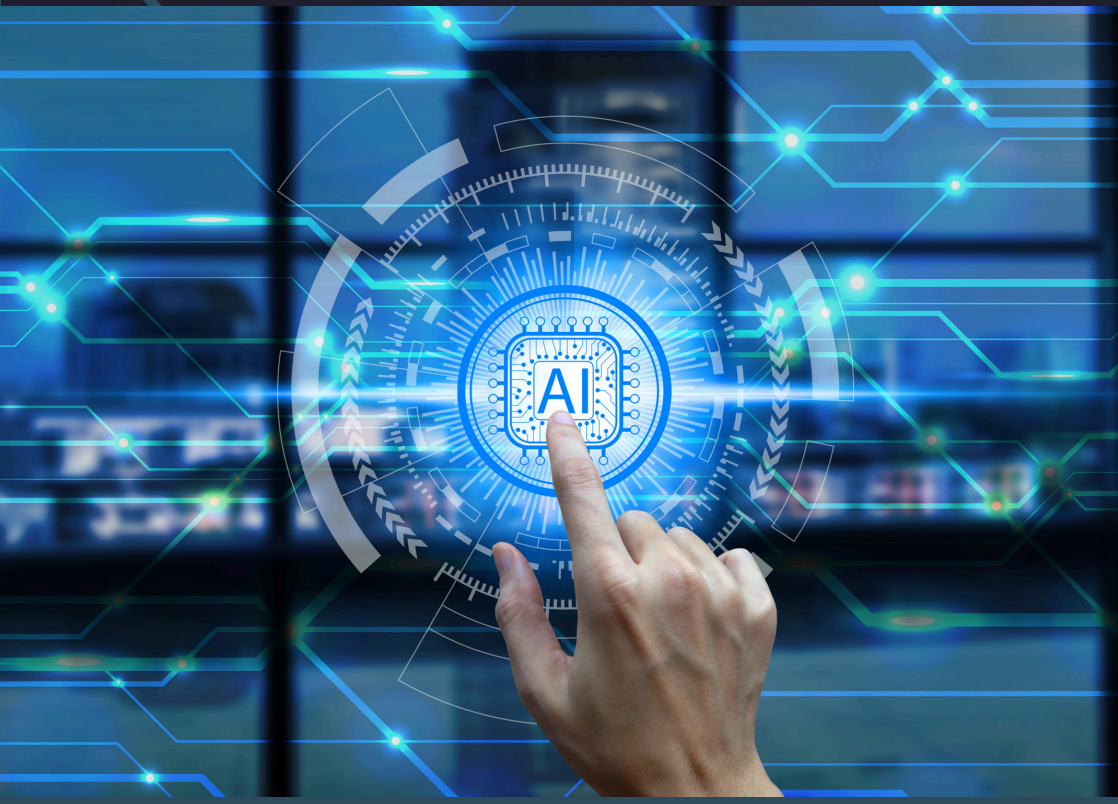
MODULAR AI FOR CONNECTIVISTIC LEARNING



A REPLICATION GUIDE

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MAI-C Teacher's Manual — Replication Guide

This guide is a plug-and-play teacher manual to run the MAI-C (Modular AI for Connectivistic) learning activities in any class. It is designed to be simple, repeatable, and adaptable — working especially well for text-intensive subjects such as business, humanities, and social sciences, while still being easily applied across a broad range of disciplines, including STEM and creative fields.

Part 1 — MAI-C Modules: Teacher Templates

1. AI Inquisition

Purpose: Clarify complex concepts; build targeted questioning skills.

Suggested time: 10–15 minutes

Learning outcomes: Students can explain a concept in simple terms and understand it in a wider context.

Prompt template:
> I'm having trouble understanding [*specific concept*]. Explain it in simple terms and give an example related to [*topic/subject*].

Sample prompt:
> I'm having trouble understanding trade protectionism. Explain it in a simple way and give an example from recent international trade.

Teacher tips

- Ask students to paste the AI answer into a shared doc and highlight one useful sentence and one questionable claim.
- Encourage follow-ups: "Why?" and "Give me an example from 2021–2023 in Malaysia."

2. AI Cooperation

Purpose: Generate and refine ideas using human–AI collaboration.

Suggested time: 10–20 minutes

Learning outcomes: Students effectively collaborate with each other with the help of AI to brainstorm ideas.

Prompt template:
> We are working on [*problem/topic*]. Suggest solutions or steps we should consider. Help us compare and refine these ideas.

Sample prompt:
> We are working on improving a product launch strategy for a foreign market. Suggest key factors and possible problems we may face.

Teacher tips

- Ask groups to produce 3 candidate solutions and have AI rank or compare them.
- Teach a simple evaluation checklist: feasibility, cost, time, customer fit.

3. AI Exemplification

Purpose: Turn ideas into concrete examples, visuals, or analogies.

Suggested time: 15–25 minutes

Learning outcomes: Students can produce a prototype description or visual, logo idea, or short case example.

Prompt template:
> Using this [*concept*], generate an example as a [*case/story/analogy/image*] that shows [*specific outcome*].

Sample prompts:
- Generate case study: Using economies of scale, create a short company case that shows cost decline as output rises.
- Generate visuals: Using the product features list, generate a logo concept and packaging description.

Teacher tips

- Ask students to request alternative styles: "Make it minimalist," "Make it targeted at Gen Z."
- Remind students to check feasibility and avoid copying existing designs.

4. AI Simulation

Purpose: Practice scenario-based decision-making and see consequences.

Suggested time: 10–20 minutes (Think + optional extension).

Forms: Timeline simulation; Choice-based simulation.

Template — Timeline:
> Create a simulation of [scenario] if [X event changes]. Show chain of events and results.

Template — Choice-based:
> Create a decision-making scenario for [situation]. Give [2–3 options]. After I choose, show what happens next and the consequences.

Sample prompts:
- Timeline: If a company focused only on battery modules, how would its product and market change over 5 years?
- Choice: Give me three market entry options (export, JV, local partner) for this product; simulate outcomes for each over 5 years.

Teacher tips

- Prefer short, focused scenarios. Ask AI to use simple language and show a timeline with years.
- If AI gives implausible outcomes, ask students to identify questionable steps.

Prompt Scaffolding & Prompt Engineering

1. **Model one prompt** live (projector). Show a weak prompt and improved prompt.

2. **Before/after example:**
   - Weak: "Tell me about marketing."

   - Improved: "For a new packaged drink targeting urban Malaysian students aged 18–25, suggest three low-cost launch tactics and explain expected costs."

3. **Teach a short checklist** for prompt quality: Specificity, Context, Output Format, Constraints. (Remember: SCOT)

4. **Require students to record:** original prompt, AI output, one student revision, and final AI output.

Part 2 — The 3Ts Activity

Quick Start — Replication in 10 Steps

1. Read the Preparation Checklist (below).
2. Set up AI access and devices.
3. Pick a 60–90 minute class slot.
4. Form student teams of 3–5. Assign roles (researcher, designer, presenter, recorder).
5. Run the **Team** phase (20–30 min): research + AI Inquisition + AI Cooperation.
6. Run the **Think** phase I (25–35 min): independent refinement + AI Exemplification + prototype.
7. Run the **Think** phase II (Simulation) (10–20 min): timeline or choice-based scenario using AI Simulation.
8. Run the **Talk** phase (10–15 min): reflection and debrief.
9. Collect and archive outputs (screenshots, short report, log of AI prompts/outputs).
10. Use your rubric to grade and collect student feedback.

Preparation Checklist

- Devices: at least one device per group (laptop/tablet)
- Internet access for each device
- AI accounts: free or institutional access to a conversational AI (e.g., Copilot, ChatGPT, Gemini, etc.)
- Projector for whole-class demos
- Printed or digital student worksheet (see Appendix A)
- Timekeeper and roles assigned

Learning Objectives

By the end of this activity students will be able to:

- Use AI prompts to clarify and apply key subject concepts.
- Collaborate with peers and AI to generate and refine solutions.
- Translate abstract ideas into a visual or textual prototype.
- Simulate decision-making outcomes using AI and reflect on the results.

MAI-C links to the 3Ts (one-line summary)

- **Team** = AI Inquisition + AI Cooperation
- **Think** = Human reasoning + AI Exemplification + AI Simulation
- **Talk** = Reflection + evaluation

The 3Ts Activity

Total class time: 90 minutes.

Group size: 3–5 students.

Step-by-step lesson plan:

Time allocation	Tasks	Deliverables
0–5 min	Warm-up & Setup Explain outcomes and success criteria. Show one demo prompt. Confirm groups and roles.	N/A
5–30 min	TEAM (Research + Inquisition + Cooperation) *Task (15–20 min):* Each group researches a local product, collects 3 facts, and asks AI Inquisition one clarifying question. *Task (5–10 min):* Use AI Cooperation to generate 3 improvement ideas and pick one to test.	1-paragraph narrative + screenshot of AI outputs.
30–60 min	THINK Phase I (Refine + Exemplify + Prototype) *Task (15–20 min):* Teams refine idea independently; teachers circulate to support. *Task (10–15 min):* Use AI Exemplification to design a logo/packaging description and a short prototype pitch.	1 visual description / logo concept + 3 bullet features
60–75 min	THINK Phase II - SIMULATION (Choice or Timeline) *Task (10–15 min):* Run a short AI Simulation of a product launch or market-entry choice.	AI simulation output screenshot + 1-page summary of choices made

75–90 min	TALK (Reflect & Debrief) *Task:* Each group does a 2-minute share + 3 reflection questions. Teacher collects artifacts and reminds students to complete the short survey.	Group presentation notes + written answers to 3 reflection questions + completed short survey

Data Collection Templates

Sample questions for student survey (post-activity, Likert 1–5):
1. I felt more confident applying the topic after this activity.
2. I understood the material better because of AI.
3. The activity was engaging and useful.
4. Access to AI tools was fair and easy.
5. I could work well with my team.

Logistics & Practical Notes

- **Group size:** 3–5 recommended.
- **Class length:** 60–120 minutes works; split across sessions if needed.
- **Tech support:** Confirm AI access before class; have a backup demo if a group loses connection.
- **Offline adaptation:** If internet is limited, use one shared device per two groups and rotate.

Safety & Ethics

- **Bias & Hallucination:** Teach students to treat AI outputs as *suggestions* and always check facts.
- **Plagiarism:** Require students to rephrase and cite sources; treat verbatim AI text as a draft, not final work.
- **Data privacy:** Do not upload student personal data into AI prompts. Use fictional company names if needed.
- **Accessibility:** Provide captions, readable fonts, and alternative text for AI-generated images.

Troubleshooting & Common Pitfalls

Problem: AI output is too generic.
Fix: Add constraints: target audience, time period, market.

Problem: AI gives false facts.
Fix: Ask the AI to provide sources, cross-check with trusted websites, or limit to a specific domain (e.g., "based on public news reports").

Problem: Students copy AI text without checking accuracy or relevance.
Fix: Require each group to highlight one useful sentence and one questionable claim from the AI output and discuss them.

Problem: Some students have weaker digital skills and feel left out.
Fix: Pair less experienced students with more tech-savvy peers, and give a short, 2-minute AI demo at the start.

Problem: Students over-rely on AI.
Fix: Insert "human-only checkpoints" where no AI use is allowed (e.g., refining the product idea before AI Exemplification).

Problem: Groups move at different speeds.
Fix: Prepare optional extension tasks (e.g., deeper simulation scenario, competitor analysis) for fast groups while slower groups complete core tasks.

Problem: Students prompt AI in a vague way.
Fix: Use the SCOT checklist to make prompts clear and targeted:

1. S – Specificity: State exactly what you want (e.g., "marketing plan for Malaysian teens" instead of "marketing ideas").
2. C – Context: Give background or constraints (e.g., "new eco-friendly drink" or "low-budget campaign").
3. O – Output Format: Tell AI how to present the answer (e.g., "as a table with 3 columns").
4. T – Time/Target: Include timeframe or audience (e.g., "for 2025 launch" or "targeting working adults").

Adaptations for Other Disciplines (examples)

- **Marketing:** Use Cooperation to generate segmentation strategies and Exemplification to design ad copy.
- **Management:** Simulate leadership decisions using choice-based simulation.
- **STEM:** Use Inquisition to clarify technical concepts and Simulation to test parameters in a hypothetical experiment.
- **History:** Use AI Simulation to explore an alternative history (e.g., "What if a key treaty had failed?") and summarize the social impacts.
- **Psychology:** Use AI Cooperation to create a stress-reduction plan for students, then AI Simulation to show potential effects over a month.
- **English Literature:** Use AI Inquisition to simplify complex literary themes, then AI Exemplification to reimagine the scene in a modern setting.
- **Music:** Use AI Inquisition to simplify complex literary themes, then AI Exemplification to reimagine the scene in a modern setting.
- **Astronomy:** Use AI Inquisition to explain orbital mechanics in simple terms, then AI Simulation to explore what would happen if Earth's rotation speed increased or decreased by 10%.

Teacher Tips

- Run one short demo before letting groups start.
- Use a projector to show AI prompt editing live.
- Start with a simple prompt template and require only one revision in the first session.
- Keep the first implementation short (60 min) and iterate.

Appendix A — Sample Student Worksheet

Group name: _____

Member	Roles

Product chosen: _____

Team phase
- AI Inquisition prompt: _____
- AI output: (paste) _____
- Key takeaway: _____

Think phase
- Revised plan (human): _____
- AI Exemplification prompt: _____
- AI output: (paste) _____

Simulate phase
- AI Simulation prompt: _____
- AI output (paste): _____

Talk phase reflection (3 bullets):
1. _____
2. _____
3. _____