

# A Collaborative PRISMA Review of Non-medical literature: Lessons Learned

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# Dr. Rheanna Reed

## UoPX Faculty, Administrator, & Alumna



- Dr. Reed earned her doctorate in Management and Organizational Leadership from the University of Phoenix.
- She has been a UoPX faculty member since 2015 and specializes in organizational behavior, leadership, and management courses.
- Dr. Reed enjoys traveling the country with her husband and son
- Fellow for the Center for Educational & Instructional Technology Research (CEITR) CDS Alumni SIG
- Phoenix 500 2020, 2021, 2022

# Agenda

- **Background**
  - Purpose
  - Methodology and Design
  - Search Criteria
  - Progress
  - Results
- **PRISMA Reflections**
  - PRISMA Applications Healthcare vs. Education
  - PRISMA Collaboratively
- **Lessons Learned**
- **Questions**

# Background

## Online tutoring:

- Growing industry
- Established benefits
- Considered a “fix” for loss-of-learning by the U.S. government
- Multiple models, formats, methods and findings are available
- Data sets mainly post-secondary level



# Purpose

## Research interests

- Understand what is known about K-12 [online] tutoring quality & best practices
- Understand at more granular K-2, 3-5, 6-8 and 9-12 levels
- Compare & contrast findings for those who oversee tutoring quality at the K-12 levels



***What are the recommendations of [online] tutoring quality & best practices for K-12 levels?***

# Methodology and Design

- Understand what is known about K-12 [online] tutoring quality & best practices
- PRISMA Systematic Literature Review
  - An accepted standard for literature reviews in the healthcare field (Page et al., 2021)
  - Step-by-step approach that implements 4 phases using a universal 27-item checklist (Page et al., 2021).
  - The process details the literature included and excluded from databases, registrars, and websites.
  - PRISMA has been said to support the quality of the review, allow readers to see the strengths and weaknesses, provide a replication model, and provide a structure for the review in a recognizable format.
- We are in the final phase, where the identified articles are reviewed for quality, and themes are extracted and integrated into the summary.

# Search Criteria

## Search Strings

### EBSCO host Database

- Online Tutoring
- Online Learning experiences
- Online Assessment/Evaluation

| Time Frame                             | Online Tutoring                | Search ID | Online learning experiences    | Search ID | Online assessment or evaluation | Search ID |
|--|--------------------------------|-----------|--------------------------------|-----------|---------------------------------|-----------|
| Pre-Covid 2016-mid March 2020          | <a href="#">Search Results</a> | s1        | <a href="#">Search Results</a> | s2        | <a href="#">Search Results</a>  | s3        |
| Covid-Lockdown mid March 2020-May 2022 | <a href="#">Search Results</a> | s4        | <a href="#">Search Results</a> | s5        | <a href="#">Search Results</a>  | s6        |
| Post-Covid lockdown June 2022-present  | <a href="#">Search Results</a> | s7        | <a href="#">Search Results</a> | s8        | <a href="#">Search Results</a>  | s9        |

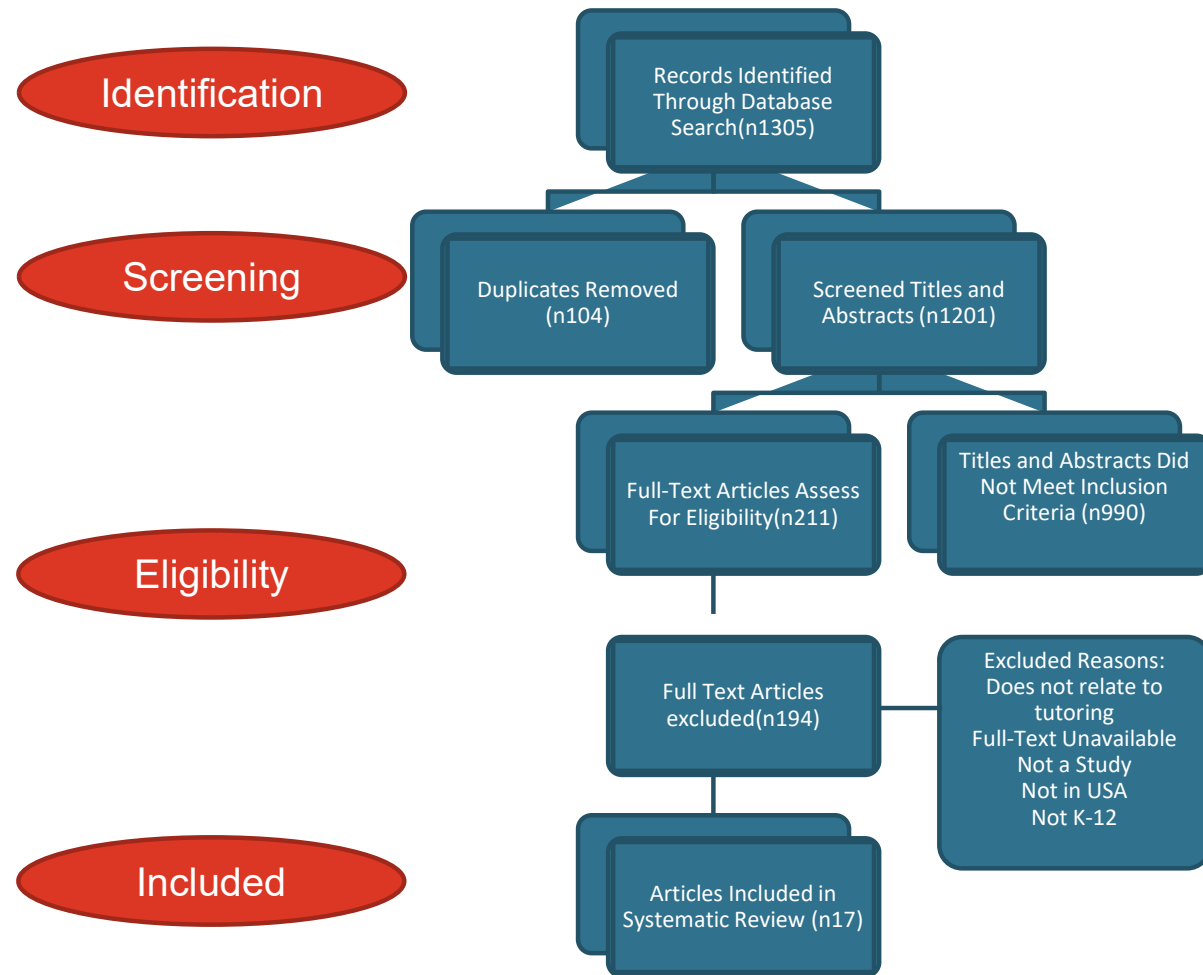
# Progress

## Inclusion Criteria (titles/abstracts)

- IC1 - Level of education is expressed
- IC2 - Explores online tutoring potential indicators of high-quality tutoring
- IC3 - Academic Peer-Reviewed Journals or Conferences
- IC4 - Schools in the USA school system

## Next Steps:

- Finalize Quality Review of Included Literature
- Summarize findings
- Finalize Manuscript

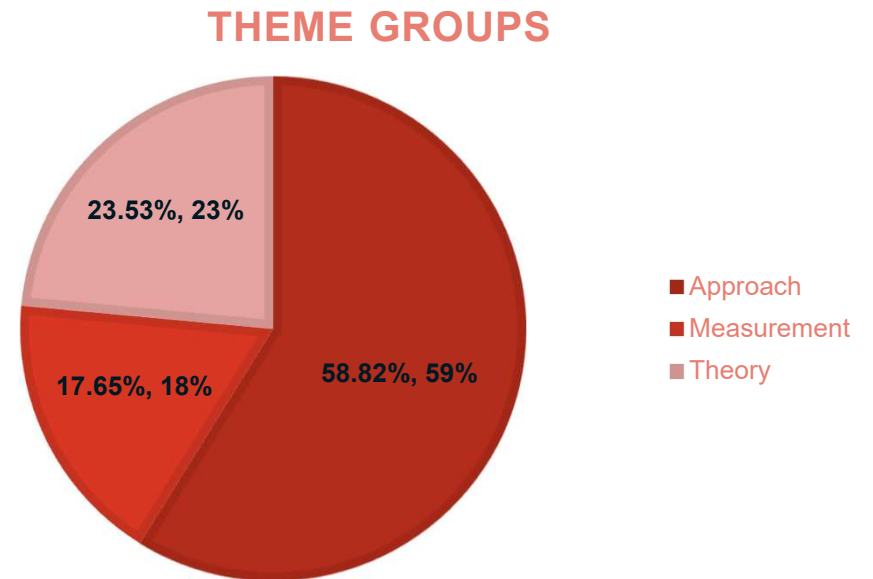




# Results-Themes

- Extraction and integration of themes

| Article                      | Approach | Measurement | Theory | Grand Total |
|------------------------------|----------|-------------|--------|-------------|
| Best Practices in E-tutoring |          | 1           |        | 1           |
| Community of Inquiry         |          |             | 1      | 1           |
| Community of Practice        |          |             | 1      | 1           |
| Flipped Learning             | 1        |             |        | 1           |
| Instructional Strategies     | 7        |             | 2      | 9           |
| Learner Satisfaction         |          |             | 1      | 1           |
| Online Presence              | 1        |             | 1      | 2           |
| Grand Total                  | 10       |             | 3      | 17          |



# PRISMA Application

## Healthcare

- Predominantly quantitative experimental research
- Criteria developed in the health sciences for quality appraisal tools are not all relevant to other sectors, including education [Dixon-Woods et al. (2005); Pluye et al. (2011)]
- Scoring rubrics for quality appraisal tools used outside the health sciences are not clear [Patterson et al. (2013) in higher education]

## Education

- Educational research is often found to use mixed methods or qualitative
- Constructs and vocabulary are inherently more challenging to define as discrete measures when used as inclusion/exclusion factors
- Quality appraisal phase was not straightforward
- How limitations, identified through quality appraisal, impact the recognition and subsequent interpretation of themes in included sources is not clear [Patterson et al. (2013) in higher education]

# PRISMA collaboratively

- Increased discussion is needed to clarify understanding at each step
- Team experienced feelings of tedium & had to calibrate and reevaluate often for articles being included/excluded
  - Subjective interpretations of coding, decision-making, and scoring
  - Inclusion and exclusion decisions involved compromises
- Team members who are not subject matter experts have difficulty identifying key terms and frameworks and may struggle to identify the important findings or themes
  - Team needs to reach a common level of familiarity with the topic
  - Would benefit from the experience of those who used PRISMA before
  - Extraction & integration of themes for inclusion were superficial and subjective
- The original “net” yielded several results
  - The research topic is contemporary, and few studies (K-12 online tutoring) were found
  - The “results” varied from intent, design, method, & measurements
  - A common limitation may be database accessibility





- The PRISMA model may not be compatible to all topics/disciplines
- Implementing the PRISMA model collaboratively requires more time for discussion, calibration, and compromise
- Teams should leverage the experience of other PRISMA users
- Teams should strive to reach a similar familiarity with the topic
- Quality appraisal phase may need to be adapted to other disciplines



**QUESTIONS**

QUESTION

# References

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# Research Team

# Dr. Frederick Lawrence

## UoPX Faculty



- Dr. Lawrence earned BS & MS in Mathematics from Michigan State University and a PhD in Industrial Engineering from Arizona State University
- He has been a UoPX faculty member since 1999 and specializes in business operations and management, mathematics, statistics, and research methods.
- **Quantitative Methodologist in the Research & Methodology SIG** in the Center for Educational & Instructional Technology Research (CEITR)
- Phoenix 500 in 2022
- Dr. Lawrence enjoys traveling the world with his wife.



# Dr. Danielle Kearns-Sixsmith

## UoPX Alumna

- **Assistant Professor in the Department of Education and Director of Teacher Preparation Field Experiences at St. Francis DeSales University.**
- **Completed a B.S. from Rutgers in Biological Sciences. M.S. in Secondary Science Education, M.S. in School Administration & Supervision, & Ed.D. in Educational Leadership from University of Phoenix.**
- **Research Fellow for Center for Educational & Instructional Technology Research (CEITR)**



# David Mailloux

**Advanced Facilitator, Adjunct Faculty**



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