AI Researchers

Embedding Responsible AI in Research

Designing a research presentation with AI

Worked example: Dong et al. (2025)

CASE 5.1

PAPER PRESENTATIONS

CC BY SA

Co-funded by the European Union

Co-funded by the European Union. Views and opinions expressed are however those of the author or authors only and do not necessarily reflect those of the European Union or the Foundation for the Development of the Education System. Neither the European Union nor the entity providing the grant can be held responsible for them.

What AI can and cannot do

AI CAN PROPOSE

Two ways to tell the paper’s story
Shorter slide messages
A layout for results and limitations

THE RESEARCHER MUST CHECK

The paper’s methods and estimates
Any change in scientific meaning
Text, figures and spoken interpretation

In this article, the Results text and Figure 2 report different pooled values.

AI can organise evidence; it cannot settle a source discrepancy.

Dong et al. (2025), Computers and Education: Artificial Intelligence 8, 100400

Audience and presentation objective

SETTING

An eight-minute doctoral seminar for researchers who know meta-analysis but have not read the paper.

OBJECTIVE

Explain the pooled finding, the large variation across studies and the limits on applying it to every classroom.

Success test: listeners can describe the result and one limitation.

The audience determines the level of method detail.

Dong et al. (2025), Computers and Education: Artificial Intelligence 8, 100400

The paper’s central contribution

VERIFIED PAPER CARD

Question: What is the average effect on academic achievement?
Design: Meta-analysis of 29 studies, 2,657 learners.
Text result: Hedges’ g = 0.924; 95% CI 0.612–1.235.
Variation: I^2 = 93% across studies.
Open issue: Figure 2 reports a different pooled value.

Contribution: synthesis plus an explicit account of variation.

Dong et al. (2025), pp. 1, 4 and 6

AI Researchers
Embedding Responsible AI in Research

Selecting verified content

RETAIN WITH ITS SOURCE

29 studies after one outlier exclusion (§5.1)
2,657 participants (§5.1)
Random-effects model (§4.5)
Substantial heterogeneity: I^2 = 93% (§5.2)

FLAG BEFORE USING

Pooled value: text and Fig. 2 differ
30 in the flow chart; 29 analysed
Any claim that one AI type is superior

Record section, table or figure for every claim that goes onto a slide.

Preserve the source trail, including unresolved differences.

Dong et al. (2025), Computers and Education: Artificial Intelligence 8, 100400

Requesting alternative narratives

PROMPT TO AI

“Using only the attached Dong et al. paper, propose two seven-slide outlines for an eight-minute doctoral seminar. One should follow the paper; the other should begin with the research question. Include the study-selection step, the pooled result, heterogeneity and limitations. Quote the source location for every number. Flag the mismatch between Results §5.2 and Figure 2. Do not choose an estimate or invent an explanation.”

Expected output: alternative orders and a list of facts needing review.

Give AI a bounded task and require source references.

Dong et al. (2025), Computers and Education: Artificial Intelligence 8, 100400

Comparing two structures

CONVENTIONAL

1 Question and prior findings
2 Search and eligibility
3 Studies and participants
4 Overall result and heterogeneity
5 Moderator analyses
6 Limitations and source check
7 Conclusion

PROBLEM-ORIENTED

1 Does AI improve achievement?
2 How the evidence was selected
3 What the synthesis reports
4 Why results differ across studies
5 Which moderators are supported?
6 What Figure 2 makes us check
7 A bounded takeaway

Both routes must explain 30 eligible studies versus 29 analysed.

Choose a narrative without concealing the methods or the mismatch.

Dong et al. (2025), Computers and Education: Artificial Intelligence 8, 100400

Slide-level messages

PAPER HEADING

“Overall effect size”

PRESENTATION MESSAGE

“The synthesis reports a positive mean effect, with substantial variation between studies.”

Keep the exact g value off the headline until the text–figure discrepancy is resolved.

One slide, one source-faithful message.

Reducing text without losing meaning

MISLEADING SHORTCUT

“AI improves every student’s results.”

DEFENSIBLE VERSION

“The review reports a positive average effect across 29 studies.”

Add aloud: I^2 = 93% indicates substantial variation; the review does not establish a universal benefit.

Short copy must preserve population and uncertainty.

Dong et al. (2025), Computers and Education: Artificial Intelligence 8, 100400

Diagrams and visual organisation

POSSIBLE VISUAL

Study-selection flow: 30 eligible, then one outlier excluded
Forest plot: effects and confidence intervals
Moderator table: selected categories and tests

RESEARCHER'S CHECK

Show the 30-to-29 step clearly
Do not redraw the pooled diamond until the values agree
Label Hedges' g and the 95% CIs

Reused paper figures require attribution under CC BY 4.0.

Choose visuals for a question and preserve their source data.

Dong et al. (2025), Fig. 1 p. 4, Fig. 2 p. 6, Table 3 p. 7

Checking visual accuracy

RESULTS TEXT (§5.2)

29 effect sizes
g = 0.924
95% CI 0.612–1.235
Q(28) = 233.384

FIGURE 2

Q: df = 24
g = 0.89
95% CI 0.55–1.24
Q = 207.25

The two printed summaries differ. The PDF does not resolve why.

Flag the conflict; do not silently choose one pooled estimate.

Dong et al. (2025), Results §5.2 p. 4 and Fig. 2 p. 6

Unsupported simplifications

AI DRAFT

“Every AI tool works equally well.”
“Chatbots have the strongest effect.”
“Longer use always works better.”

SOURCE-FAITHFUL REPAIR

Type-of-AI moderator: p = .78.
Do not rank tools as proven winners.
Duration moderator: p = .12.

Observed subgroup means alone do not establish between-group differences.

Use the moderator test, not the most attractive subgroup mean.

Dong et al. (2025), §5.3 and Table 3, pp. 5–7

Preparing speaker notes

PROJECTED SLIDE

"A positive average effect, but considerable variation."

SPOKEN CONTEXT

"The authors analysed 29 studies with 2,657 participants. The Results text reports g = 0.924 and I^2 = 93%. Figure 2 prints a different pooled value, so we should verify the exact estimate before using it as a headline."

Check the note against the paper, then rehearse it aloud.

Final scientific and ethical check

CONTENT

Check study count, outcome definition, pooled estimate and heterogeneity against the PDF.

SOURCE AND USE

Cite Dong et al. Check CC BY attribution for any reused figure. Confirm AI disclosure rules.

DELIVERY

Reconcile the text–figure mismatch before an exact numeric claim. Rehearse the limitations: English-language journal articles, 2019–2024; few long-term studies.

Stop if the figure, source or claim cannot be verified.

Dong et al. (2025), pp. 1, 3–8; article CC BY 4.0

Human-only responsibility checklist

The researcher confirms

- ☐ Every statistic matches the cited passage or figure.
- ☐ The 30-to-29 selection step is explained.
- ☐ The §5.2–Figure 2 discrepancy is resolved or flagged.
- ☐ Heterogeneity and study limits remain visible.
- ☐ Reused figures have attribution and valid rights.
- ☐ I can defend every slide and spoken claim.

Source: Dong, Tang & Wang (2025), Computers and Education: Artificial Intelligence 8, 100400.

doi:10.1016/j.caeai.2025.100400 Article CC BY 4.0 AI Researchers resource CC BY-SA 4.0

Numerical discrepancy: Results §5.2 versus Fig. 2 of the supplied PDF.

About this resource

Toolkit reference UC5-01, AI Readiness Toolkit, use case 5: Paper presentations

Developed by University of Lodz

Suggested citation AI Researchers (2026). Designing a research presentation with AI. AI Readiness Toolkit, UC5-01. University of Lodz. airesearchers.eu

Companion Presenter guide with objectives, cues and a full script for every slide

Version 1.0, November 2026. External peer review is under way

Co-funded by the European Union. Views and opinions expressed are however those of the author or authors only and do not necessarily reflect those of the European Union or the Foundation for the Development of the Education System. Neither the European Union nor the entity providing the grant can be held responsible for them.