AI-Driven Deep (AIDD) Learning Assessment Framework: A Replication Guide

Quick note: This guide provides a plug-and-play structure for lecturers to implement the AIDD framework across subjects. Each stage contains its purpose, suggested workflow, prompt template, sample applications implemented in International Business (IB) and Foreign Market Entries (FME), and tips for lecturers. It is designed to be simple 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.

Figure 1 below illustrates the five-stage implementation of the AIDD learning assessment framework.

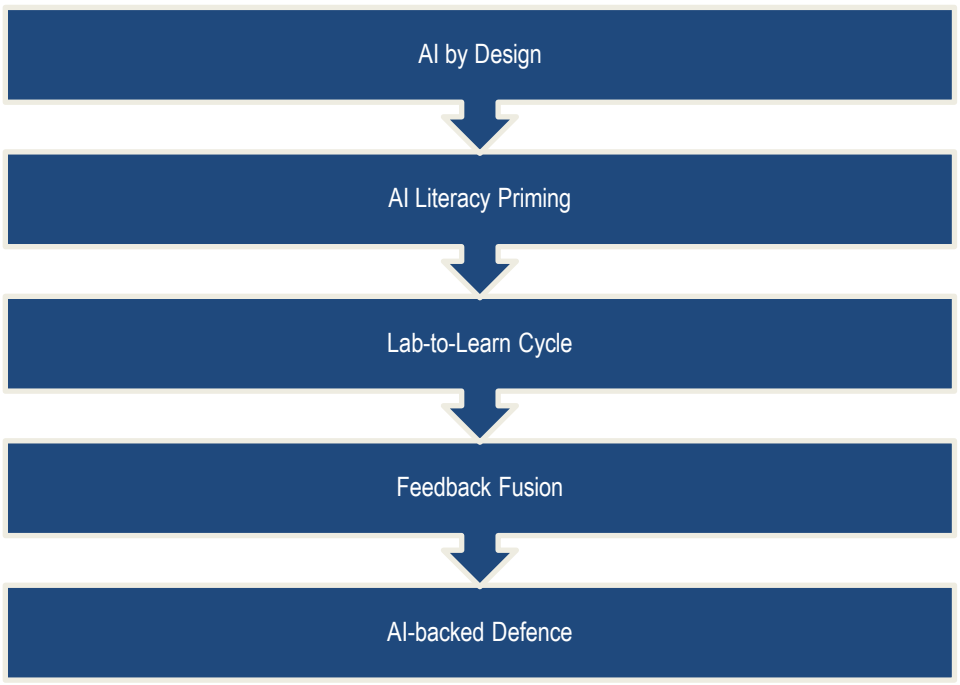

Figure 1 The five-stage implementation of the AI-integrated assessment framework

Implementation Notes

1. AI Appendix should be made compulsory for all assignments.
2. AI as scaffold, not substitute: AI handles outlines, checks, and ideas; students handle synthesis and judgment.
3. Rubrics must reward both AI-use transparency and human critical reasoning.

Stage 1 — AI by Design

Purpose: Design assignments that explicitly embed AI tools while ensuring academic integrity.

Suggested workflow:

1. Draft assignment and rubric.
2. Get peer and AI feedback for clarity and CLO alignment.
3. Revise rubric to include AI-use documentation and evaluation criteria.

Prompt template (for lecturers):

"I am designing an assignment for [subject/course]. Review this draft and suggest improvements to ensure alignment with learning outcomes, fair workload, and clear AI-use requirements."

Sample applications:

1. **IB:** Educator provides basic assignment plan to AI. For example, students need to defend Apple or Huawei in a legal dispute.

   AI Suggestions: Rubric includes marks for AI-simulated counterarguments and penalties for uncritical AI use.

2. **FME:** Educator provides basic assignment plan to AI. For instance, students need to recommend a foreign market for chosen Malaysian SME.

   AI Suggestions: Rubric includes marks for AI appendix, verification of AI outputs, and integration with real data.

Tips:

- Require AI Appendix (prompts + outputs + highlights on sections used in report).
- Build critical analysis checkpoints into rubric.

Stage 2 — AI Literacy Priming

Purpose: Train students to use AI responsibly before starting assignments.

Suggested workflow:

1. Run AI Student Literacy Workshop.
2. Teach prompt engineering basics, APA citation of AI, and ethical use.
3. Require students to practice creating an AI Appendix.

Prompt template (for students):

"I am studying [topic]. Generate a simple explanation, provide examples, and show possible limitations. Highlight one part I should fact-check."

Sample applications:

1. **IB:** Students use AI to generate case summaries, then fact-check legal claims with external sources.
2. **FME:** Students use AI to list Malaysian firms suitable for expansion, then verify company profiles using credible references.

Tips:

- Model one weak vs strong prompt in class.
- Run a quick quiz on AI ethics and documentation.

Stage 3 — Lab-to-Learn Cycle

Purpose: Support iterative drafting with AI and peer collaboration.

Suggested workflow:

Outline with AI → Human-written first draft → AI-supported lecturer feedback → Peer + AI review → Revise draft

Prompt template (for students):

"Here is my outline for [assignment topic]. Suggest missing points, gaps in reasoning, and questions I should address."

Sample applications:

1. **IB:** Students draft legal defences with AI, refine with human evidence, and simulate rebuttals through AI-generated dialogues.
2. **FME:** Students create screening tables with AI, then verify GDP, culture, and competition data before revising country choice.

Tips:

- Insert "human-only checkpoints" (e.g., draft reflection without AI).
- Encourage peer review of AI outputs to detect errors.

Stage 4 — Feedback Fusion

Purpose: Combine AI pre-evaluation with lecturer validation.

Suggested workflow:

1. AI does pre-grade scoring and basic feedback.
2. Lecturer finalises marks and adds deeper comments.

Prompt template (for lecturers):

"I need to grade this student assignment using the attached rubric. Suggest marks for each section and provide constructive feedback. Check for critical analysis, flow, and evidence of learning beyond AI-generated content."

Sample applications:

1. **IB:** AI checks whether case summary, allegations, and rebuttals are included. Lecturer comments on legal depth and real-world citations.

2. **FME:** AI checks if all five screenings are covered. Lecturer verifies economic data accuracy and integration of evidence.

Tips:

- Always cross-check AI's rubric scoring.
- Add specific feedback on where AI reliance shows.

Stage 5 — AI-Backed Defence

Purpose: Develop students' ability to defend work in real-world settings.

Suggested workflow:

1. Lecturer/AI generates probing Q&A from final reports.
2. Students defend in live sessions.
3. Peers ask additional questions.

Prompt template (for lecturers):

"Based on this student report, generate 10 probing questions that test their ability to justify evidence, defend analysis, and reflect on weaknesses."

Sample applications:

1. **IB:** Mock trial defence of Apple argues patents are not enforceable.

   AI suggestion: Challenge fallback arguments if patents are enforceable.

2. **FME:** Students justify final country choice (e.g., Australia).

   AI suggestion: Probe reasons for the elimination of other countries in the list.

Tips:

- Focus grading on articulation and reflection, not memorisation.
- Encourage peers to use AI to generate cross-examination questions.