



The Educator's Role in AI & Self-Directed Learning

By Bonnie Benjamin-Phariss, Executive Director, [Mosaic](#)

AI is not waiting politely at the threshold of education; it has already let itself in. From the phones in our pockets to the platforms that organize our work and communication, it's embedded into daily life. We can distrust it and worry about its impact (and for good reason), but pretending we can opt out is unrealistic. The more essential question is: what does this mean for young people, and for the adults who support them?

At [Mosaic](#), our work centers on independent meaningful learning (IML). We use this term to encompass a family of models (e.g., self-directed learning, unschooling, liberated learning) all of which place learner-led inquiry at the heart of the experience. Since the days of John Holt in the 1960s, critics of conventional schooling have pointed out the same truth: one-size-fits-all education stifles curiosity and ignores the agency of young people.

What makes AI so consequential is that it continues the collapse of standardization at the heart of conventional schooling, creating opportunities - and risks - that put the principles of IML into sharper focus - learner choice, curiosity, and self-directed exploration. AI opens new opportunities but also raises risks, making intentional, learner-centered guidance more essential than ever.

Mosaic does not purport to be an expert on AI. We are a community of families seeking ways to help and support learners to thrive. This is why Mosaic approaches AI not as a moral referendum (good or bad, right or wrong) but as a pragmatic challenge: how do we support and prepare young people for a digital world they did not choose but will inevitably inhabit?

This question requires us to hold two positions at once: acknowledging that the distrust of Big Tech is valid, while also recognizing that abstention is not an option. Phones, apps, and search engines are already AI-driven. We also recognize that families vary widely in how far along they are in adopting AI. Mosaic's position is that a more useful frame for this critical dialogue is how young people, and the adults guiding them, develop the capacity to leverage these tools with discernment and agency.

The Promise of AI for Self-Directed Learning

IML rests on a simple idea: curiosity fuels deeper learning than compliance and compartmentalization. AI can stretch that principle further than most of us imagined possible.

One of the most significant benefits of AI in IML is its capacity to adapt to the learner. Adaptive learning platforms like DreamBox or Khan Academy's Khanmigo are examples: they can adjust difficulty, suggest resources, and offer tailored feedback. These AI tools may offer scaffolds when they stumble, but the questions and curiosity are still theirs to drive.

Mosaic's perspective is clear: the promise of AI is to have another platform for learners to follow their own lines of inquiry.

The Tensions We Can't Ignore

For our purposes here, we define “Educator” as a “Guide” – the person/parent/caregiver who serves as a facilitator of the young person’s learning journey. The job of Guides in the Age of AI isn’t to discern whether AI is a worthy tool, but to be curious: what assumptions are baked into these models? How can we bring these curiosities beyond the screen? How can we create safeguards for young learners?

As Sir Ken Robinson, a leading voice in education innovation, observed: *“The role of the teacher is not to fill the minds of students with facts, but to cultivate their natural curiosity and help them discover what they love to learn.”*

For Guides, the tension is constant: how to hold the space between freedom and structure. How to ensure these AI learning paths evolve into meaningful discovery, not just more noise. What happens if a learner or Guide does not handle AI effectively and what are the consequences for the learner? Balancing guidance with autonomy, addressing concerns, ensuring equity, and cultivating ethical literacy are central challenges.

1. Guardrails vs. Freedom

IML thrives on autonomy. But complete autonomy and unrestricted access can overwhelm or even mislead. AI tools are persuasive by design: their answers sound confident, even when they’re wrong.

But banning the tools isn’t the answer; it only drives their use underground. What’s needed are scaffolds - ways of helping learners build their own filters. Guides step in not to dictate outcomes but to provoke reflection: Where did this information come from? What evidence would make you trust it? What might this system not know?

As Dr. Sugata Mitra, educational researcher and innovator best known for his “Hole in the Wall” experiments, reminds us: *“Children are capable of learning a great deal with minimal supervision if given access to the right resources and freedom to explore - but they still need frameworks to help make sense of what they discover.”*

The tension for Guides in the age of AI is exactly that: how to preserve autonomy while still providing enough guidance to keep curiosity from collapsing into confusion or harm. I’m reminded of a phrase we hear a lot in IML - minimum interference and maximum support.

2. Parental Concerns

Parents and caregivers are often caught in the crossfire of AI discourse. On one side, headlines (and indeed some research!) warn that AI erodes attention spans, hollows out creativity, and will displace jobs. On the other, glossy ed-tech Big Tech campaigns promise productivity and unrealistically frictionless efficiency. Both narratives put pressure on families: either shield your young person from the threat or use it to nurture their curiosity, support their lifelong growth, and foster a love of learning.

At Mosaic, we see it differently. Parents’ fears are real, and so are their hopes for their young learners’ future, but the danger lies in treating AI as either savior or saboteur. Neither frame holds. What matters is not AI in the abstract but how young people actually use it and how they are supported along the way.

This is where the Guide’s role becomes essential. Guides can help young people recognize that AI can shape thinking, surface new perspectives, and direct curiosity, but only if the learner remains in charge of their journey.

3. Digital Equity, Access and Capability

Many conversations we see about AI in education risk overlooking a critical roadblock that is unfortunately and unmistakably real: AI and access to internet aren't available equally. These tools require devices, broadband, and digital fluency. Families without this access aren't just disadvantaged: they're being excluded. And when access gaps widen, the promise of IML collapses into privilege.

Some programs have recognized this. At Metropolitan Regional Career and Technical Center in Providence, for example, the school provides loaner laptops, Wi-Fi access, and mentorship are provided so that all students, not just the resourced few, can pursue personalized projects that incorporate digital tools, including AI-assisted research and design platforms. Observations from the program indicate that students with school-provided devices achieve project outcomes comparable to peers with home access, demonstrating that proactive equity strategies enable all learners to thrive in self-directed, AI-supported environments.

Mosaic shares this conviction. Agency without access is an illusion. Equity is not a side product of this discourse: it is the condition that will make IML possible in the Age of AI. Without deliberate strategies to close gaps, AI will reinforce the very hierarchies IML seeks to undo.

4. Ethical and Critical Literacy

There is another tension that cuts across the lived experience of young learners: AI does not just produce answers, it produces ethical dilemmas. Who owns the work that's produced with these tools? Whose bias is embedded in the data? Given the biases (and missing voices) we know exist, for example, in some history textbooks - where AI pulls its data, what is considered a trusted source? What happens when misinformation looks indistinguishable from fact to a learner?

This is the core of critical literacy and its importance in this ongoing dialogue: the role of Guides in teaching young people that AI is not a neutral tool, but a constructed system that reflects choices, omissions, and emotional biases. The challenge for Guides is to insist that interrogation and curiosity, not imitation, is the standard.

Examples of self-created, self-paced projects leveraging AI:

To illustrate AI's potential in self-directed settings, consider the following hypothetical examples:

Example 1: Historical Documentary Project

A group of learners set out to create a short documentary on local civil rights history. AI tools supported:

- Transcription of oral histories
- Video editing suggestions
- Generating visual storyboards based on historical text

Yet AI was not the centerpiece, the learners were. They decided what to include, how to frame the narrative, and what ethical standards to apply. This exemplifies the power of peer-to-peer learning (including with siblings!) in self-directed environments. Guides stepped in to press on coherence, accuracy, and representation (we recognize that many learners will do this naturally!). The outcome was a professional-quality film, but the deeper result was growth in research, collaboration, and critical evaluation.

Example 2: AI-Enhanced Environmental Science Experiments

A self-directed learner conducted simulations of wetland ecosystems using AI modeling software. The platform provided dynamic feedback, showing shifts in plant growth, water cycles, and species interactions as variables changed.

The Guide's role was not focused on dictating the "right answers," but to query: What pattern did you see here? How would you test this in the field? What happens if you change one factor at a time?

The project demonstrated how AI can stretch inquiry-based learning into new spaces, be they at home or in informal environments, while still relying on mentorship to turn raw output into reflection and future hypotheses.

Example 3: Creative Writing and Ethical Debate

A self-directed learner used AI to co-author a short story exploring themes of justice and community. The Guide offered prompts encouraging the young person to consider cultural representation, consent, and bias in AI outputs. The learner iteratively revised the story, integrating human judgment with AI assistance, producing work that was richer and more nuanced than either could have achieved alone.

The revisions that followed were not simply edits to the story, but a process of wrestling with what it means to create ethically in partnership with AI. The final piece was richer than either the learner or the AI might have achieved alone precisely because the Guide elevated the work with thoughtful reflection and encouraging critical analysis.

Hypothetical Case Studies of Challenges and Successes

Case Study 1: Success – Self-Directed Coding Lab

In a community makerspace, teens created AI chatbots designed to simulate historical figures. Guides intervened lightly: nudging reflection, prompting ethical considerations, and suggesting debugging strategies. The learners took ownership of the process, coding, testing, and iterating until their bots worked.

The project showed high engagement and deep mastery of computational thinking, proof that independence and oversight can co-exist productively - and with creativity.

Case Study 2: Challenge – Overreliance on AI in Research

In another setting, learners used AI to write research essays. The initial drafts leaned heavily on automated summaries, showing surface-level engagement, but minimal nuance and critical analysis. Guides noticed the flattening effect and co-designed deep-thinking exercises with the learners: side-by-side comparisons of AI outputs with primary sources, exercises in evaluating reliability, and structured reflections on synthesis methods. The experience reinforced a core truth: AI can magnify both strengths and weaknesses. Without intentional structure and mentorship, independence risks slipping into the pitfall of dependence.

Case Study 3: Equity Challenge

One learner, experimenting with AI-generated storytelling from home, had intermittent Wi-Fi and no dedicated mentor. Instead of abandoning the work, she adapted: drafting offline,

uploading at the library, and swapping files with peers via USB drives. Another learner experimenting with AI music composition recorded tracks offline and uploaded them when public access was available.

These stories show that equity challenges are not always solved by formal programs. Sometimes learners and Guides co-create workarounds and the beauty of this is the presence of intrinsic motivation inherent in IML. The persistence is inspiring, but it also underscores the systemic inequities that demand broader solutions. Agency thrives on resourcefulness, but resourcefulness should not have to substitute for access.

Thought-Leader Insights

Several leaders in education and technology offer useful context for how AI should (and should not) reshape learning:

- **Sir Ken Robinson** emphasized cultivating curiosity rather than enforcing standardization. AI can accelerate this, but only if framed as a tool for exploration, discovery and creativity.
- **Sugata Mitra** argued that children are capable of extraordinary self-organized learning if given the right resources and freedom, but they still require frameworks to make sense of what they can achieve.
- **Sal Khan**, founder of Khan Academy, positions AI as a supplement, not a substitute. It can personalize pathways, but it cannot cultivate reasoning on its own.
- **Mitchel Resnick** at the MIT Media Lab sees technology as a “material for learning,” best suited to playful experimentation and reflection rather than rote consumption.

These perspectives align with Mosaic’s conviction: AI can expand the boundaries of curiosity, but it is the Guide who ensures that terrain becomes meaningful rather than harmful or chaotic.

Practical Recommendations for Guides

To navigate this evolving landscape, Guides can adopt several strategies:

1. **Facilitative Mentorship:** Actively guide reflection, decision-making, and ethical considerations without dictating outcomes. Self-directed learning can be “messy” – interests evolve and change. Creating space for various pathways – all in the service of learning – is critical.
2. **Co-Creation of AI Norms:** Involve learners and parents/caregivers in establishing guidelines for responsible AI use.
3. **Equity-First Planning:** Audit access to devices, connectivity, and mentorship; proactively bridge gaps.
4. **Structured Reflection:** Encourage learners to critically assess AI outputs and consider ethical, social, and cognitive implications.
5. **Ongoing Professional Development:** Guides must continually deepen their AI literacy, staying informed about new tools, capabilities, and risks.

Conclusion

The role of Guides in AI-enhanced, self-directed learning is not a footnote, it is the foundation. It is multifaceted, balancing autonomy, guidance, equity, and ethics.

AI offers dazzling opportunities for personalization, creativity, and collaboration. But it also brings risks: overreliance, inequity, misinformation, and the false promise that a tool can substitute for meaning. Left on autopilot, AI will widen the very hierarchies and shortcuts that IML is challenging. Guides hold this tension.

That is why the work of Guides matters more than ever. Information is more widely accessible than at any point in our history. By embracing a facilitative and reflective stance, Guides can ensure that AI is not the primary platform driving young learner's journey, but a catalyst for deeper questions, creativity and the boundless curiosity that inspires us all. When handled with intention, AI doesn't replace learning (and in our case, independent meaningful learning); it enriches it, sharpening motivation, skill, and agency.

Sugata Mitra's reminder still stands: *"The future of learning lies not in teaching children to answer questions but in giving them the tools to ask questions."*

AI can broaden the scope of what's possible, but it cannot tell us which questions matter, or why. That responsibility belongs to us: to the facilitators, educators, parents, and communities who choose to guide young people toward discernment, curiosity, innate creativity and purpose.

The future will not be defined by whether AI is good or bad. It will be defined by whether learners meet it with clarity, courage, and agency. Supporting them in that work demands nothing less from Guides than imagination, discipline, and a refusal to let technology set the terms of human relevance and possibility.

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