EQUITY ACCELERATOR

Fostering a Culture of Growth in California Community Colleges

Kathy Emerson, Director of Research @ Equity Accelerator

CAP Webinar - Oct 5, 2023

AB 1705 One-Time Implementation Funding $64 million

Education Code 78213.2(e) establishes 5 funding categories to support stronger and more equitable math and English outcomes in transfer-level courses.

CCCCO memo (Search: CCCCO, AB 705; Go to: Resources, Memos)

- Professional development for faculty focused on high challenge, high support equity-minded teaching practices and equitable grading with the goal of achieving stronger, more consistent, and more equitable pass rates across sections of the same transfer-level course.
- Communities of practice for faculty teaching gateway courses to share activities and practices that humanize the classroom, promote interaction and engagement, foster a sense of belonging, communicate a belief in student capacity and growth, and mitigate stereotype- threat.
- Professional development for faculty that creates safe places for equity conversations about section-level success rate data disaggregated by race, income, gender, etc. to help faculty develop a reflective teaching practice that fosters innovation to improve learning outcomes for marginalized student populations.

Teaching Matters for Equity

CAP Webinar 1: New Insights into Math Instruction that Promotes Equity

What factors explain student success in transfer-level math?

Large CA community college study examined the association between passing a transfer-level math course and the following factors: student demographics, prior academic preparation, high school student attended, course attributes, student's instructor

Key findings:

1. Math faculty are the most important factor in predicting a student's success in a transfer-level math course. (Twice as important as students' prior academic preparation.)
2. Specific instructional practices can reduce racial disparities in transfer-level math course outcomes.

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Equity Accelerator: Who We Are

- EA is the first focused research organization to harness research, practice, and policy to create **more equitable learning and working environments**.

- We work with culture creators to reshape institutions of higher education into true **Cultures of Growth**, where the norms, policies, and practices of an environment effectively support the success of all students– particularly those from structurally-disadvantaged and historically-excluded backgrounds.

- Our unique framework is grounded in **robust empirical evidence** from the fields of education, organizational behavior, and the social sciences.

- We work across institutions of higher education to create, implement, and evaluate **evidence-based tools and resources** for faculty, administrators, and staff that consistently improve students' experiences and outcomes.

Presentation Roadmap

- **From Growth Mindset to Growth Cultures**
- Evidence in Support of Cultures of Growth
- Our Current Work with CAP
- What You Can Do to Build Cultures of Growth

Personal Mindsets

- People's personal beliefs about the malleability of human characteristics

  - **Fixed Mindset**: Intelligence, athletic ability, and personality are fixed traits that can't be changed– either you have it or you don't.
    - *"I'm just not a math person."*
  - **Growth Mindset**: Intelligence, athletic ability, and personality are malleable qualities that can be developed and improved by effort, applying the right strategies, and seeking help.
    - *"I just haven't mastered math yet."*

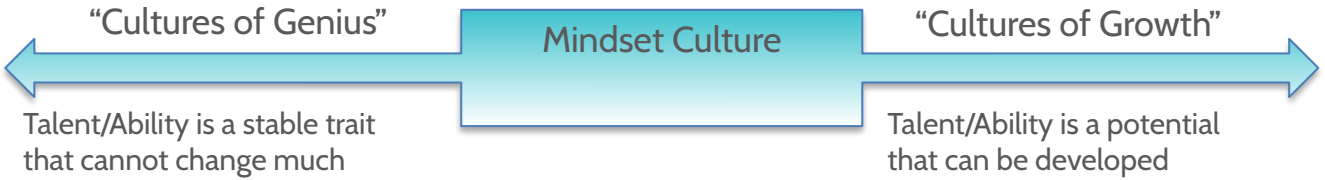
Carol Dweck

The Limits of Personal Mindsets

- Decades of research has demonstrated that students' mindsets can affect their **motivation, persistence, engagement, and performance.**
- Yet, conceptualizing and studying mindsets as being "in the heads" of students **puts the onus on students** to foster a growth mindset to improve their own outcomes.
- **Some educational environments undermine students' growth mindset beliefs**– they provide limited opportunities to improve with effort, little guidance in strategies they might apply, and minimal encouragement when seeking help.

New Definition: Mindset Cultures

- Beliefs of **powerful people** in a setting—like teachers, professors, counselors, or administrators—about people's talents and abilities.



- **Mindset culture** is expressed through what powerful people say and do, including norms, policies, practices, and interactions with students.
- What faculty **say and do** (e.g., the mindset culture they create) predicts how students perceive faculty's mindsets and the classroom's culture.

Murphy & Dweck, 2010; Emerson & Murphy, 2015; Canning, Murphy et al., 2020

Faculty Create & Communicate the Mindsets Culture of their Classes

"Look to the left, look to the right. One of you won't be here at the end of term."

"If you're not a science person, you should consider dropping this course."

Do they think I, or people like me, don't belong here?

Faculty Create & Communicate the Mindsets Culture of their Classes

"This course builds on material from Math 101. If you need to review those concepts, we can connect you to resources."

"It is normal to be challenged by material at some point in the term. Please reach out for help."

All students can learn and grow in this course.

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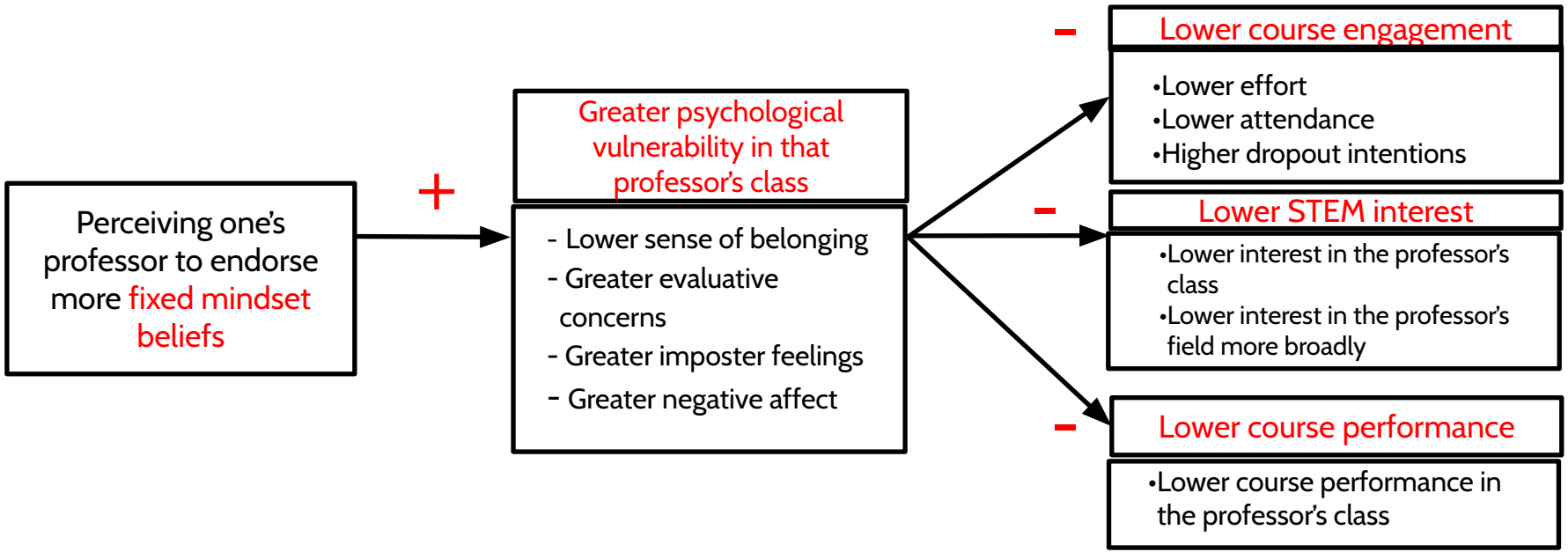
Students' Experiences in STEM Classrooms

- 1,192 first- and second-year college students
- Enrolled in more than 50 introductory STEM courses
- At 4 universities
- Used an experience-sampling procedure
- **Research question: How do instructors' (perceived) mindset beliefs impact students' classroom experiences and outcomes in their class?**

Muenks, K., Canning, E.A., LaCosse, J., Green, D.J., Zirkel, S. Garcia, J.A., & Murphy, M.C. (2020). *Journal of Experimental Psychology- General.*

Process Model Results



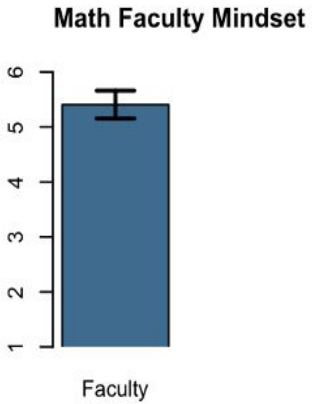
Muenks, K., Canning, E.A., LaCosse, J., Green, D.J., Zirkel, S. Garcia, J.A., & Murphy, M.C. (2020). *Journal of Experimental Psychology- General.*

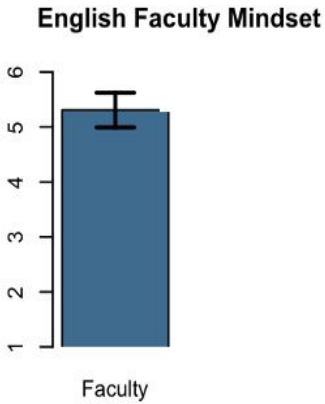
Faculty Growth Mindset in CA Community Colleges

- 109 math and English faculty at 9 CA community colleges
- 1,064 students in transfer-level math and English classes of participating faculty
- Faculty: self-reported mindset about student abilities
- Students: perceptions of faculty mindset; perceptions of faculty use of growth culture teaching practices; classroom experience
- **Research question: To what extent are faculty mindset beliefs and use of growth culture teaching practices associated with students' perceptions of their instructors, and their overall classroom experience?**

Murphy, M.C., Woodruff, S.E., Ozier, E., & Mathias, K. M. (2022). *Student impacts of faculty mindset in California community colleges*

Faculty & Students Disagree about Faculty Growth Mindset





Note: Higher numbers indicate more growth mindset.

*p < .05; **p < .01; ***p < .001

Faculty **self-report very high levels** of growth mindset beliefs.

Murphy, M.C., Woodruff, S.E., Ozier, E., & Mathias, K. M. (2022). *Student impacts of faculty mindset in California community colleges*

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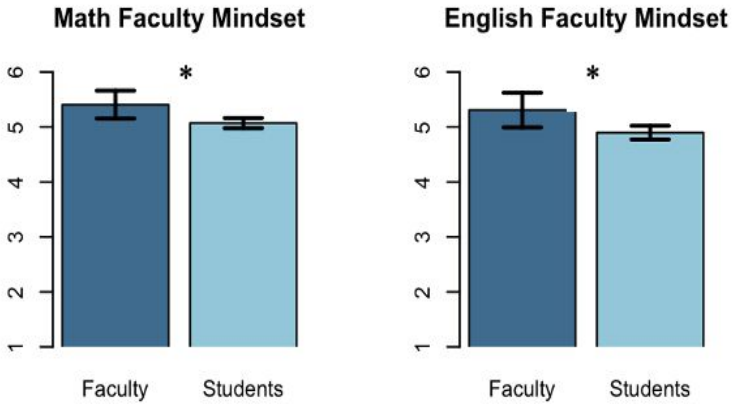

Note: Higher numbers indicate more growth mindset.

*p < .05; **p < .01; ***p < .001

Faculty **self-report very high levels** of growth mindset beliefs.

Yet, **students perceive weaker growth faculty mindset beliefs** than faculty self-report.

Murphy, M.C., Woodruff, S.E., Ozier, E., & Mathias, K. M. (2022). *Student impacts of faculty mindset in California community colleges*

Teaching Practices for a Culture of Growth

- Helping students cultivate positive attitudes about learning
- Discussing common mistakes with students before tests/exams
- Giving specific suggestions for how students can improve their work
- Structuring engaging learning opportunities into the class
- Telling students you believe they are capable of reaching the high standard you have set for their work
- Monitoring student progress

Kroeper, K.M., Muenks, K., Canning, E.A., & Murphy, M.C. (2022). *Teaching and Teacher Education*

Students' Perceptions of Faculty Mindset are Associated with Faculty Teaching Practices

Practice	Correl. with Students' Perception of Faculty Mindset (Math)	Correl. with Students' Perception of Faculty Mindset (English)
Help students cultivate positive attitudes about learning	.259***	.322***
Discuss common mistakes w/ students before tests/exams	.090*	.251***
Tell students you believe students are capable of reaching the high standards you have set for their work	.287***	.290***
Give specific suggestions for how students can improve their work	.204***	.345***
Structure engaging learning opportunities into the class	.267***	.319***
Monitor student progress	.199***	.336***

* p < .05; ** p < .01; *** p < .001

Students' perceptions of faculty use of growth culture teaching practices were **positively and strongly associated** with their perceptions of faculty mindset.

(subsample of correlations shown)

Murphy, M.C., Woodruff, S.E., Ozier, E., & Mathias, K. M. (2022). *Student impacts of faculty mindset in California community colleges*

Students Report More Positive Experiences in Cultures of Growth

Psychological Outcome	Correl. with Students' Perception of Faculty Mindset (Math)	Correl. with Students' Perception of Faculty Mindset (English)
Belonging	.243***	.168***
Self-efficacy	.124**	.212***
Identity threat	-.196***	-.272***
Stereotype threat	-.417***	-.558***

* p < .05; ** p < .01; *** p < .001

Students' perceptions of faculty growth mindset were **strongly associated** with their classroom experiences.

Murphy, M.C., Woodruff, S.E., Ozier, E., & Mathias, K. M. (2022). *Student impacts of faculty mindset in California community colleges*

Summary of Past Research on Cultures of Growth

- When faculty endorse stronger growth mindset beliefs (i.e., create a Culture of Growth), students:
  - **Experience more** belonging and self-confidence
  - **Experience less** evaluative concern, imposter feelings, negative affect, identity/stereotype threat
  - **Exert more effort** and **maintain better attendance** in their courses
  - **Report greater** interest in the course and the field more broadly
  - **Perform better** in their courses

- Students may **infer** faculty growth mindset beliefs from faculty's use of growth culture teaching practices.

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Equity Accelerator's Collaboration with CAP

- Between Spring 2022 & Spring 2023, EA developed and evaluated **three different professional development opportunities** to support faculty in creating more equitable classroom learning environments:
  - Virtual workshops (Phase 1)
  - An EA-led Community of Practice (Phase 2)
  - Local Communities of Practice led by faculty who participated in the EA-led CoP (Phase 3)

What is a Community of Practice? A community of practice is a group of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly (Wenger-Trayner & Wenger-Trayner, 2015).

- Each opportunity was grounded in EA's evidence-based Growth Culture Teaching Practice Library resources
  - Additionally, we developed resources to support teams in **building and facilitating a Community of Practice** grounded in EA's resources.
- As part of their participation, faculty completed surveys that assessed their mindset beliefs, use of growth culture teaching practices, etc.
  - EA-led CoP participants: distributed surveys to students to assess perceptions of their professor, classroom experiences, and anticipated grade

Our Four Key Findings

1) **When students perceive they are in a Culture of Growth, they have a better classroom experience and greater academic success.**

2) Students infer a classroom's Culture of Growth based on their professors' practices–*not* their professors' self-reported mindset.

3) Evidence-based, field-tested professional development opportunities effectively support faculty in creating Cultures of Growth.

4) Colleges and colleagues play a critical role in supporting faculty as they sustain and scale their Cultures of Growth.

FINDING #1: Culture of Growth & Student Experience

- **Finding:** *Across <u>every</u> growth culture practice, students who reported that their professor used a particular growth culture practice more also reported a more positive experience in the course.*

Description of Faculty Practice	Correlation Between Perceived Use and Student Experience
Instructor Cares: Tell students that you care about their success and learning.	0.38***
Value Diversity: Include a statement that makes clear that diverse identities are valued in your classroom.	0.32***
Connect to Resources: Connect students with resources that can support their overall well-being (e.g., mental health and counseling services).	0.33***
Struggling Common: Tell students that struggling with coursework is common, and not a sign that they aren't capable or don't belong.	0.34***
Share Stories: Tell students about a past experience where you, or other students, overcame academic challenges with time and strategies.	0.28***
Encourage Help Seeking: Encourage students to seek help from you or the TA when they find themselves struggling with course material.	0.32***
Significance levels: * $p < .05$, * $p < .01$, *** $p = .001$	

FINDING #1: Culture of Growth & Student Experience

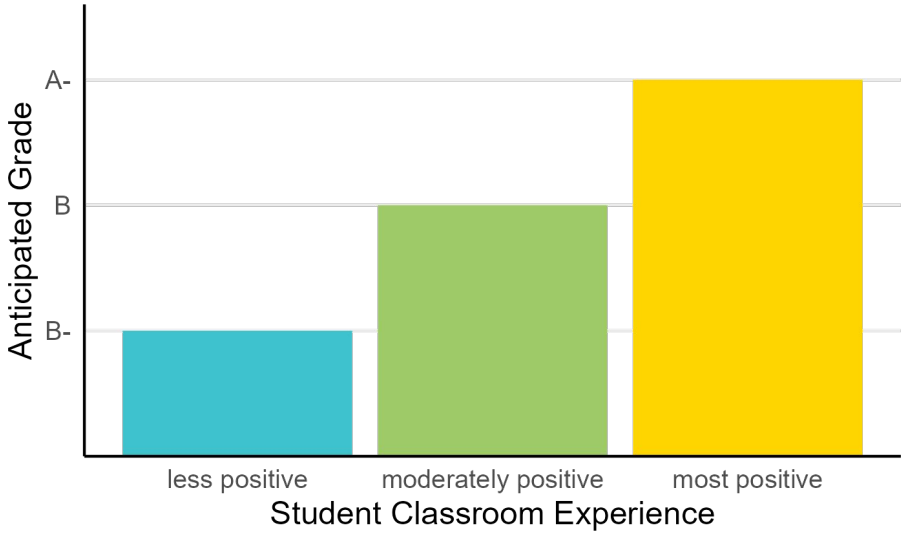
In students' own words...

"She was very clear of her expectations in the beginning of the course. She thoroughly explained every week the amount of work / hours we would need to put into our assignments. Even with the high workload, she encouraged us from the beginning that she has resources available and will always help if we need it."
- Student Respondent

"She's super approachable! She gives excellent tips and tricks when you're looking for feedback on your work, and she's very objective about your areas of improvement. She has a lot of empathy and understands when one is not able to turn in assignments, and looks for ways we can make it work."
- Student Respondent

FINDING #1: Culture of Growth & Student Success

- **Finding:** *Students who had more positive experiences in their courses also anticipated receiving higher course grades ($\tau_b = 0.34$, $p < .001$).*



- Students who reported the least positive experience expected to earn a B-, on average.
- In contrast, students who reported the most positive experience in their course expected to earn an A-, a full letter grade higher.

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FINDING #2: Faculty Hold Growth Mindset Beliefs

- **Finding:** *California community college faculty strongly endorse growth mindset beliefs about student abilities.*

PD Opportunity	Percent of Faculty with Strong Growth Mindset Beliefs Prior to PD Participation
Workshops	73%
EA-Led CoP	100%
Locally-Led CoPs	83%

FINDING #2: Gaps in (Perceived) Faculty Mindset

- Finding: *Students' perceptions of faculty mindset beliefs were not associated with faculty's own self-reported beliefs – faculty reported stronger growth mindset beliefs than students perceived them to hold.*

	Faculty Self-Reported Mindset (Average)	Student Perception of Faculty Mindset (Average)	Correlation between Faculty & Student Ratings
All Students	5.7 (out of 6)	5.0 (out of 6)	0.01
SDR Students only	5.7	4.9	-0.08
First Gen Students only	5.7	4.9	-0.04
Significance levels: * $p < .05$, * $p < .01$, *** $p = .001$			

FINDING #2: Students Infer Faculty Mindset by Practice Use

- Finding: *Across <u>every</u> practice, when students perceived that their professor used a growth culture practice more, they rated their professor as endorsing stronger growth mindset beliefs.*

Faculty Practice	Correlation Between Students' Ratings of Faculty Mindset & Their Perceptions of Faculty Practice Use
Instructor Cares	0.33***
Value Diversity	0.22***
Connect to Resources	0.20***
Struggling Common	0.32***
Share Stories	0.29***
Encourage Help Seeking	0.26***
Significance levels: * $p < .05$, * $p < .01$, *** $p = .001$	

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FINDING #3: EA PD Supports Faculty in Building Cultures of Growth

- Finding: *Faculty participants in all phases of the project reported overwhelmingly positive experiences—that they enjoyed the opportunities and would recommend them to their colleagues.*

Across the workshops and CoPs, nearly all survey respondents reported a positive experience:

97%

FINDING #3: EA PD Supports Faculty in Building Cultures of Growth

- Finding: *Results of this analysis indicate that each of EA's growth culture workshops and CoPs led to greater intentions to use evidence-based growth culture practices, beyond current use.*

Virtual Workshops:

Across every practice rated in Workshops 1 and 2, **most faculty (>75%)** currently used or intended to adopt the growth culture practices in future teaching. After Workshop 3, **100% of faculty** said they were already using or intended to use every practice.

"At the very beginning, I was thinking that this might not be a good fit for me because I have a very strong background in Dweck's ideas and already try to practice them in my own classes. But there were several things that were still new to me. I especially liked the two "misconception" slides -- I have noticed lately that sometimes I just push hard work, and also need to be aware that even with hard work, failure (and growth) might still happen."

- Workshop 2 Attendee

FINDING #3: EA PD Supports Faculty in Building Cultures of Growth

- Finding: *Results of this analysis indicate that each of EA's growth culture workshops and CoPs led to greater intentions to use evidence-based growth culture practices, beyond current use.*

EA-Led CoP:

Before the CoP, most faculty (>60%) reported using each of the growth culture practices, a number that **jumped 23 percentage points** (>83%) after participation in the CoP. Similarly, the number of faculty already using *every* growth culture practice rose from 36% before the CoP to 56% after the CoP–**an increase of 20 percentage points.**

"The support from other faculty and the activities reinforced the concepts in the preparatory readings. Gathering ideas about how other faculty approach similar challenges, or the various ways that they creatively integrated the suggested practices, was inspiring."

- EA-Led CoP Participant

FINDING #3: EA PD Supports Faculty in Building Cultures of Growth

- Finding: *Results of this analysis indicate that each of EA's growth culture workshops and CoPs led to greater intentions to use evidence-based growth culture practices, beyond current use.*

Locally-Led CoPs:

The number of faculty in a locally-led CoP that reported using or intending to use each practice **rose by 31 percentage points** (from >50% to >81%) after participation in the CoP. Moreover, whereas only 19% of faculty reported using *every* practice before the CoP, this number increased to 56% after the CoP— **an increase of 37 percentage points.**

"It's been great to have a dedicated time each week when we could share our experiences and challenges related to teaching, brainstorm solutions, discuss various high-impact teaching practices, and overall support each other in a positive and inclusive way."
- Locally-Led CoP Participant

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1) When students perceive they are in a Culture of Growth, they have a better classroom experience and greater academic success.

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3) Evidence-based, field-tested professional development opportunities effectively support faculty in creating Cultures of Growth.

4) **Colleges and colleagues play a critical role in supporting faculty as they sustain and scale their Cultures of Growth.**

FINDING #4: Faculty are Dedicated to Building Equitable Practice

- Finding: *Faculty from both the EA-led and locally-led CoPs expressed enthusiasm about sustaining their growth culture practices through continued CoP engagement as well as sharing the knowledge with colleagues.*

Percent of teams from EA-led CoP that formed locally-led CoPs:

50%

Percent of faculty in locally-led CoPs that indicated a strong desire to continue with their local CoP:

94%

"I enjoyed sharing ideas and getting ideas and discussing challenges with other faculty from across the state and in different disciplines. I also built stronger relationships and got some amazing tools and ideas from my math friends at [my institution]! It is always nice to have a carved out space and time to talk, share and grow together."

- EA-Led CoP Participant

FINDING #4: Faculty's CoP Work Requires Support

- Finding: *While faculty consistently spoke to the benefits of CoP participation and expressed their interest in continuing their CoP work in the future, they also acknowledged barriers to sustaining this work over time.*

Challenges to Sustaining Equity-Focused CoP's	% of Faculty Who Experienced
Competing professional demands on time (e.g., other PD opportunities, professional service commitments, etc.)	38%
Struggles with teaching workload/burnout	31%
Personal commitments	31%
Lack of compensation for additional workload required by CoP	25%
Lack of support for equity-focused work in department/among colleagues	6%

Our Four Key Findings: A Summary

1) When students perceive they are in a Culture of Growth, they have a better classroom experience and greater academic success.

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Conclusion: What You Can Do to Build Cultures of Growth

- Instructors: To build Cultures of Growth in your classrooms...
  - You can use our evidence-based **Growth Cultures Classroom Practices Library**! (URL on the next slide)
    - Learn more about each practice, how to incorporate it into your classroom (with examples you can use)
    - These resources can be used individually or in a Community of Practice
  - EA has developed a suite of **CoP Facilitation Resources** that are available for all CA community college faculty and staff
    - What goes into creating a CoP? How should we structure our collaboration? What do we do in sessions?
- Department chairs/Administrators: Provide faculty with opportunities to engage in CoP work
  - Protected time for faculty to collaborate with each other
  - Reward structures and other resources to support sustained engagement

Thank you!

Questions? Interested in future PD opportunities?
Email me at kathy@acceleratеequity.org
Subscribe to our newsletter: acceleratеequity.org/contact

To access our Growth Culture Classroom Practices Library, visit:
acceleratеequity.org/tools-and-resources

Our Project Team:

Kathy Emerson
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Krysti Ryan
Chief Operating Officer

CAP Professional Development Opportunities & Resources

AccelerationProject.org

Publications:

- This presentation's recording and slides available by October 11

Events:

- CAP Webinar 3 (October 27 @ 1:00)

  Learning from Our Students' Experiences to Create Classroom Cultures that Promote Equity