

- practicing new material (Sweller, 1985).
- 2012).
- solving was effective for mathematics learning.

- outcomes?
- What moderates these effects?



LITERATURE SEARCH AND SCREENING

- To reduce publication bias, both published and grey literature were reviewed.
- Performed a systematic search of ERIC, PsycINFO, and ProQuest Dissertations and Theses Global
- Titles and abstracts were screened based on our exclusionary criteria.
- Search terms
 - Worked examples and mathematics
 - Erroneous examples and mathematics
 - Incorrect examples and mathematics
 - Faded worked examples and mathematics

A META-ANALYSIS OF THE WORKED EXAMPLES EFFECT ON MATHEMATICS PERFORMANCE Sarah Clerjuste, Kamal Chawla, Christina Areizaga Barbieri, PhD, Dana Miller-Cotto, PhD

- Included **40** articles, reporting a total of **49** studies, which reported a total of **185** effect sizes
- 46 experimental and three quasi-experimental studies.
- 32 articles included studies using correct worked examples; Seven articles included studies using incorrect examples and four included comparison conditions; Four articles included studies involving faded worked examples.
- Moderators explored were type of example, administration format, grade/school level of participants, and content area targeted.
- 20 US articles, remaining conducted internationally.
- Majority of studies reported included performance outcomes measured by percent accuracy with just three articles reporting on problem-solving errors.



- their mathematics performance compared to those who do not.
- Only five of the forty articles reviewed were published by 2007 when the IES published a report claiming moderate evidence to support interleaving problem-solving practice with worked examples
- We found that the effects persisted regardless of the specific moderators tested.
- Our findings indicate that the worked examples effect appears to be robust to variations in design, age, and content area differences.
- Future work might contribute to design and age considerations to include a more nuanced understanding of these considerations as they relate to cognitive load theory.
- More widespread use of worked examples, as well as professional development for teachers in creating and using their own worked examples with their students may be a fruitful practical next step.

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