

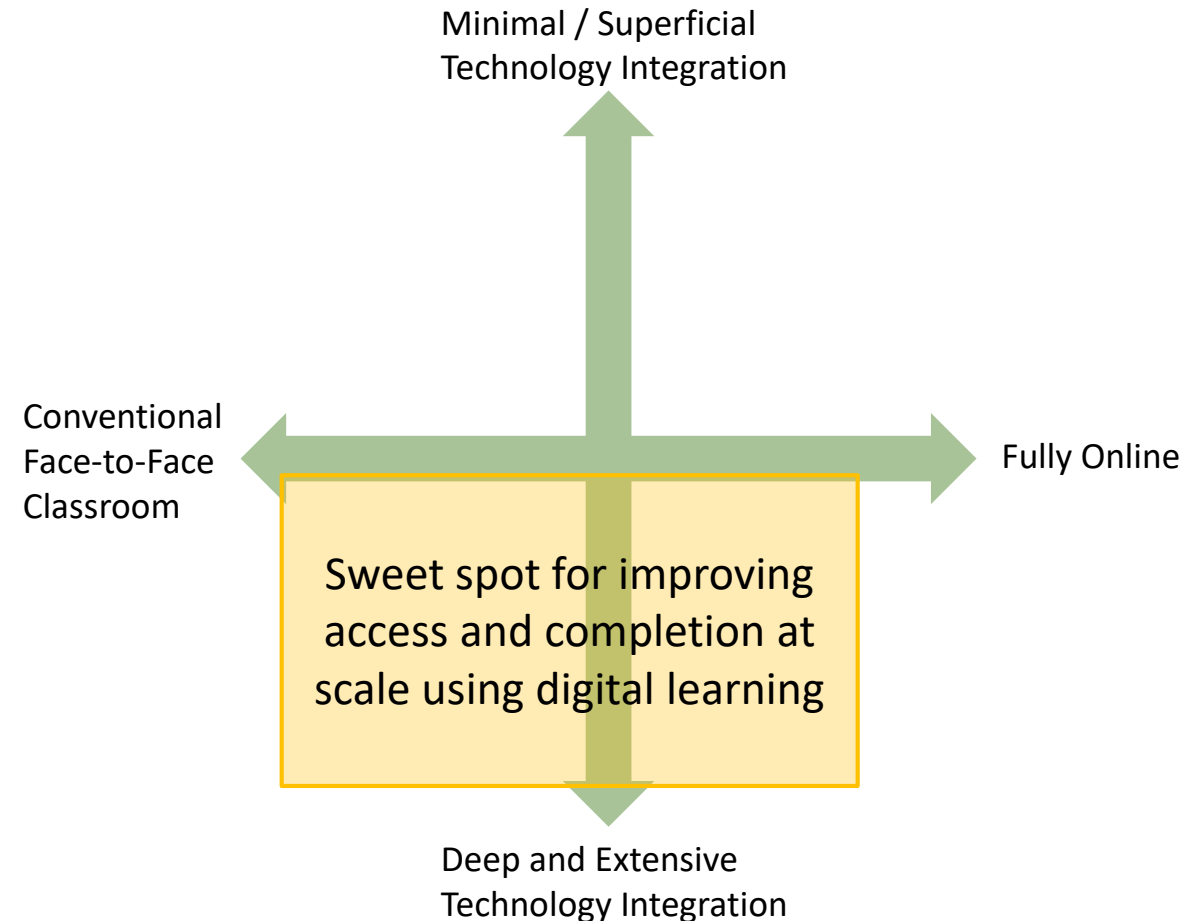
# *BUILDING A SCALABLE APPROACH TO IMPROVING GATEWAY COURSES LEVERAGING ADAPTIVE COURSEWARE*

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# Why Focus on Digital Learning in Gateway Courses?



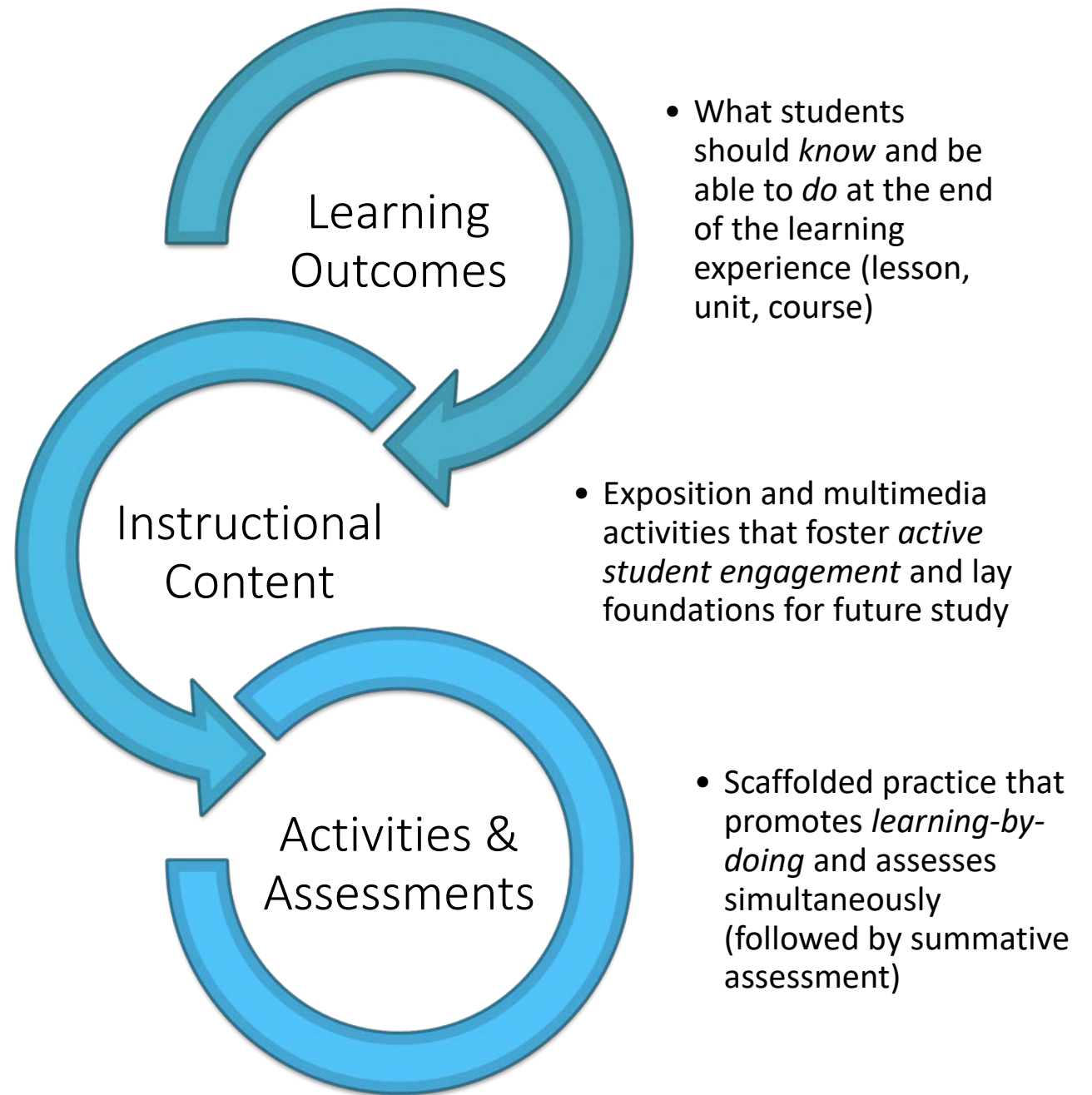
# What is Adaptive Learning?

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“As an approach to creating a personalized learning experience for students, adaptive learning takes a sophisticated, data-driven, and in some cases, non-linear approach to instruction and remediation, adjusting to a learner’s interactions and demonstrated performance level and subsequently anticipating what types of content and resources learners’ need at a specific point in time to make progress.”

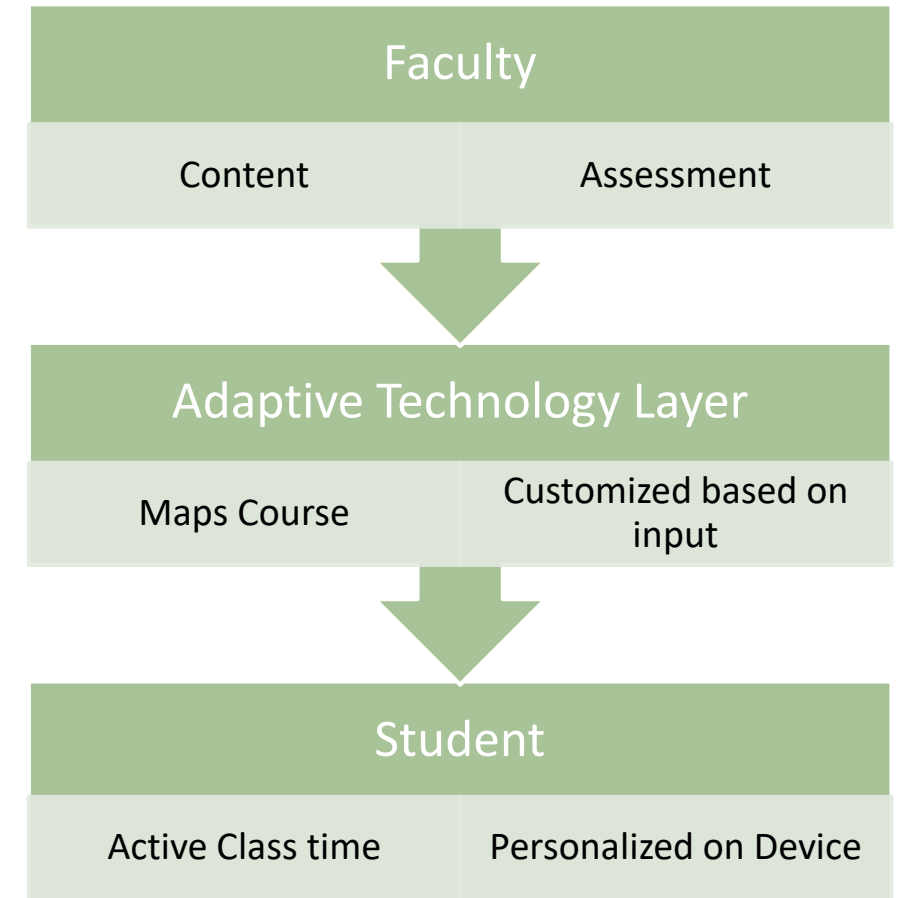
Source: Tyton Partners, "Learning to Adapt: Understanding the Adaptive Learning Supplier Landscape," April 2013.

Well designed adaptive learning experiences (and products) have common attributes and approaches.





We are focused on the thoughtful integration of instructional technology in face-to-face and blended academic course or program environments. This is where we believe there is the greatest potential for impact on student outcomes at public universities.



# APLU Accelerating the Adoption of Adaptive Courseware Grant

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## CROSS-INSTITUTION COLLABORATION

- Targeting similar programs and courses
- Adopting from a list of approved adaptive courseware suppliers and products
- Sharing information within the cohort by campus-based program managers
- Common reporting requirements

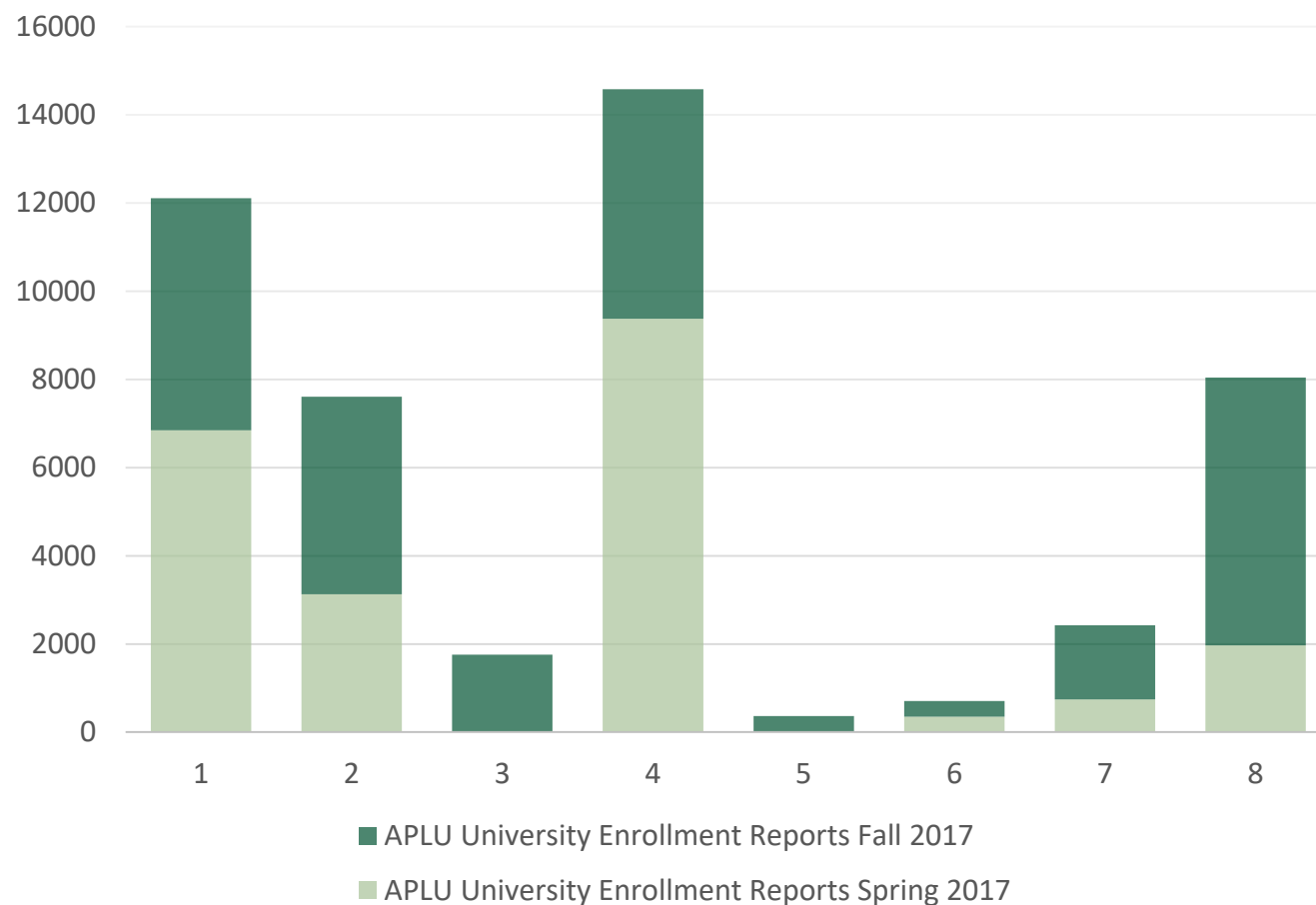
## FACULTY ENGAGEMENT METHODS

- Incentives (money, time, teaching support)
- Training and instructional design support
- Department-level adoption decisions
- Peer learning communities
- Senior leadership investment and recognition

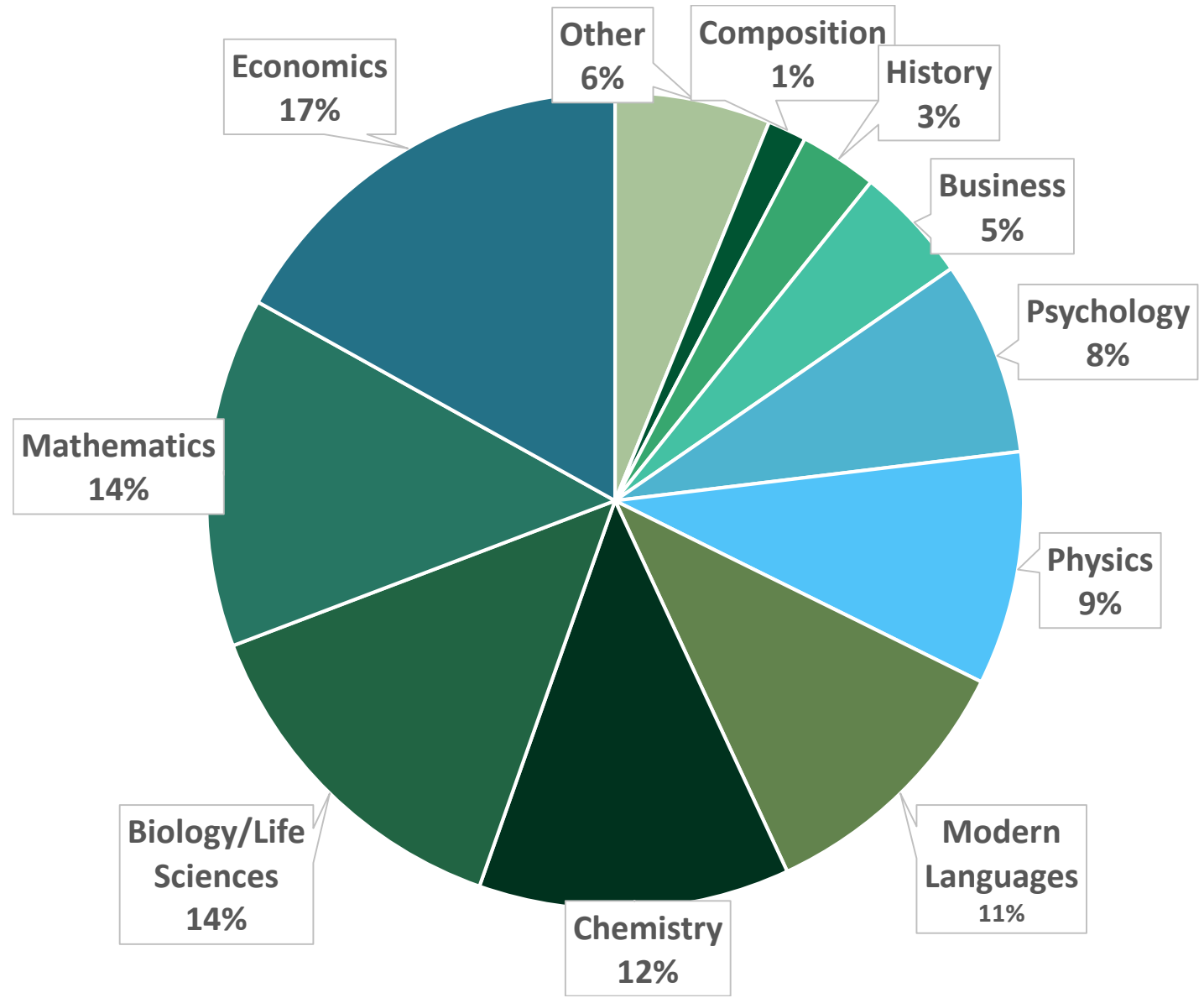


Results:  
Calendar year  
2017, eight  
universities  
produced 47,606  
enrollments

## APLU ADAPTIVE COURSEWARE ENROLLMENTS

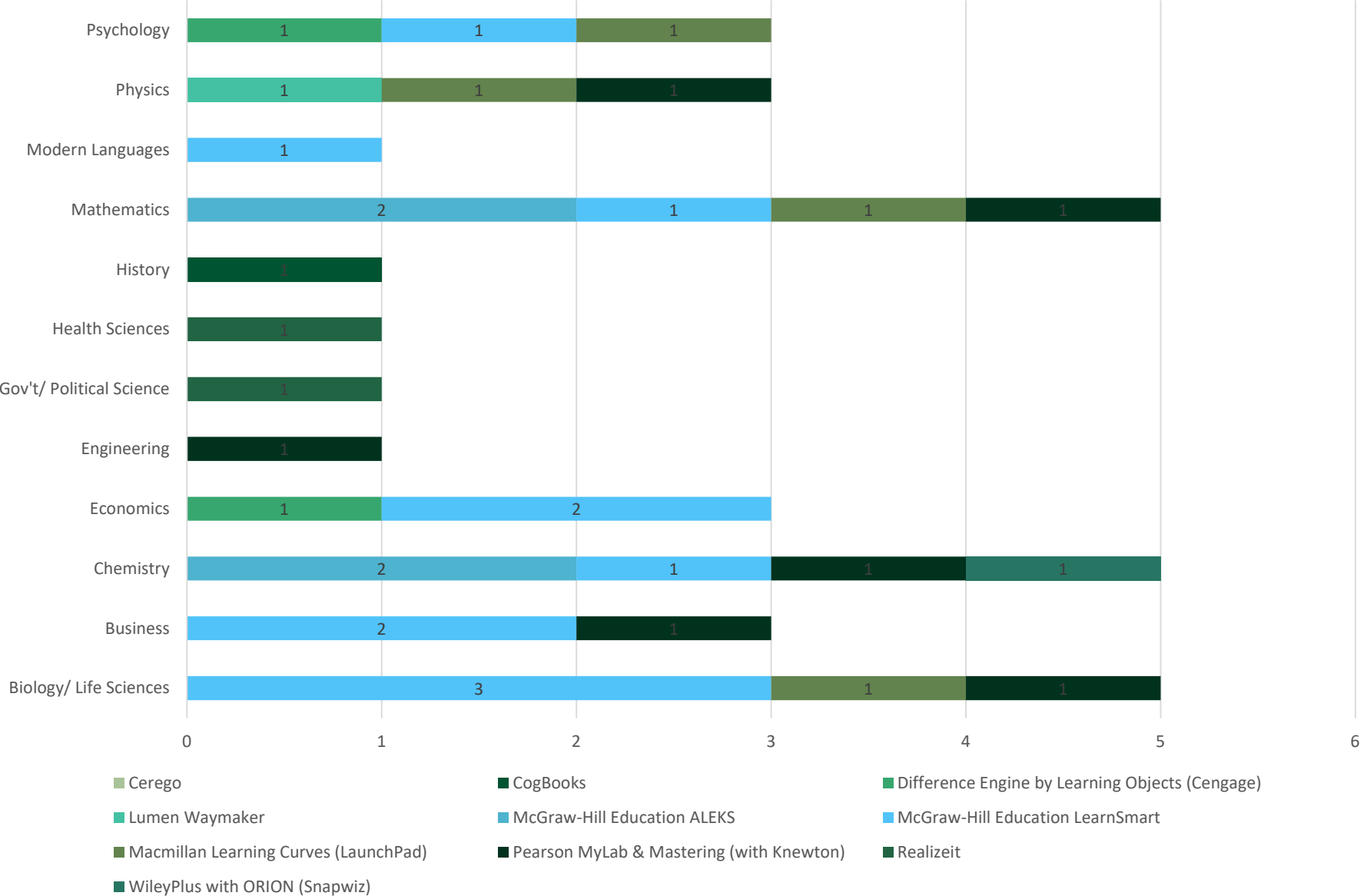


Results:  
Multiple Disciplines  
adopting  
courseware (51%  
STEM and 49%  
Humanities & Social  
Sciences)





# Courseware Usage Across APLU Grantees (12/31/17)



# Types of Adaptive Learning

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## ADAPTIVE COURSEWARE

Includes most popular courses

Limited flexibility to customize

Not all dashboards are the same

Faculty Roles



## ADAPTIVE PLATFORMS

Content Customization

Authoring

- Content
- Assessment

Redesign Process

Can Be More Time Intensive

# What about the Data?

Qualitative	Quantitative
Activities	Enrollments
How program managers spend time	Course Types (Discipline, level)
Vendor selection process	Course Outcomes (Pass Rates, DFW Rates)
Awareness Building	Segmented Course Outcomes (Pell, Minority, Gender, First-time)
Faculty Development Process	Progression
Classroom Redesign (active learning)	Retention
Challenges	Vendor Selection & Satisfaction

# University Self-Reporting

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OSU out of the gate reports improvement in student success in math and psychology

ASU through shows great improvement through continual process improvement and refinement

NAU reporting some courses improve but not every student group does as well

CSU, GSU and UL are doing controlled trials and early data is promising but implementation iteration is needed

# Success Strategies: Build from Early Improvements

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## Strategic (3)

- Decade of Student Success Initiatives as part of culture
- Shift into academic course/program improvement

## Opportunistic (3)

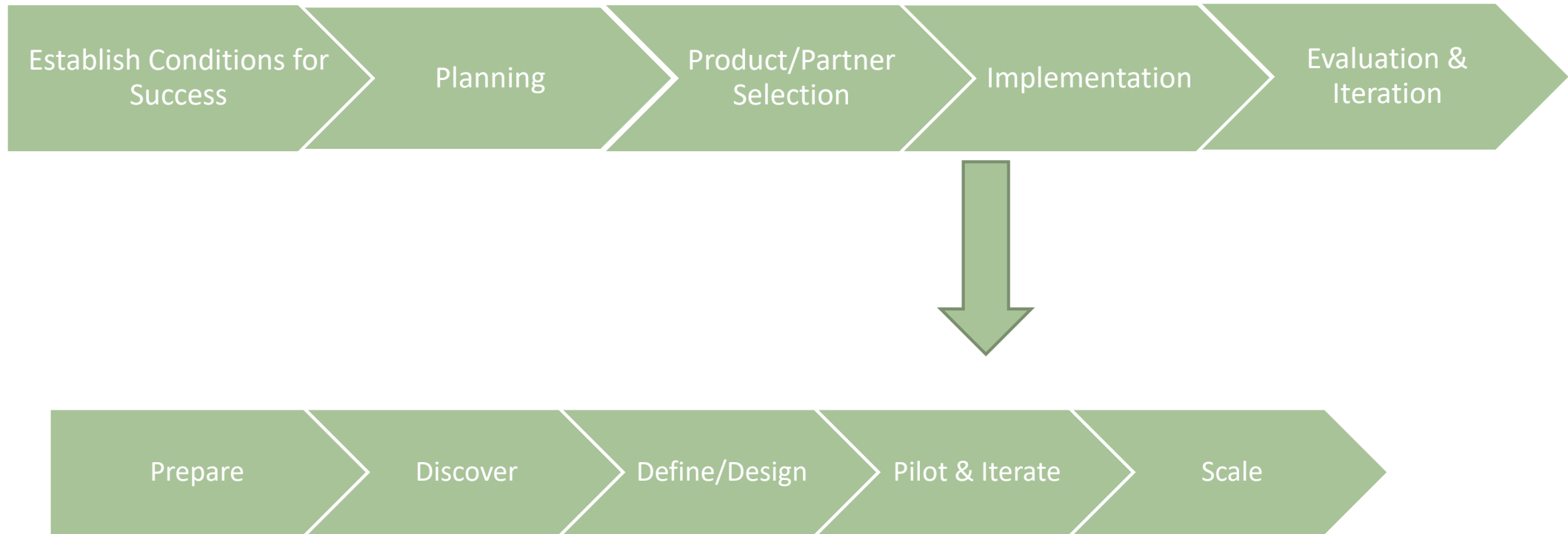
- Some success at multiple initiatives
- Faculty interest high

## Early (2)

- New culture of evidenced based interventions
- Faculty reluctance (& union concerns)
- Has strong champions

# Coming Soon: Digital Learning Solutions Network

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# **The University of Mississippi**



## **Adaptive Learning Program**



# Targets

Year 1

Department	Course	Fall, Spring, Summer Enrollment in 2014-2015	% Pell Recipients in 2014-2015	DF Rate in Fall 2015
Mathematics	Math 115 (Statistics)	1,247 Students	30.7%	21%
Chemistry	Chemistry 101	606 Students	38%	27%
Writing and Rhetoric	Writing 101	1,981 Students	25.5%	8%

Year 2

Department	Course	Fall, Spring, Summer Enrollment in 2014-2015	% Pell Recipients in 2014-2015	DF Rate in Fall 2015
Mathematics	Math 121 (Algebra)	1,175 Students	29%	27%
Psychology	Psychology 201 (Intro)	2,108 Students	27.3%	17%
Writing and Rhetoric	Writing 102	2,085 Students	24%	19%

Year 3

Department	Course	Fall, Spring, Summer Enrollment in 2014-2015	% Pell Recipients in 2014-2015	DF Rate in Fall 2015
Biology	Biology 102	1,860 Students	21.4%	22%
Chemistry	Chemistry 105	1,068 Students	25.5%	18%
Economics	Econ 202 (Micro)	1,669 Students	16.2%	12%



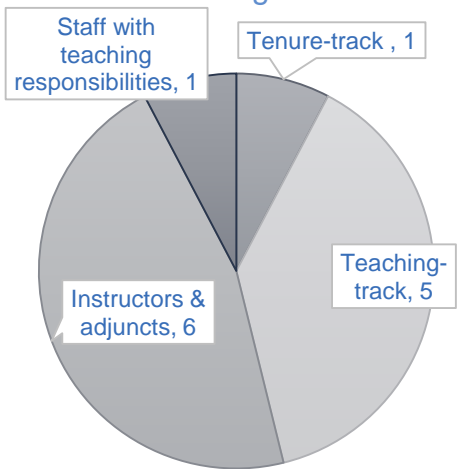


# Incentives

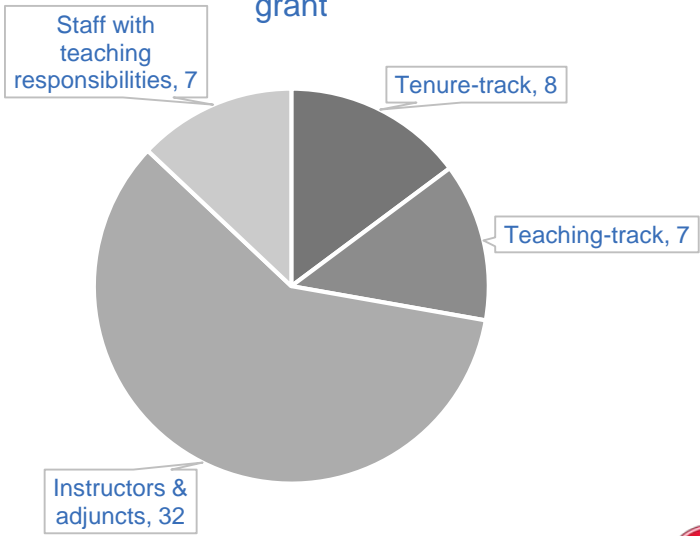
## Faculty Stipends

	Year 1	Year 2	Year 3
Category 1: Off-the-shelf course product	\$2,000.00	\$2,000.00	\$1,000.00
Category 2: Modified course product	\$3,000.00	\$2,000.00	\$1,000.00
Category 3: Full build of course	\$4,000.00	\$3,000.00	\$1,000.00

Year 1 faculty participants in APLU adaptive courseware grant

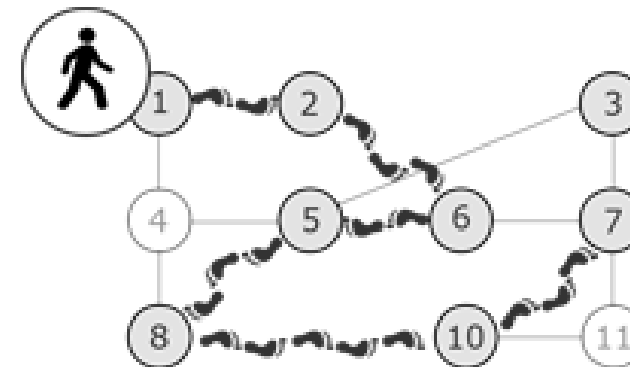
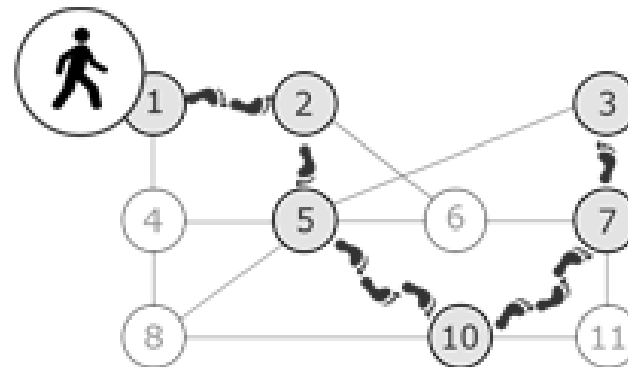
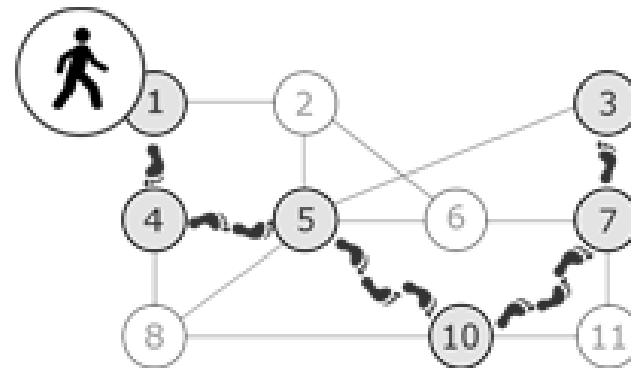


Year 2 faculty participants in APLU adaptive courseware grant

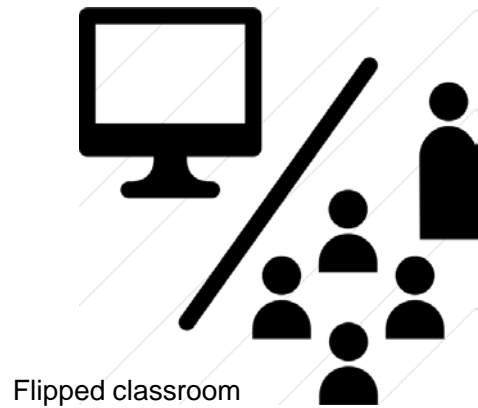


# How does adaptive courseware work?

Each student experiences a personalized learning path based on a pre-assessment, their choices in the system, and their demonstration of mastery of each learning objective.



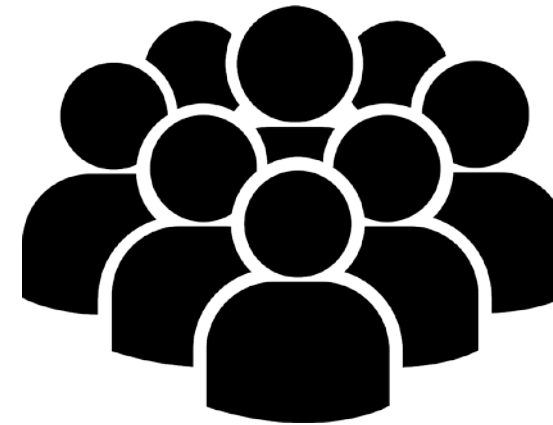
# Why use adaptive courseware in higher ed?



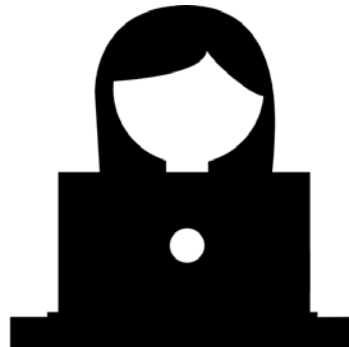
Flipped classroom



Maximizing instructor contact



Managing high enrollment classes



Student self-remediation



# The supplier landscape



## E-TEXTBOOK SUPPLEMENT

- McGraw Hill LearnSmart with Connect
- WileyPlus with Orion
- Macmillan LaunchPad with Learning Curve
- Pearson MyLabs and Mastering
- Cengage MindTap

## OER COURSES

- OLI Carnegie Mellon
- OLI Stanford
- Lumen Waymaker
- Realizeit Learning
- Cengage Open Now

## NEW BUILD COURSE

- Realizeit Learning
- Smart Sparrow
- Acrobatiq

## CUSTOMIZABLE BASE COURSE

- Lumen Waymaker
- Realizeit Learning
- Cogbooks
- Acrobatiq
- Smart Sparrow



# Our approach to adaptive learning



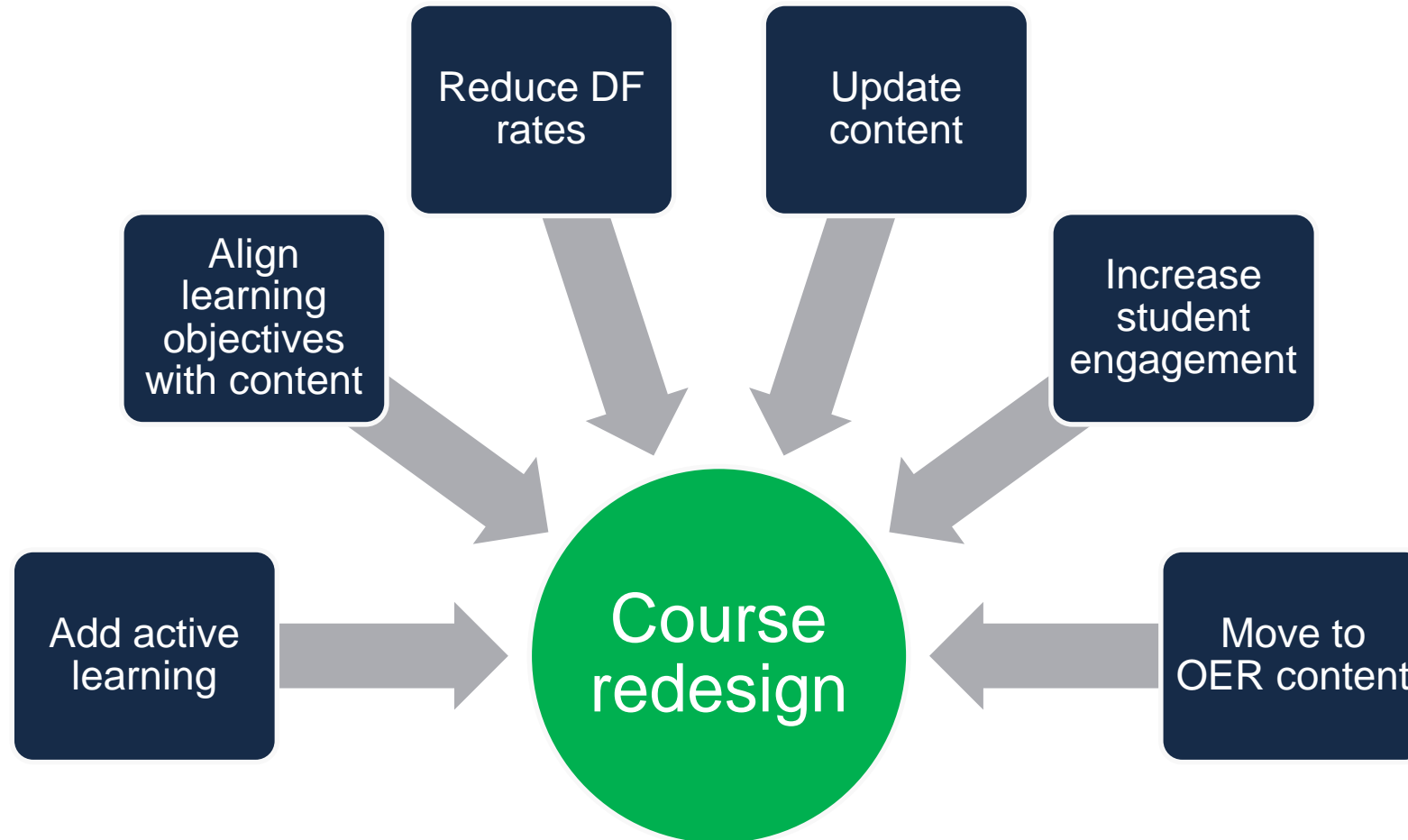
1. Identify and showcase innovative faculty
2. Seek out and support faculty who want to redesign courses
3. Shift the focus from adaptive learning to engaged learning
4. Provide faculty development
5. Execute a research agenda

# Identify and showcase innovative faculty



# Who on your campus is already using adaptive courseware?

# Seek out and support faculty who want to redesign courses



# Shift the focus from adaptive learning to engaged learning

House adaptive learning in an existing teaching and learning center or academic innovation center, or create a new program to support it.

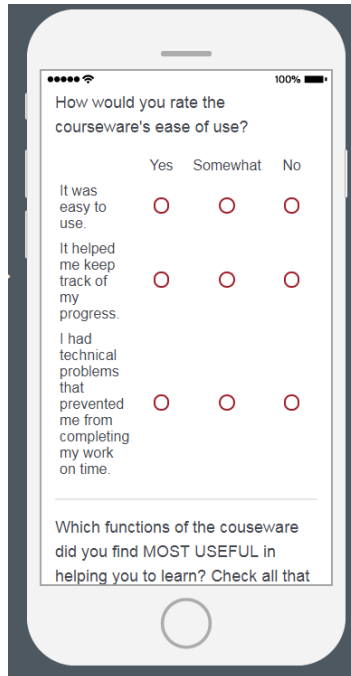


Collaborate with existing teaching and learning centers to provide faculty development programming emphasizing active learning and flipped classroom strategies.



# Execute a research agenda

Qualitative research on student perception of learning with adaptive courseware.



How would you rate the courseware's ease of use?

	Yes	Somewhat	No
It was easy to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It helped me keep track of my progress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had technical problems that prevented me from completing my work on time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which functions of the courseware did you find MOST USEFUL in helping you to learn? Check all that



The University of Mississippi  
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Division of Research Integrity and Compliance - Institutional Review Board  
100 Barr Hall - University, MS 38677  
[irb@olemiss.edu](mailto:irb@olemiss.edu)

**APPLICATION TO CONDUCT RESEARCH WITH HUMAN SUBJECTS**  
~ Instructions ~

Quantitative research comparing student grades in classes utilizing adaptive tools and those not utilizing adaptive tools.

# Questions?

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