Engaging in Rapid-Cycle Approaches to Corequisite Improvement

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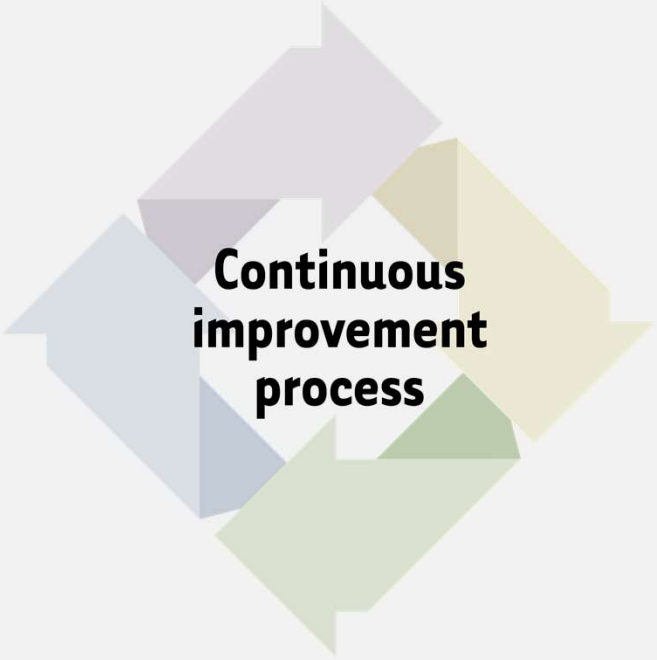
Plan for today's session

- **Why use rapid-cycle approaches to continuous improvement?**
- Conducting a Plan-Do-Study-Act cycle
- Rapid-cycle improvement efforts by Texas colleges
- Overcoming barriers to continuous improvement work

What does “continuous improvement” mean to you?

We define continuous improvement as follows



An ongoing and structured process for educators to improve the quality of programs by identifying challenges, developing and testing options for improvement, and using data to inform program development

Why is rapid-cycle continuous improvement valuable?

- ✓ Can be applied across many contexts, policies, and programs
- ✓ Can help colleges prioritize and address real issues that they face
- ✓ Ensures data use in colleges is valuable in driving program improvement
- ✓ Doesn't necessarily require complex research methods
- ✓ Facilitates long-term planning and improvement

Rapid-cycle improvement can help to build effective corequisites

- Colleges scaling up quickly and have lots of questions about how best to do things
- Available evidence isn't sufficient
  - Rigorous research evidence doesn't usually address common problems of practice
  - Professional development often anecdotal
  - Findings may not be as relevant to new models in new contexts

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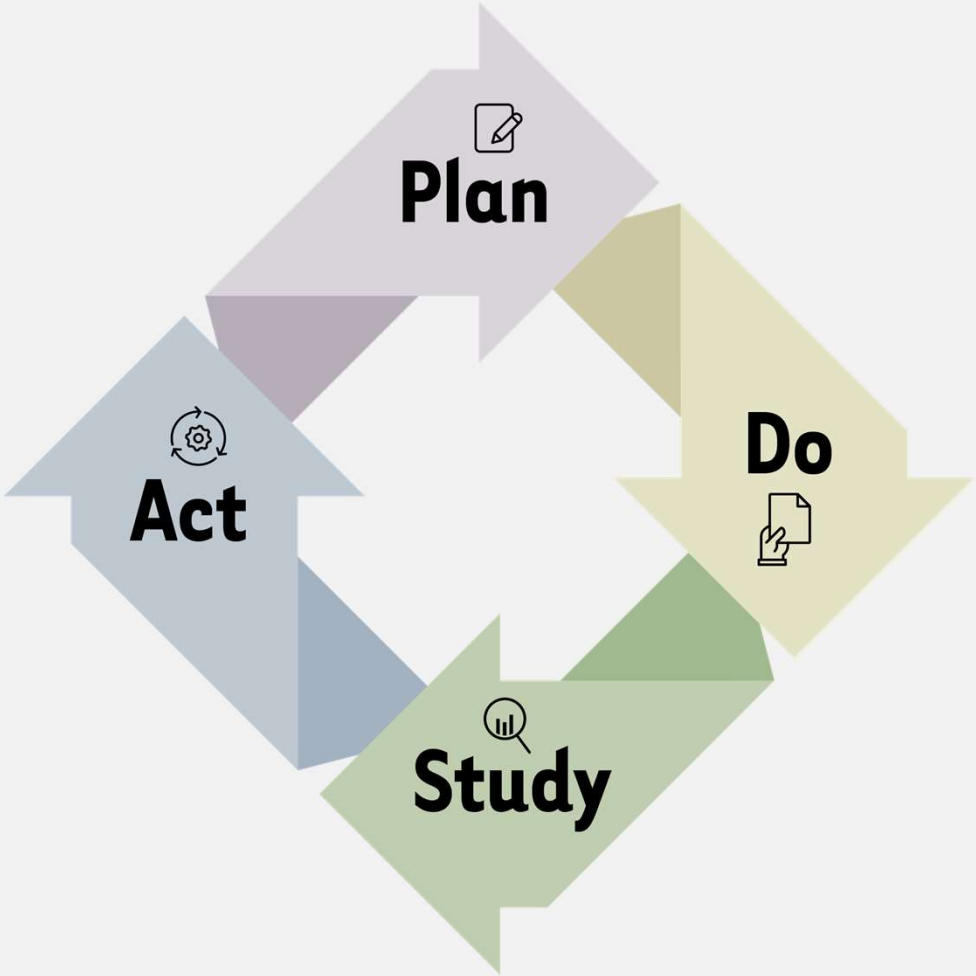
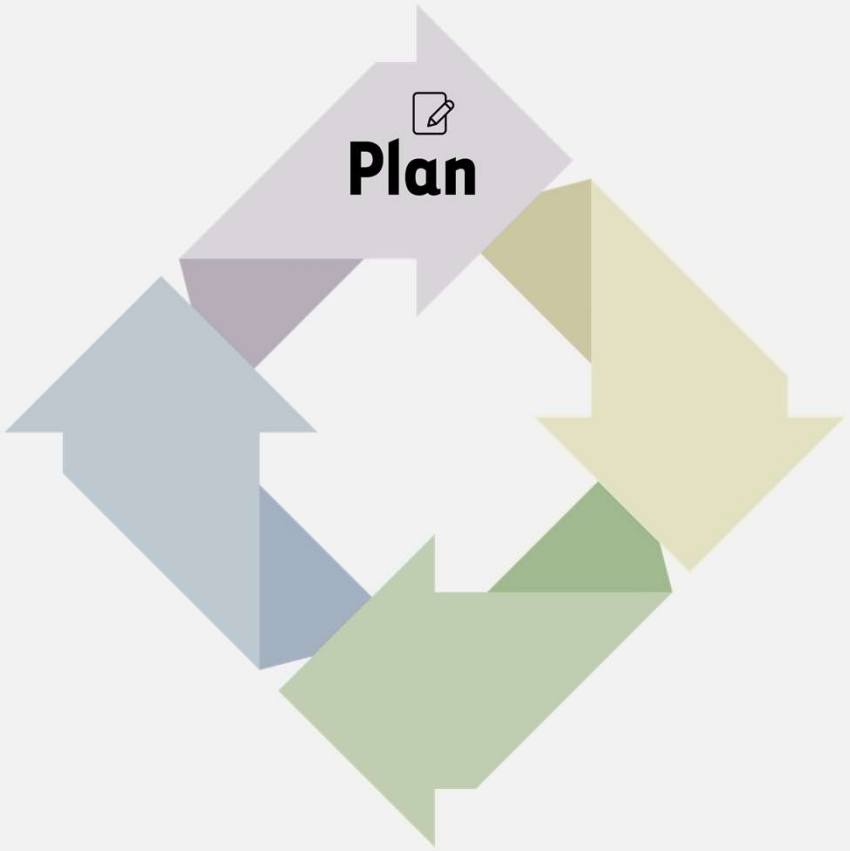
One important tool for continuous improvement is a rapid improvement cycle



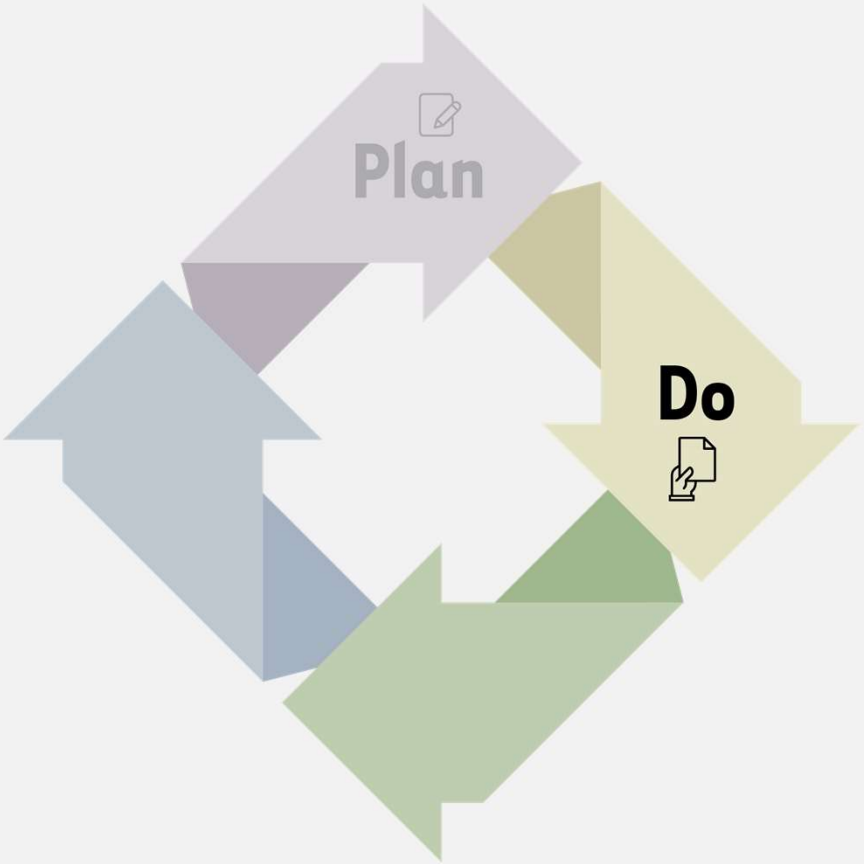
This model was developed by the Chartered Quality Institute and is used commonly for continuous improvement.

Key activities in the PLAN stage



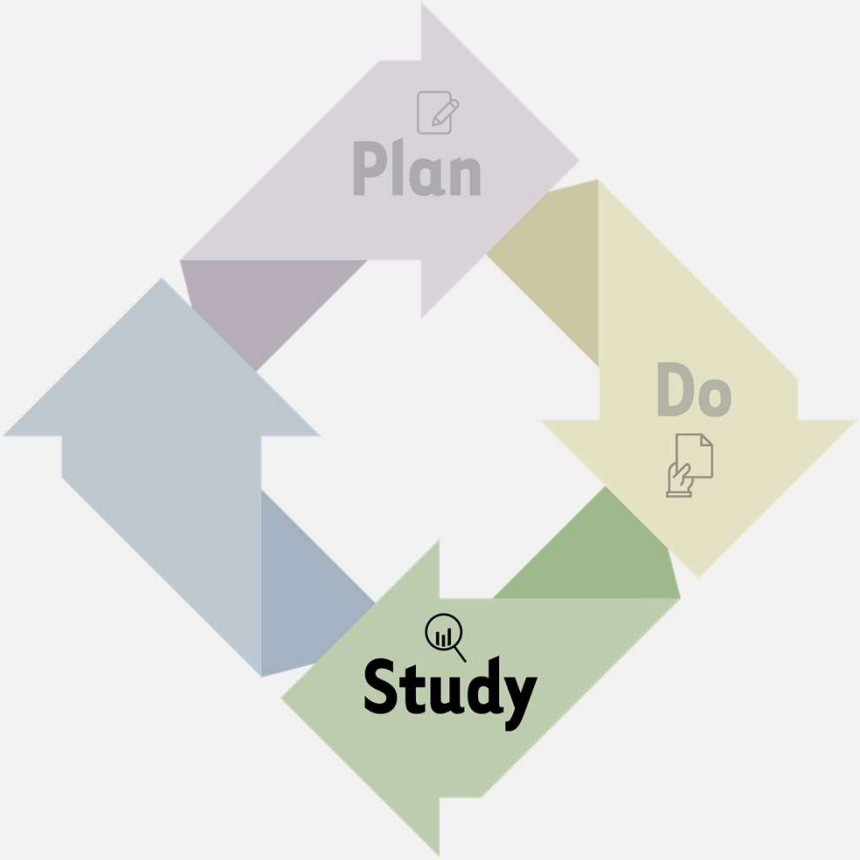
- Identify the problem of practice
- Identify specific cycle objective(s)
- Identify measures and data, make predictions
- Define key activities and timeline
- Assign roles and responsibilities

Key activities in the DO stage



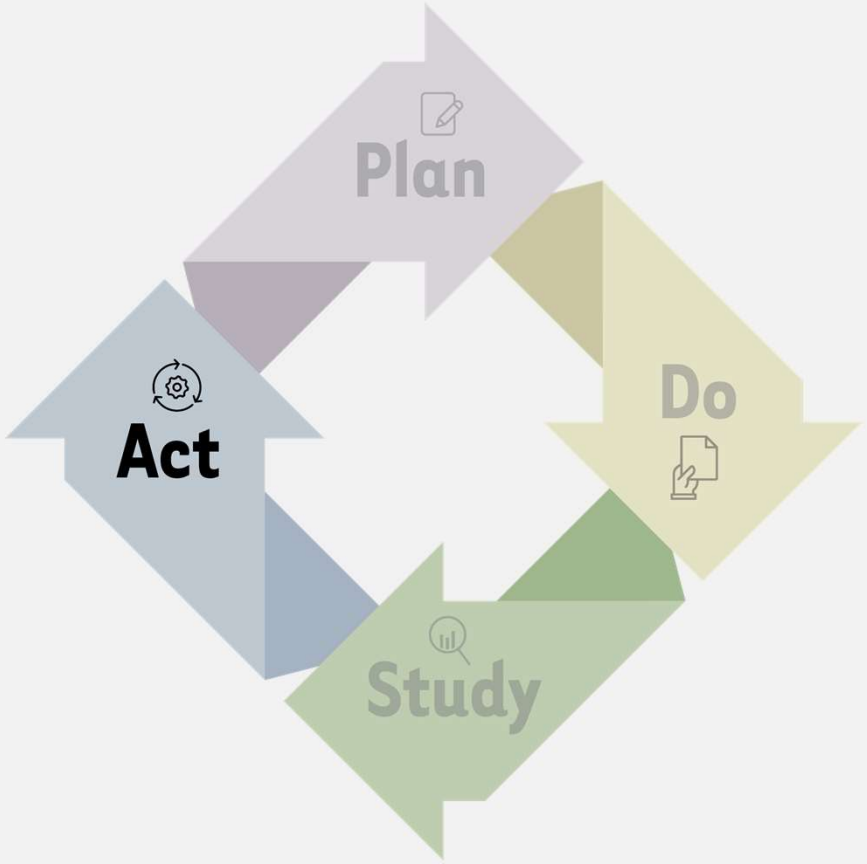
- Test out a new improvement
- Provide clear guidance and ongoing support around how the improvement is implemented
- Collect data that informs improvement

Key activities in the STUDY stage



- Assess the data
- Reflect on findings with broad group of stakeholders
- Document what was learned

Key activities in the ACT stage

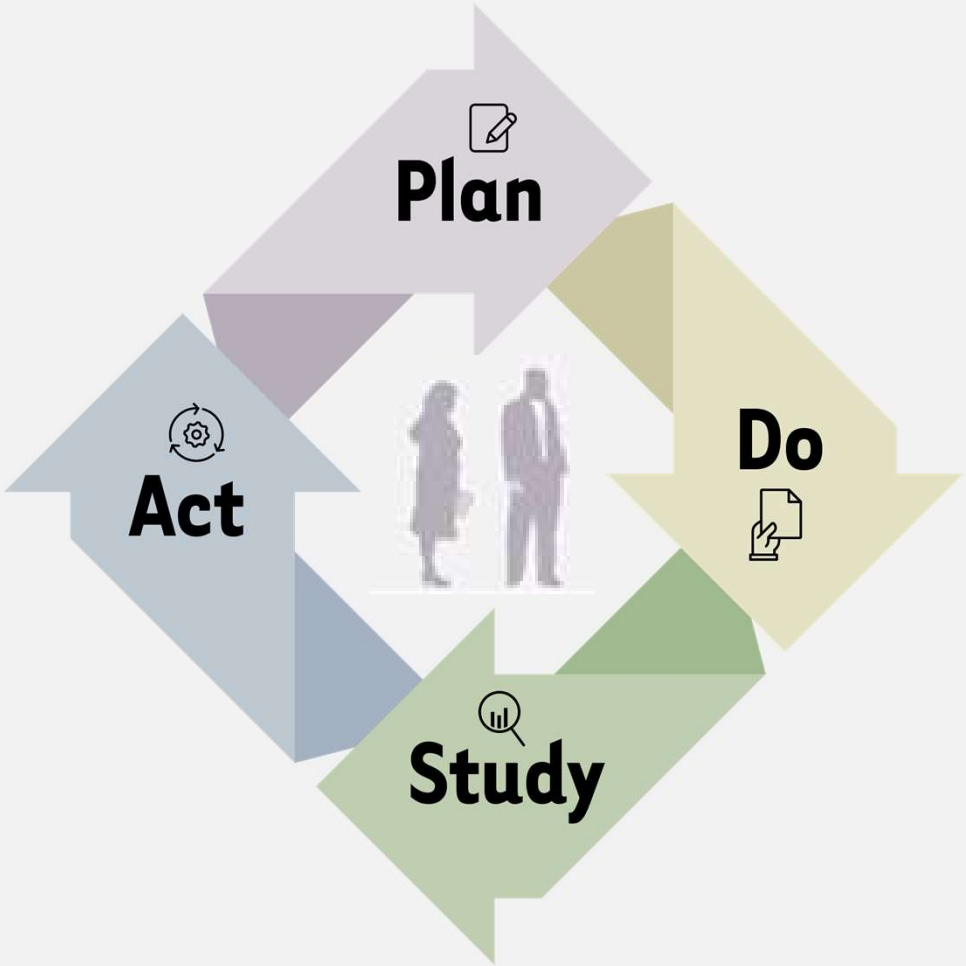


- Determine the changes to be made
- Share findings and improvement plans broadly
- Identify questions that require further study

An example: Supporting corequisite success for students scoring at lower levels

- A fictional college has scaled its algebra corequisite to students with lower test scores, it has found that pass rates for these students are very low
- To identify a problem of practice where improvement will be focused, the institution pulls together faculty, students, and advisors to identify “root causes”

PLAN: The college chooses the need for targeted basic skills support as the problem of practice



PLAN: The college identifies an objective for the improvement cycle

Objective: Testing a supplemental instruction support for students with lower test scores

- Tutor attends courses and provides extra weekly support session
- Requirement to attend for lower scoring students
- Tutor focuses on basic math concepts not taught in class

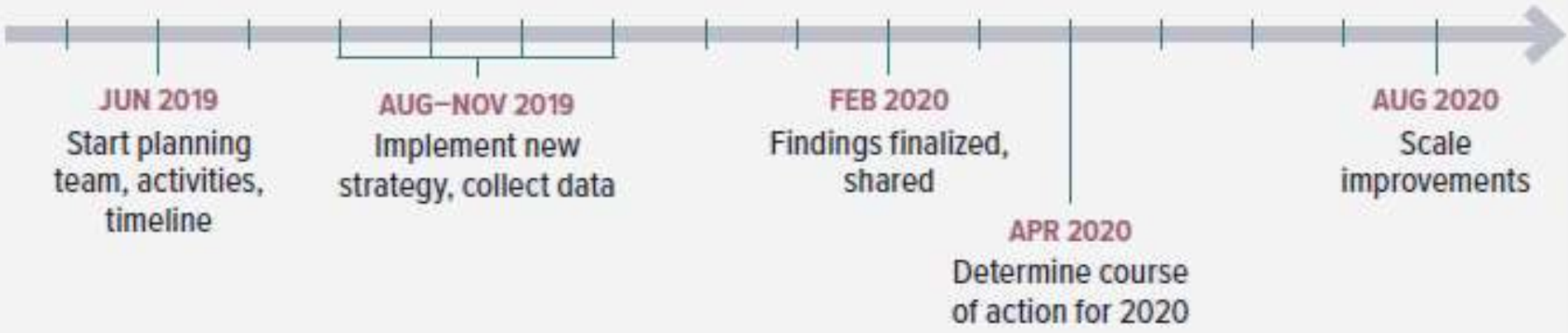
PLAN: The college figures out how it will measure improvement

- Student success: Are students passing the college course?
- Support for basic skills: Did students and instructors perceive improved support around basic skills?
- Participation in support: How often did students participate in SI?
- Barriers to alignment: What barriers did instructors face to implementing SI?

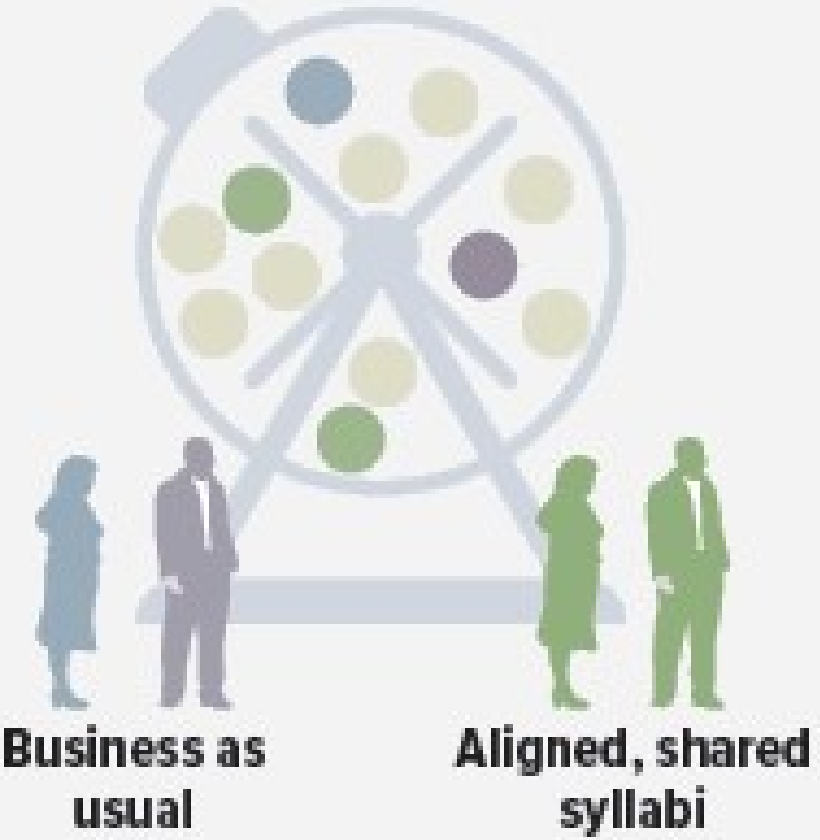
PLAN: The college lays out activities and identifies roles and responsibilities

	Faculty	Advisors	Deans, VP	Inst Research	Others?
Develop strategy	X		X		
Train instructors	X		X		
Schedule sections and enroll students	X	X	X		
Assign sections to supplemental instr.	X		X	X	
Deliver (and align) instruction	X				
Collect data	X		X	X	
Assess and reflect on data	X		X	X	
Create and act on plan for improvement	X		X		

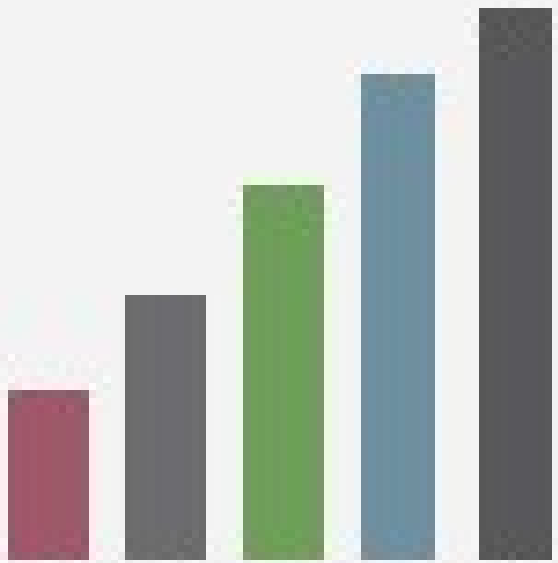
PLAN: The college develops a timeline for the improvement cycle



DO: The college only pilots supplemental instruction with some instructors



DO: The improvement team collects a range of data



Administrative data

- Course passing

Student survey

- Perceived support with basic skills

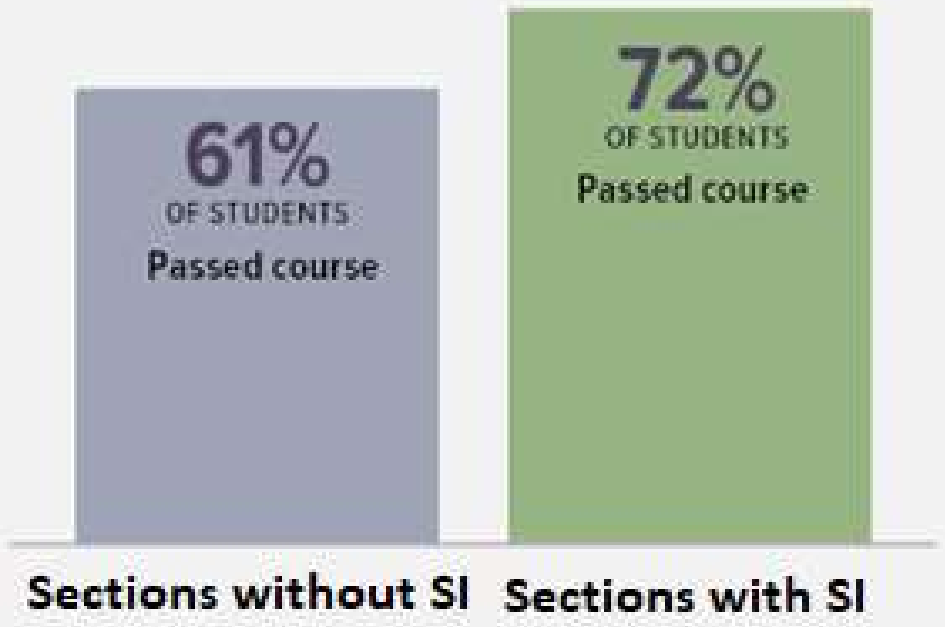
Instructor/tutor survey

- Perceived support with basic skills
- Barriers and facilitators to delivering effective support

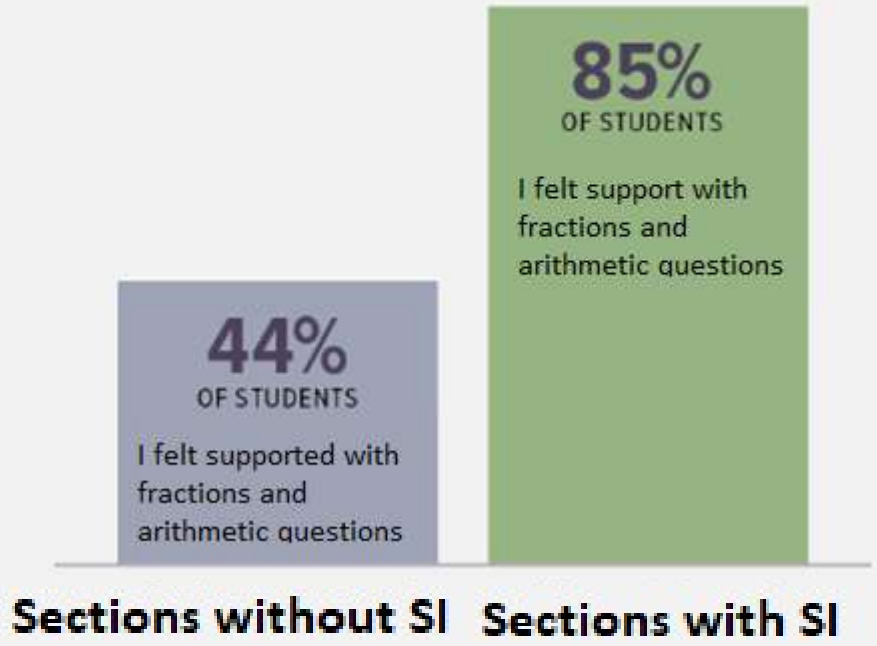
Attendance records

- Student participation in supplemental instruction

STUDY: Sections with SI saw higher pass rates for students



STUDY: Students in SI were more likely to perceive support with basic math



"I felt supported by my instructor(s) when I had questions about concepts like fractions and arithmetic."

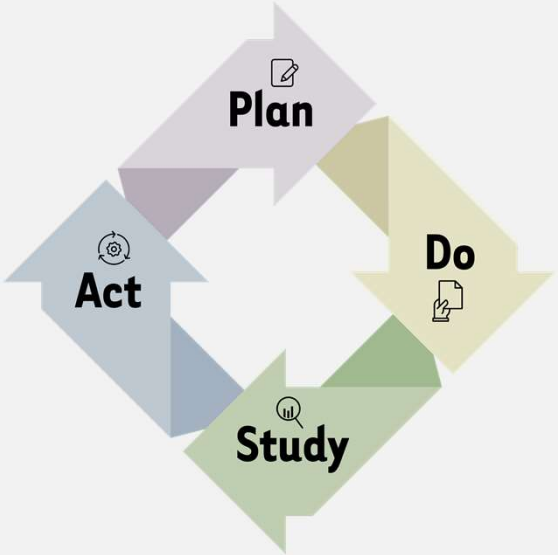
Other data suggested some areas for ongoing improvement

- 15% of lower-scoring students attend few or no SI sessions
- Tutors reported that more support around which concepts to cover each week would be helpful
- Instructors were interested in identifying strategies for involving tutors in non-disruptive ways during class sessions

ACT: The college chooses a course of action

Improvements in program delivery: College plans to scale supplemental instruction to all algebra corequisites

Later continuous improvement cycles: Assess whether instructors are following through, identify barriers to SI, and develop strategies to overcome barriers



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Some Texas colleges have engaged in planning for continuous improvement

- In June 2019, 30 TX colleges participated in coaching to develop a continuous improvement plan
  - Identified a problem of practice and something that would be tested in a rapid improvement cycle
  - Developed a plan for carrying the work out in the 2019-20 academic year
- We continued to offer support as needed through February 2020

Colleges focused on a range of issues

- Improving marketing, advising, and placement
  - Building awareness, increasing enrollment (5 colleges)
  - Getting students into the right courses (4 colleges)
- Improving models
  - Aligning instruction in 2-instructor models (3 colleges)
  - Determining which models are most effective (2 colleges)
  - Streamlining models across campuses, instructors (2 colleges)
  - Streamlining content within course (1 college)
  - Increasing participation in supplemental instruction/tutoring (1 college)
- Better supporting certain groups of students
  - Lower-scoring students (7 colleges)
  - Repeaters (1 college)
  - All struggling students (3 colleges)

What problems of practice related to corequisites would you want to focus on?

Take 1-2 minutes to think about the issues your college has been facing with corequisites:

What problem of practice might you want to address through a PDSA cycle?

Remember: Keep it "bite-sized"; make sure it is something the institution has leverage over

One example of rapid-cycle improvement in Texas

Problem of practice	Alignment of instruction/support across two-instructor models
Cycle objective	Test out requirements to use new calendar for coordination, have weekly calls, use Blackboard
Key activities	• Rolled out the new requirements to all two-instructor pairs • Conducted conference calls with pairs several times during the semester • Compared gaps in pass rates between one-instructor and two-instructor corequisites
Findings and next steps	• Did not see reduction in gaps but decided to retain conference calls because they were useful • Decided to focus on a new issue in the next cycle (assessing effectiveness of ALEKS-based models vs other models)

A second example of rapid-cycle improvement in Texas

Problem of practice	Improving academic support to students who are struggling
Cycle objective	Test out supplemental instruction
Key activities	• Hired tutors • Collected surveys from students and interviewed tutors • Analyzed pass rates
Findings and next steps	• Tutors were perceived as helpful in some cases • Pass rates remained low • Some challenges with implementation (e.g., tutors perceived as being disruptive sometimes) • Refining supplemental instruction to figure out how to allow for one-on-one time with tutor without disrupting class time

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Continuous improvement requires time, dedication, and buy-in

- Staying focused on a single, relatively narrow issue until it is addressed
- A commitment to collaborative and practitioner-driven decision-making (and the additional time this requires)
- Regular meetings by a team/task force with broad representation
- Additional data collection from staff and students
- The ability to make change quickly

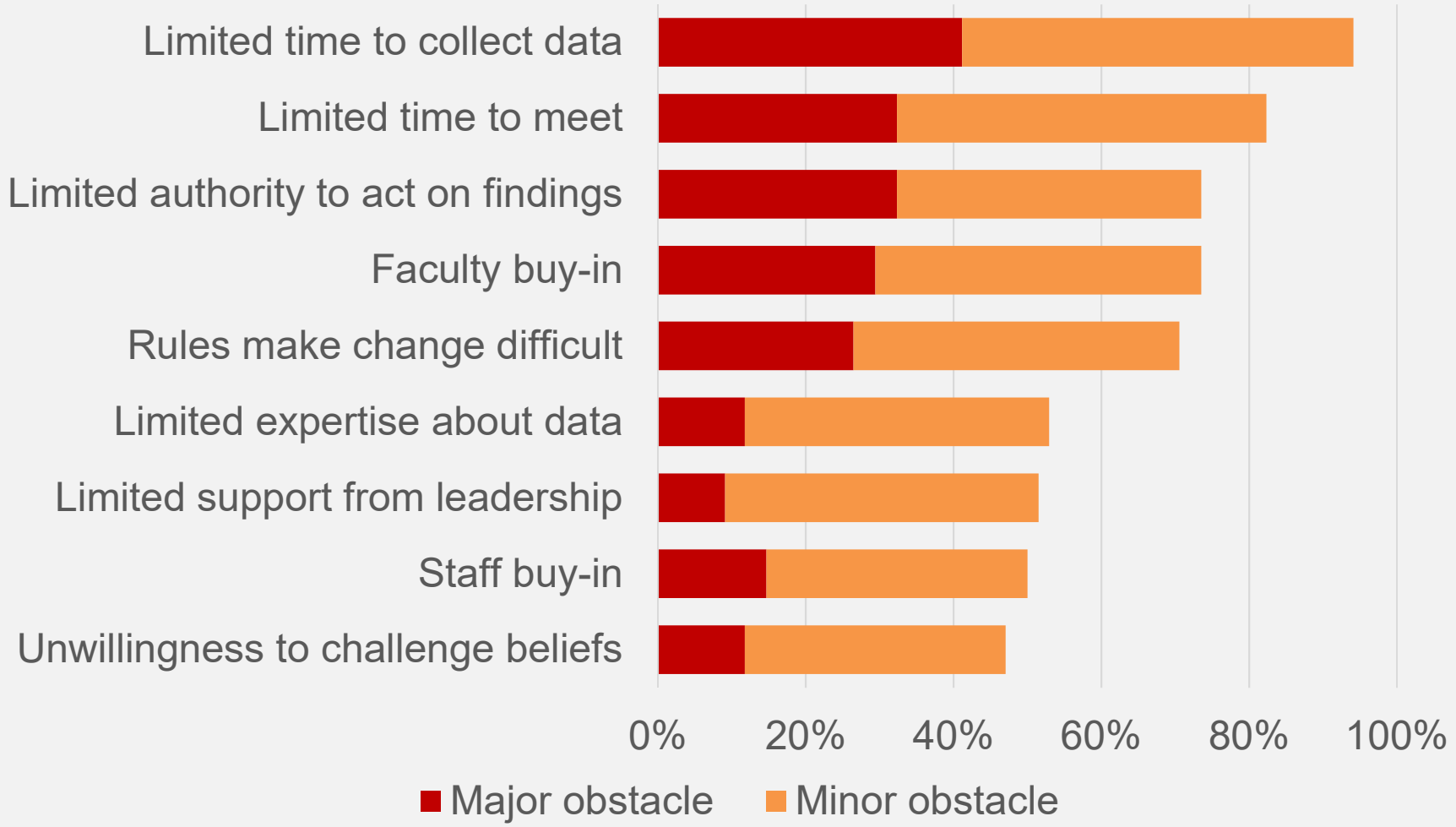
There can be many barriers to continuous improvement

- ~~Lack of knowledge about how to carry out rapid cycles of improvement~~
- Limited support from leadership
- Lack of buy-in from faculty or other college staff
- Limited time for the team to meet frequently
- Data collection challenges: little time, little expertise
- Unwillingness of the team to challenge existing beliefs
- Limited authority of the team to act on findings from the process
- Extensive rules, requirements and processes that make change difficult

Poll: Anticipated obstacles at your institution

Which obstacles to carrying out continuous improvement around corequisites do you anticipate at your institution?

Colleges from the June conference also weighed in on the biggest obstacles



Activity: Finding solutions to common barriers to continuous improvement

- Scenario: You are the lead for continuous improvement at your institution, and you need to deal with one of these challenges
- Activity
  - We will break out into 3 groups within Zoom, each group will tackle one of the challenges
  - 8 mins to brainstorm as a group on strategies for overcoming the barrier
  - Choose 1 person to report back on 2-3 strategies you discussed

Activity: Challenges for the three breakout groups

- Challenge 1: “We don’t have time to be meeting on a weekly basis for months just to address one small issue with corequisites.”
- Challenge 2: “Instructors and students are too busy and we don’t want to bother them by collecting data.”
- Challenge 3: “It’s so hard to collaborate with Department X, it seems like they don’t want to admit there is room for improvement.”

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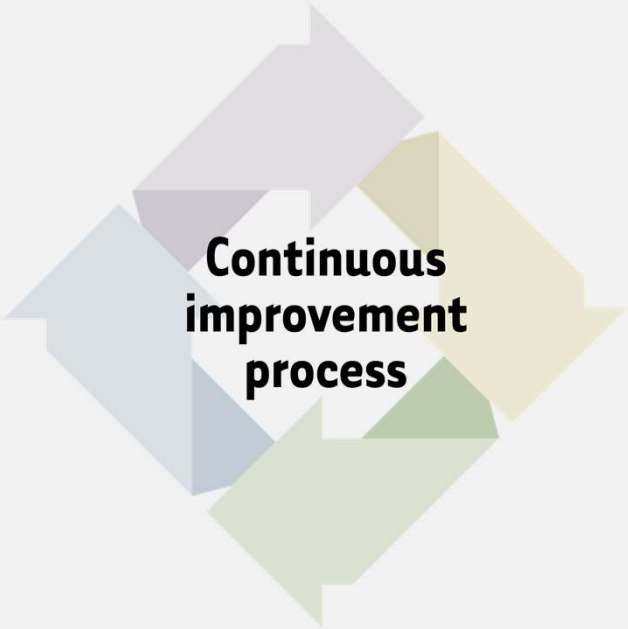
Strategies to overcome barriers

Barrier	Strategies to Overcome Barrier
Lack of time to meet	Make the work high-profile and demonstrate the value; explicitly carve out time and resources for the work; staff core team with people who value the work; shorten length of cycles
Collecting data is too tough	Be thoughtful about data collected, make data collection short (1-3 questions), piggyback on existing resources, develop expedited process for approval, communicate purpose and value of data collection
Lack of buy-in among certain groups	Ensure that the process is transparent and involves the group throughout, allow group to define POP and objective, inform staff about purpose of the efforts, engage in team-building
Don't have authority to make change	Involve individuals who do have authority on the team; choose POPs and objectives that the team has authority of; collect and document evidence to support the need for change; engage decision-makers early and often

Questions?



Toolkit available at www.rand.org

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