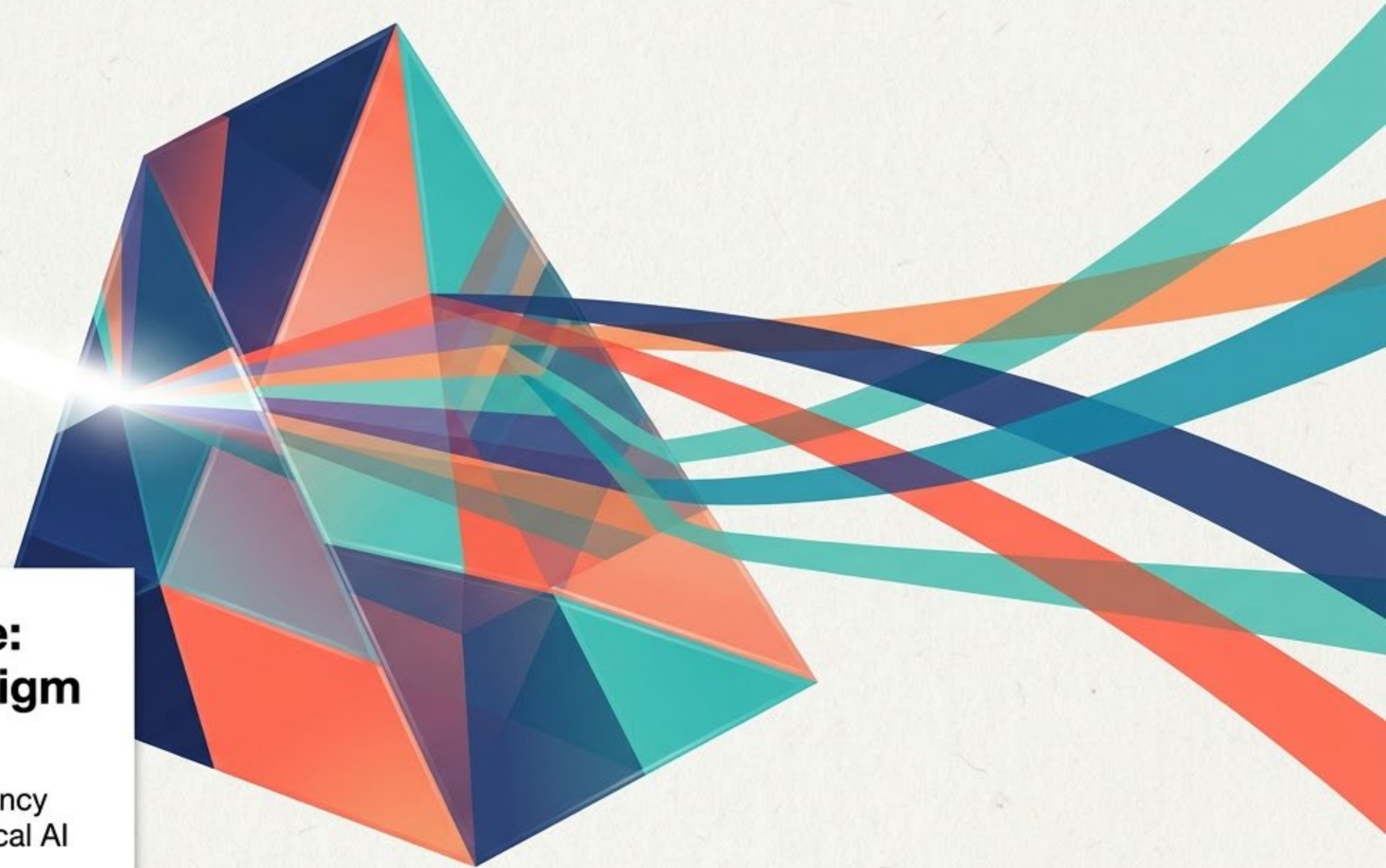
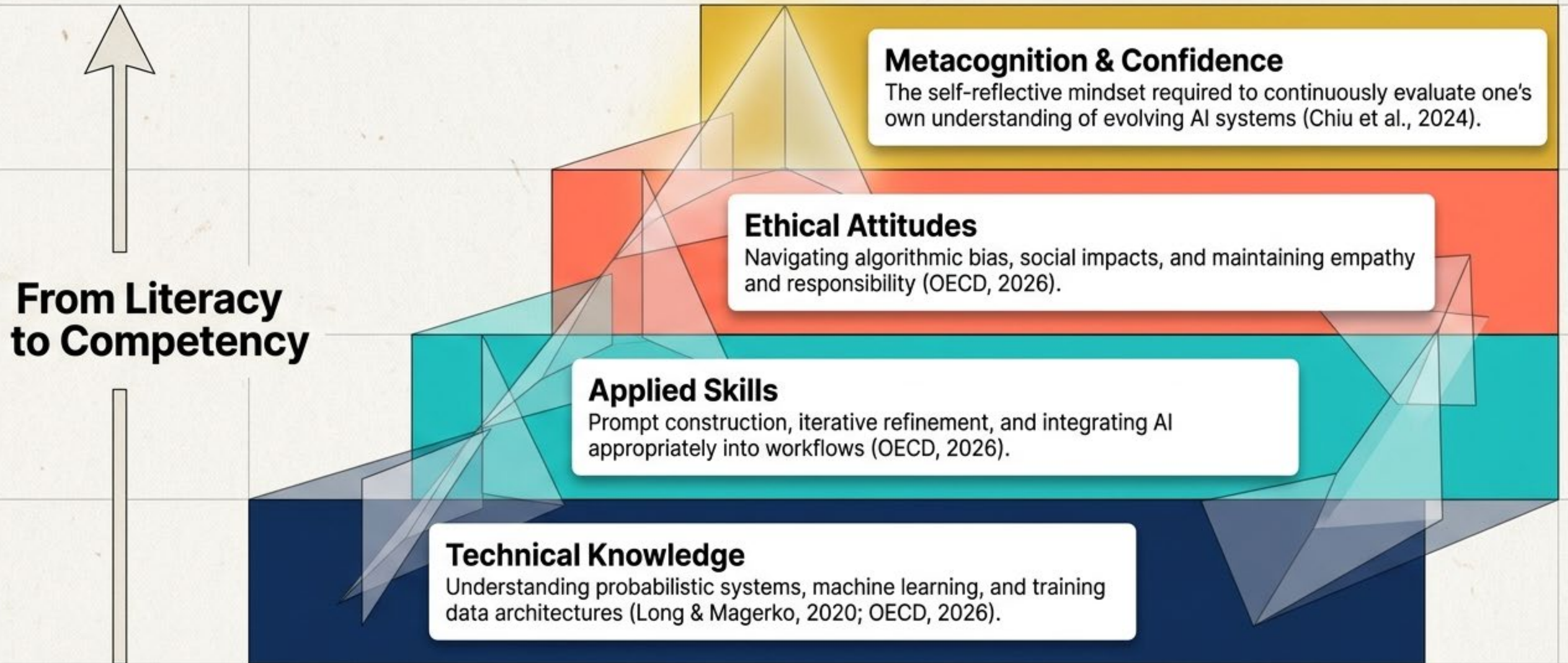


An abstract graphic featuring a multi-faceted prism in the center, composed of various colored triangles (dark blue, teal, orange, and purple). A bright white light beam enters from the left, hitting the prism and refracting into multiple colored rays that fan out to the right. The background is a light, textured grey.

Refracting the Oracle: A Pedagogical Paradigm for AI Literacy

Moving beyond digital tool proficiency
toward critical, structural, and ethical AI
competency in higher education.

The Anatomy of AI Literacy



The Foundational Matrix: Digital vs. AI Literacy

 Digital Literacy		 AI Literacy	
Nature of Tool	Deterministic. Explicit programming; predictable.	Probabilistic. Non-deterministic; variable outputs from similar inputs (JobCannon, 2026).	
User Interaction	Direct command execution.	Iterative prompting and dialogic negotiation (JobCannon, 2026; Chiu et al., 2024).	
Output Reliability	High predictability; errors are traceable coding faults.	Confidently wrong outputs; hallucinations encoded in statistical weights (JobCannon, 2026).	
Evaluation Required	General information literacy.	AI-specific bias detection and deep domain domain assessment (JobCannon, 2026).	

The Epistemic Shift: The Probabilistic Engine

The Digital Era



The AI Era

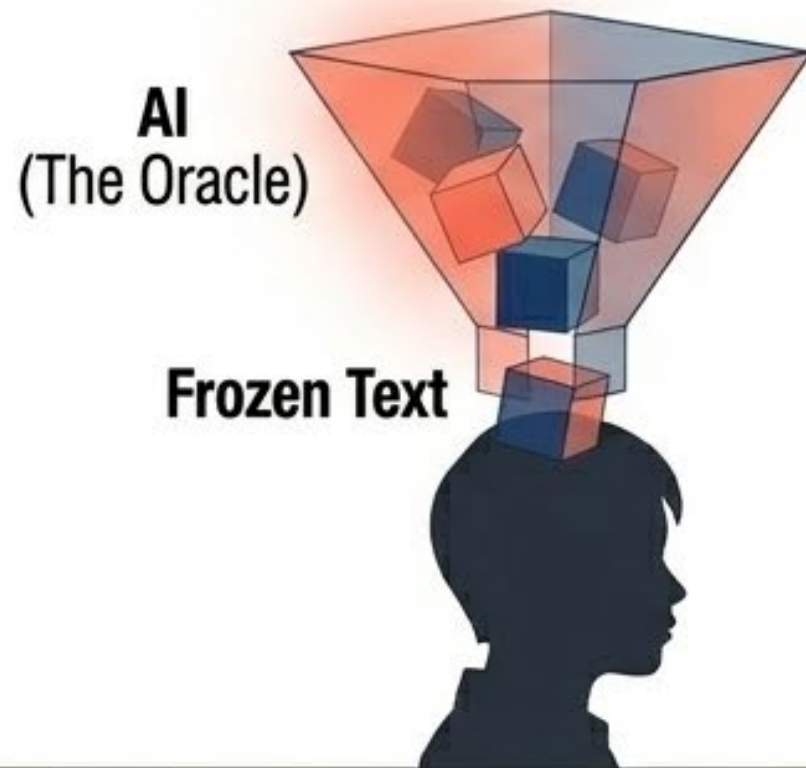


AI is not human. It combines step-by-step procedures with statistical inferences to generate outputs based on probability, not objective truth (Russell & Norvig, 2022, as cited in OECD, 2026).

Because the engine is non-deterministic, critical evaluation is non-negotiable.

Reconceptualizing Literacy: The Classroom Dynamic

The Banking Model



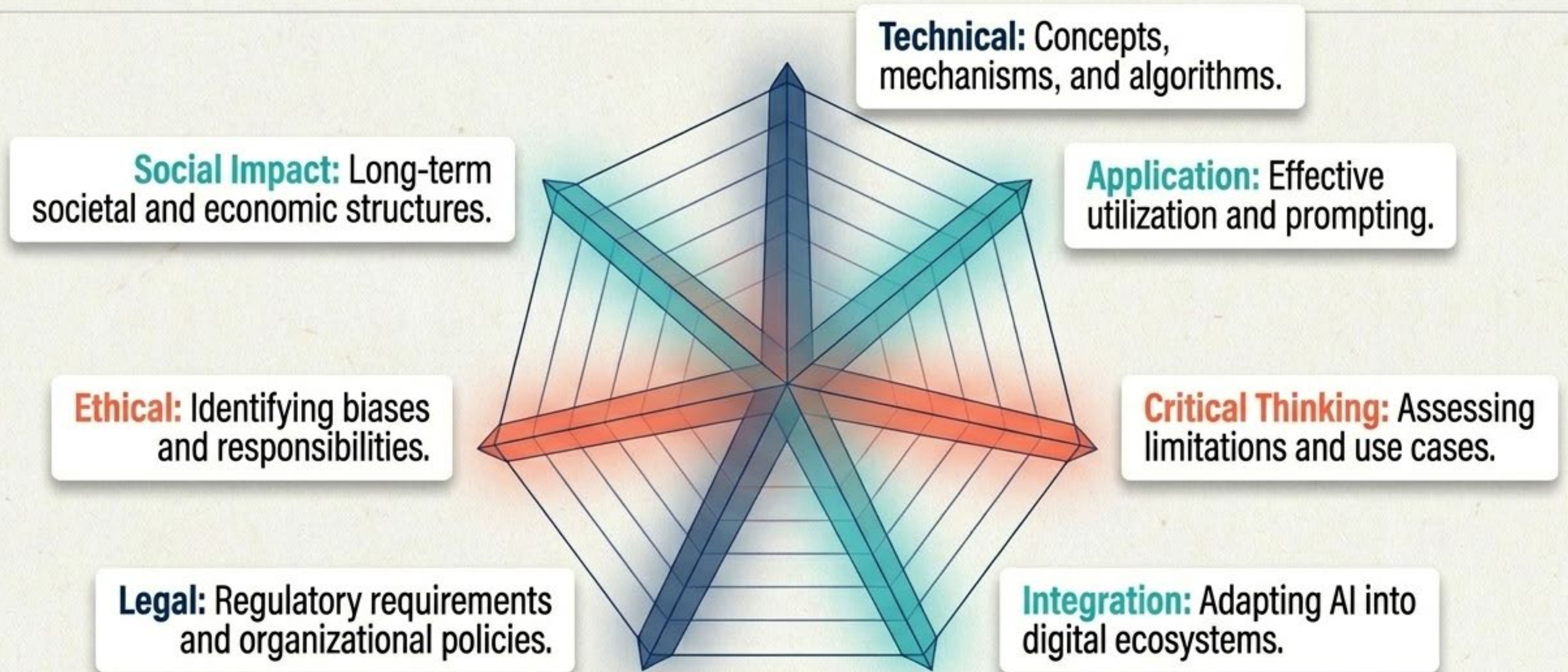
Uncritical acceptance of generative AI mimics Freire's "banking model." AI acts as a dominant transmitter of "frozen language," eliminating the emancipatory dialogue central to meaning-making (Alm & Watanabe, 2023).

Co-Literacy



AI literacy demands "**Co-Literacy**." AI-generated content is not fixed knowledge, but **raw material for critical re-evaluation, redesign, and active student agency** (Alm & Watanabe, 2023).

The AI Literacy Heptagon

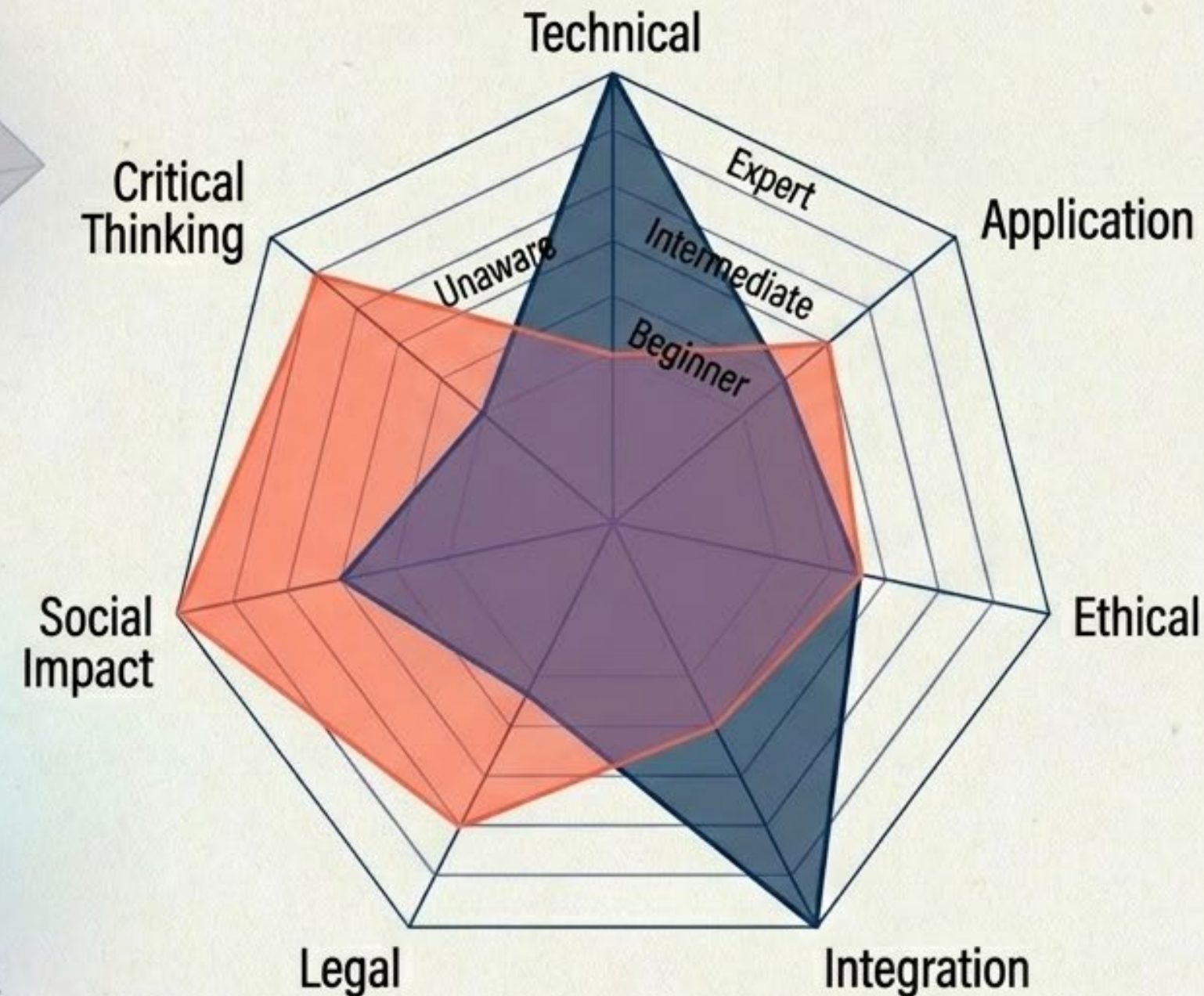


(Hackl, Müller, & Sailer, 2026)

Disciplinary Adaptability

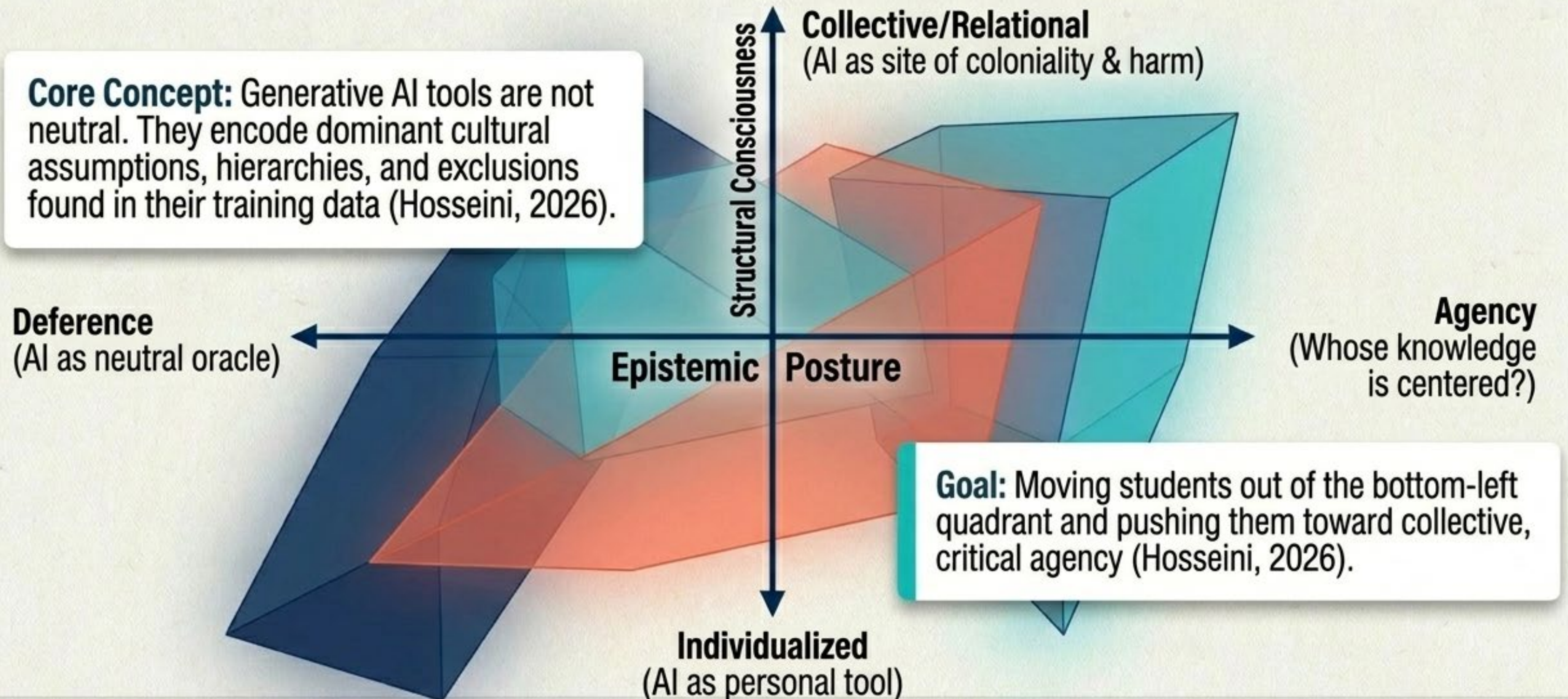
Navy Profile:
B.Sc. Computer
Science

Coral Profile:
Media Pedagogy

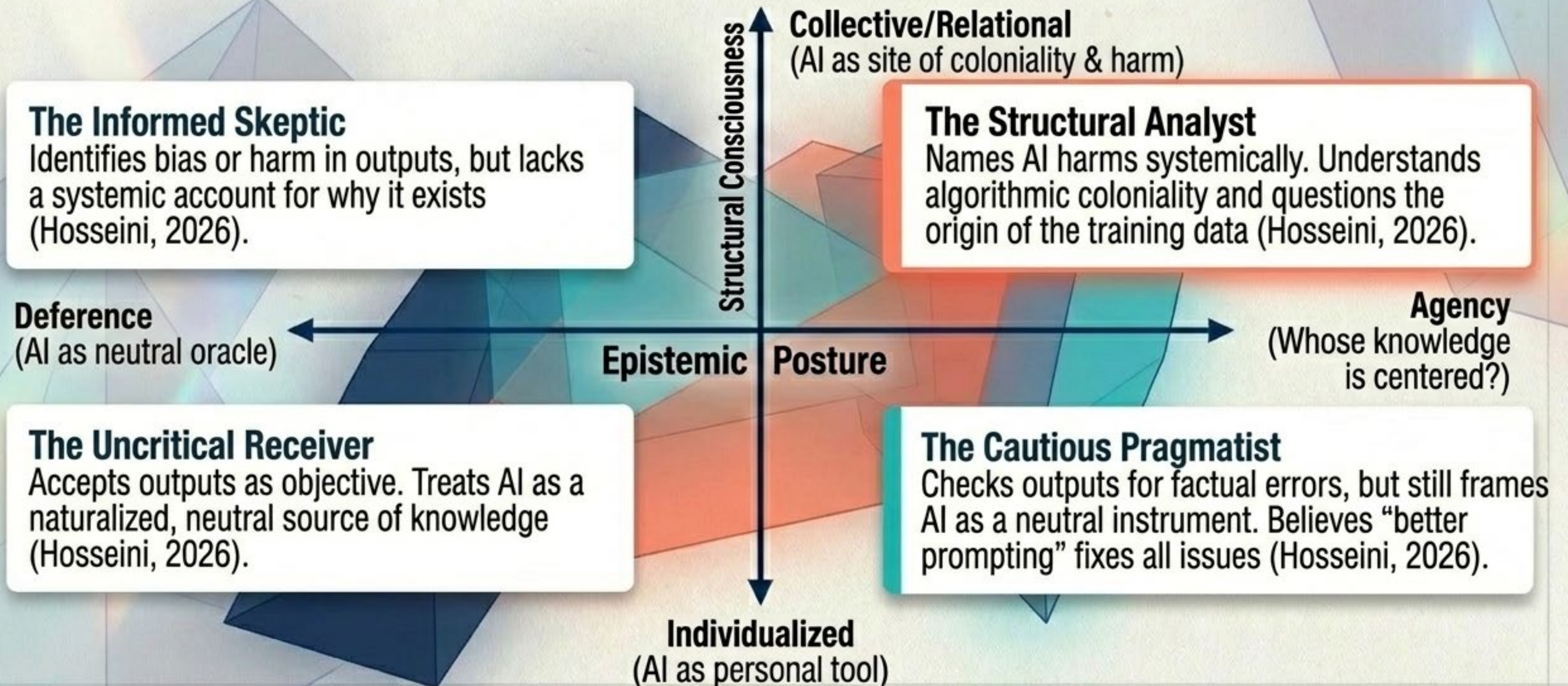


AI Literacy is not a monolithic competency. The Heptagon allows universities to adapt curricula to specific disciplinary contexts while ensuring no core dimension is entirely ignored (Hackl et al., 2026).

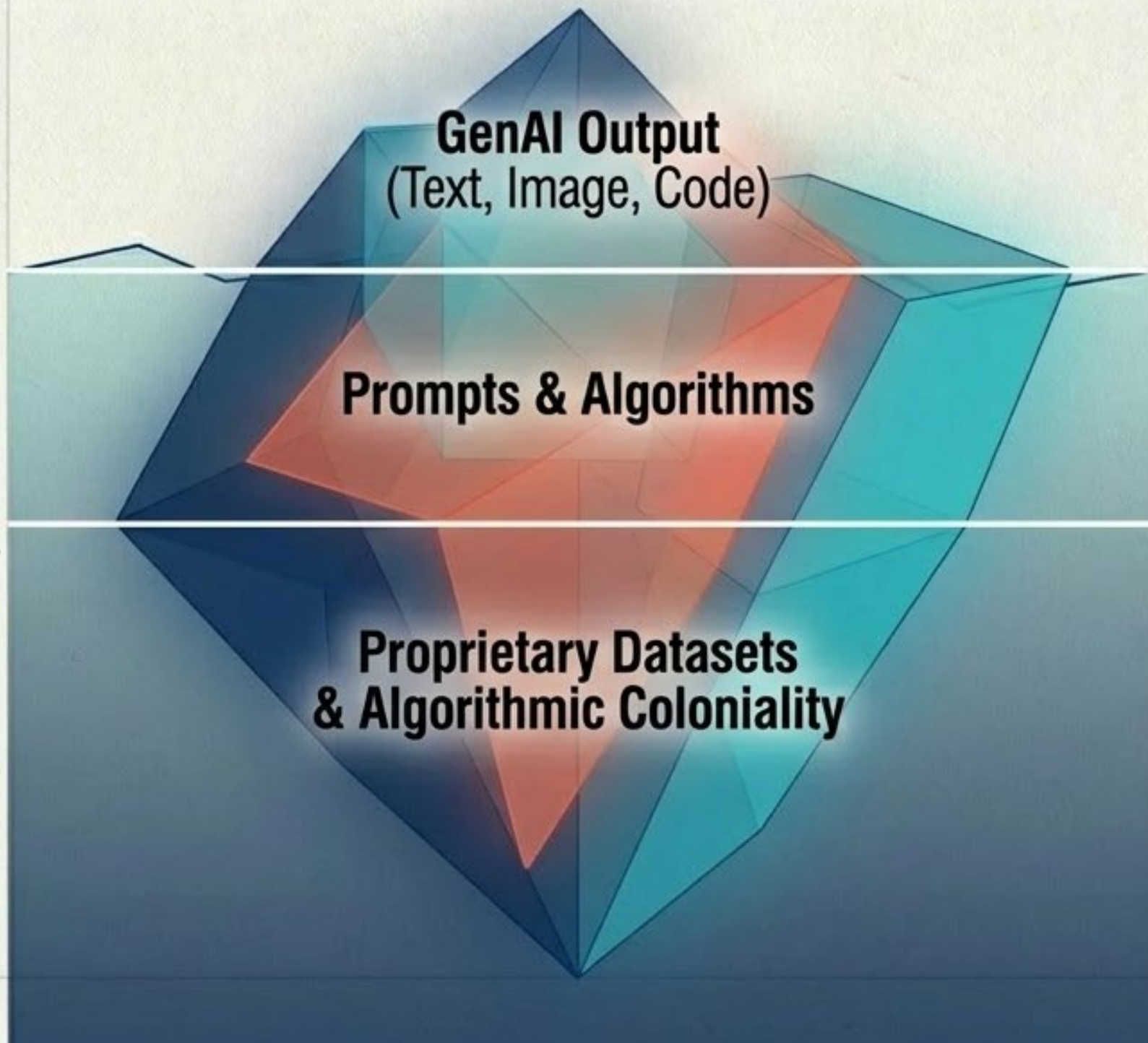
The Critical AI Engagement Framework



Diagnosing Learner Archetypes



Confronting Algorithmic Coloniality



Surface improvements (more realistic images, better text) mask underlying logics. A technical fix does not resolve colonial training data (Hosseini, 2026).

Opaque datasets embed dominant, Eurocentric worldviews that uphold hierarchical, racialized, and gendered ways of knowing (Mohamed et al., 2020).

Pedagogical Imperative: Educators must shift the classroom question from "Is this accurate?" to "Whose accuracy is this?" (Hosseini, 2026).

Literacy vs. Competency

AI Literacy (The Foundation)

Focuses on **Knowing**.

Involves acquiring knowledge and discrete skills.

Answers “**What to do**” with AI (Chiu et al., 2024).

AI Competency (The Praxis)

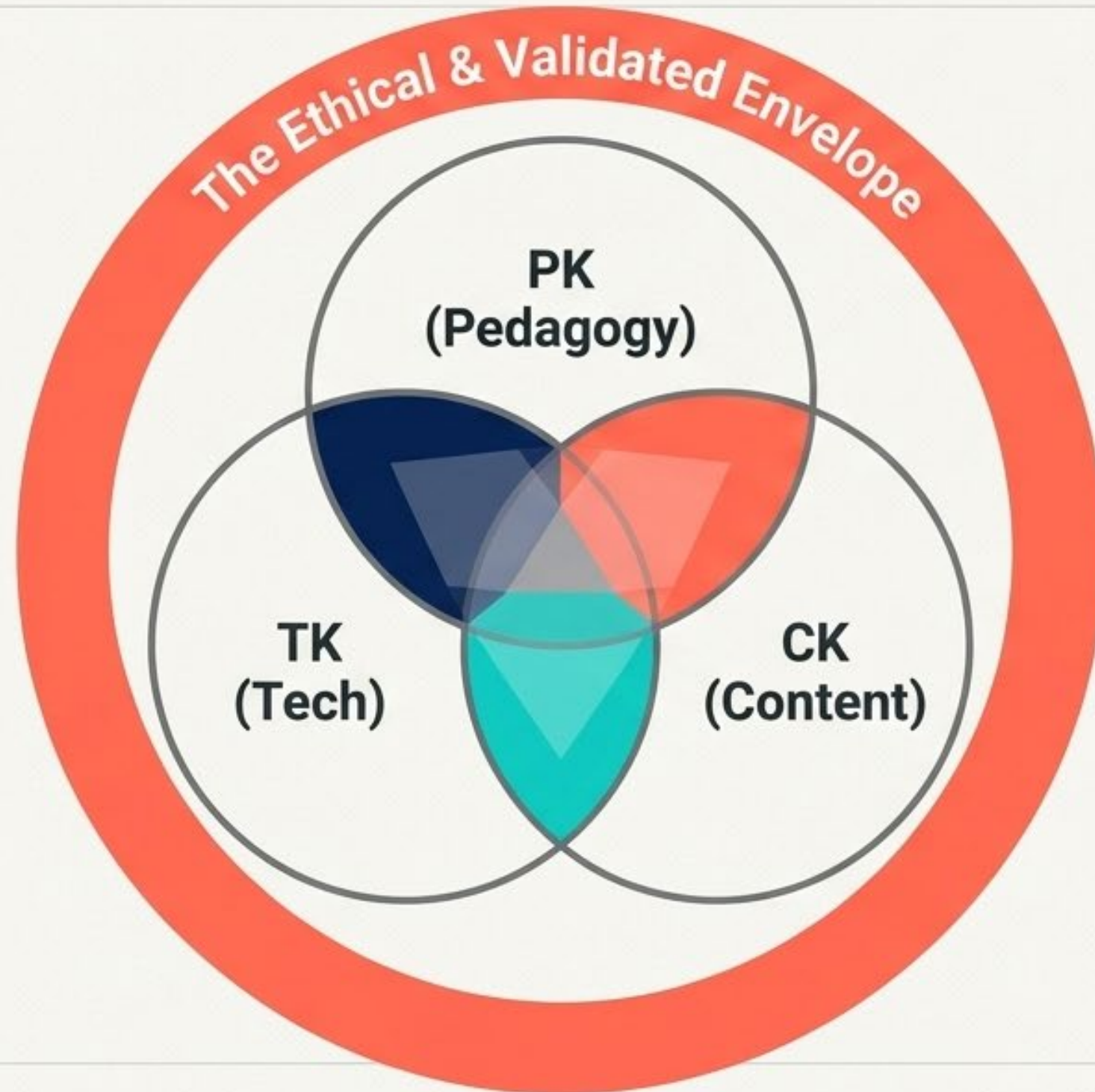
Focuses on **Applying**.

Involves confidence, contextual integration, and self-reflection.

Answers “**How well it is done**” and ensures beneficial outcomes (Chiu et al., 2024).

Emerging, disruptive technologies like generative AI require an ongoing, **self-reflective mindset** to continuously evaluate one's own understanding as the tool evolves (Chiu et al., 2024).

Intelligent-TPACK Integration



Integrating AI into K-12 and Higher Education does not require abandoning established pedagogy. Instead, it expands the TPACK framework by injecting an explicit layer of ethical evaluation and validated tool application over all technological choices (Touretzky et al., 2019; Celik, 2023; Tsioukas & Kostas, 2027).

The Critical Praxis Matrix

"Beginner" technical skills often correlate with "Uncritical Reception."

Reaching "Expert" status in Ethical and Social Impact dimensions requires the structural consciousness to view AI as a socio-technical artifact shaped by power relations, not a neutral tool.

Heptagon Unaware → Beginner → Intermediate → Expert



Hosseini's axes

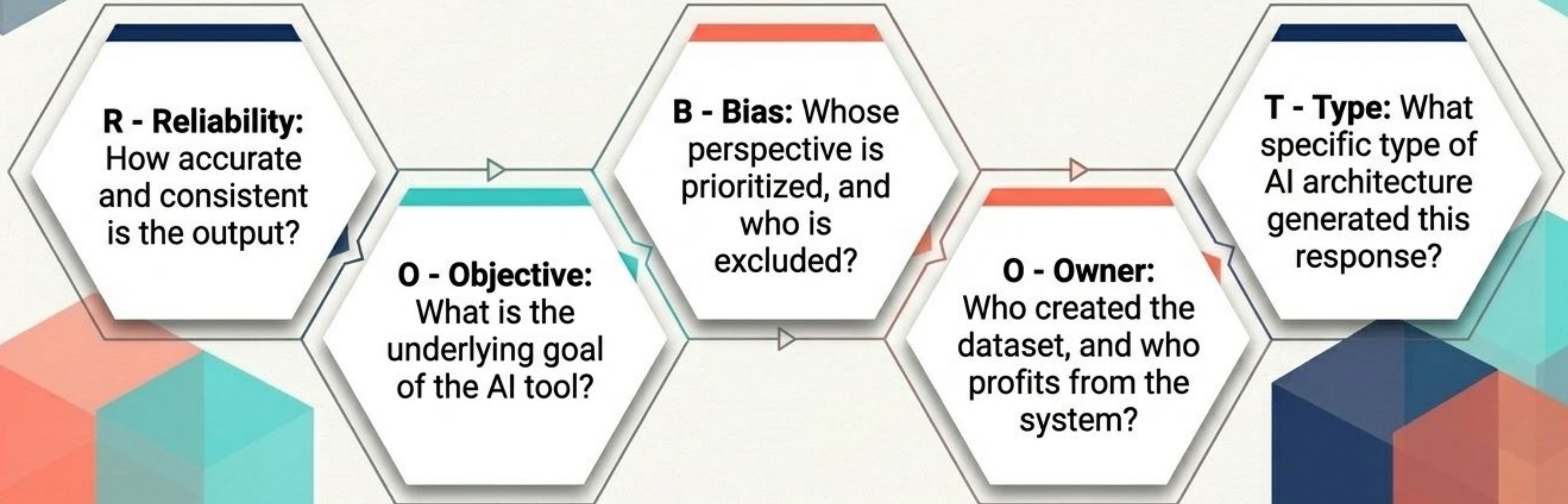


Epistemic Deference -> Collective Agency

Main Insight: Acquiring Technical Knowledge (Heptagon) is insufficient without a parallel shift in Epistemic Posture (Engagement Framework).

Applied Praxis: The ROBOT Test

A framework to empower learners to critically approach any AI application or generated text (Hervieux & Wheatley, 2020; Tsioukas & Kostas, 2027).



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