moving lives forward

Online and Hybrid Learning:
Instructional Methods that Affect Learning

Lauren Margulieux, Assistant Professor

Department of Learning Sciences, Georgia State University

Research on Hybrid Learning

Mixed Instruction Courses

Face-to-face and online components
- Hybrid
- Blended
- Flipped
- Inverted
- Supplemental
- Replacement

Potential to improve learning OR reduce costs
- Fewer limitations
  - Space
  - Pace
  - Time

Early State of Research

Support for mixed instruction is inconsistent

Inconsistent classifications of courses
- Difficult to find themes in research
- Difficult to meaningfully discuss instructional methods
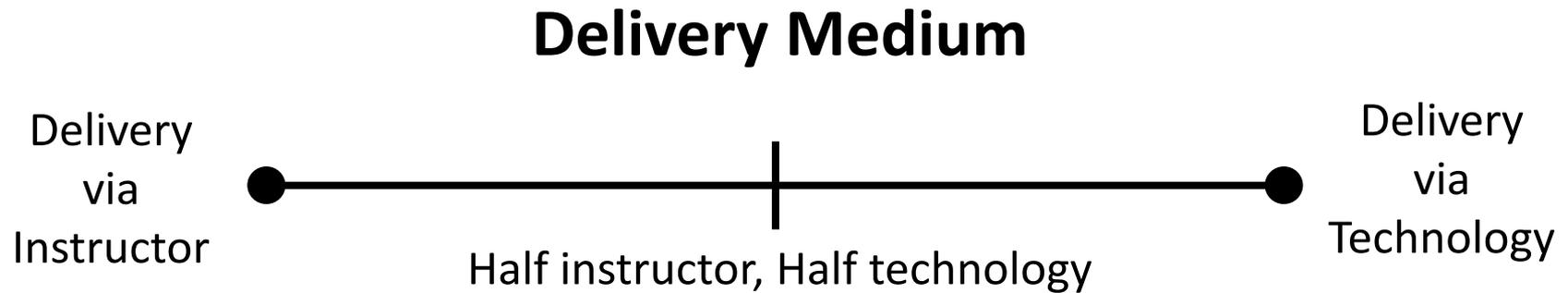- Difficult to advance research and practice

Need meaningful classifications

Creating the Taxonomy

Previous definitions of terms

Common dimensions of definitions
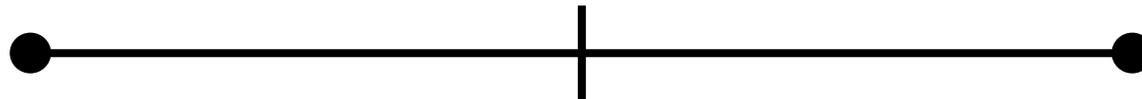- Delivery Medium
- Instruction Type
- Synchronicity

Taxonomy Dimensions

Delivery Medium

Delivery
via
Instructor

Delivery
via
Technology

Half instructor, Half technology

Taxonomy Dimensions

Instruction Type

Receiving
Content

Half reception, Half application

Applying
Content

Taxonomy Structure

Delivery Medium

Delivery via Instructor ●━━━━━━━┃━━━━━━━● Delivery via Technology

Half instructor, Half technology

Instruction Type

Receiving Content ●━━━━━━━┃━━━━━━━● Applying Content

Half reception, Half application
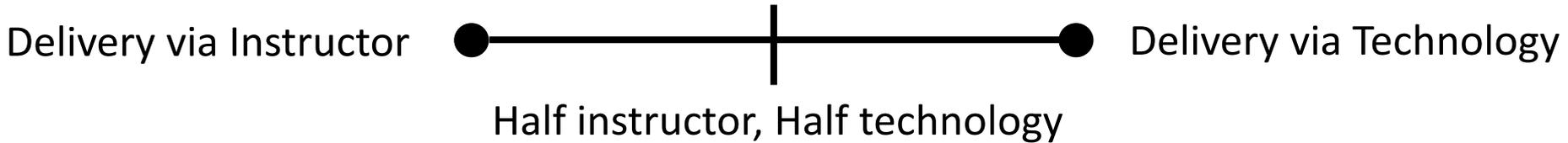
Fundamental Instructional Experiences

Delivery via Instructor

Receiving Content

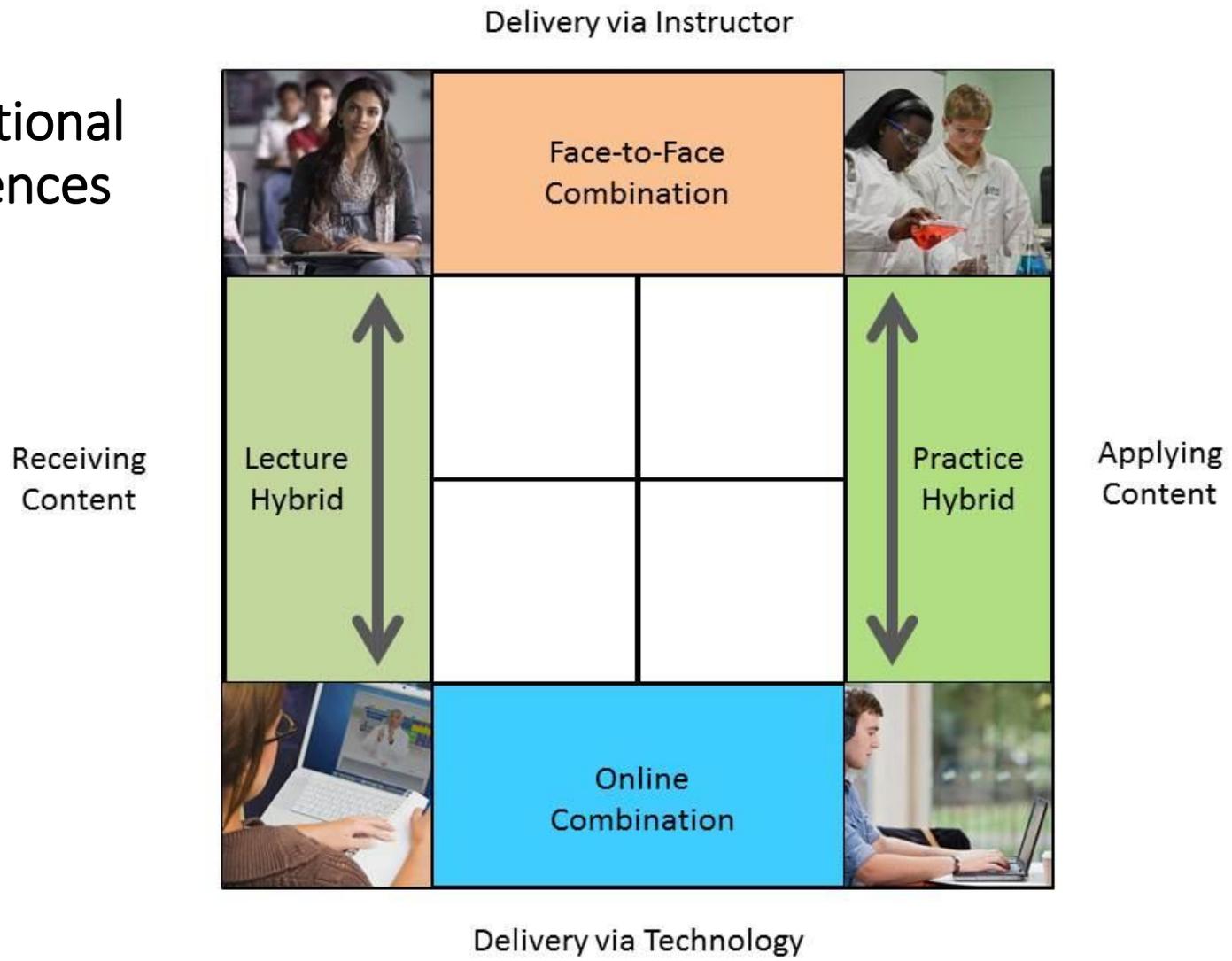Applying Content

Instructor-transmitted

Instructor-mediated

Technology-transmitted

Technology-mediated
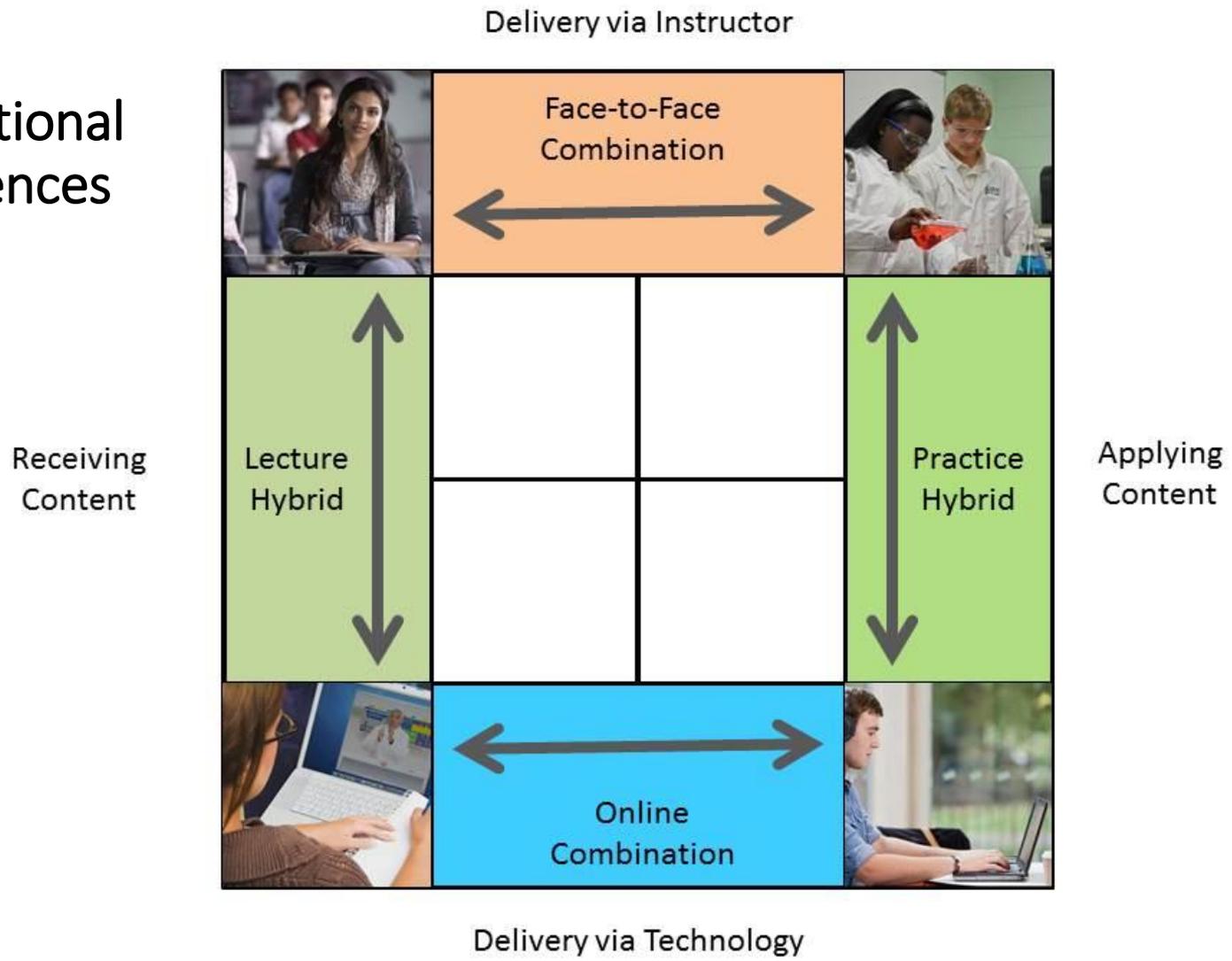
Delivery via Technology

Paired Instructional Experiences

Paired Instructional Experiences
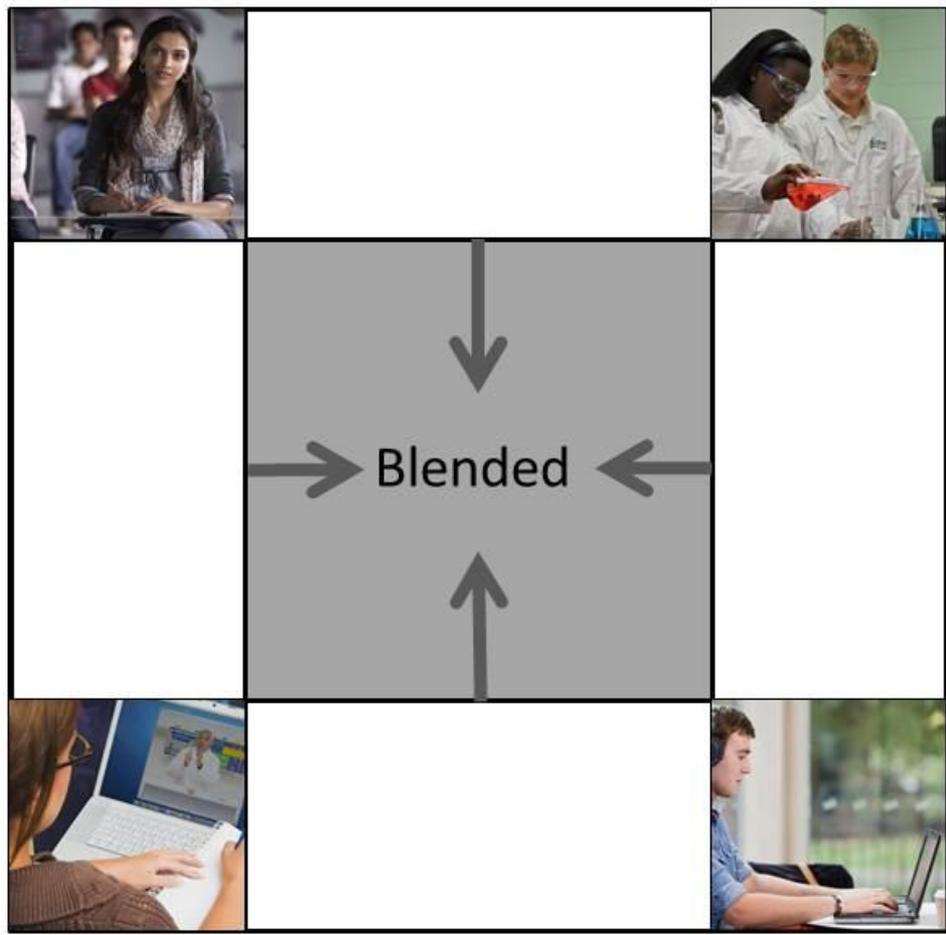

Delivery via Instructor

Face-to-Face Combination

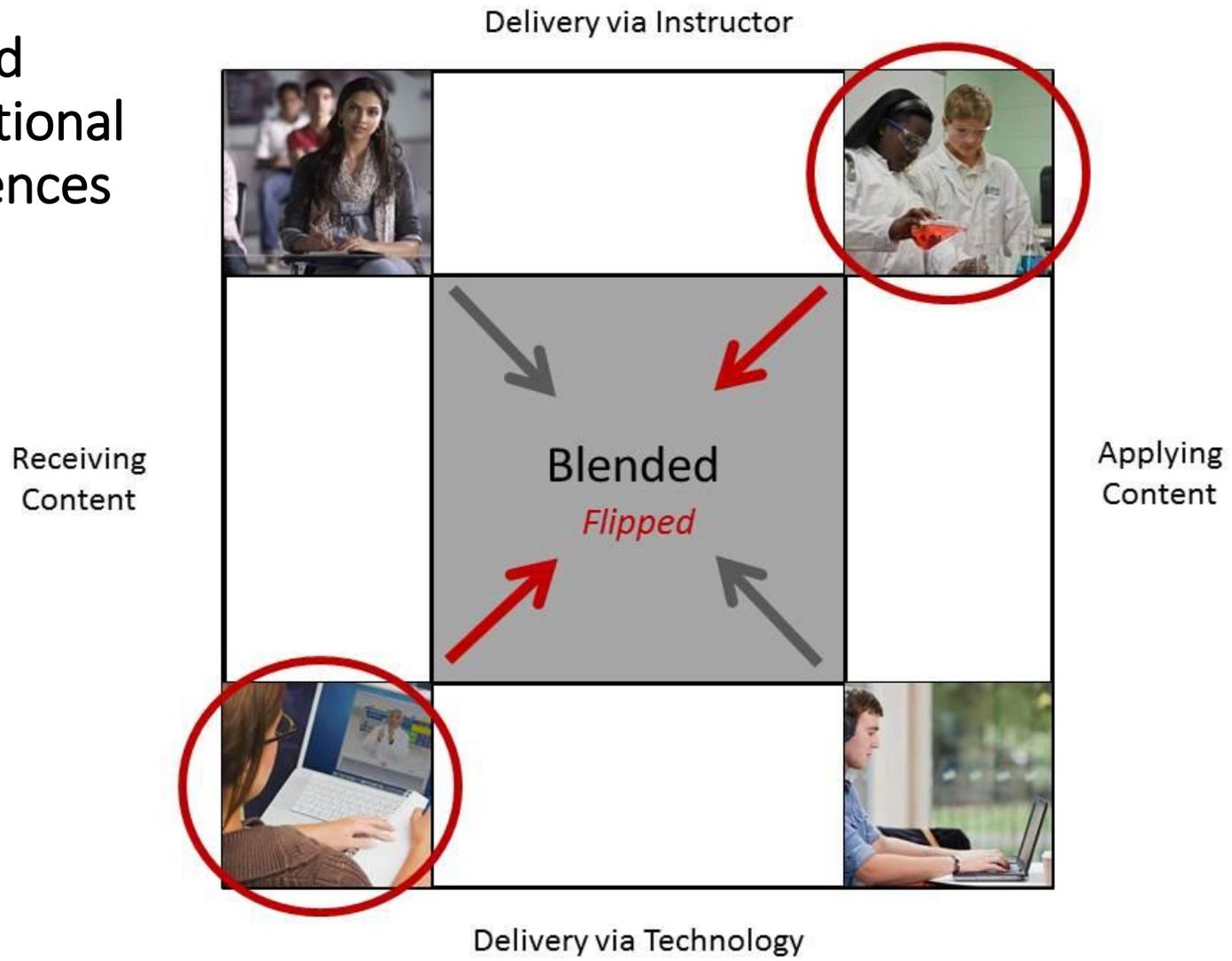Receiving Content · Lecture Hybrid

Practice Hybrid · Applying Content

Online Combination

Delivery via Technology

Blended Instructional Experiences

Delivery via Instructor

Receiving Content

Blended

Applying Content

Delivery via Technology

Blended Instructional Experiences

Delivery via Instructor

Receiving Content

Blended
Flipped

Applying Content

Delivery via Technology

Blended Instructional Experiences

Delivery via Instructor

Receiving Content

Blended
Supplemental

Applying Content

Delivery via Technology

Blended Instructional Experiences

Delivery via Instructor

Receiving Content

Blended

Replacement
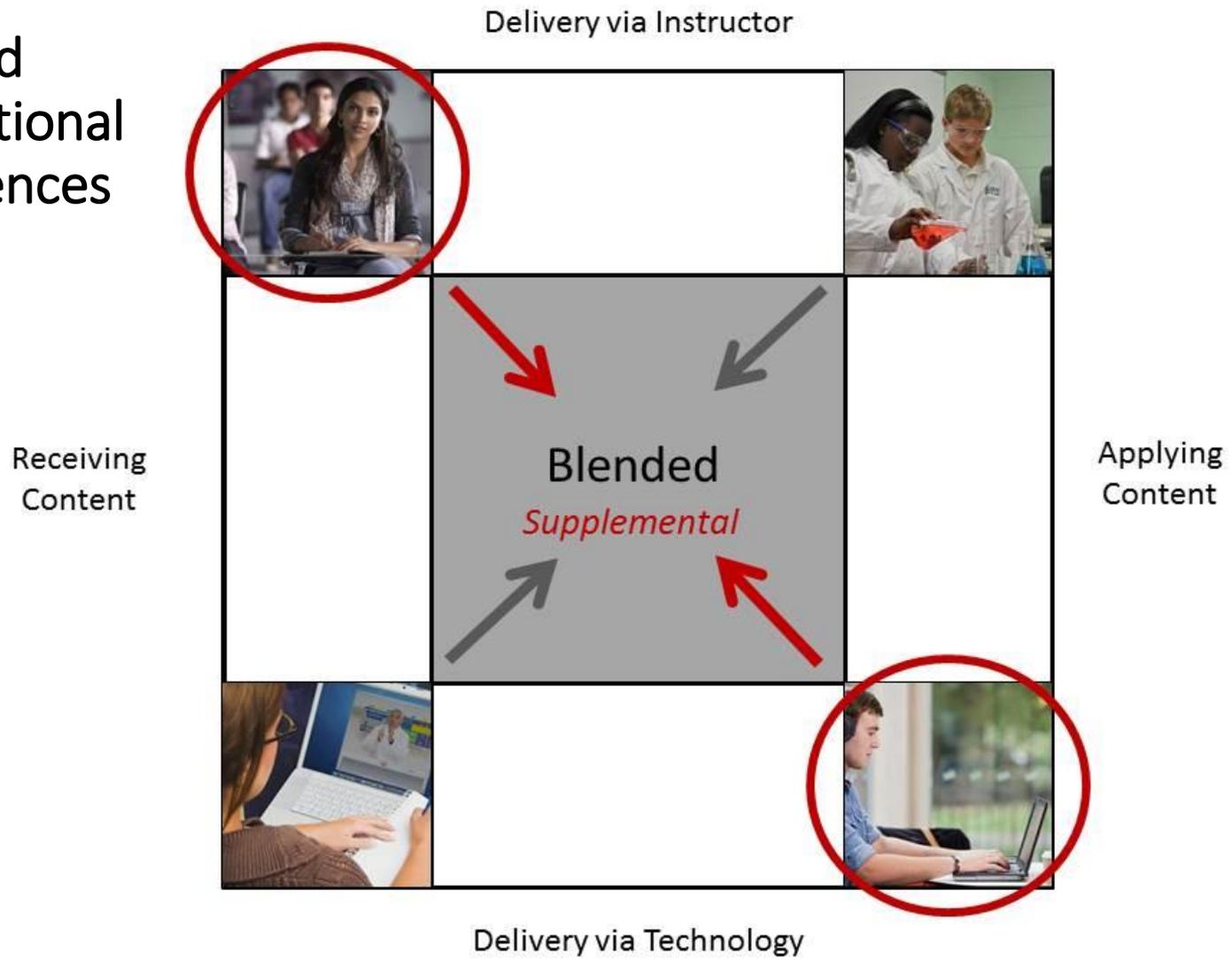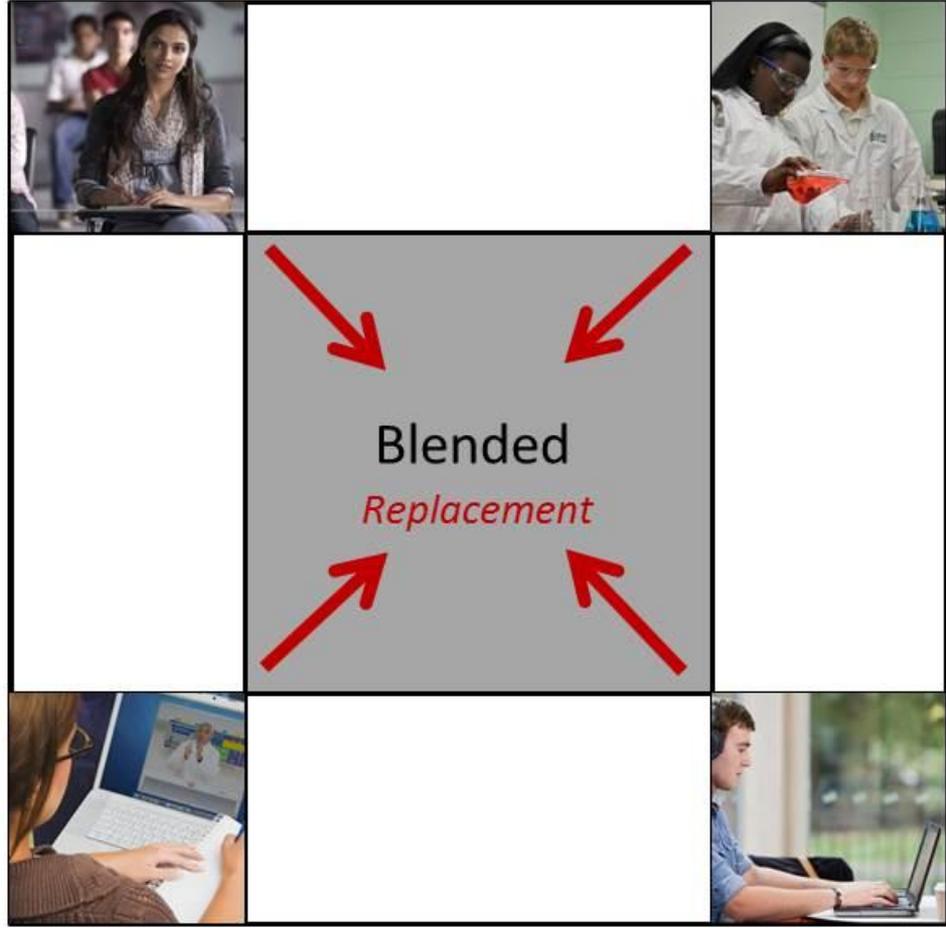
Applying Content

Delivery via Technology

MIX Taxonomy

Delivery via Instructor

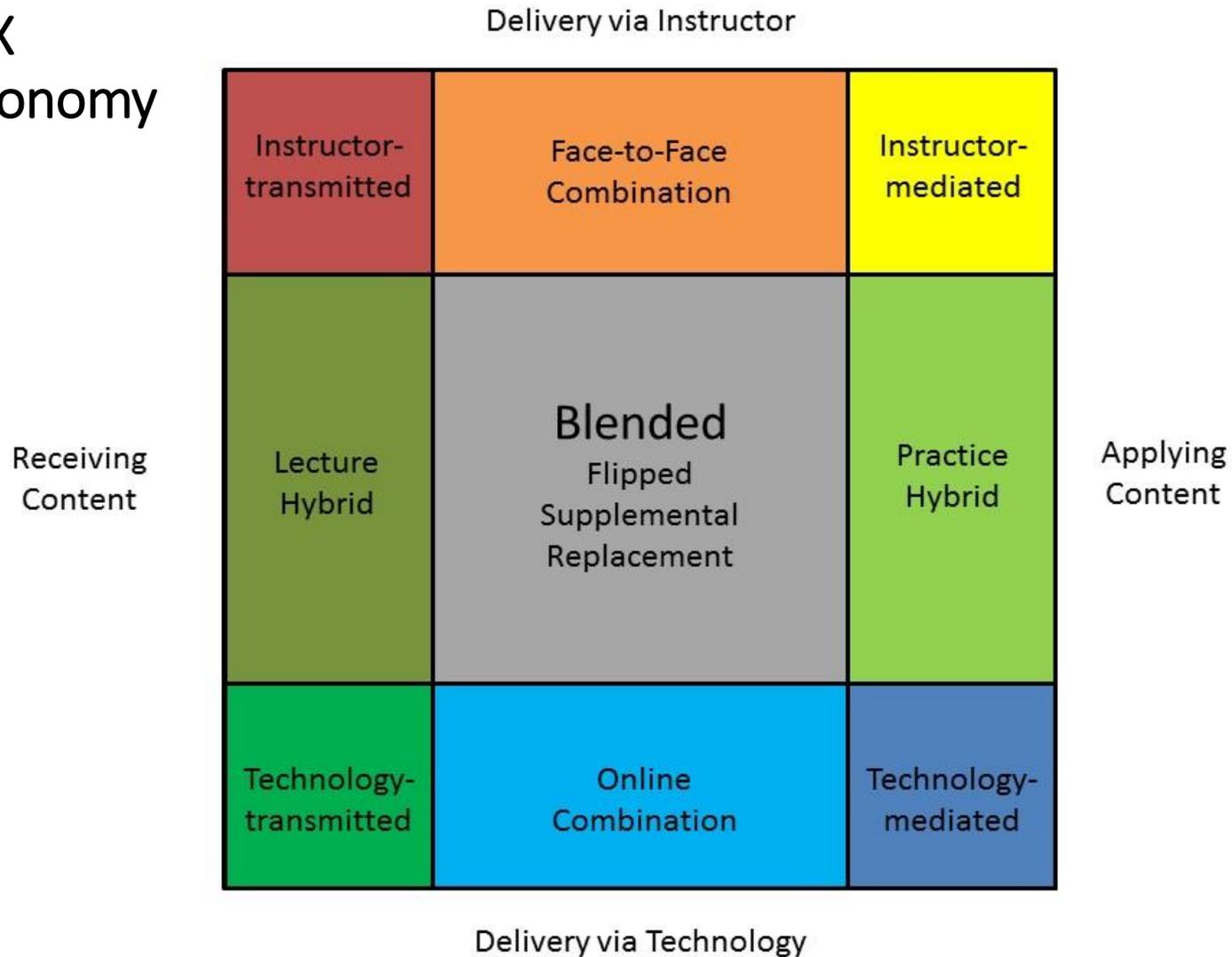|		
Instructor-transmitted	Face-to-Face Combination	Instructor-mediated
Lecture Hybrid	**Blended** Flipped Supplemental Replacement	Practice Hybrid
Technology-transmitted	Online Combination	Technology-mediated

Receiving Content

Applying Content

Delivery via Technology

Analysis

Methods

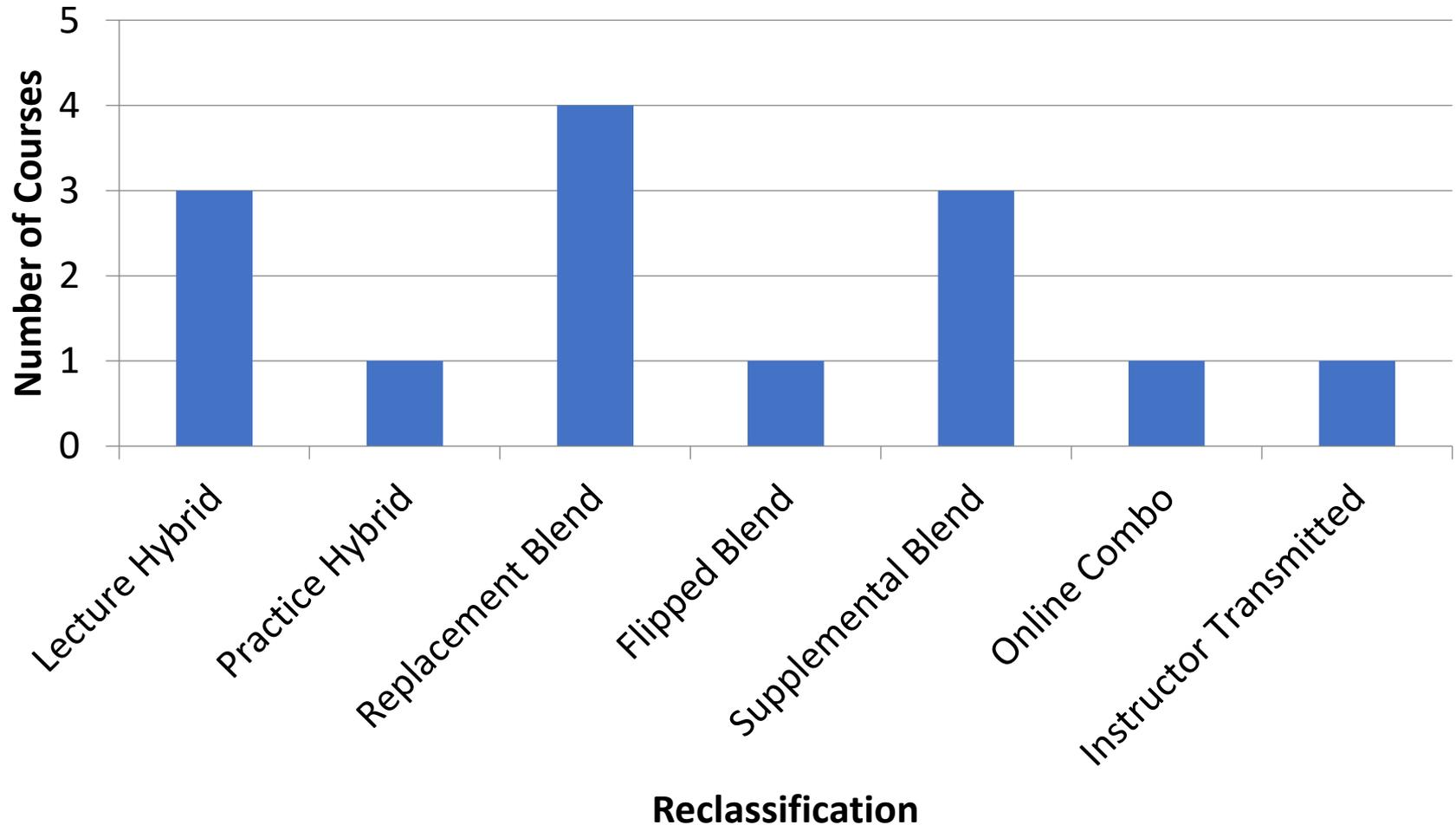Keywords: hybrid, blended, flipped, or inverted

- Journals from 2000-2015
- Education databases and Google scholar
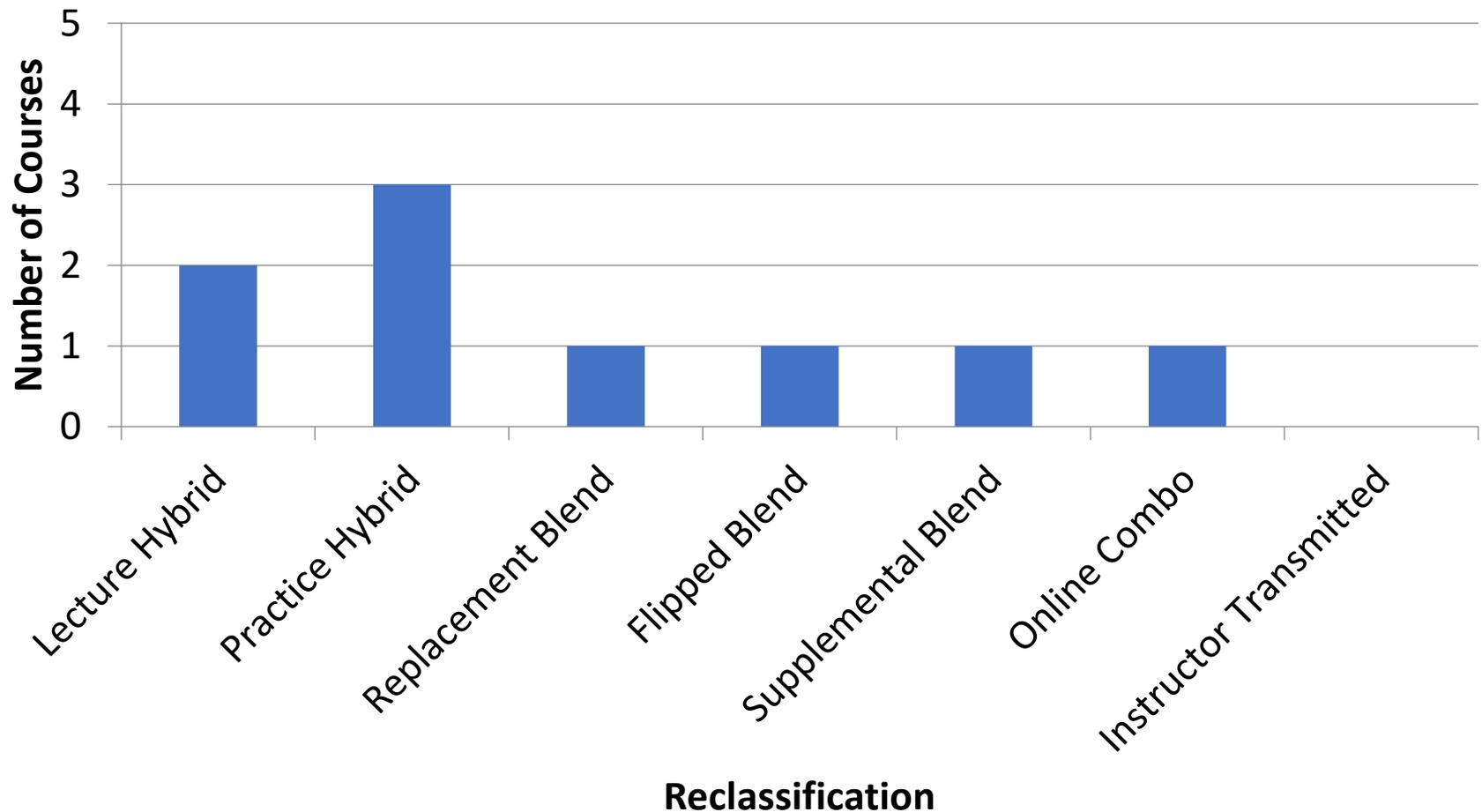
Include quasi-experimental research

- Included control group (traditionally taught class)
- Measured quantitative learning outcomes
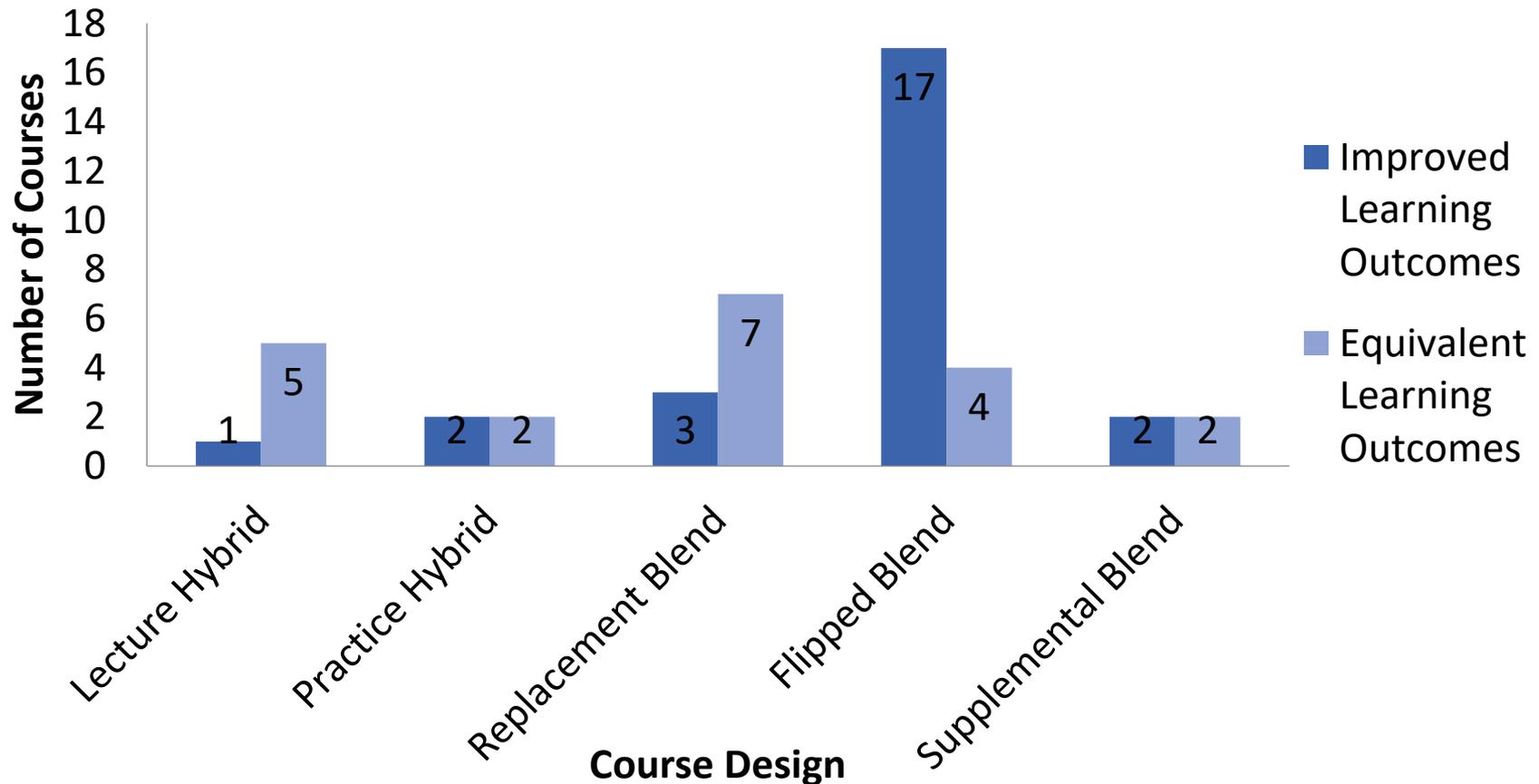- Higher education courses for credit

N = 49

Reclassified Hybrid Research

Reclassified Blended Research

Learning Outcomes of Mixed Instruction

How Courses Changed

Moved instruction online

- 19 changed only delivery medium
  - 15 (79%) had equivalent learning outcomes

Time in class

- 22 reduced time in class
  - 18 (82%) had equivalent learning outcomes
- 27 maintained time in class
  - 23 (85%) improved learning outcomes

How Courses Changed

Added feedback during content application

- 30 added feedback in class
    - 23 (77%) improved learning outcomes
    - 23 out of 26 (88%) if feedback was new element

Areas of Disagreement

- Face-to-face lectures in flipped courses

- Feedback from technology

- Continuing application activities online

But what if I can teach online only?

The Foundations

- Align learning objectives, instruction, activities, assignments, and assessments

- Use good equipment
  - Headphones to avoid echo
  - A good microphone to improve clarity and reduce background noise

- Be consistent in disseminating information
  - There's a higher barrier to asking questions

- Highlight important points verbally and visually

Promoting Social Learning

- Use video when talking with students whenever possible

- Create ways for students to talk with each other
  - Discussions (though not necessarily require responses)
  - Something that you can't see
  - Provide feedback on assignments, get help during assignments
  - Breakout rooms for small group work (though be wary of graded group work)

Course Design

- If students never met in-person, do an icebreaker activity

- If students are new to online learning, short and frequent assignments provide more information about how they are doing

- Quick feedback on assignments increases instructor presence, even if it's just "Good job"

- Try different media (video vs. audio, sync vs. async)
  - More options available than face-to-face

Thank You!

Email: lmargulieux@gsu.edu