> college knowledge Schools Low- performing Students low college- prep (A-G), enrollment	Families Aspirations for children's education EPC Staff, integrated database, funding Partners School, campus, region, state, and national	Academic advising College, financial aid, and career knowledge; Tutoring; College visits Staff Professional Development Collaborative data analysis formative & summative evaluation	# Students advised # with shared Individualized Academic Plan (IAP) # attended college visits # Staff attended /completed workshops Data analysis linked to action plans updated yearly	Grades 6-9 Basic college and financial aid knowledge Develop and update IAPs Grade 10 Take PSAT 	Grade 11 Take SAT/ ACT; college and financial aid knowledge Grade 12 Increase college-prep (A-G), AP, and honors completion; college and financial aid applications, completion	College Increase enrollment and graduation rates --For each program & EPC as a whole

3: Aligning Student Outcomes through the Pipeline with Individual-Level Longitudinal Data: Cabrillo Advancement Program at Cabrillo College

Elementary Middle School HS Community College and 4-year Universities

Algebra 1---College-prep---College---Community College---College Completion
Career/college goals courses enrollment CTE, degrees, transfer

Year passed Algebra--Math College Placement—CTE, degrees, transfer->Degrees

- **Cal-PASS Plus** www.calpassplus.org - Statewide longitudinal database of individual student records from K-12 through college

Alliance merging individual students' data files over time on:

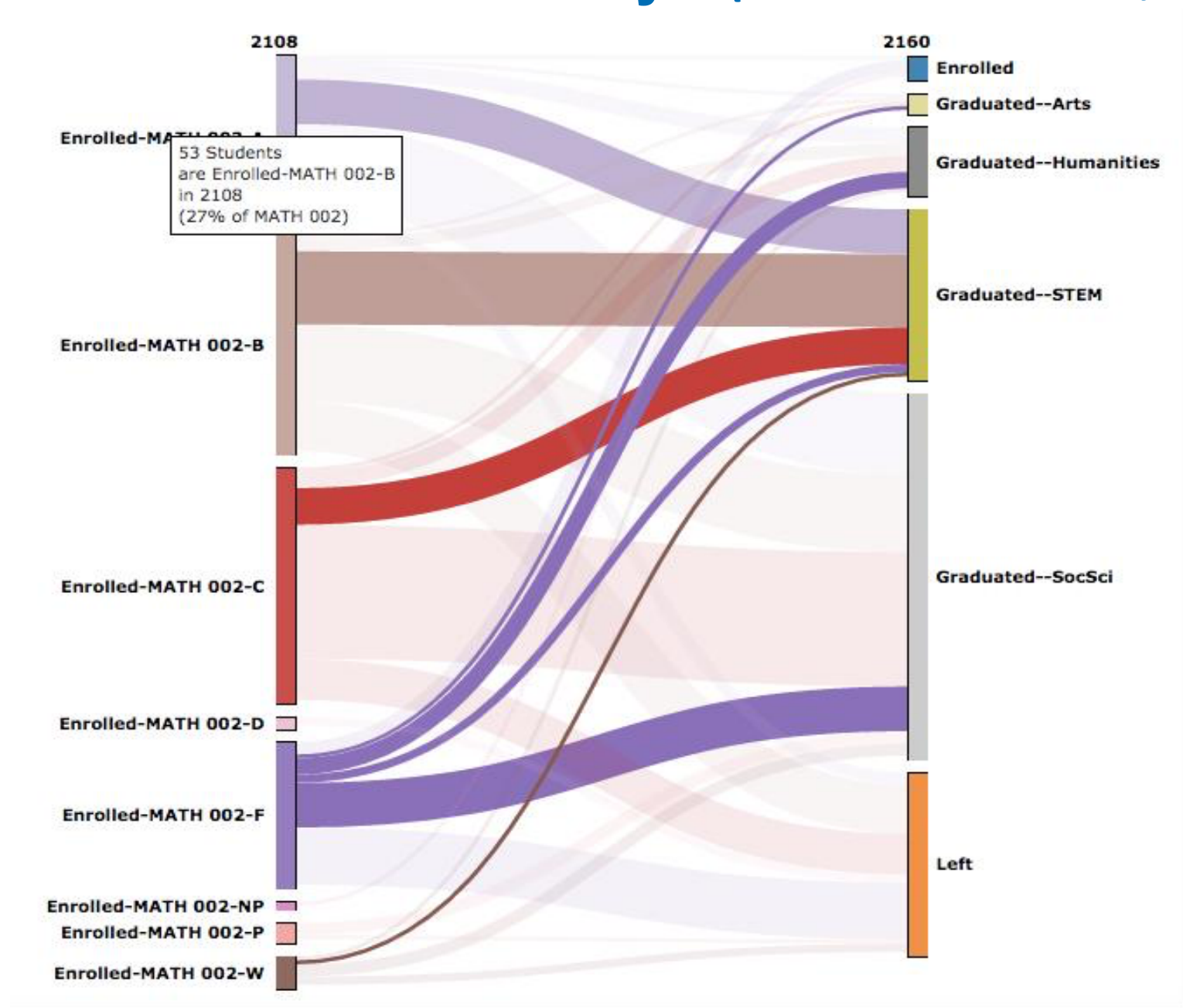
- Student and K-12 school-level demographics – *Inputs* in logic model
- Surveys and interviews - *Activities*
- Program participation - *Outputs*
- Math, language, college, and career pathways - *ST & LT Outcomes*

UCSC Hispanic Serving Institutions:

Aligning Activities and Longitudinal Outcomes Across Three Grants

Activities	UCSC MAPA	San Jose City College - UCSC Coop	HSI STEM SEMILLA
<i>Curriculum:</i> Math	Math 2 Redesign	STEM Learning Center	College Math Seminars
<i>Curriculum:</i> Writing	WORD Regional Institutes (SF, Oakland, Los Angeles)	Research Writing Course at SJCC	
<i>Academic and Social Supports:</i> Sense of Belonging	Regional Family Conferences El Centro Internships Student Focus Groups	Dia de Familias/Family Campus Visits	STEM Learning Center, ACE, MEP, STEM Diversity
<i>Academic and Social Supports:</i> Advising	Math 2 and Writing Advising CFL/iMAP, Multicultural Competence Adviser Training	Transfer/Retention Counselor, Graduate Student Mentoring	Holistic STEM Counselors
<i>Transfer</i>		Undergrad Research Articulation - SJCC	STEM Transfer Academies Articulation Review
<i>Professional Development</i>	Writing and Math Faculty TAs		STEM Faculty TA Training Certificate
<i>Collaborative Data Analysis</i>	Integrated Logic Model Team		Equity Analysis & Reporting

UCSC HSI Student Pathways (Sanchez & Herzon, 2017)



Towards a Common Language: Sketching an ILM for Educational Equity

- College-Going and College-Completion Cultures
- Curriculum: Aligning Math, Writing, STEM, ESL, CTE pathways
- Academic, Social, Financial Support: Advising, Tutoring, Mentoring/Near-Peers
- Multicultural College & Career Identity Pathways: Aspirations, Shared IAP
- Sense of Belonging in College and Careers: e.g., STEM
- Professional Development: Teachers, Counselors/Advisors, Faculty, TAs, Tutors
- Family Engagement Pathways
- Transfer, Dual Enrollment, and Other Intersegmental Pathways
- Collaborative Data Analysis: Integrated Longitudinal Database, Equity Analysis

An Invitation and Next Steps: **Bridging Multiple Worlds Alliance** **www.bridgingworlds.ucsc.edu**

- Growing network of state, national, and international partners
- How immigrant, low-income, and underserved minority youth build college and career pathways without losing ties to families and cultural communities
- Advancing research, practice, and policy in collaboration with alliance partners and youth in multicultural societies
- Bridging Multiple Worlds Tools (Cooper, 2011; 2017) and website
- Roundtable on Integrated Logic Models and Databases

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