



# Scaling Systematic Reviews: A Solo Researcher's Workflow with Gemini

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#### Scaling

100s/1000s of papers are often required.

**Systematic** Reviews:

Extract same information from all papers (previously successful: Malik & Sime, 2025, <a href="https://doi.org/10.18260/1-2--57199">https://doi.org/10.18260/1-2--57199</a>)

A Solo (?) Researcher's

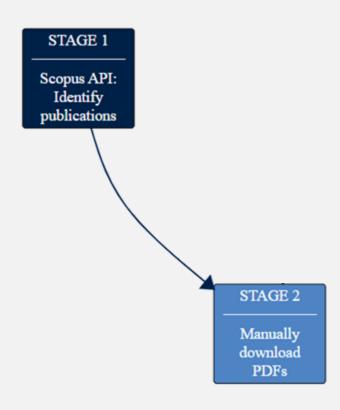
The more supervision and collab, the better!

Workflow with Gemini

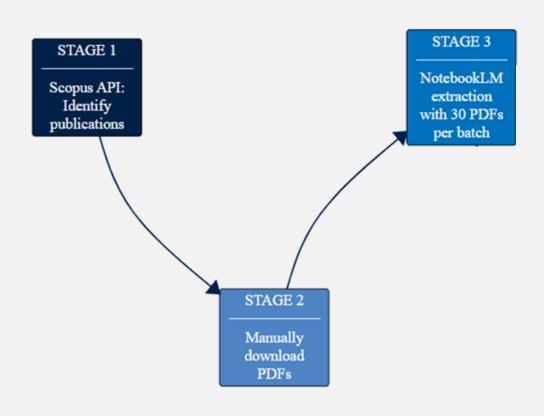
**+copilot**, **-autopilot** for best results.

NotebookLM + Gemini + other tools like R.

### Search and access PDFs



## → NotebookLM batches



I'm preparing a study to investigate semantic processing using a core semantic priming task as the dependent variable. The independent variables will include stimulus onset asynchrony and individual differences in language (based on lexical decision), vision (based on a visual task) and other sensorimotor modalities (based on the Plymouth Sensory Imagery Questionnaire and a mental comparison task). I need to review relevant studies that present data from an experiment featuring at least one lexical or semantic task, and at least one individual difference in language and/or imagery/perceptual/motor experience.

Help me conduct a systematic review by extracting the following information from every paper attached. Use all the fields listed below in the order provided, placing each field in a column and ensuring that the information is appropriate for the field. Flag any irrelevant studies in the `exclusion\_reason` field. Do not use any bullet points or numbered points within fields. Produce the output in a spreadsheet format, and do not use dollar signs for mathematical notation.

Column: filename

Column: title (title of the paper)

Column: exclusion\_reason (exclude papers that do not address semantic/conceptual processing or do not present novel experimental data)

Column: experiment\_ID (if there is more than one experiment in a paper, label each experiment with a unique ID, such as 'Exp 1' and 'Exp 2', and extract the appropriate information for each experiment)

Column: relevance\_rating (scale ranging between 0 and 10 that assesses the relevance of the paper to the study I am preparing, described above)

Column: number\_of\_participants

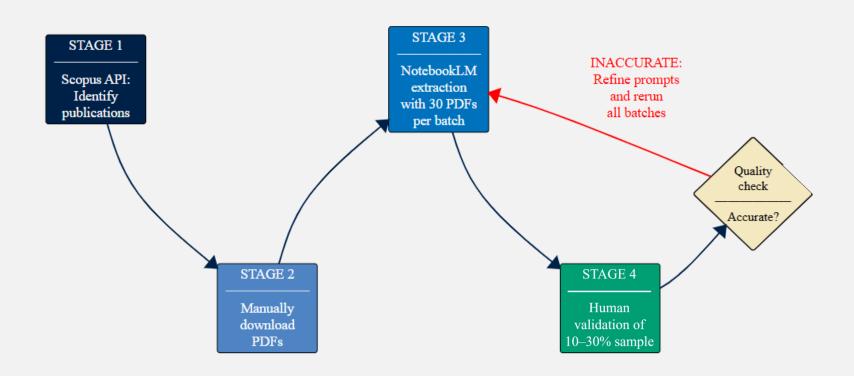
Column: number\_of\_trials

Column: language\_of\_testing (language of the tasks)

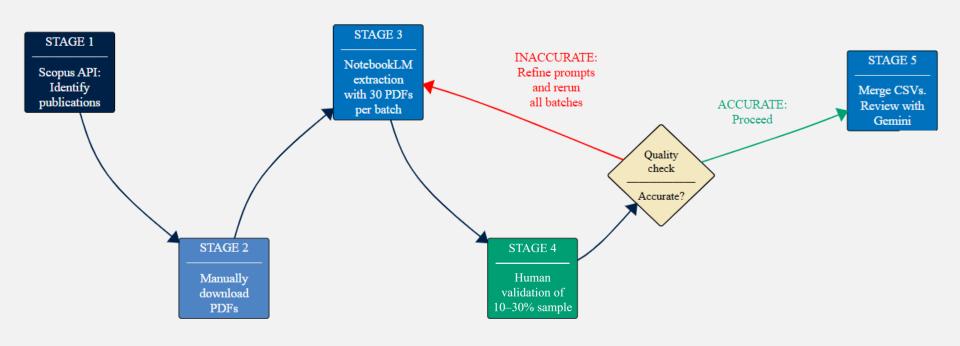
Include all 25 columns: filename, title, exclusion reason, experiment ID, relevance rating, number of participants, number of trials, language of testing, first\_language, second\_language, lexical\_or\_semantic\_task, individual\_language\_experience\_measure, effect of individual language experience on semantic processing, effect\_size\_of\_individual\_language\_experience\_on\_semantic\_processing, individual\_imagery\_experience\_measure, effect of individual imagery experience on semantic processing, effect\_size\_of\_individual\_imagery\_experience\_on\_semantic\_processing, other\_individual\_differences, statistical\_method, power\_analysis\_method, <u>target\_power, required\_participants\_for\_language, required\_participants\_for\_imagery,</u> required\_trials\_for\_language, required\_trials\_for\_imagery

Do not overidentify any information. Leave any missing information blank.

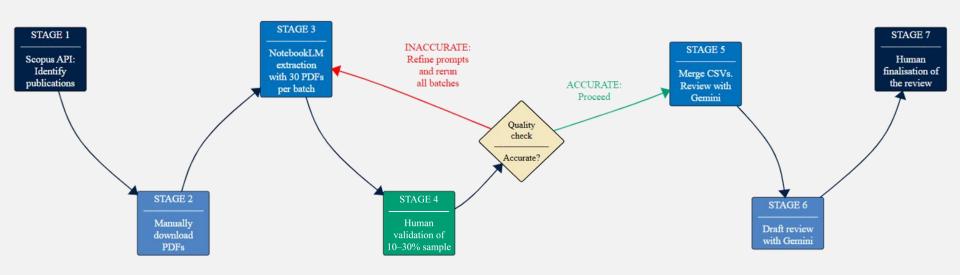
## → Quality check



## → Merge and Gemini review



### Draft and human finalisation



## Thank you

Explore  $\rightarrow$ 

Stay hungry, stay foolish



https://github.com/pablobernabeu/ Gemini\_literature\_review\_workflow

#### Unprecedented individual role in Al

**Al-supported workflows** are multiplying and improving thanks to projects big and small, including modest, individual attempts.