

# Learning About Teaching and Learning: Exploring New Faculty Development Models

Florence Ran, Community College Research Center  
Diana E. Cruz, Community College Research Center  
Laura Smoyer, Portland Community College  
Donny Winter, Delta College

**CCRC** COMMUNITY COLLEGE  
RESEARCH CENTER

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TEACHERS COLLEGE, COLUMBIA UNIVERSITY

The logo for Education Northwest features a stylized 'E' shape composed of three colored blocks: a green square at the top left, a yellow square at the top right, and a blue square at the bottom right.

education  
northwest

The logo for Portland Community College is a blue diamond shape containing a white spiral design.

**Portland  
Community  
College**

The logo for Delta College depicts a stylized waterfall with multiple streams of water falling into a pool of water below.

**Delta College**

# Engaging Adjunct Faculty in the Student Success Movement

Project Overview

# Project Partnership

- Achieving the Dream funded learning initiative
- Supported by Helmsley Trust and Great Lakes
- Six leader colleges selected to receive \$160K over two years
- CCRC is serving as evaluator on the project

## Scope of Work includes

Select two departments or divisions to pilot engagement activities. At least one department/division will be in STEM.

Create a cross-functional team to lead implementation. 25% of team members must be part-time faculty.

Receive technical assistance from ATD staff

Share strategies and lessons learned and serve as leaders for part-time faculty engagement in the ATD Network.

Develop plans for scaling and institutionalizing successful strategies beyond the two-year project period.



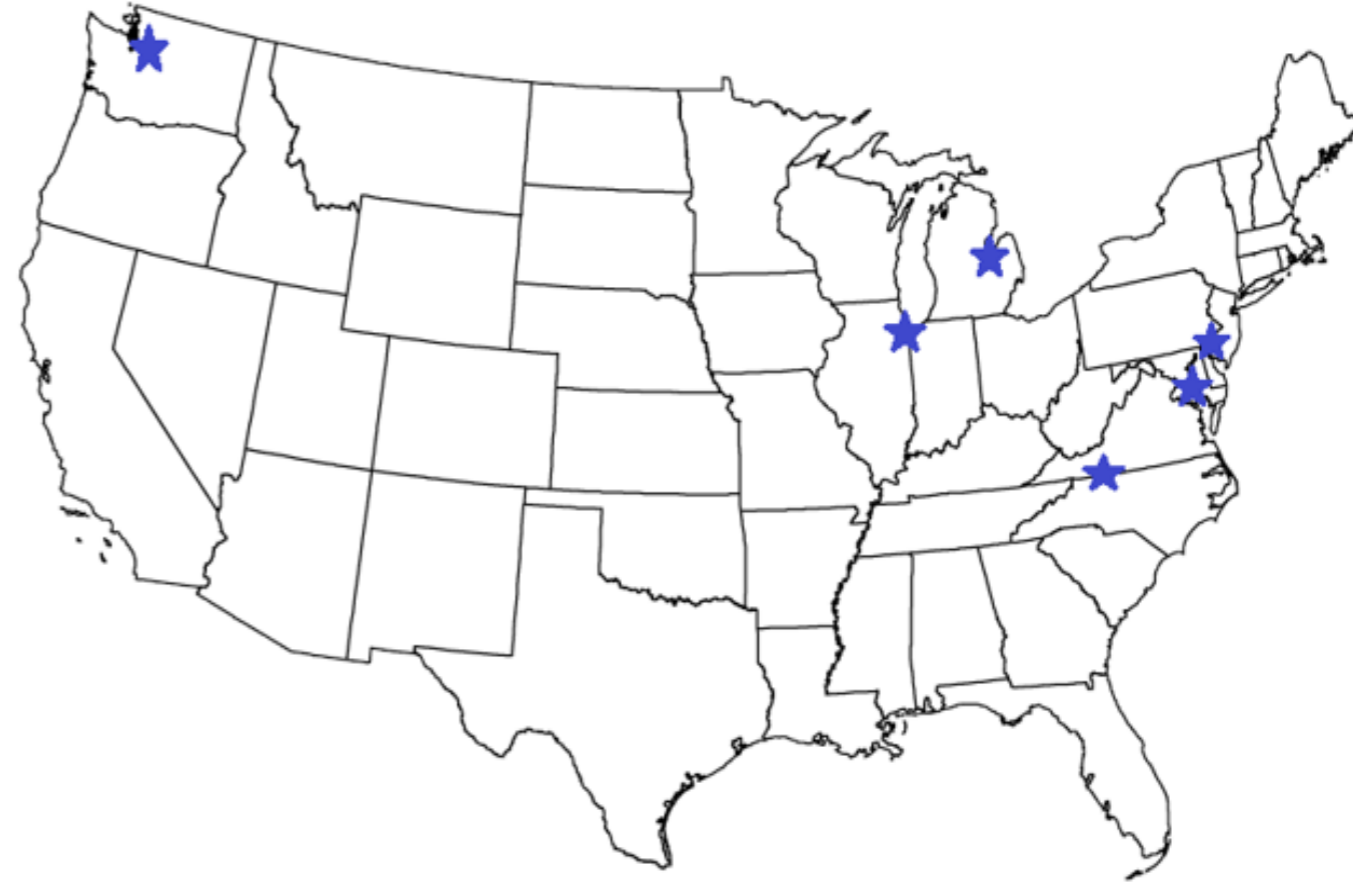
Achieving  
the Dream™

Community Colleges Count

# Selected Colleges

Mix of:

- Urban, rural, suburban
  - Union and non-union
  - Small, medium, large
  - Prior experience engaging part-time faculty
- 
- Community College of Baltimore County
  - Community College of Philadelphia
  - Delta College
  - Harper College
  - Patrick Henry Community College
  - Renton Technical College



# Typology of Engagement Strategies

Type	Example
Orientations and trainings	Patrick Henry is increasing part-time faculty participation in existing trainings on SAILS and cooperative learning
Online resources	Several colleges are enrolling part-time faculty in Blackboard shells that house policy information and teaching tips
Faculty inquiry groups	Harper College is running Communities of Practice comprised of full-time and part-time faculty
Mentoring	Renton is developing a mentoring program that will pair experienced and inexperienced faculty members
Instructional improvement initiatives	CCBC is scaling up High Impact Practices, and involving part-times in the planning, piloting, and scaling
Resources and space	CCP has created an part-time resource center within their Faculty Center for Teaching and Learning
Representation and recognition	CCP is hosting regular events to celebrate the achievements of part-time faculty

# Project Timeline



- Colleges selected
- Colleges develop action plans

- CCRC *faculty pre-survey*

- CCRC collects *baseline student transcript data*

- CCRC *site visits*

- CCRC *site visits*

- CCRC *faculty post-survey*

- CCRC collects *follow-up student transcript data*

\*Colleges implemented engagement strategies from spring 2017 to spring 2018

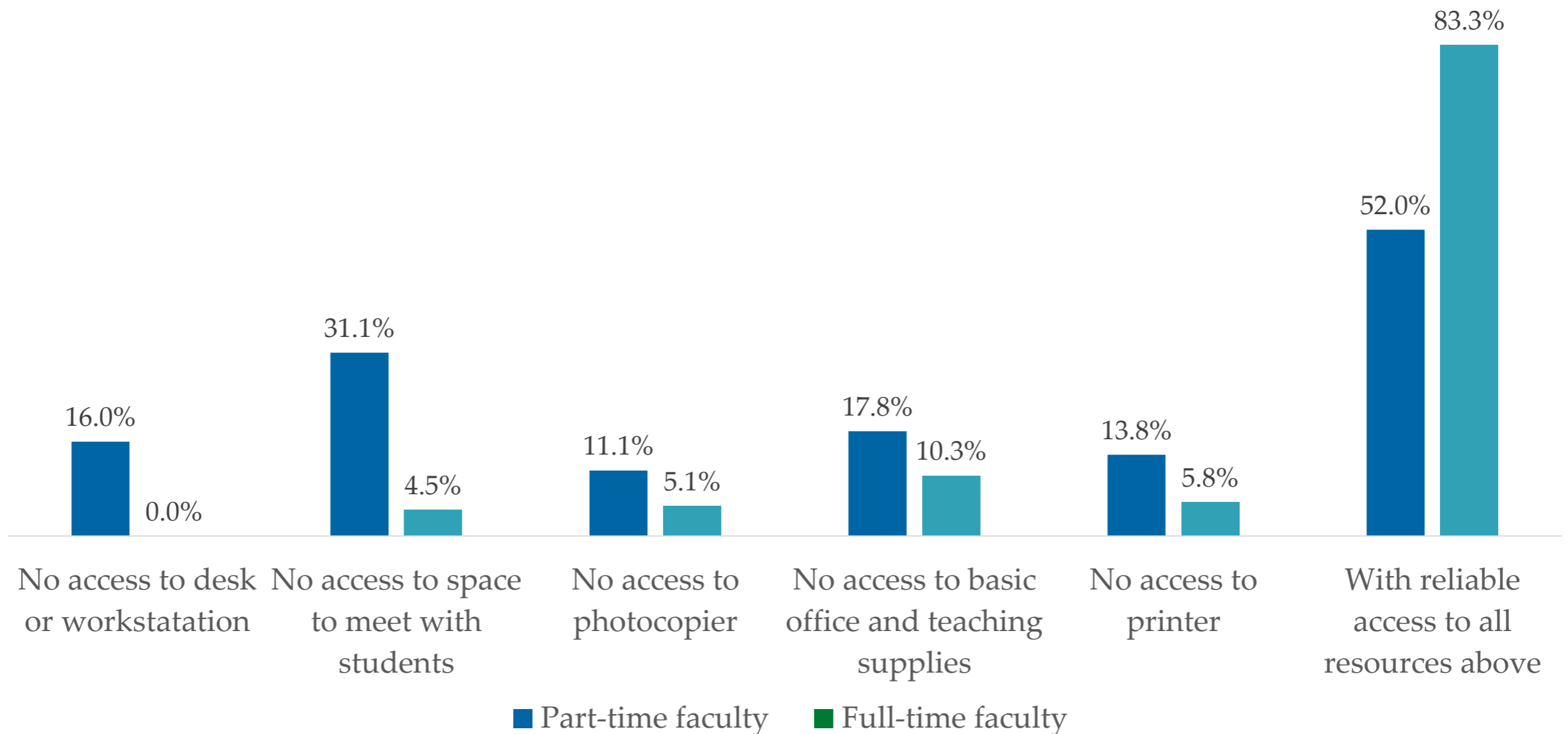
# Professional Experience of Part-time Faculty



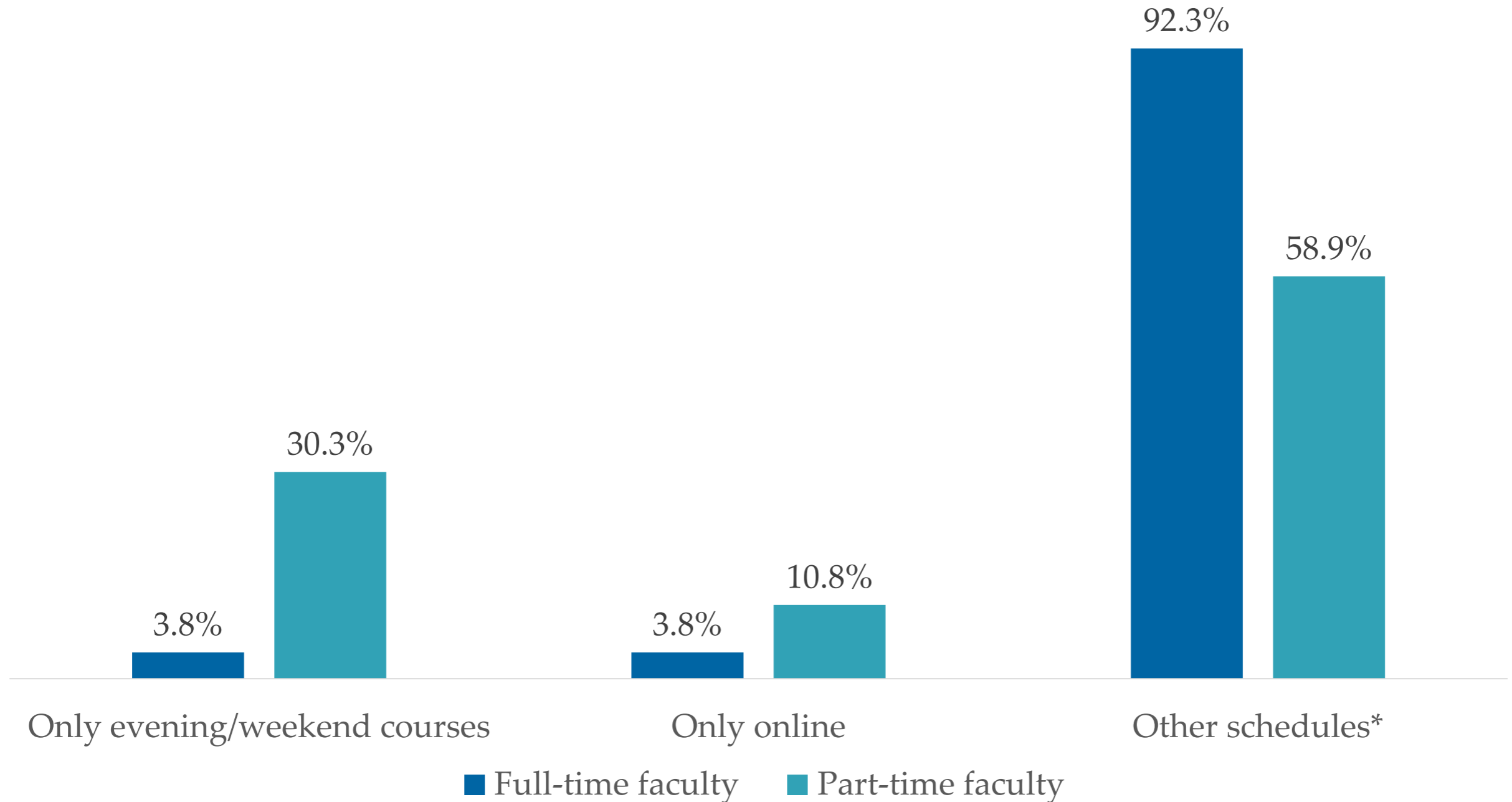
# PT Faculty Have a Range of Employment Goals and Experiences

Fall 2016 Faculty Survey (N = 254)	
Consider teaching in higher education to be your primary career	64%
Currently only employed in this part-time position	34%
Currently have a full-time job elsewhere	19%
Retired from another job	21%
Hold teaching positions at more than one college or university	33%
Would apply for a full-time faculty position at this college	51%
Degree in education/teaching credential	50%
Years at college	9
Years teaching experience (any level)	18
Teach only sections meeting at after 5pm [2018 survey]	30%

# PT Faculty Report Less Reliable Access to Resources on Campus



# PT Faculty Are More Likely to Only Teach Evening/Weekend Courses



\*Other schedules include any schedule combinations that include courses meeting between 8 am – 5 pm.

# Engaging Adjunct Faculty Project Activities

# About One-Third Faculty Participated in Project Activities

**38%**

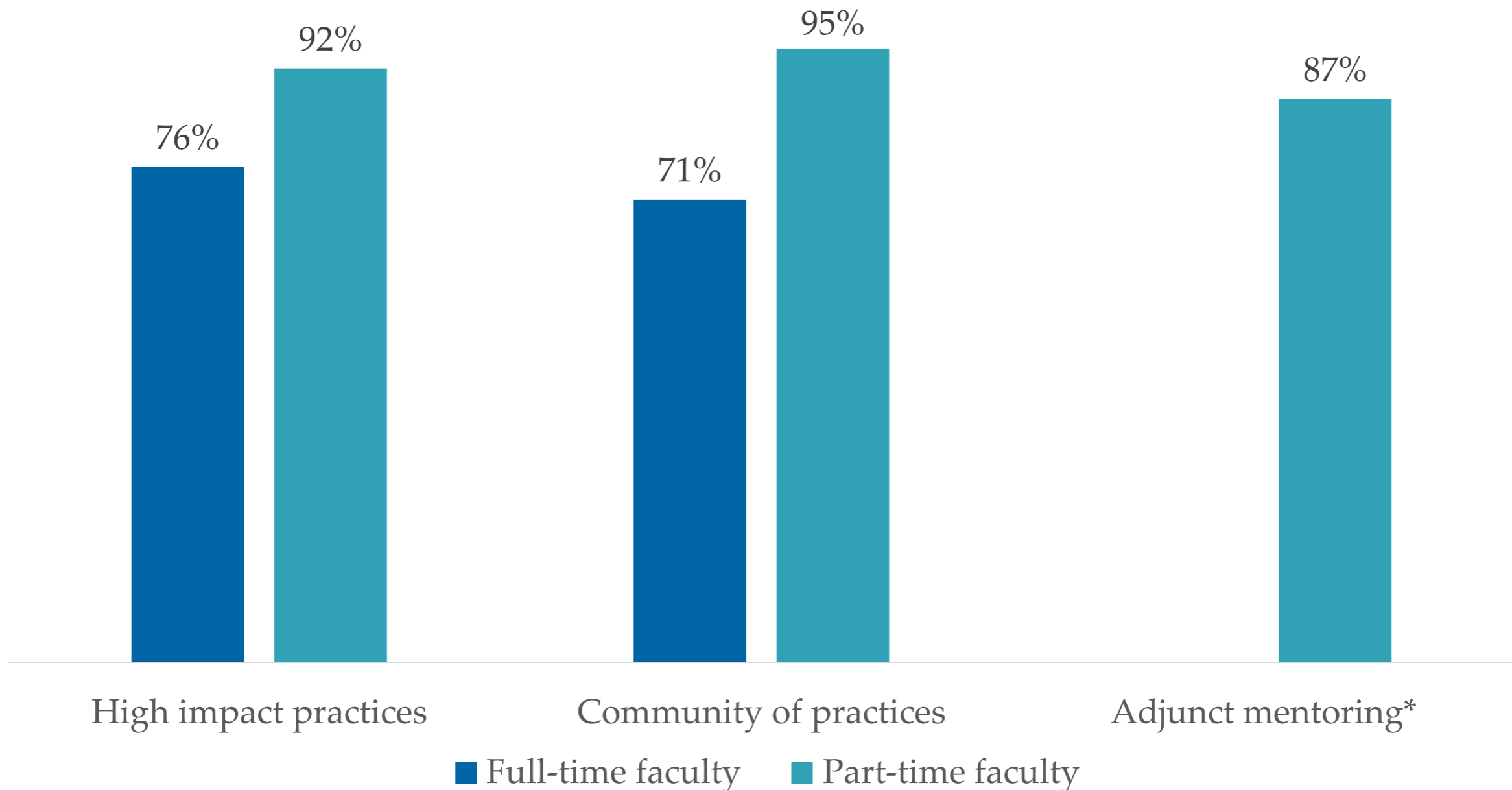
Full-time faculty

**31%**

Part-time faculty

# Project Satisfaction Levels Are High, especially for PT Faculty

% of faculty report moderate to extremely satisfied by the project activities they attended

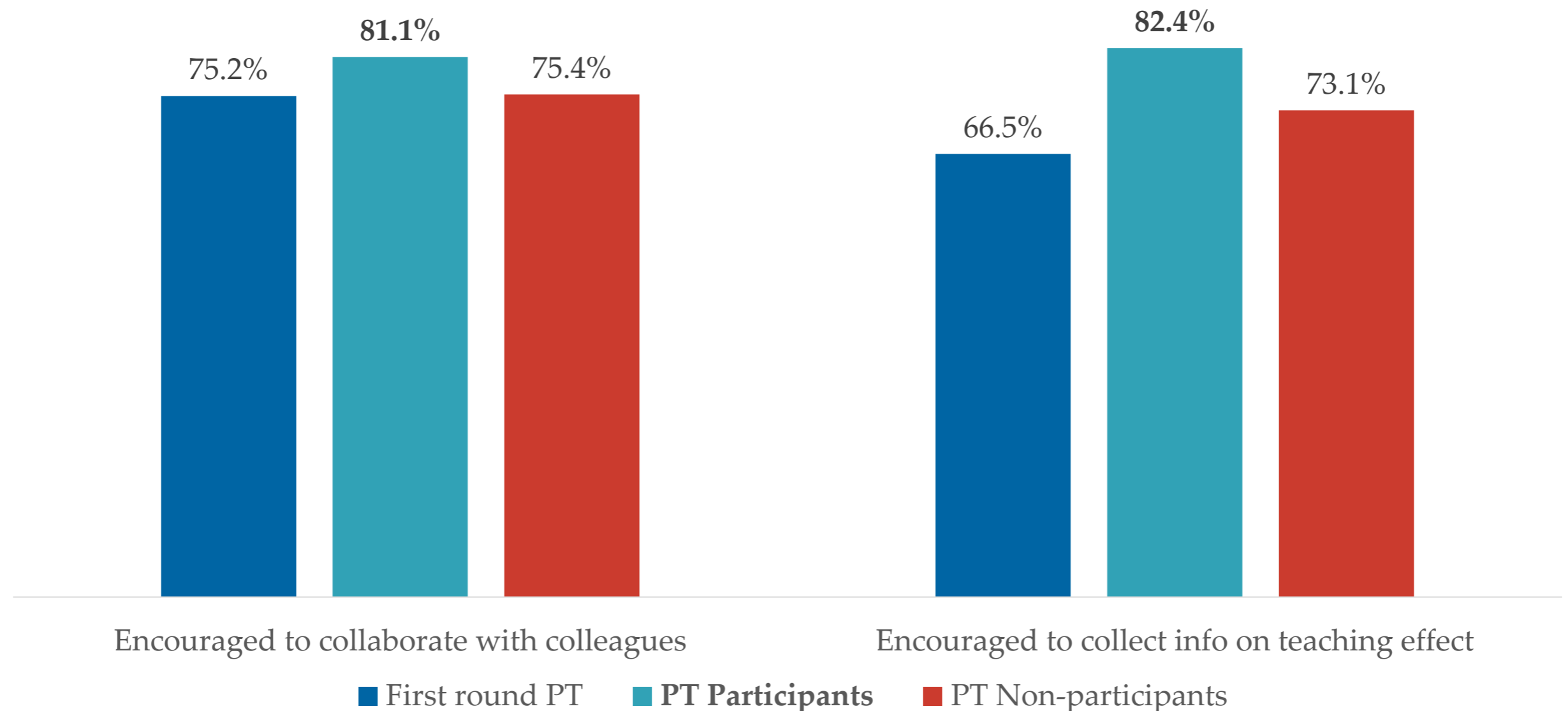


\* Adjunct mentoring is for part-time faculty only  
we report satisfaction rate for project activities with more than 10 participants

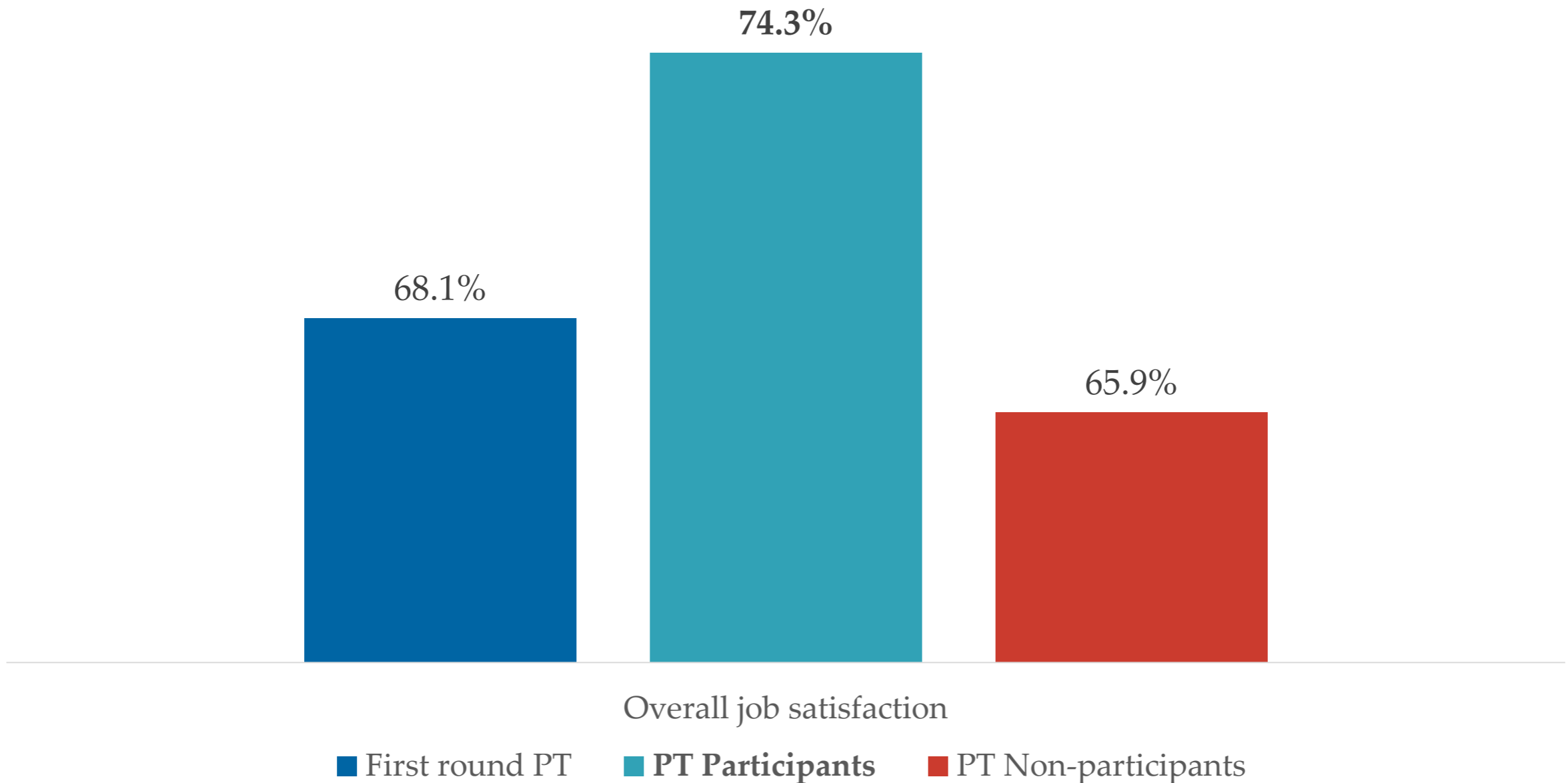
# PT Faculty Participated in Project Activities Report Better Departmental Engagement

PT faculty who participated in the project activities report:

- significantly higher levels of collaboration with colleagues on improving teaching and learning
- significantly more likely to systematically collect information on teaching effectiveness.



# PT Faculty Participated in Project Activities Report Higher Job Satisfaction



The statistics reported in the graph are the proportion of part-time faculty reported moderate to extremely satisfied by the job.



# The Goal: to Promote Solidarity

- A team of part and full time faculty at Delta College was formed to create a professional development cycle that not only created solidarity among faculty, but also provided students with a unique educational experience.



# Step 1: Faculty Learning Communities

- Faculty members volunteered to lead faculty learning communities in different disciplines including: Humanities, Social Sciences, Math, and Trades.
- It began our process by bridging our pedagogical strategies through demonstrating **collegiality**.



# Step 2: Cultivating Ownership

- The collaborative environment in the Faculty Learning Communities stimulated opportunities for cultivating **ownership** and **acknowledgement** of individually created classroom materials.
- Lead additional professional development opportunities outside of the grant for faculty to create Open Educational Resources (OER)

## Literacy for College Success

RDG 097: Academic Reading Course Text

Amee Schmidt and Donald Winter

 Creative Commons Attribution ShareAlike

READ BOOK

## Literacy for College Success

RDG 097: Academic Reading Course Text

Amee Schmidt and Donald Winter

## Step 3: Team Teaching Partnerships

- The final step allowed teachers to partner and co-teach classes. Our hope was to create an interactively unique educational experience for students. They had the benefit of exposure to two perspectives within different disciplines.
- Additionally, faculty were able to learn from their partner's teaching.

# Looking Forward: Sustainability

- **Recruitment:** Through promoting this process to others, we are confident more faculty will participate when they realize it's a safe, accepting environment that promotes idea building, not assessment.
- **Cost:** Our primary concern centers in cost as we'll need continued investment from the institution's administrative body. Through recruitment, our goal is to demonstrate the marketability in this process as it provides students a cost effective, unique education, but also creates further opportunities for faculty.

# Lesson Study

# Adapting Lesson Study Project

- Can *Lesson Study*, a form of professional development that has shown promise in K12 settings, be adapted for use in the community college context?
- What are math faculty experiences with Lesson Study?
- Does the model show promise for improving teaching and student learning?

# Project Activities

- Three community college teams participate in four cycles of Lesson Study with support from experts at Education Northwest
- CCRC researches feasibility and faculty experiences and collects formative data on student learning and outcomes



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# Reforms to Developmental Education



Structure

**Structural**  
reorganization of  
instructional time and  
delivery (e.g., co-  
requisite).

Curriculum

**Curricular**  
rationalizing and refining  
content (e.g., math  
pathways).

Pedagogy

**Pedagogical**  
changes to teaching (e.g.,  
student-centered activities,  
metacognition).

# Oregon's Math 98

“Math 98, Quantitative Literacy, is a rigorous mathematics course that is designed to be part of an alternate pathway from the traditional algebra track. Rigor implies that students display conceptual understanding and procedural fluency while working on authentic applications.”

Five major course topics:

1. Applied Number Sense
2. Applied Algebraic Reasoning and Modeling
3. Graphical Sense
4. Measurement
5. Statistical Reasoning



# Lesson Study

## 1 Plan

The team develops a lesson by investigating curricula and examining research. The plan includes goals, learning outcomes, anticipated student responses, instructional strategies, and evaluation questions.

## 2 Teach and Observe

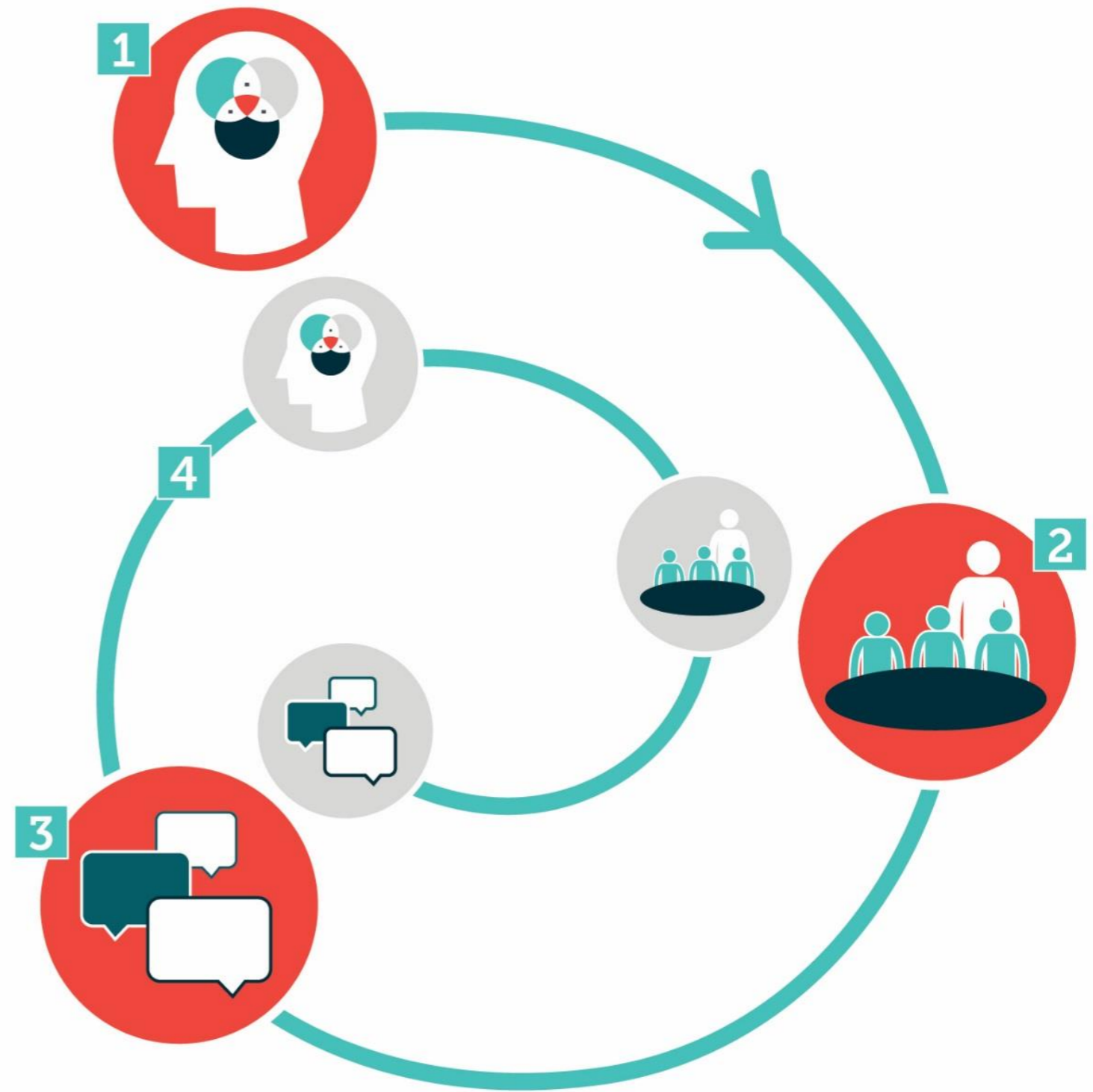
One team member teaches the lesson while others observe and collect evidence of student learning.

## 3 Debrief

The team shares observations, discusses evidence of student learning, and explores the effectiveness of the lesson.

## 4 Revise, Reteach, Reflect

Based on findings from the first teaching, the team revises and reteaches the lesson. The team reflects on the reteaching results and synthesizes lessons learned.



# Plan



- What qualities do we hope to strengthen in our students as they move through the mathematics pathway?
- What topics are challenging for students to learn, difficult for faculty to teach? What key understandings do students need to develop about this topic?
- What lessons cover a concept critical to the topic? What sequence of experiences will help students develop the desired understanding?



# PCC Lesson Study Research Theme

- How do we build students' confidence in their mathematical reasoning and willingness to persevere in problem solving?
  - Promote a productive disposition.
  - Support a growth mindset.
  - Embrace and learn from confusion.



Embrace  
Confusion.

“Confusion is the beginning  
of Wisdom.”

—Socrates

Topic:

*Student goals for the topic:*

- Interpret the meaning of their answer as it relates to the actual situation
- Estimate
- Unit cost (the cost that it takes to produce the product)
- Unit price (what you charge per item)

*Student Challenges*

- May have trouble converting between gallons and ounces
- May have trouble expressing as a rate (unit cost)
- May have trouble comparing the rates
- May have trouble estimating or be hesitant to try estimating



How does the cost of water compare to the cost of gas?

1) Estimate: A standard water bottle has 16.9 ounces. Without calculating, think of two ways you could estimate how many bottles of water are in a gallon, then carry out these approaches. Explain which estimate you like better and why.



# Teach and Observe

- What do the observation data reveal about student understanding and learning?

<p>30 min</p>	<p><b>Anticipated student responses</b></p> <ul style="list-style-type: none"> <li>• Do the calculations wrong. (example: <math>8.75/28.26 = 0.309 \rightarrow \\$3.09/\text{gal}</math> or <math>\\$0.30/\text{gal}</math> <math>128/16.9</math> vs <math>16.9/128</math>)</li> <li>• Find the price per ounce for water</li> <li>• traditional route: convert ounces to gallons and then divide dollar by gallons</li> <li>• counting up number of water bottles that equal a gallon and then multiplying <math>\\$2.49</math> by that amount</li> <li>• some may estimate, others find exact</li> </ul>	<p>Encourage to estimate not calculate for question (1) and to explain estimation.</p> <p>Suggest use rounding to estimate, or use visual models.</p> <p>For (2): Gas Does your price for a gallon of gas seem reasonable? What does the value represent? What are the units for the value? What about the units for the original values? Remember to record your units. Correct Answer <math>\\$3.23/\text{gal}</math></p> <p>For (2): Water Are you calculating price per amount? What does the value represent? What are the units for the value? What about the units for the original values?</p> <p>Assuming students calculate price per ounce, direct to information at the bottom, re-read questions with attention to unit</p> <p>OR Students might use the estimate they made in (1) to calculate the cost of the water: <math>\\$2.49/\text{water bottle} \times 8 \text{ water bottle/gallon} = \\$19.92</math> per gallon</p> <p>Chart paper and markers available</p>	<p>Lot's more time est. methods</p> <p>(1) Are the students estimating or calculating? What strategies are they using to estimate? Are they using the note at the bottom?</p> <p>(2) Are students using units? Are students too discouraged to push on? How much time does each part of the task take? Which part is the most difficult? Does the answer seem to make sense to the students? Are they using the note at the bottom?</p>	<p>Explains + motivates to par water into gal</p> <p>So <math>16.9 \times 8</math> should be close to 128?</p> <p>Yeah. Check calc - a little over.</p> <p>2 is under do you want to go over or under?</p> <p>Let's do 2.5.</p> <p>Estimate not trying to be exact.</p> <p>Bottle to have more than less in life in general.</p> <p>Two methods... Im trying to think of a completely different method</p> <p>Also using milliliters price of water bottle</p> <p><math>128/16.9 \times 2.49 = 18.85</math> <math>18.85 \times 2.49 = 47.57</math> <math>28.26/18.75 = 1.507</math></p>
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*Handwritten notes:*

- Less focused on unces etc bc more engaged in estimate
- Wanting to record units, but not all worked about formatting pos labels all wrongs well - but adding labels
- In real life a gallon of water doesn't cost that much - I just bought a gallon for \$6 - but that's what it would be with this information
- engaged + available
- explained to Nabilie what he now understand
- Just happy once he directly does  $7.5 \times 2.49$  (as opposed to  $128/16.9$ )
- Joseph still thinks Jonathan is an estimate - Jonathan mumbles him
- Check this out - this is what I did
- I was thinking to be more exact we should use  $7\frac{1}{2}$  bottles
- That's crazy. That's right I think that's so crazy it cost that for...



# Debrief

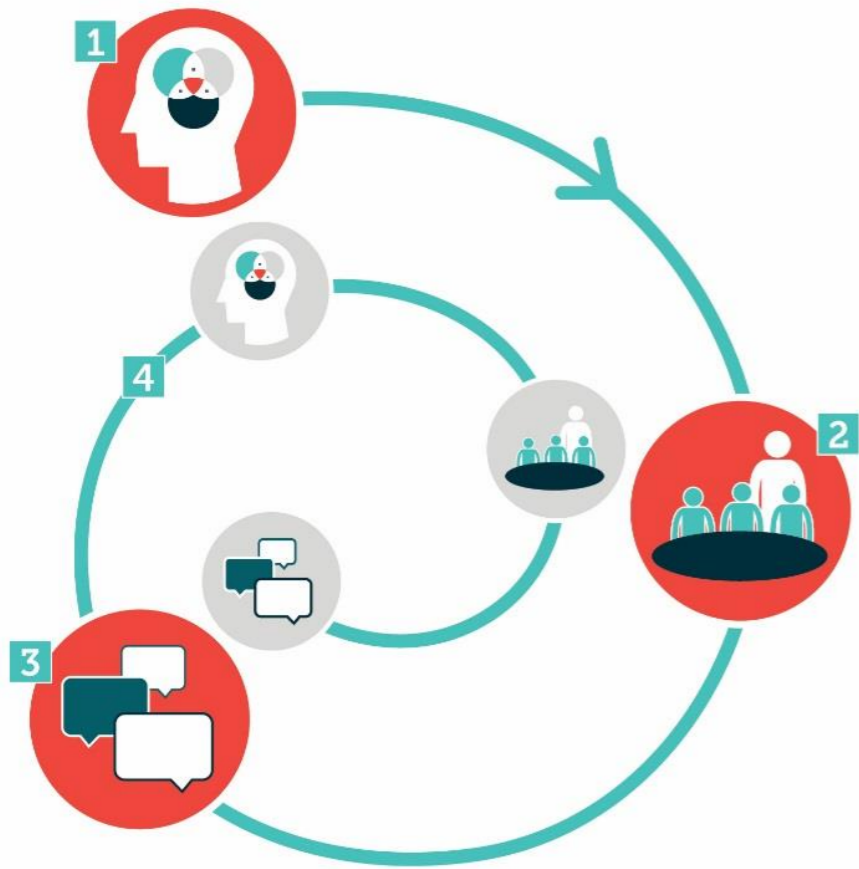


- To what extent were the goals of the lesson achieved?  
What aspects of the lesson contributed to student learning?





# Revise, Reteach, and Reflect



- How can the lesson be changed to help students more effectively reach the goals?
- Did the revised lesson bring about desired changes?
- What did we learn during this cycle that can be applied more broadly to our professional practice?

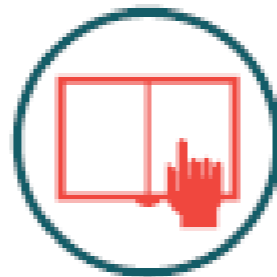


# Underlying Principles of Lesson Study



## DEVELOP AND SUSTAIN A COLLABORATIVE LESSON STUDY TEAM

- Establish purpose and long-team goals
- Articulate and attend to collaboration norms
- Maintain an inquiry focus on student learning



## STUDY RESEARCH AND APPLY EVIDENCE-BASED PRACTICES

- Explore research literature on student development of mathematical understanding
- Investigate instructional approaches aligned with evidence-based practices



## GENERATE AND SHARE PROFESSIONAL KNOWLEDGE

- Synthesize and document lessons learned
- Consider broader application for teaching practice
- Share knowledge with the field

BEHOLD THE TURTLE  
WHO MAKES PROGRESS  
ONLY WHEN HE STICKS  
HIS HEAD OUT



"Good Teaching is failing & evolving. What's important is that we learn from what we do."

# Reimagining Developmental Education

How can we do better for our students?

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New York City, NY

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 [ccrc@columbia.edu](mailto:ccrc@columbia.edu)

 212.678.3091