How to Build Student-Led Program Maps

Activating Guided Pathways Reform, Part III

Community College Executive Forum

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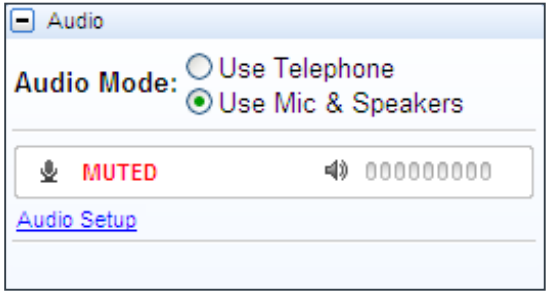

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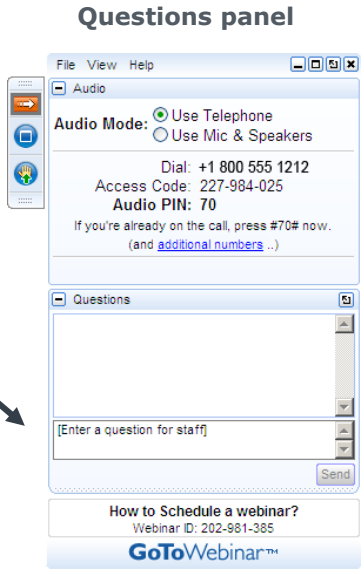

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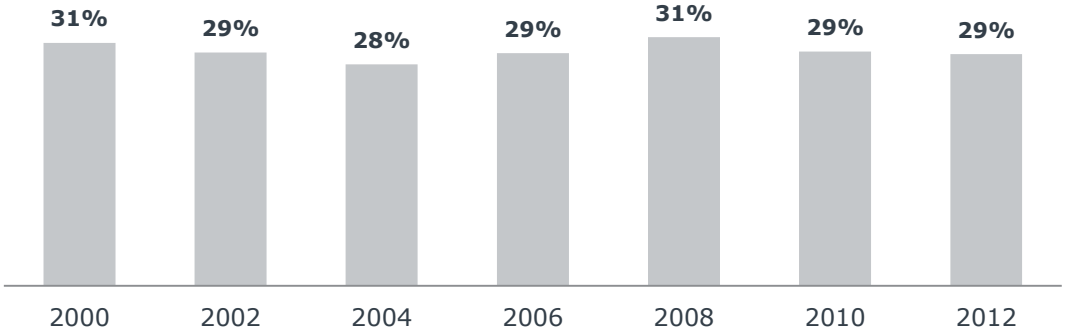
Running to Stand Still

Despite Significant Investment, Graduation Rates Remain Stubbornly Flat

Completion Metrics Not Budging

NCES Three Year Community College Graduation Rate, 2000-2012



Massive Investments Fail to Inflect Completion Outcomes

$2B+

Estimated annual spend on developmental education

$890M

California grant allocation for student success

Source: National Center for Education Statistics, "Beginning Postsecondary Students (BPS)," *Datalab,* Accessed June 7th, 2017; Gordon L, "California 'Student Success' Initiative Slow to Increase Community College Completion Rates," EdSource, Apr., 2017; EAB interviews and analysis.

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Serving an "At Risk" Population

Growing Percentage of Students Associated with Stop Out Attributes

Characteristics of Students Most Likely to Stop Out	Enrollment Driven by Students From Highest Risk Tiers
Low-income	+91% *Growth in Pell Grant recipients enrolled in CCs, 2006-07 to 2011-12*
Full-time employment while enrolled	41% *Part-time students working full-time*
First-generation	36% *CC students who are first-generation*
Developmental education need	68% *CC students enrolled in at least one dev ed course*
Part-time enrollment	61% *Students enrolled part-time in Fall 2016*

Source: "New Pell Grant Numbers Trend Well for Community College Students," American Association of Community Colleges, September 11, 2012; "2014 Fact Sheet," American Association of Community Colleges; "What We Know About Development Education Outcomes," Community College Research Center, January 2014; "Enrollment and Employees in Post-Secondary Institutions, Fall 2015," National Center for Education Statistics; EAB interviews and analysis.

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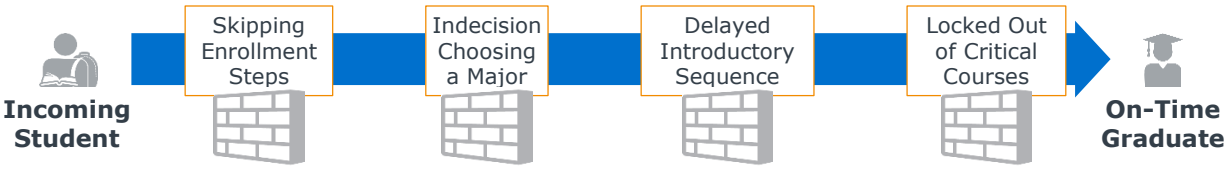
A Problem of Our Own Making

Self-Inflicted Barriers Caused by Complex College Structures

Common Roadblocks on Path to Graduation



What We Heard From Student Research

Help Me Find My Way

"The first few days are so overwhelming, I almost felt like quitting before I got started. I just wish there was more help."

I'm Struggling to Set Goals

"There are so many [program] choices, I don't know which I'm supposed to pick. What if I pick wrong? How would I know?"

My 'Plan A' Fell Through

"I thought I could do it all, but then I ran into money problems and needed to pick up extra shifts at work. I felt desperate."

Give Me What I Want

"The college bureaucracy is frustrating. But if I get what I need from this experience, this will all be worth it."

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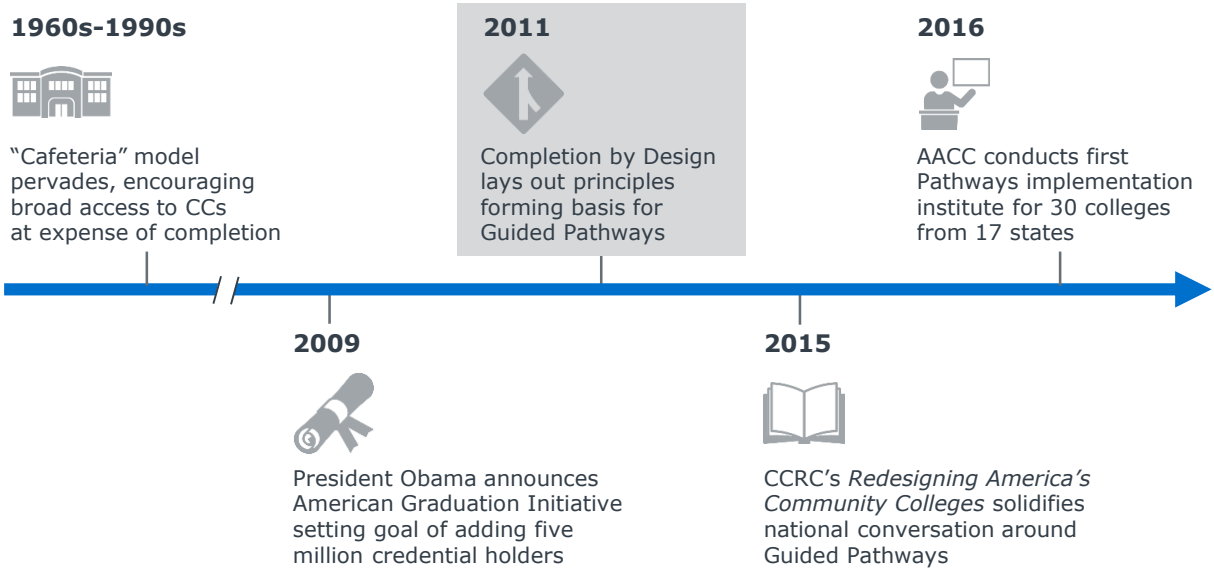
Source: EAB interviews and analysis.

Guided Pathways, The Path Forward?

A Condensed History of Guided Pathways

Steady Progress Towards Acceptance and Adoption



Source: Bailey T, et al, *Redesigning America's Community Colleges: A Clearer Path to Student Success,* CCRC, 2015; Barack Obama, "Investing in Education: The American Graduation Initiative," Obama White House Achieves, 2009; AACC, "The Movement Towards Pathways," 2016; EAB interviews and analysis.

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From Theory to Implementation

Where We Must Focus Our Attention to Implement Guided Pathways

Can we steer students to productive credits while preserving exploration?

Can we ensure seat availability without costly excess capacity?

Can we improve our advisory delivery model without breaking the bank?

Can we make offerings more flexible to match reality of students' lives?

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Source: EAB interviews and analysis.

Achieving Pathways Goals

A Roadmap for the Study

1 Designing Student Centric Pathways

1. Sticky Note Speed Sequencing
2. Crowdsourced Program Maps
3. Community-Endorsed Career Clusters
4. Expedited Course Overlap Identifier
5. Jargon-Free Map Design

Outcome Metric: Design Speed

2 Aligning Course Capacity to Student Demand

6. Registration-Based Course Predictor
7. Guaranteed Course Schedule
8. Future Demand Retraining Grants
9. Completion-Based Registration Rules

Outcome Metric: Course Availability

3 Fostering Goal Based Student Decision Making

10. Campus Wide Directed Decision Days
11. First Year Pathway Exposure Course
12. Professional Goal Setting Advisors
13. Competitive Major Stop-Out Campaign

Outcome Metric: Advising Touches

4 Flexing Pathways for Off-Pace Students

14. Financial Aid Supported Intersession Courses
15. Year-Round Default Mini-Mester

Outcome Metric: Credit Load

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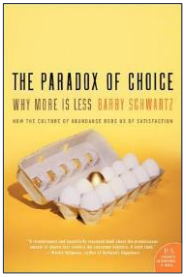
Paradox of Choice

More Isn't Always Better for Students

Do More Options Make it Difficult to Choose Any Single One?



WIKIMEDIA.

"The Paradox of Choice," Barry Schwartz

- Decision making **quality suffers** with too many options
- **Likelihood of any decision decreases** when offered more choices
- Applies to **trivial decisions** (e.g. groceries) as well as **significant decisions** (e.g. 401K participation)

Guided Pathways Movement Motivated by Concerns Over Excess Choice

"Cafeteria" course catalog model emerges over time as need to serve transfers, open-access mission spurs course proliferation

"Cafeteria" model offers too many choices at expense of completion

New model limits choice to ensure high quality decisions

Dependent on "nudge" theory that provides limited choice, encourages non-forced compliance

Source: Barry Schwartz, "Is the Famous 'Paradox of Choice' a Myth?" PBS NewsHour, January 29, 2014; EAB interviews and analysis.

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Concerns About Limiting Student Exploration

Theory Is Harder in Practice at Community Colleges

"We offer customers one option, buy it or don't buy it."
– *Steve Jobs*

Trading Exploration for Efficiency?

Students make one choice, a program of study

↓

Degree maps become the default schedule

↓

On-time completion becomes the norm

"I have some of my best faculty telling me all the time that if we had Guided Pathways back when they were in college, then they never would have become a professor in the liberal arts. They would have picked whatever had the highest income and never looked back."

Vice President of Academic Affairs
Community College, Midwest

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Source: Cathy Cleek, "Executive Sponsorship," *State of California Franchise Tax Board*; EAB interviews and analysis.

What's the Optimal Route for Students?

Make a GPS System, Not a Subway

Subway Provides a Linear But Rigid Route

Screenshot of DC Subway Map

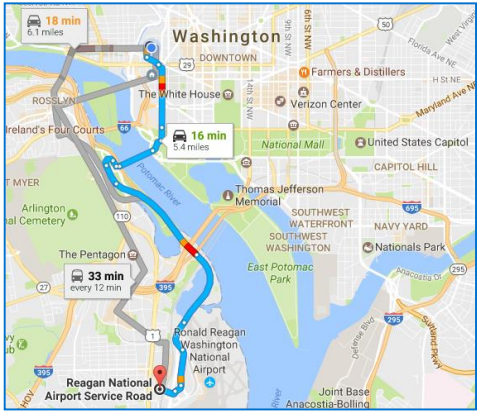
WASHINGTON POST.

"Instead of zigging and zagging from one course to another—expending time, energy, and money—Guided Pathways gives students a clear route from point A to point B."

Joshua Wright, EMSI

GPS Provides Flexibility Based on User Need

Screenshot of Google Maps



GOOGLE.

"Just like GPS in your car, students on a Guided Pathway know their location along their chosen pathway in real time. They can see the progress made to date and a clear path of courses."

Complete College America

Source: Wright, Joshua, "Guided Pathways: Stories from Pilot Colleges," *Emsi*, May 17, 2016; Complete College America, "Guided Pathways to Success, Boosting College Completion," 2012; EAB interviews and analysis.

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Activating Structured Exploration

Defining Program Maps and Meta-Majors Role in Student Progression

Parsing Theory into Practice

"In Guided Pathways colleges, faculty **clearly map out academic programs to create educationally coherent pathways**, each with clearly defined learning outcomes that build across the curriculum and are aligned with requirements for further education and career advancement in the given field. **Students who enter without clear program or career goals are assisted in choosing a broad initial field of interest**."

Thomas Bailey, Shanna Smith Jaggars, and Davis Jenkins, Redesigning America's Community Colleges

Program Maps
Provide clarity on the sequence of courses necessary to complete a program of study at a college using the most direct route possible

Meta-Majors
Clustered programs with shared course requirements allow for structured exploration with minimal excess credit accumulation

Desired Transfer or Career Outcome

Source: Bailey, Thomas R. et al., *Redesigning America's Community Colleges, A Clearer Path to Student Success* (Cambridge: Harvard University Press, 2015); EAB interviews and analysis.

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Avoid Common Trip Wires

Anticipating Pitfalls to Program Map and Meta-Major Creation

Building Program Maps

1	Assemble Graduation Requirements and Electives	
2	Create List of "Must Have" Requisites for Each Program	✕ Unresolved Hierarchy of Program Requirements
3	Determine Program Map Course Sequence	✕ Execution Slowed by Committee Decision Making

Developing Meta-Majors

4	Collapse Program Maps Into Meta-Majors	✕ Determining Composition of Meta-Majors
5	Reorder to Lead with Prereqs and Common Courses	✕ Capturing Correct Sequence and Timing of Gen Ed Electives
6	Implement New Meta-Major Structure Into College	✕ Translating Final Results to Students, Staff, and Faculty

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Source: EAB interviews and analysis.

Designing Student Centric Pathways

Developing Program Maps and Meta-Majors

I

Building Program Maps

1 **Program Design Principles**

2 **Sticky Note Speed Sequencing**

3 **Crowdsourced Program Maps**

II

Developing Meta-Majors

4 **Community Endorsed Career Clusters**

5 **Expedited Course Overlap Identifier**

6 **Jargon-Free Map Design**

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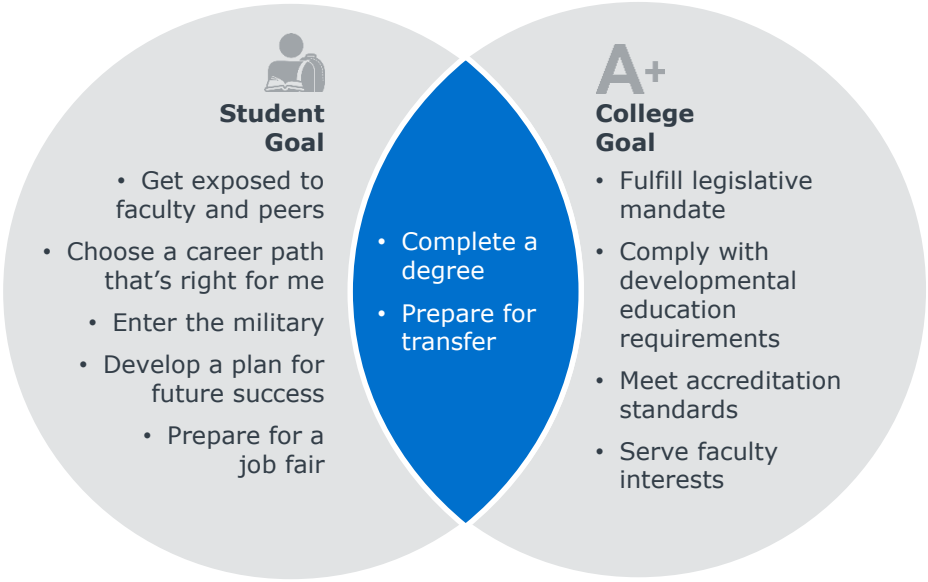
Source: EAB interviews and analysis.

How Do We Know We've Succeeded with Maps?

New Product Design Requires End User Understanding

Purpose, Goals of Mapping Vary Wildly between College and Students



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Source: EAB interviews and analysis.

Initial Program Map Course Inclusion Rules

Hierarchy of Student-Centric Design Requirements

Least Flexible

1. Mandated by accreditation, state, or industry
2. Mandated by transfer institution
3. Advised by employer or industry advisory council
4. Part of existing graduation or completion requirements

Most Flexible

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Source: EAB interviews and analysis.

Efficient Program Sequence Creation

Timed Cross-Department Mapping Session

SPC St. Petersburg College

Small Group Balances Efficiency with Cross-Institutional Knowledge

Create Program Sticky Notes

Place every potential program course on an individual sticky note; indicate if pre-requisite, core or state mandated course

Select Program Courses

Committee discusses best program courses, most appropriate general education courses, and eliminates toxic course combinations

Sequence Program Courses

Committee uses sticky notes and their combined institutional knowledge to create optimal program map sequences

Just The Right Number of Cooks

Committee Composition

- 5-10 Faculty
- Dean
- Advisor
- Student Support

Student-Centered Curricula in Just Two Hours

3-9 Hidden credits found per program on average

64 Number of program maps completed in three months

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Source: EAB interviews and analysis.

Identifying a Leader for the Mapping Process

Natural Power Struggles Emerge in Academic-Led Map Building

Current Ownership Limitations to Mapping Process

Faculty Skeptical of Change

- Misalignment between individual incentives and best choice for program
- Tension between personal experience and entrenched program norms
- Lack of knowledge about prerequisite courses to include

Dean Incentives Misaligned

- Tension between optimizing program sequence and decline in division size
- Fear of appearing biased by prioritizing certain classes or faculty over others
- Hard to distill current state of programs within their division

Risks of Just Faculty-Led or Dean-Led Approach

- *Loss of buy-in by creating us vs. them*
- *Favor either strategic input or deep subject matter expertise*
- *Loss of historical employer input and feedback*
- *Risk of excluding critical courses for program accreditation requirements*

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Source: EAB interviews and analysis.

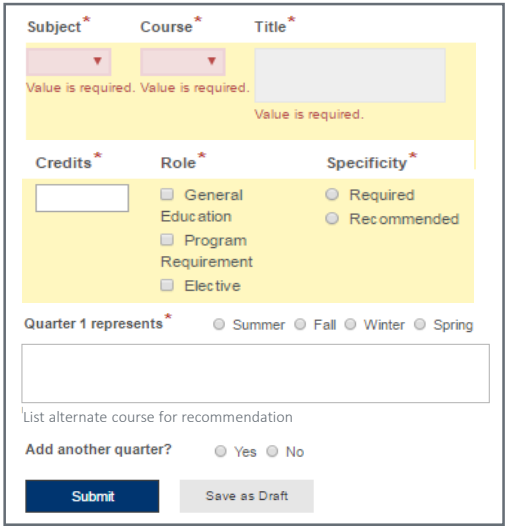
Building Consensus with Broader Involvement

Online Program Map Designer Enables Campus-Wide Input

Linn-Benton COMMUNITY COLLEGE

Online Tool Democratizes Participation

Abridged Screenshot of Linn-Benton's Program Map Designer



Design Process Contained within Online Portal

- One member of institutional research creates program map templates using online portal
- Course catalogue uploaded to online portal for faculty to use for map creation
- Drop-down option created for all courses to use with template program maps
- Text field allows faculty to suggest alternative courses based on program knowledge

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Source: EAB interviews and analysis.

Online Entries Allow Map Quality Assurance

Creating Broad Based Academy Support for Program Maps

Faculty Submission Prior to Advisor Revisions

Hypothetical Political Science Crowdsourced Map Submission

Name:	Prof. Price	Prof. Lee	Prof. Wright	Prof. Smith	Prof. Lall
Course 1		MTH105		MTH105	PE 231
Course 2	PE231	PE231	PE231	PE231	MTH105
Course 3	WR121	WR121	WR121	WR121	WR121
Course 4	PS201	PS201	PS201	PS201	PS201
Course 5	PS204	PS204	PS204	PS204	PS204
Course 6	COM101	COM101	COM101	COM101	COM101
Course 7	BIO102	BIO102	BIO102	BIO102	BIO102
Course 8	SOC104	SOC104	SOC104	PHY104	SOC104

Compare multiple submissions

See missed prerequisite courses

Detect toxic course combinations

Crowdsourced Maps Enable Efficient Curricular Review

Modifiable fields for 9 and 12 credit maps

Drop down menu to list all college courses

Aggregated view to make map adjustments

100+ Faculty map submissions received in Fall 2016

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Source: EAB interviews and analysis.

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6 | Jargon-Free Map Design

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Source: EAB interviews and analysis.

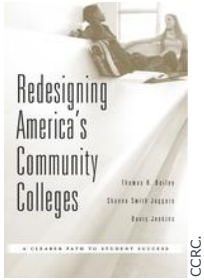
What is a Meta-Major?

Breaking Down the Definition Into Functional Parts

Giving Meta-Majors Meaning

"[Meta-majors are] ...default areas of study grouped by common disciplinary area that exposes students to educational and career options within broad fields."

Thomas Bailey, Shanna Smith Jaggars, and Davis Jenkins, Redesigning America's Community Colleges



CCRC.

Meta-Majors Solve Two (Non-Competing) Goals

1 | Link Students to Careers

Naming convention for students to quickly understand link between career clusters and program of choice

2 | Create College's Academic Framework

Clustering of related majors to minimize excess credits if a student switches majors within a related field

Source: Bailey, Thomas R. et al., *Redesigning America's Community Colleges, A Clearer Path to Student Success* (Cambridge: Harvard University Press, 2015); EAB interviews and analysis.

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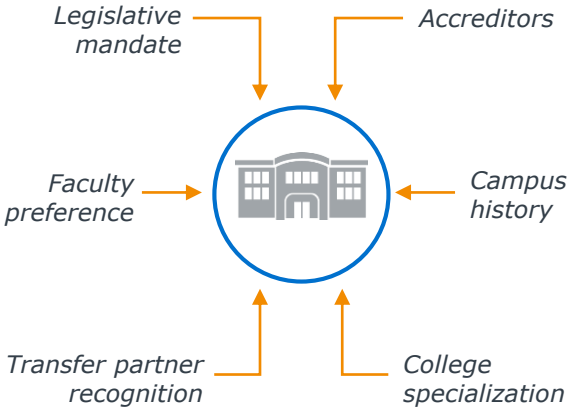
Lost in Translation?

Meta-Majors Must Translate Outside of the College

Naming Conventions Historically Influenced by a Host of Factors



Stakeholders Need More Clarity Around New Academic Structure

- Employers and industry
- Community
- K-12 education
- Four-year institutions

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Source: EAB interviews and analysis.

Localizing Curriculum Changes

Community-Endorsed Career Clusters Create Clarity

Jackson COLLEGE

Community Interviews Produce Employer-Friendly Competencies

Identify Stakeholders

- **On-Campus**
  Targeted current students, faculty, and past review participants
- **Community**
  Spoke to employers, alumni, advisory board members, and other community leaders

Conduct Interviews

- **Interview Training**
  Outside consultant trained Gen Ed team how to elicit quality responses
- **Campus Invitations**
  Invited approximately 300 stakeholders for lunch and dinner sessions

Workshop Results

- **Gap Analysis**
  Gen Ed's 15 member team judges where curriculum fails to meet common feedback
- **Revised Names**
  Produced three essential competencies all students must acquire

Gathering Community Input

Concise Format

Limit to six questions and cap conversation at 60 minutes

Internal vs. External

Ask internal groups about academics and employers about skills

Longitudinal Change

Compare responses to past outreach to ensure progress

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Source: EAB interviews and analysis.

Meta-Major Consensus Process More Complex

Meta-Major Courses (and Opinions) Multiply with Number of Stakeholders

Program Map Options Offer Limited Amount of Choices…

Focus on single program restricts number of faculty and incents cooperation

No overlapping course content or competing priorities across programs

Limited complexity to creation since courses are sequential

…But Meta-Major Process Exponentially Harder

- Programs in meta-major
- Faculty teaching individual courses
- Academic leaders
- Student services pathways leaders

↓

Hundreds of possible outcomes

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Source: EAB interviews and analysis.

Quick Pattern Recognition Ensures Transferability

Data Query Determines Courses and Sequences

Jackson COLLEGE

Measure What Classes Overlap Most Often

Screenshot of Liberal Arts Meta-Major Data

Percentage of meta-major students in program

Programs in meta-major

Liberal Arts			
		41.80%	1.40%
	Class	arts.aa	grde.aas
66.20%	ADO 10	G	
88.60%	MAT 139	G	G
87.00%	ADO 4	G	G
75.70%	ADO 4	G	
87.00%	PSY 140	G	G

Percentage of course required by meta-major

Indication of program requirement

Sequencing Ensures Highest Volume of Productive Credits

- Curriculum map sequence **prioritizes highest frequency courses within meta-major**, places them in first semester
- **Student decision point set by most common semesters as possible based** on the program requirements within each meta-major

3+ Additional months of major exploration time

20% Percent decrease in advisor navigation questions

Source: EAB interviews and analysis.

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Do You Speak Guided Pathways?

Embed Pathways into College Communications and Operations

Seemingly Foreign Language

Guided Pathways Terminology

Pathway	Course sequence
Meta-Major	Term
Credit hours	Liberal arts
Milestone course	Program map
Semester	Developmental

Conflicting Student-Facing Language

Lagging Website Descriptions Confuse Students

1. Website not updated with current number of pathways
2. Website and course catalog present different information
3. Website describes Guided Pathways reforms in administrative language

Undoing Decades of Culture

"With Guided Pathways reforms, you need to realize that you're trying to reverse about 50 years of practice, ideas, expectations, not to mention daily habit and work. This is a seismic shift in culture."

Samuel Hirsch, Vice President of Student Affairs, Community College of Philadelphia

Source: William Erickson, Sharon Trerirse, et al. "The Accessibility and Usability of College Websites: Is your Website Presenting Barriers to Potential Students?" Community College Journal of Research and Practice, 2013; EAB interviews and analysis.

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Create a Clear Vision of Completion

Jargon-Free Maps Minimize Confusion, Ensure Clarity for Students

MIDDLESEX Community College

Simplified Maps Enable Easier Self-Navigation

Abridged Screenshot of MCC Business Program Map

Milestone Markers Create Clarity

1. Indicate a clear start and end point
2. Denote essential degree-advancing courses
3. List course names in simple terms
4. Adopt colors consistent with college brand

12% Percentage of reduced advising errors since maps launched in 2015

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Source: EAB interviews and analysis.

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CCEF Webconferences

Our Upcoming Fall and Winter Offerings

Providing Continuous Pathways Support

1

Optimizing Course Capacity Management amid Pathways Reform

September 13, 3-4pm ET

Best practices for creating schedules that prioritize course availability based on student completion

2

Driving Intentional Academic Decisions

September 28, 1-2pm ET

Steps to proactively guide students to their best decisions throughout career and program selection

3

How to Build Student-Led Program Maps

October 5, 1-2pm ET

Step-by-step guidance on creating program maps and meta-majors with student outcomes at the center of design

4

Winning Faculty Engagement in Pathways Reform

December 5, 1-2pm ET

Best practices to increase individual faculty participation and committee effectiveness in pathways reform

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Source: EAB interviews and analysis.

Upcoming Webconference: 2018 Research Plan

2018 Topic Poll Results and Early Research Findings

November 9, 1-2 pm EST REGISTER HERE

- Identify "up and at night" issues for presidents and their cabinets
- Reveal domains in which colleges are failing to keep up in an increasingly competitive market
- Analyze the different personal and institutional goals present across campus and how those may influence strategic initiatives

Early Findings

79% Presidents who believe launching new career programs are "very" important

1/2 Liberal Arts/Transfer institutions who see competition in higher ed as the greatest threat to sustainability

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Providing Continuous Pathways Support

Activate Guided Pathways on Your Campus

EAB

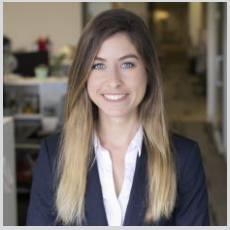
Achieving Pathways Goals with Student-Centered Design

Community College Executive Forum

Building Student-Centric Pathways Infographic

- Full publication contains all 15 Guided Pathways best practices
- Includes corresponding tools to facilitate implementation
- Unlimited copies available to members

Questions on Today's Material?



Larisa Hussak, PhD
Senior Analyst

lhussak@eab.com
202-266-6950

Your Member Services Team

Kristen Miller
Senior Manager, Member Services

kmiller2@eab.com
202-266-4337

Mary Allen DeBold
Associate Director, Member Services

mdebold@eab.com
202-266-5678

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