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BACKGROUND

Active learning (AL) is important for positive learning experiences and outcomes. Generative Artificial Intelligence (GAI) brings both opportunities and challenges for AL [1]. It can :

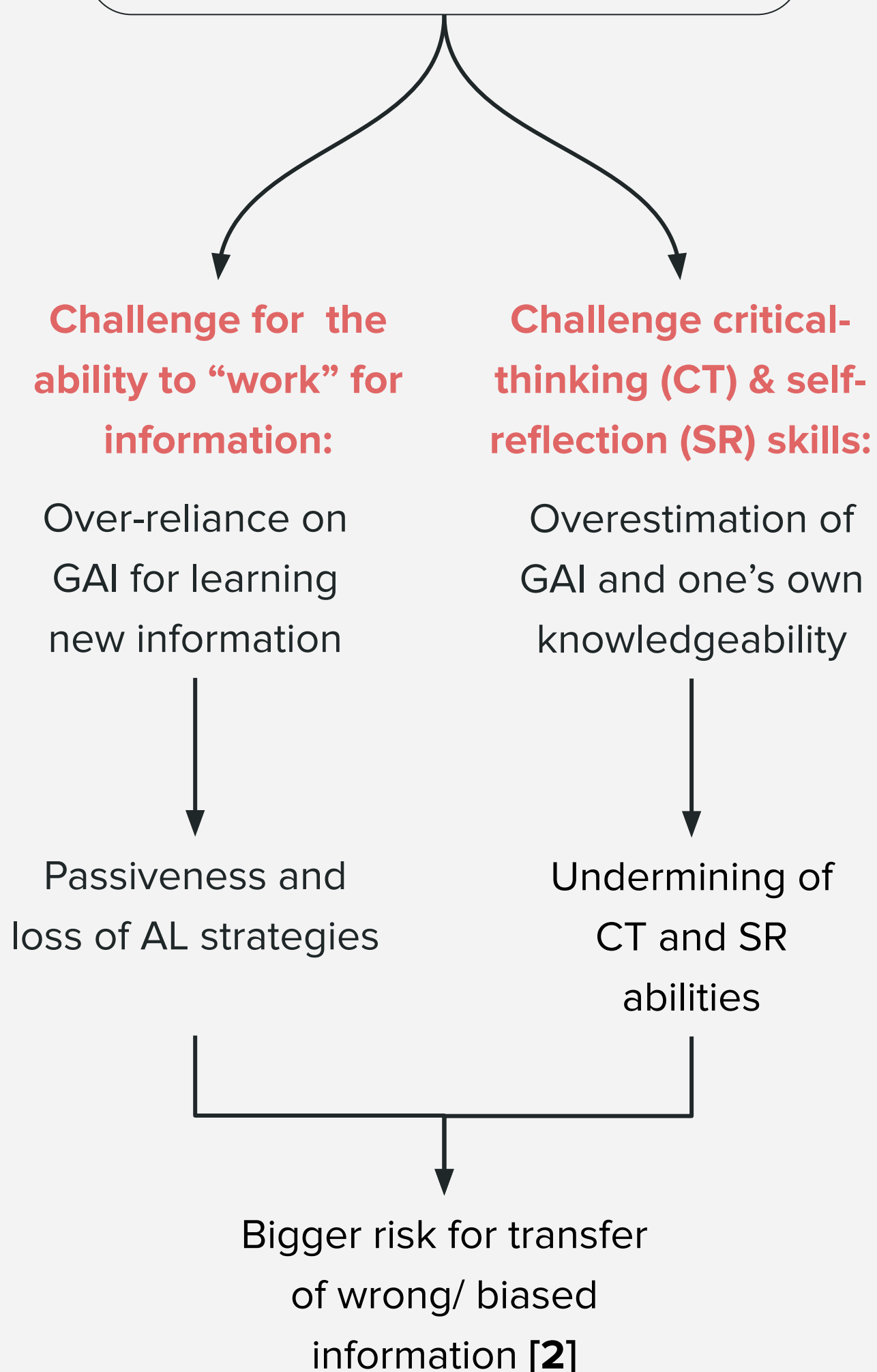
- **Enhance AL by:** providing personalized, interactive and empowering pedagogical sequences.
- **Compromise AL by:** leading to over-estimation of one's own competencies, confirmation of inadequate beliefs, passiveness, impaired curiosity and critical-thinking

GAI tools can lead to negative impacts on AL because they lack (or have unclear) pedagogical stance in their behaviors.

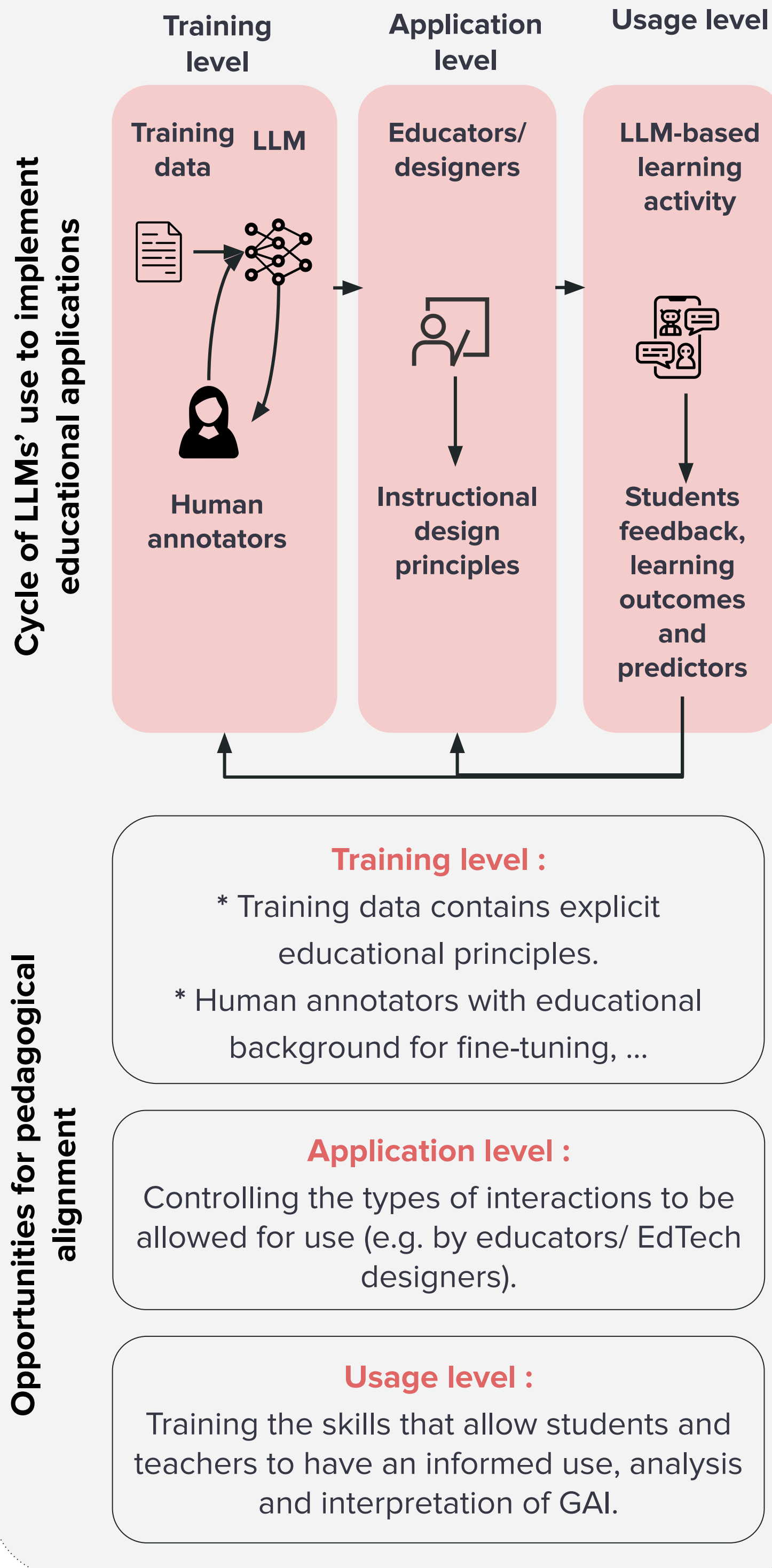
GAI CHALLENGES ACTIVE LEARNING

Some properties surrounding the use of GAI :

- "Easy" access to information
- Continuous assertive stance
- Steerability and social overhype

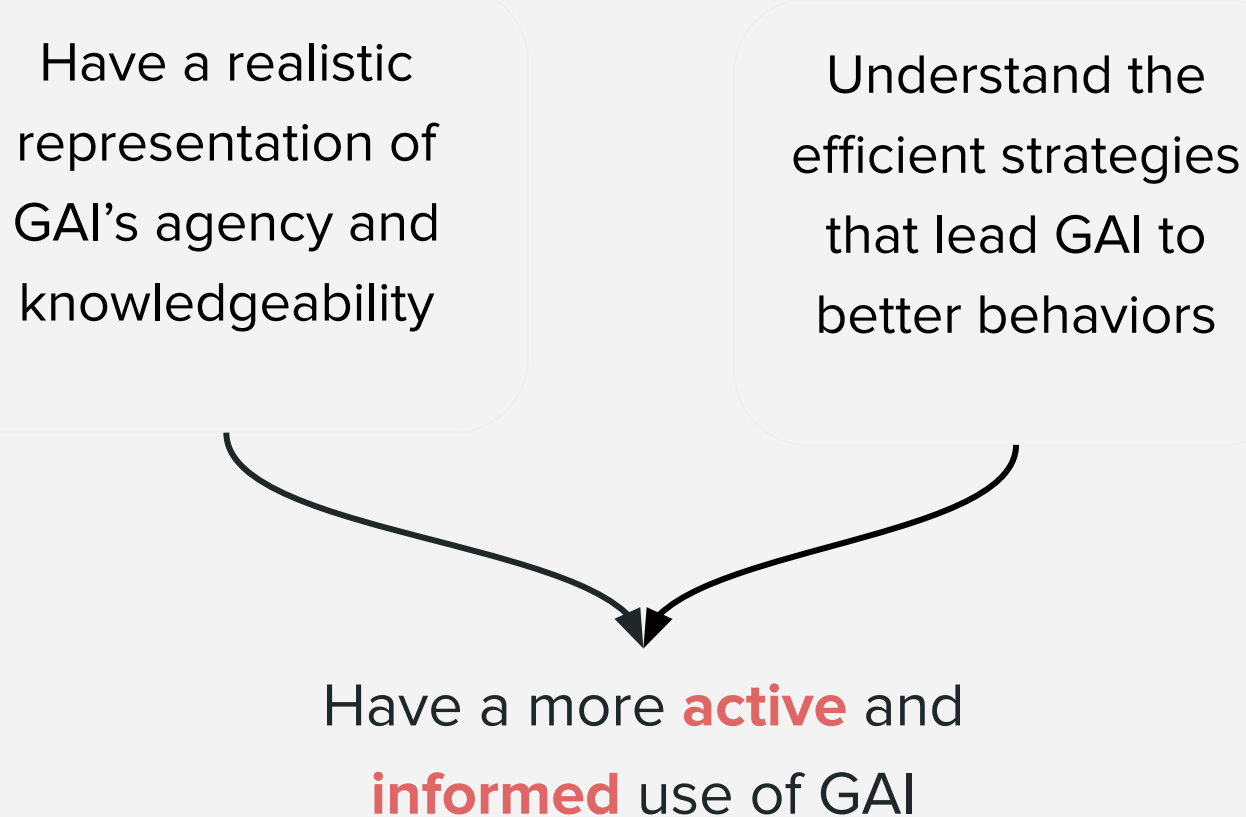


PEDAGOGICAL GROUNDING OPPORTUNITIES



ROLE OF GAI LITERACY

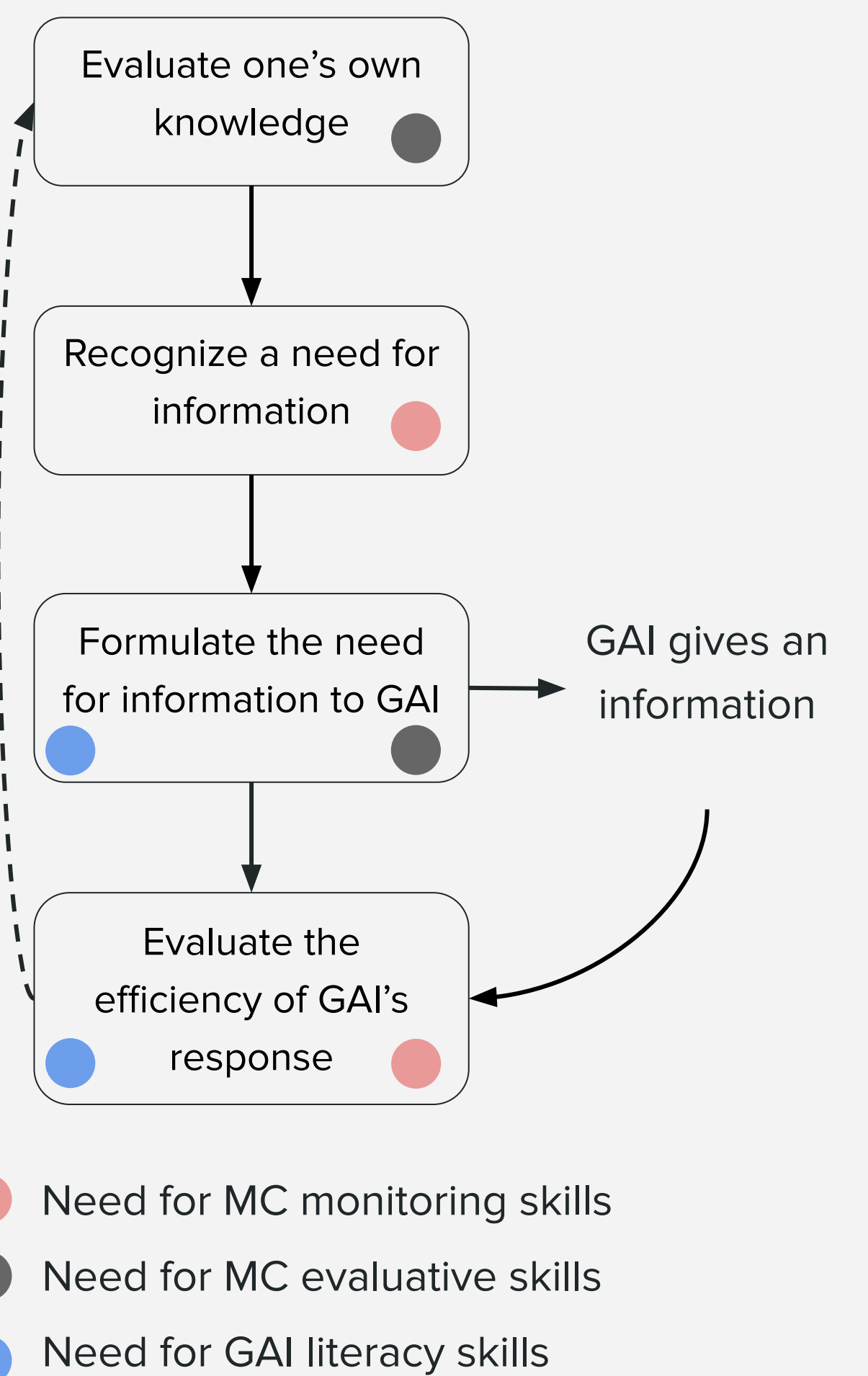
Students and teachers should have access to appropriate knowledge and training that helps them :



ROLE OF METACOGNITIVE (MC) TRAINING

GAI literacy training may not be sufficient for promoting AL with GAI and its relevant skills. Some MC-related skills are also needed [3] :

Active knowledge-acquisition cycle with GAI :



DISCUSSION

- Using GAI in the classrooms still raises questions for AL, mainly because of the lack (or unclarity) of a pedagogical stance.
- Using GAI to promote AL requires effort from all stakeholders: AI and EdTech communities, educational psychologists and educators.

References

- [1] Kasneci, E., Seifler, K., K uchemann, S., Bannert, M., Dementieva, D., Fischer, F., ... & Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and individual differences*, 103, 102274.
- [2] Celeste Kidd and Abeba Birhane. "How AI can distort human beliefs". In: *Science* 380.6651 (2023), pp. 1222–1223.
- [3] Kou Murayama, Lily FitzGibbon, and Michiko Sakaki. "Process account of curiosity and interest: A reward-learning perspective". In: *Educational Psychology Review* 31 (2019), pp. 875–895.