

Journal Discussion Clubs – Facilitation Guide

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About these groups

Journal Discussion Clubs are exploratory discussion-based groups centered on scientific questions, topics, or themes. These groups will focus on breadth over depth—engaging with a range of ideas, methods, and perspectives. Journal Club facilitators are encouraged to make scientific concepts approachable, not teach them in a traditional lecture format. The goal is to foster clear scientific communication across experience levels, strengthen community connections, and support the development of mentoring skills.

Instead of assigning one article per session, facilitators should curate a selection of materials such as research papers, review articles, blog posts, podcasts, videos, or op-eds to collectively illustrate your chosen theme. Please be mindful of group participants' time and educational levels, selecting materials that should take no longer than an hour in total to review.

1. Choose a **theme**. This theme will guide content exploration throughout the summer and should be broad enough to spark curiosity and meaningful conversations.
2. Craft your **schedule**. Create a detailed plan that outlines session goals and key takeaways.
3. Select your **sources**. This could involve comparing multiple perspectives, identifying points of agreement or disagreement across sources, and/or synthesizing key ideas.

Groups may meet in-person, online, or in a hybrid format, at the Journal Club Facilitator's discretion. Please note that some interns report feelings of isolation when they are the only trainee attending online, so consider this carefully when choosing a hybrid model. Ensure discussions prioritize big-picture thinking and foster a welcoming learning environment.

Examples:

Example 6-Week Session

“How are Artificial Intelligence and Large Language Models changing the way scientists do research?”

Session 1: What is a Large Language Model (LLM)? How do they work?

Sources:

- [Large Language Models, by Khan Academy](#) (video, 10 min)
- Lee, J., Lee, J., & Yoo, J. J. (2025). The role of large language models in the peer-review process: opportunities and challenges for medical journal reviewers and editors. *Journal of educational evaluation for health professions*, 22, 4. <https://doi.org/10.3352/jeehp.2025.22.4>
- <https://news.mit.edu/2025/teaching-large-language-models-to-absorb-new-knowledge-1112> (news article)

Session 2: How are scientists using LLMs?

Sources:

- [The potential of LLMs for accelerating scientific knowledge and our understanding of disease biology](#). (video, 2 min)
- Dmitry Kobak et al., Delving into LLM-assisted writing in biomedical publications through excess vocabulary. *Sci. Adv.* 11, eadt3813(2025). DOI:10.1126/sciadv.adt3813

Session 3: How are LLMs changing scientific research?

Session 4: What aspects of scientific research do LLMs struggle with?

Session 5: What’s agentic AI? Will Agentic AI change scientific research?

Session 6: What’s the future of AI and LLMs? Where do we go from here?

Example Session Format

1. Arrival & Reflection: Begin with a brief check-in to ground the group and establish a welcoming tone.
~5–10 minutes
 - a. Invite participants to reflect on the assigned materials:
 - i. How challenging were the materials?
 - ii. What stood out as interesting, confusing, or enjoyable?
 - b. Encourage honest responses to normalize uncertainty and curiosity.
2. Mini-Lecture: Provide light context to orient the group. This is not a deep lecture—think of it as setting the stage.
~10-15 min

- a. Address the “why”:
 - i. Why is this topic important?
 - ii. Why is it worth our collective attention?
 - b. Example:
 - i. Why study large language models (LLMs)?
 - ii. LLMs are emerging technologies that are increasingly being implemented across many sectors, including science, medicine, and education.
3. Small group dialogue: Use structured discussion techniques to encourage broad participation.
~5-10 min (can be repeated throughout the session)
- a. Common formats:
 - i. Think–Pair–Share:
 - 1. Participants first reflect independently, then discuss in small groups, and finally share insights with the larger group.
 - ii. Turn & Talk:
 - 1. Participants briefly discuss a prompt with a neighbor or nearby peer.
 - b. These methods help participants process ideas before speaking in the full group.
4. Whole group discussion: Bring everyone back together to share insights, questions, and reflections.
~20 min
- a. Invite groups to report out themes or tensions that emerged.
 - b. Introduce open-ended discussion questions to deepen dialogue.
 - i. Ex: How do you feel about LLMs? Does this contribute to your opinion of them?
 - c. Encourage participants to respond to one another, not just to the facilitator.
5. Wrap up: Close the session by helping the group make meaning together.
~5-10 min
- a. Highlight recurring ideas, disagreements, or new perspectives.
 - b. Reflect back key claims or questions raised by participants.
 - c. Emphasize that unresolved questions are a valuable outcome.

Optional:

A. Individual Reflection & Journaling

~5-10 min

- a. This might include journaling, free-writing, or responding to a prompt.

- b. Participants may choose to share reflections, but sharing should be optional.
- B. Additional facilitation ideas and activities: <https://teaching.tools/activities>

Facilitation Guide (adopted from “The Art of Facilitation”)

Gass, R. (2013). *The Art of Facilitation. Social Transformation Project.*

The Facilitator helps with:

- Setting a positive tone
- Maintaining focus
- Encouraging participation and collaboration
- Managing the flow of the meeting
- Adjusting the process as needed
- Shifting learning modalities
- Monitoring group dynamics

Good facilitation starts with setting a good agenda/outline. Facilitators should prepare an agenda that focuses on:

- The opening
 - Welcome participants and set the context
 - Clarify the purpose and outcomes
 - Review the agenda
 - Set ground rules/rules of engagement
- The middle:
 - Ask inquisitive questions
 - Find balance between keeping to the agenda and letting the discussion meander on its own.
 - Remember the question you are trying to answer.
- The end:
 - Acknowledge what was learned (or a key takeaway)

Top 10 Mistakes:

1. Engaging in long discussions about which process to use.
2. Letting the group go on and on and letting the energy drain from the group.
3. Allowing interactions to become all hub-and-spoke, with you at the center.
4. Getting tight and controlling.
5. Being unwilling to make a tough but needed confrontation because you're concerned that people might get upset with you.

6. Allowing a few people to dominate the group while others increasingly withdraw.
7. Subtly pushing your own point of view while trying to look like you're facilitating.
8. Getting stuck on an early agenda item.
9. Letting one person derail the group and agenda.
10. We all make mistakes. The top facilitator mistake is making a mistake, not owning up to it, and trying to make it seem like the group's failure.