

Oregon State University Ecampus Research Unit

Critical Review: The Effect of Synchronous Instructor Presence on Student Learning

QM Research Online Conference 2025



Research Team



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About the Ecampus Research Unit

ecampus.oregonstate.edu/research



Original Research in Online Higher Education



Support for Online Education Research



Collaborative Studies and Programs

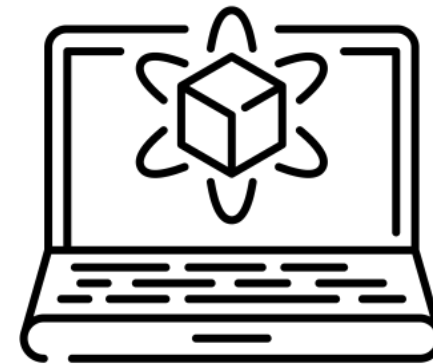
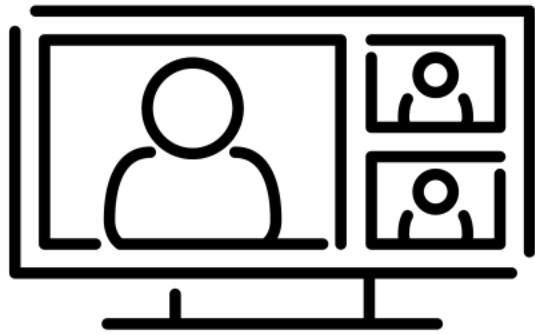


Research Literacy Tools

Research Seminars Program: Meta-Analysis

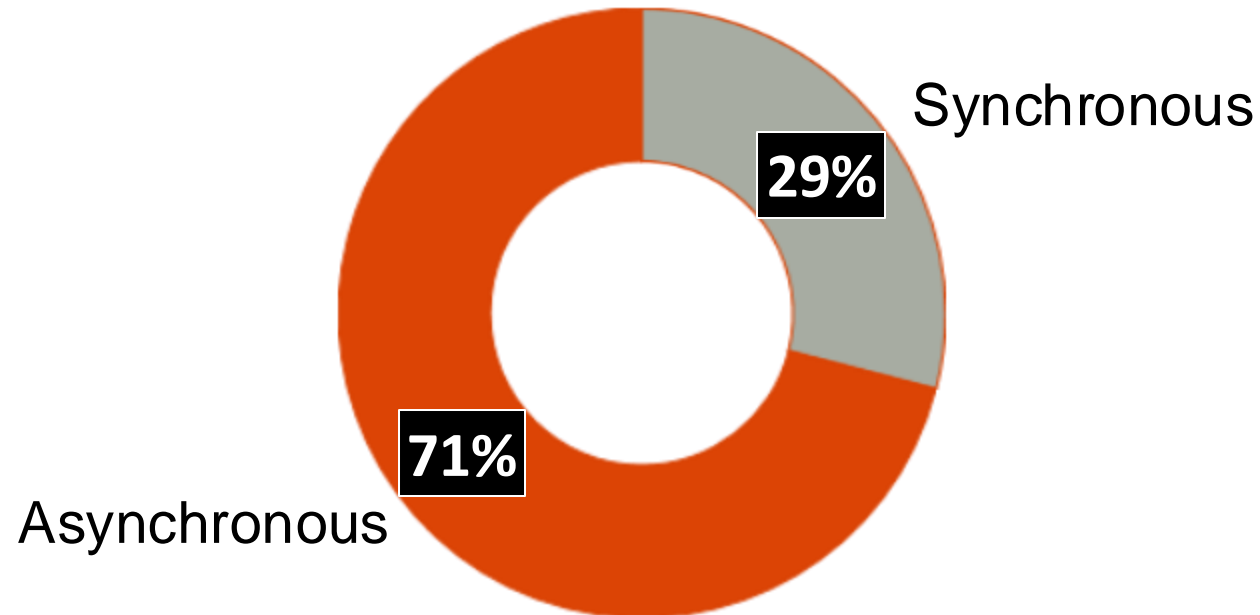
Synchronous Instructor
Presence student
outcomes

Motivation & student
performance



Student Preferences for Synchronous Online Instruction

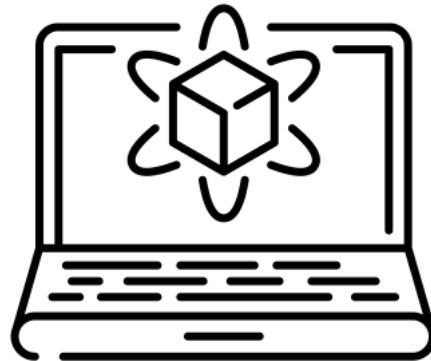
Modality Preferences



79%

open to **at least one** synchronous session per course

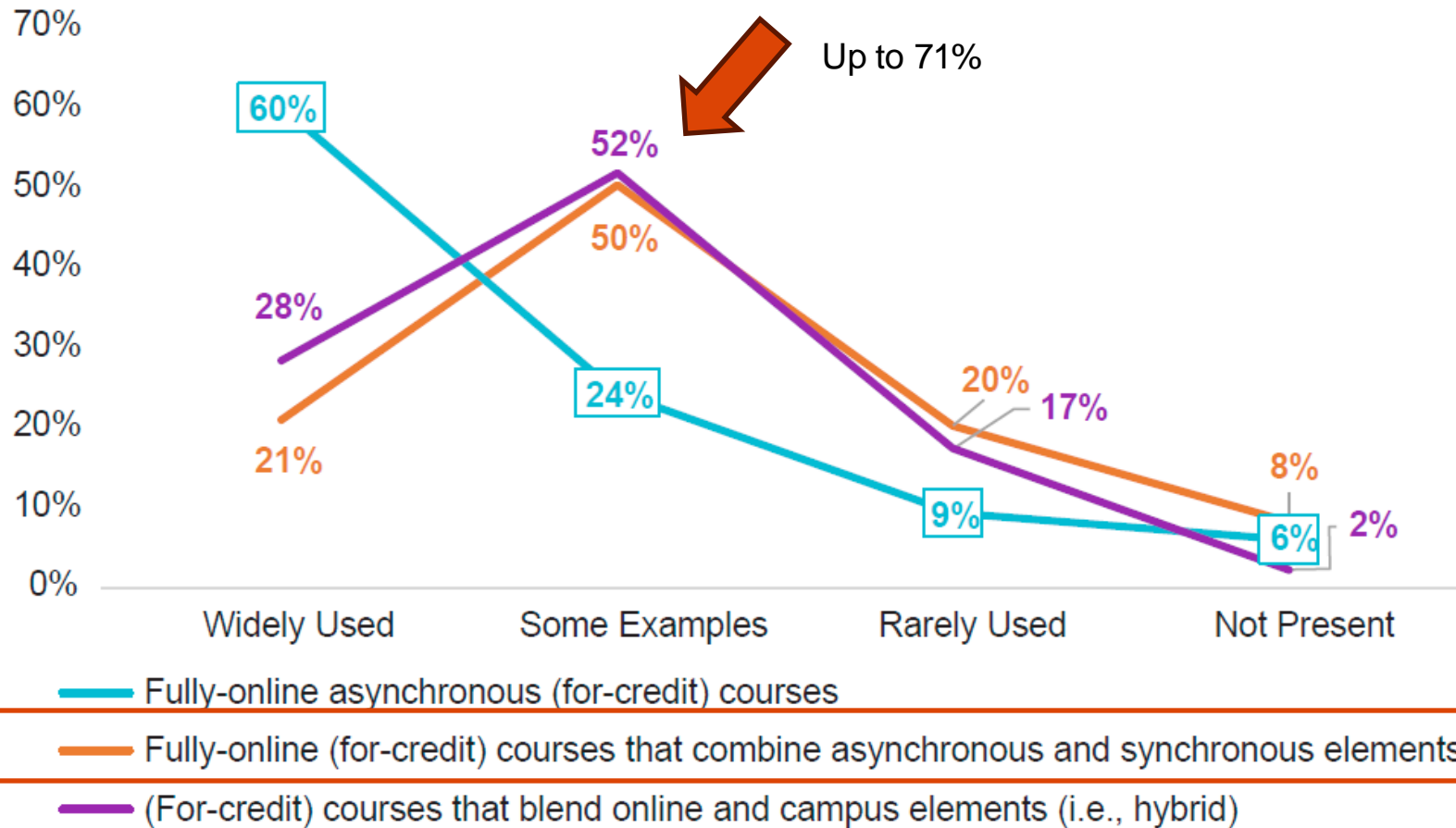
In your current online programs, what **synchronous components** exist?
What do they look like?



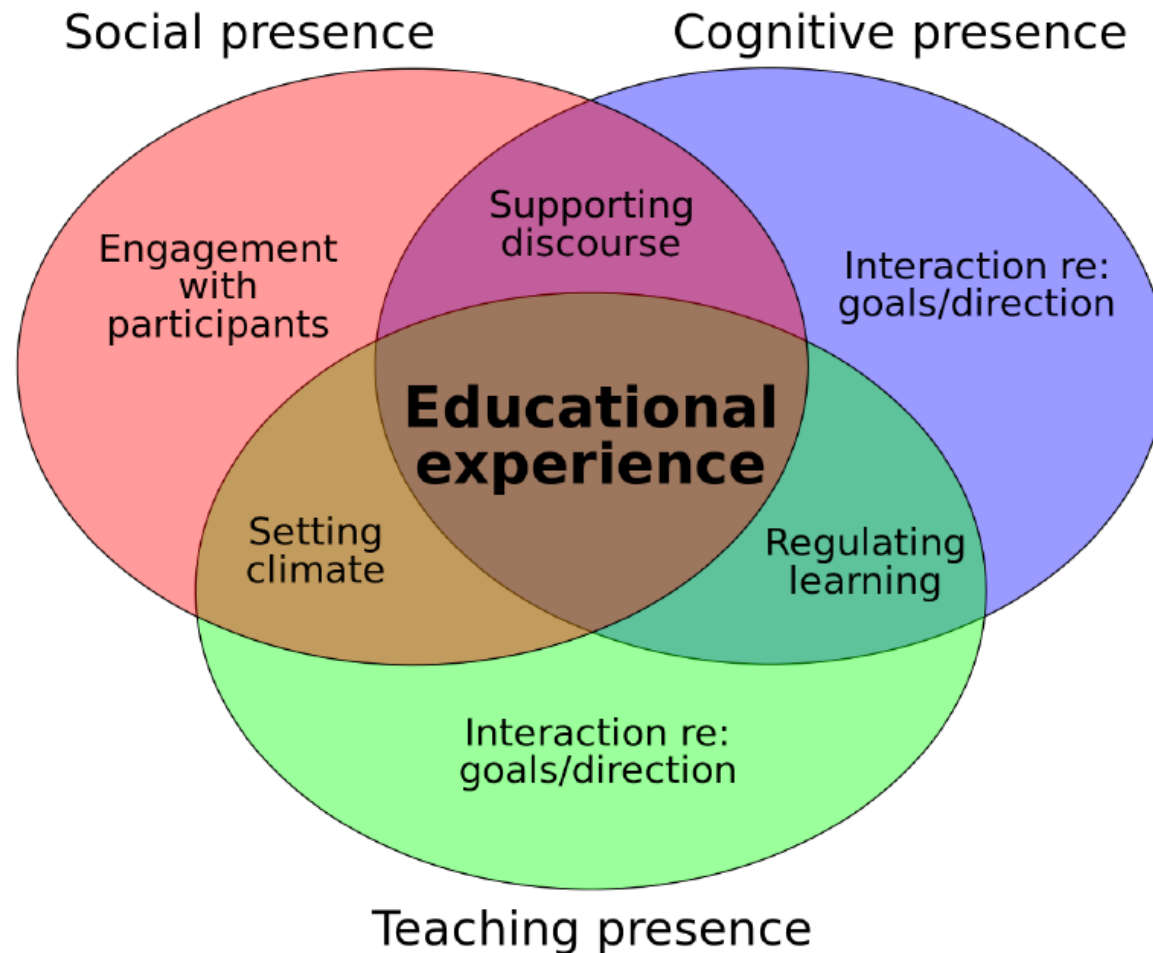
Research Question

How does synchronous instructor presence in the form of **synchronous activities** relate to student satisfaction and course outcomes (i.e. grades)?

Current Implementation of Synchronous Online Instruction (CHLOE 8)



Community of Inquiry and Synchronous Instructor Presence



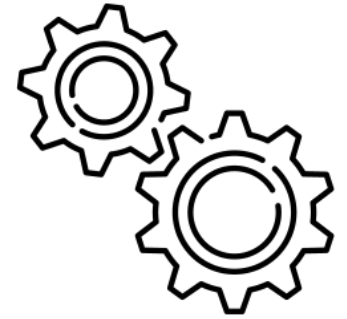
Defining Synchronous Instructor Presence

Interactions in real-time with instructor and students

Examples:

- Live lectures (Zoom, Teams)
- 1:1 meeting(s) with instructor (required)
- Live chat/text with instructor
- Live online discussions with instructor and other students
- Live discussion through online platforms (Discord, Twitter)
- Collaborative brainstorming tools (Jamboard, Perusall)

Methodology



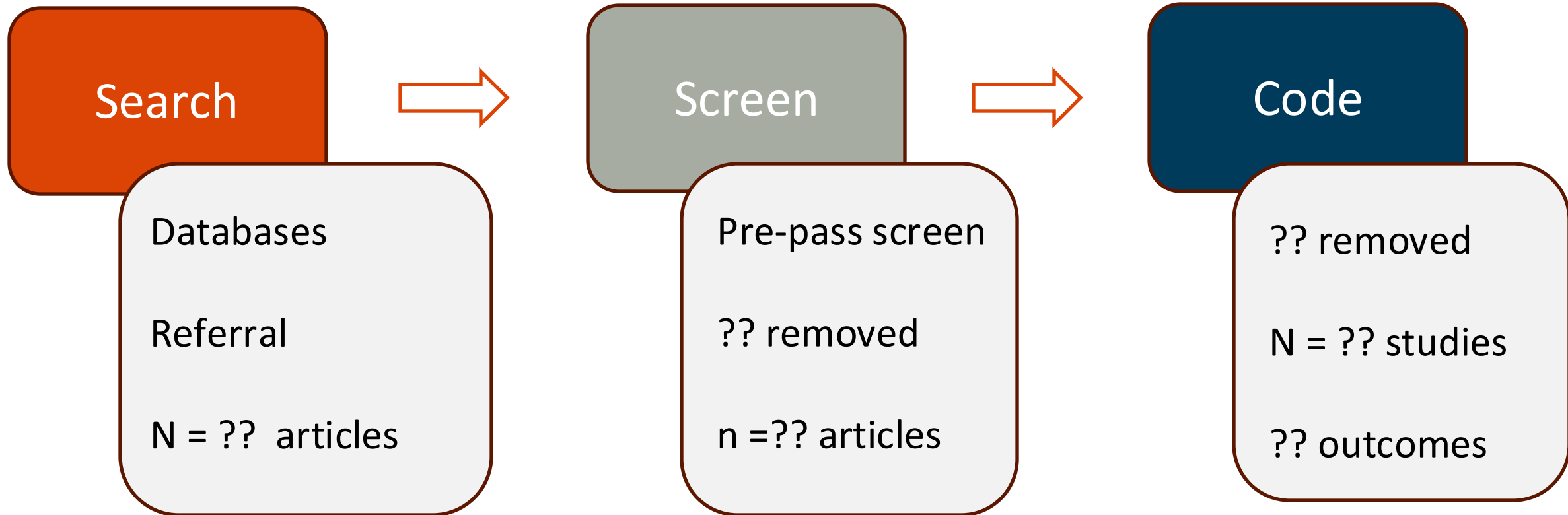
➤ Systematic Review

Page, M. J., McKenzie, J. E., Bossuyt, P.M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., et al. (2020)

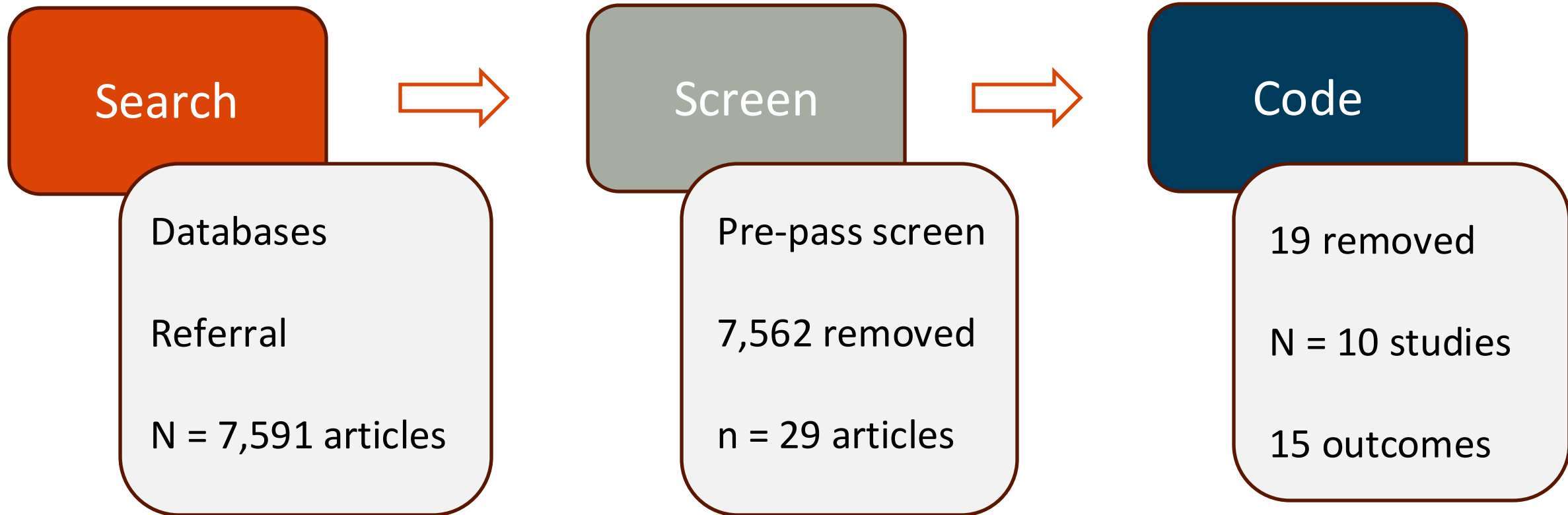
➤ Meta Analysis

Harris-Cooper, Hedges, & Valentine (2019); Borenstein, Hedges, Higgins, & Rothstein (2009)

Identification & Screening

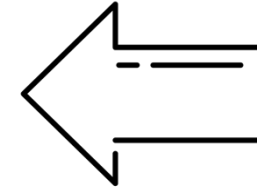


Identification & Screening



Challenges




- 10 studies = 15 outcomes
 - 9 Mean Grades
 - 6 Grade Distributions
- 4 studies from one institution
- Few studies on satisfaction
 - Wide variety of operational definitions



Reverse course:
systematic review

Authors	Outcome for Analysis	Statistics	Education Level	Course Discipline/Topic
Roberts et al. (2019)	Course grade distributions	Chi-square	Undergraduate	Research methods
Bourdeau et al. (2018)	Course grade distributions	Chi-square	Undergraduate	English Composition
Faulconer et al. (2018)	Course grades distributions	Chi-square	Undergraduate	Physics
Griffith et al. (2021)	Course grades	Means	Undergraduate	Statistics
Nieuwoudt (2020)	Course grades	Correlations	Undergraduate	Study skills & Strategies
Blau et al. (2017)	Course grades	Means	UG and Graduate	Psychology (lab study)
Olson & McCracken (2015)	Course grades	Means	UG and Graduate	Unknown
Strang (2012)	Course grades	Means	Undergraduate	Statistics
Duncan et al. (2012)	Course grades	Regression	Graduate	Accounting
Sklyar (2009)*	Course grades	Means	Graduate	Education

Grade Distributions

Authors	Grade distributions for synchronous
Roberts et al. (2019)	
Bourdeau et al. (2018)	
Faulconer et al. (2018)	

- 3 studies, 6 outcomes; 1 institution
- Statistically significant with very small effect sizes

 = Asynchronous grade distributions higher

Course Grades

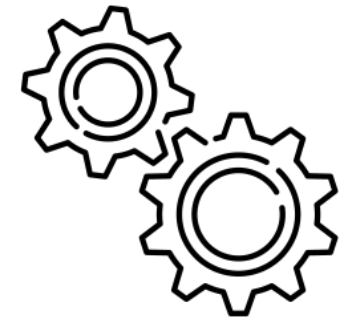
Authors	Course Grades for Synchronous
Nieuwoudt, J. E. (2020)	😊
Strang, D. (2012)	😊
Duncan et al. (2012)	😊
Griffith et al. (2021)	NS
Olson & McCracken	NS
Blau, et al. (2017)	NS
Sklyar (2009)*	NS

- 7 studies, 9 outcomes
- Statistically significant with moderate effect sizes

😊 = Synchronous grades higher

Threats to Validity

- 1 Lack of uniform operational definition of instructor presence
- 2 Variability in research design
- 3 Inconsistent measurement of outcomes
- 4 Single Institution



Opportunities

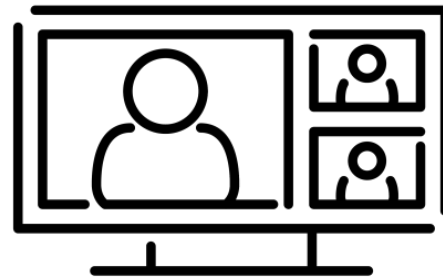


- 1 Methodological rigor & transparency
- 2 Clear definition of synchronous instructor presence
- 3 Report key details and statistics in results

Conclusions

Unable to determine
if there was a
significant effect of
synchronous
instructor presence

Limited data to
draw conclusions
- we need more
studies!



Imperatives for Future Research

To conduct high-quality research:

- ✓ Robust methodology
- ✓ Clear variable definitions
- ✓ A reliable outcome measures
- ✓ Control of confounds and bias
- ✓ Large sample sizes
- ✓ Effective reporting



Questions?

References

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