

# Trends in *The Review of Educational Research* Systematic Reviews and Implications for Supporting Graduate Students

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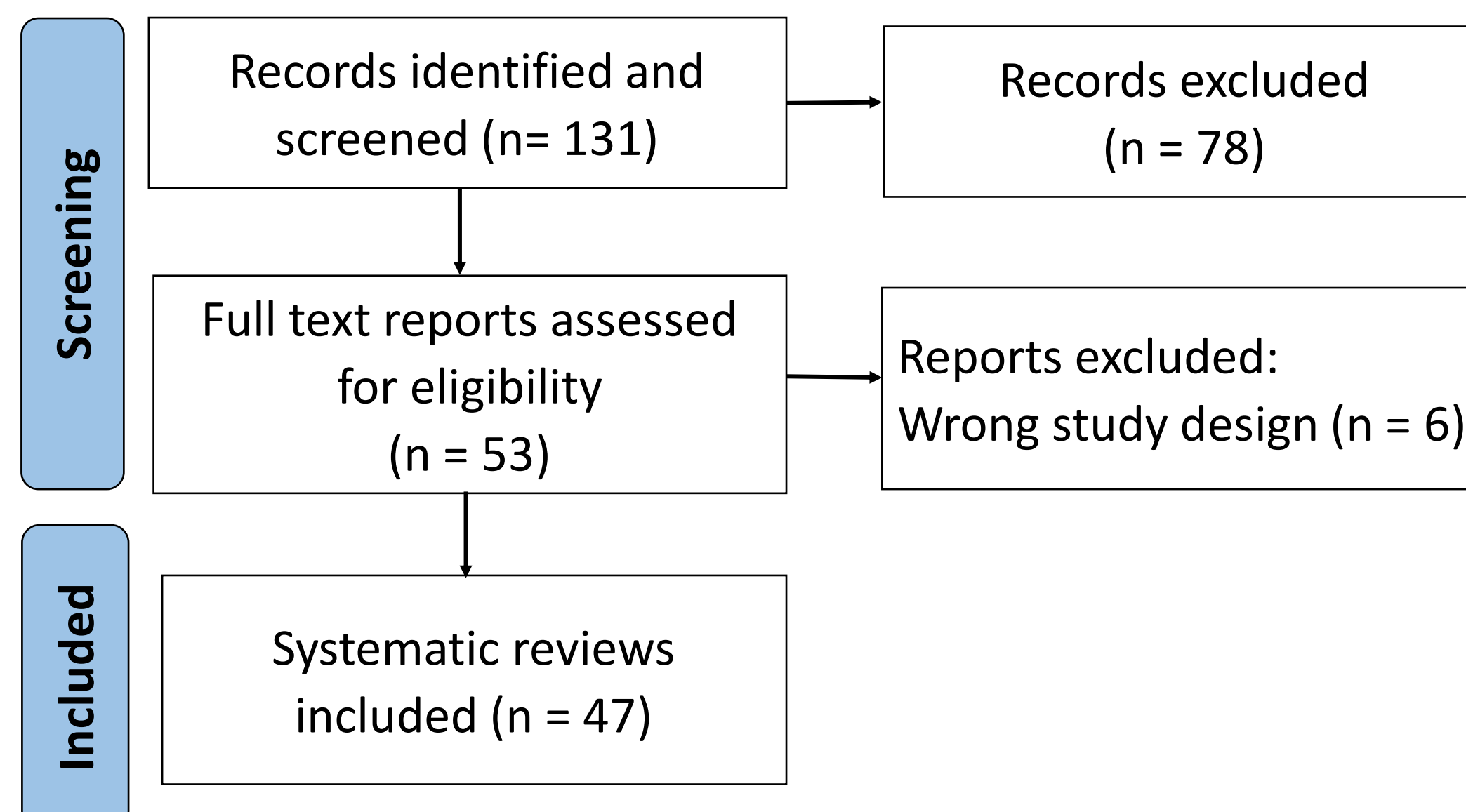


## Introduction

- At Texas A&M University, education graduate students frequently seek assistance with conducting systematic reviews (SRs).
- Some graduate students prefer to use published journal articles as a model for their SR methods instead of established guidelines.
- The Review of Educational Research*, a top review journal in the education discipline, encourages authors of SRs to consult the PRISMA statement and the APA's "[Reporting Standards for Research in Psychology](#)."
- This study was designed to guide evidence-based recommendations for SR methodology by examining SRs published in *The Review of Educational Research* to determine:
  - What sources are being cited for SR methodology?
  - How often is quality assessment or critical appraisal described in the methods?
  - What frameworks are used for quality assessment?

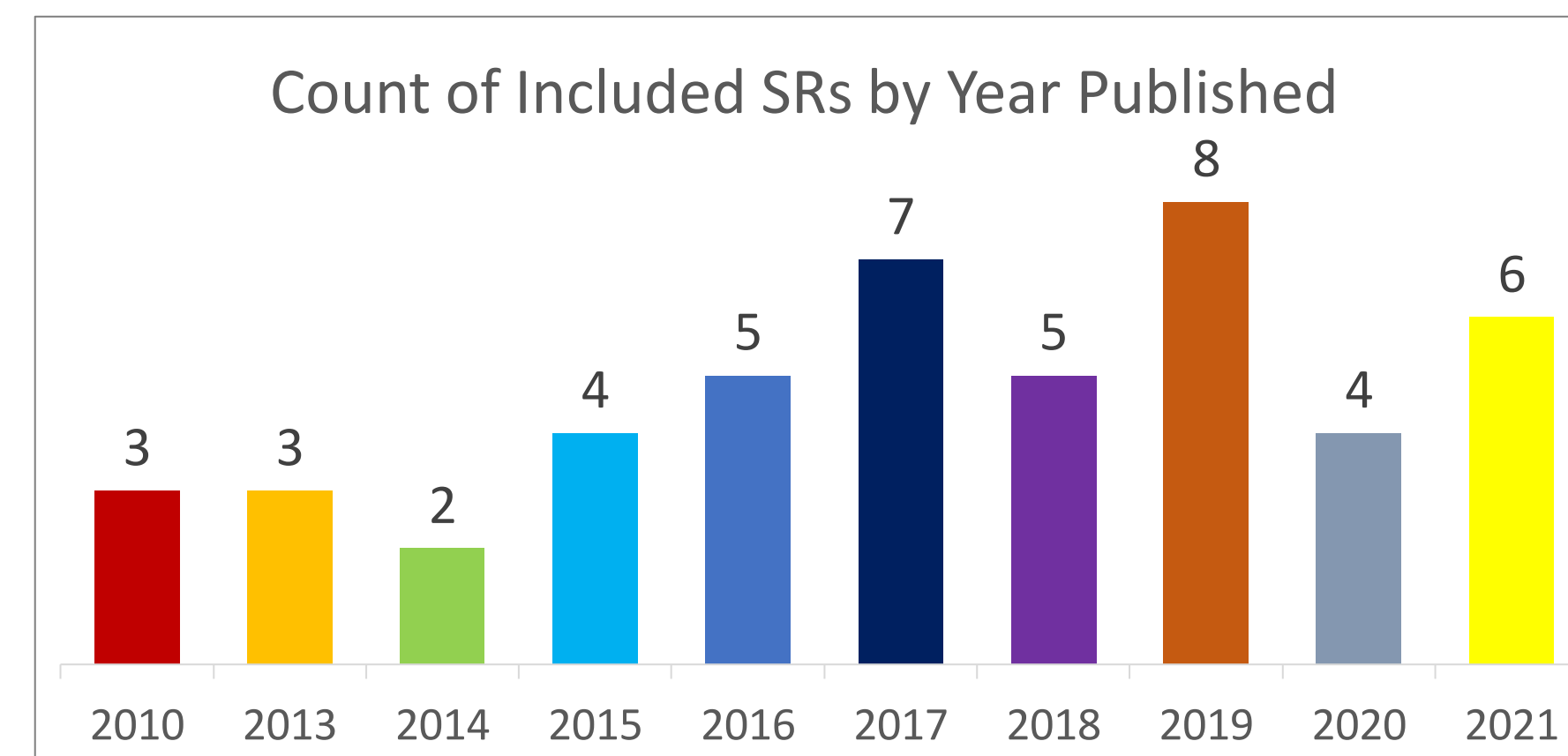
## Methods

- The search was conducted in *The Review of Educational Research* (SAGE platform) for "systematic review\*" OR "systematic literature review\*" limited to January 2000 to September 2021.
- To be included in the study, the article had to use phrase "systematic review" or "systematic literature review" to describe the methods.
- Data was extracted from the 47 included SRs using Covidence.



## Findings

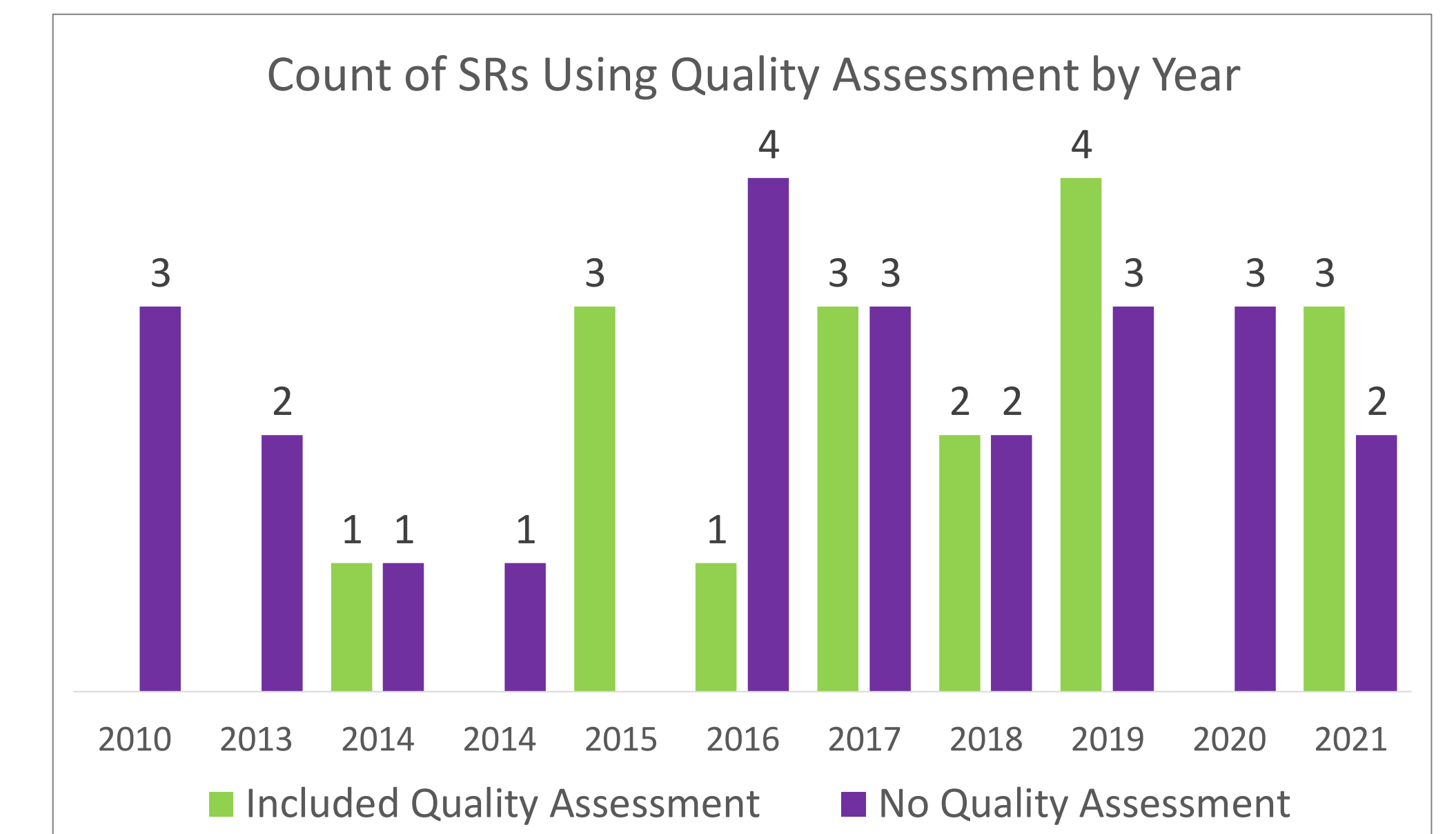
- Thirty-five articles (74%) included at least one citation related to SR methodology. Twelve articles (26%) did not include any citations to SR methodology.
- PRISMA, which was recommended by *The Review of Educational Research*, was the most frequently cited resource for SR methodology. The APA's "Reporting Standards for Psychology" were only cited twice.
- Only 17 articles (36%) explicitly described the use of quality assessment as a step in the systematic review process.
- The earliest mention of quality assessment was in 2014, but more recent SRs are still published without conducting quality assessment.



Number of Times Each Quality Assessment Source Cited		
Source	Times Cited	Discipline
Critical Appraisal Skills Programme [CASP] CASP. (2014). <i>CASP Checklist: Cohort study. CASP Checklist: Making sense of evidence.</i> <a href="https://casp-uk.net/casp-tools-checklists/">https://casp-uk.net/casp-tools-checklists/</a> CASP. (2018). <i>CASP Checklist: Qualitative study. CASP Checklist: 10 questions to help you make sense of a qualitative research.</i> <a href="https://casp-uk.b-cdn.net/wp-content/uploads/2018/03/CASP-Qualitative-Checklist-2018_fillable_form.pdf">https://casp-uk.b-cdn.net/wp-content/uploads/2018/03/CASP-Qualitative-Checklist-2018_fillable_form.pdf</a>	5	Health Sciences
Cochrane Assessing Risk of Bias Higgins, J. P. T., Altman, D. G., Sterne, J. A. C., & on behalf of the Cochrane Statistical Methods Group and the Cochrane Bias Methods Group. (2011). <i>Assessing risk of bias in included studies.</i> In J. P. T. Higgins & S. Green (Eds.), <i>Cochrane handbook for systematic reviews of interventions</i> (Vol. 5.1.1). The Cochrane Collaboration. <a href="https://handbook-5-1.cochrane.org/chapter_8/8_assessing_risk_of_bias_in_included_studies.htm">https://handbook-5-1.cochrane.org/chapter_8/8_assessing_risk_of_bias_in_included_studies.htm</a>	2	Health Sciences
Caldwell et al. (2005) Caldwell, K., Henshaw, L., & Taylor, G. (2005). <i>Developing a framework for critiquing health research.</i> <i>Journal of Health, Social and Environmental Issues</i> , 6, 45-54.	2	Health Sciences
Petticrew & Roberts (2006) Petticrew, M., & Roberts, H. (2006). <i>Systematic reviews in the social sciences: A practical guide.</i> Wiley Blackwell. <a href="https://doi.org/10.1002/9780470754887">https://doi.org/10.1002/9780470754887</a>	2	Social Sciences
Reichow (2011); Reichow et al. (2008) Reichow, B. (2011). <i>Development, procedures, and application of the evaluative method for determining evidence-based practices in autism.</i> In B. Reichow, P. Doehring, D. V. Cicchetti, & F. R. Volkmar (Eds.), <i>Evidence-based practices and treatments for children with autism</i> (pp. 25-39). Springer.	2	Social Sciences
Cochrane Handbook Higgins, J. P. T., & Green, S. (2011). <i>Cochrane handbook for systematic reviews of interventions</i> (Version 5.1.0). <a href="https://training.cochrane.org/handbook/current">https://training.cochrane.org/handbook/current</a>	1	Health Sciences

## Five SR Methods Sources with Highest Citation Counts

Source	Times Cited	Discipline
PRISMA Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., & Stewart, L. A., & members of the PRISMA Group. (2015). <i>Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015 statement.</i> <i>Systematic Reviews</i> , 4(1), Article 1. <a href="https://doi.org/10.1186/2046-4053-4-1">https://doi.org/10.1186/2046-4053-4-1</a>	10	Multidisciplinary
Petticrew & Roberts (2006) Petticrew, M., & Roberts, H. (2006). <i>Systematic reviews in the social sciences: A practical guide.</i> Wiley Blackwell. <a href="https://doi.org/10.1002/9780470754887">https://doi.org/10.1002/9780470754887</a>	6	Social Sciences
Cooper (1998, 2010, 2017) Cooper, H. (2017). <i>Research synthesis and meta-analysis: A step-by-step approach</i> (5th ed.). SAGE Publications.	4	Social Sciences
Alexander (2020) Alexander, P. A. (2020). <i>Methodological guidance paper: The art and science of quality systematic reviews.</i> <i>Review of Educational Research</i> , 90(1), 6-23. <a href="https://doi.org/10.3102/0034654319854352">https://doi.org/10.3102/0034654319854352</a>	3	Education
Cochrane Handbook Higgins, J. P. T., Thomas, J., Chandler, J., Cumpston, M., Li, T., Page, M. J., & Welch, V. A. (2019). <i>Cochrane handbook for systematic reviews of interventions.</i> <a href="https://training.cochrane.org/handbook/current">https://training.cochrane.org/handbook/current</a>	3	Health Sciences



## Implications for Supporting Graduate Students

- PRISMA and *Systematic Reviews in the Social Sciences* should be recommended for SR methodology in education with an explanation of the differences between the PRISMA reporting standards and works that describe how to conduct SRs.
- Although some *Review of Educational Research* SRs did not include quality assessment, the role of quality assessment within the SR method should be another talking point with students.
- CASP Checklists should be recommended as resources for assessing the included studies.
- More investigation is needed into quality assessment frameworks developed specifically for education and social sciences disciplines, as these were not often cited in the included SRs.