



Generative AI, Creativity, Culture, and the Future of Learning: a Conversation with Mairéad Pratschke

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I've never seen a conflict between technology and creativity...I've never seen any sort of mediated cultural production as just a straightforward representation of what are, by definition, subjective experiences. ~ *Mairéad Pratschke*

AI is the first technology in history which is not a tool, it's an agent. ~ *Yuval Noah Harari*

Introduction

This column series has long explored the evolving intersections of technology, creativity, and education, particularly its transformative potential and the challenges it presents for educators and researchers. More recently, we have featured conversations with thought leaders at the forefront of generative AI (GenAI) in education (Henriksen et al., 2023; Richardson et al., 2023; Warr et al., 2023; Woo et al., 2023). Each conversation reveals new perspectives on how the technology is reshaping how we teach, learn, and innovate. As GenAI grows, so does the urgency to understand its implications for human creativity, culture, and equity. Its impact is wide-ranging and, at times, bewildering. As educators and researchers grapple with its possibilities, they also confront its limitations, biases, and ethical complexities. How do we

navigate these challenges while embracing the potential for creativity, equity, and innovation? What does it mean for educators and learners when tools can not only provide answers, but also engage in dialogue, scaffold understanding, and even mimic creative processes?

In this article, we talk with Dr. Mairéad Pratschke, Professor and Chair in Digital Education at the University of Manchester, and a leading voice in technology, education, and culture. Dr. Pratschke's career defies simple categorization. With over 25 years of experience in digital innovation, her work spans continents, disciplines, and languages, offering a unique perspective on how GenAI can reshape education. Dr. Pratschke's historical lens and commitment to cultural preservation support her vision for the future of AI—one rooted in creativity, interdisciplinarity, and ethical responsibility.

As a native of Ireland, Dr. Pratschke has lived and worked across Canada, the USA, the UK, Belgium, and Spain, contributing her expertise as a lecturer, instructional designer, director, and consultant. Whether developing online learning platforms or shaping institutional strategies for AI in education, she has consistently operated at the nexus of creativity, technology, and learning. She has led initiatives on AI and assessment, advised on institutional AI strategies, and written extensively about the cultural and ethical implications of technologies. Her new book, *Generative AI and Education* (Pratschke, 2024) adds significantly to the global conversation about AI's transformative role in education, particularly its implications for creativity, cultural identity, and equity. Here, she offers a deeply nuanced, historical and cultural perspective on AI in education—one that invites us to rethink how we approach education, creativity, and the role of technology in shaping the future.

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An Interdisciplinary Lens

Dr. Pratschke's approach to creativity emerges from her interdisciplinary background and wide range of interests, experiences, and studies. She characterizes her background as being "interdisciplinary and international," noting that she is "technically a historian by training, but I've always felt a bit like an interloper in that field—my research was on film and the representation of identity, and I've always worked with a variety of media." Her undergraduate and master's degrees focused on international relations and European studies, exploring culture, civilization, ethnic relations, linguistics, and identity politics. This sparked her longstanding interest in the intersection of policy and practice across disciplines and the history of cultures—i.e., "how politics, technology, or other forces impact and change cultures." She also has a strong sense of creative identity in the arts, reflected in her personal and familial history, as she put it:

Personally, I come from an arts background. I'm a trained musician, and my family is full of academics and artists. Everyone in my family is either a singer, musician, or academic...and I play a few instruments myself. My research background is in film and media, and I also write for fun as well as for work.

Her creative interests, interdisciplinary education, and experiences living internationally in many countries and cultures are also clearly connected to who she is, and her focus on issues of identity. Her growing interest in minority linguistic and cultural identity carried into her PhD in history, where she studied the political and cultural construction of identity and its visual representation in film.

This interweaving of personal, professional, and educational interests reflects Dr. Pratschke's interdisciplinary perspective on creativity and how she actively integrates these elements into her worldview. Research supports this kind of integration of personal passions with educational and teaching identity as a hallmark of innovative scientists (Root-Bernstein & Root-Bernstein, 2001) and creative teachers (Henriksen & Mishra, 2015). Dr. Pratschke's perspective on creativity also aligns with the frame we have established in this series: creativity is inherently transdisciplinary (Henriksen & Mishra, 2014) and rooted in skills and mindsets that are as relevant to STEM fields as they are to the arts, humanities, or any knowledge discipline (Mishra & Deep-Play Research Group, 2012).

Her interdisciplinary tendencies also brought her into the field of educational technology. After returning to Canada from Belgium in the late 1990's, she found that she was one of very few people with a graduate degree in European studies. As the only subject matter expert, she

became the designer, and later the instructor, for the first online European studies courses at her alma mater. That experience of online learning design sparked her love of both technology and teaching, which ultimately led her to academia and sparked her career path. She reflected that "my entire career has been defined by moving in and out of higher education but always working with digital technology." Her tendencies to move across contexts and spaces, coupled with a view of knowledge development as an interdisciplinary space, support her views on creativity and technology.

Creativity as Process, Technology as Partner

For Dr. Pratschke, creativity is not just a concept—it is a process rooted in her own journey, and she sees creativity as a vital, iterative act of sense-making, enriched by diverse experiences and fields of knowledge. Technology is part and parcel of that view, as it gives humans a set of cognitive tools to support creativity or help us along our creative paths and processes. Her view of creative work as a set of iterative processes is fundamental, as she noted:

Creativity and technology go hand in hand. In writing, for instance—I've never felt threatened by AI in my creative process. That's because I've never used AI for writing...I use it for other things, and while I have no problem with others using it for writing, for me, writing is very much a process. It's about the edits, the drafts, the updates—all the work that goes into shaping ideas. So, while technology can be an enabler of creativity to some extent, for me the creative process is much more tied to that iterative work.

This perspective aligns with research that frames creativity as a process rather than merely a product or psychological profile. While some creativity scholarship has explored internal psychological factors, such as personality traits or the psychology of creative individuals, another body of work emphasizes the creative process (Sawyer & Henriksen, 2024). Viewing creativity as a process, rather than solely a function of talent, inherently connects it to learning and enhances its relevance for education (Beghetto & Kaufman, 2007). Dr. Pratschke sees technology as a creative process partner, which aligns with emerging perspectives on AI as a medium for human-machine collaboration (Farina et al., 2024). Her interdisciplinary background gives her a unique lens to explore how GenAI expands the possibilities for creativity in these collaborative spaces.

She highlighted examples like AI-generated art projects that invite users to engage with technology as co-creators

rather than passive consumers. For her, this is where the real potential lies, as she described in the following example:

This morning, I was looking at a German artist Philipp Langer, who works for IBM and has done an amazing series of AI-generated portraits called *The Hybrids*, which explores animal and human hybrids through AI-generated art. I loved them, especially because I have a chapter in my book called *The New Hybrid*, which refers to this new form of human collaboration with generative AI. The series reminded me of Boris Eldagsen, another German artist—this time a photographer—whose work I have discussed in the context of generative AI and the cultural and creative industries. Eldagsen describes prompt engineering as an artistic and creative process, for which he coined the term “promptography” which I found fascinating for the way it combines the creative process of photography and the technical process of prompting the AI.

In some ways her historical background, combined with her focus on film and media, has allowed her to explore the critical intersections of human collaborations with technology:

I’ve never seen a conflict between technology and creativity. If you go back to Walter Benjamin and his ideas on mechanical reproduction, you see this interplay. When I taught film history, I discussed documentary films—whether, for example, Eisenstein’s work represented the reality of the Russian Revolution or pure propaganda. My history background and film/media focus has always pushed me to critically explore this intersection. I’ve never seen cultural production as a straightforward representation of what is by definition our subjective experience of the world. John Grierson’s definition of documentary as “the creative treatment of actuality” encapsulates this issue about art and representation. There has never been any truly objective representation of “actuality”—we know that because experience of actuality is subjective.

This critique of objectivity and representation is increasingly important as traditional views of learning evolve with GenAI’s potential to help us create new ideas or knowledge (Palani & Ramos, 2024). Describing AI as “a creative engine,” Dr. Pratschke places critical thinking and creativity at the core of human-AI partnerships. These elements are essential in dealing with a tool that can generate ideas—a capacity once considered primarily human. As she says of the tool, “the generative aspect is the most important point, because that’s where it becomes a creative engine. And it’s also where human sense-making comes in.”

Generativism: A Framework for Learning with AI

At the heart of Dr. Pratschke’s approach to GenAI is the concept of “generativism,” an area of theory focused on the process of sense-making that links prior understanding to new experiences. As she put it, “Generativism isn’t just about generative AI; it’s about generative learning theory. At its heart, learning is about sense-making, linking what you already know to new inputs.” While this has clear links to theories like constructivism or connectivism, she also points to how this theory has a specific critical focus aligned with learning and GenAI:

While reading about generative learning theory and the concept of critical interrogation, I thought, “*This is exactly how people should approach generative AI.*” The idea of schemata—mental models—really stands out. It’s about linking what you already know to what the AI is presenting, weighing it against prior learning, and being a critical user of the technology.

Generative learning theory emphasizes connecting prior knowledge to new information, fostering deep understanding through iterative processes of exploration and questioning (Wittrock, 1992). Dr. Pratschke sees this alignment as essential for navigating the affordances and challenges of GenAI. While critics often highlight AI’s tendency to produce inaccuracies or hallucinations (Yao et al., 2023) she views these limitations as opportunities for learning, noting that, “The main critique of generative AI is that it spits out nonsense...but when approached critically—when we can examine and interrogate what it produces—it becomes a tool for creating and refining our own understanding.”

This active interrogation reflects the broader goals of education—cultivating independent, critical thinkers who can synthesize information and apply it meaningfully (Quay, 2013). Generativism, as Dr. Pratschke describes it, hinges on the interplay between human and machine, creating a hybrid space where both contribute uniquely to the learning process. Expanding on this, she said:

It’s this idea that human and AI together—this collaboration—is a partnership centered on sense-making. The tools can help us make sense, like simplifying a tough concept or offering a starting point, but ultimately the process of learning is about you figuring things out and constructing meaning for yourself.

This collaborative model sits well with the principles of constructivism, where learners build understanding through active engagement with ideas (Bada & Olusegun, 2015; Vygotsky, 1978) and extends these principles to a

human–machine partnership. Central to this is the concept of schemata, which generative learning theory describes as the mental models that learners use to connect and organize knowledge in the mind (Wittrock, 1992). By critically evaluating AI outputs and integrating them into existing schemata, learners can refine their understanding and develop the skills to navigate an increasingly AI-driven world.

Dr. Pratschke’s conception of generativism also points us to the potential of hybrid creativity. By leveraging AI’s capabilities to clarify concepts, spark creative exploration, or provide alternative perspectives, learners may be able to explore deeper and more dynamic inquiry, as she noted:

That grounding creates space for interrogation and critical interaction with the technology, rather than just being a passive receiver. Then there’s the hybrid idea—the concept of humans and AI working together, while the humans use their critical thinking skills for sense-making. For example, students might generate an output to help simplify a difficult concept. But that also invites a critical, two-way collaboration, where students must evaluate what the machine is presenting as true and weigh it against what they already know and then determine to be true for themselves.

Thus, generativism reflects a vision of education that prioritizes inquiry, adaptability, and critical engagement (Pratschke, 2024). By integrating AI as a collaborator rather than a replacement, or as a mere tool that gives answers, Dr. Pratschke envisions it as a collaborator in the active construction of knowledge, challenging passive approaches to technology use in education.

Ethics, Bias, and Power in AI

For Dr. Pratschke, the ethical implications of generative AI are as significant as its transformative potential. While she recognizes the tools’ capacity to enhance learning, support neurodivergent students, and foster creativity, she cautions that GenAI does not exist in a neutral world. It is embedded within and entering systems and societies shaped by historical biases, colonial legacies, and systemic inequities, and its outputs inevitably reflect those influences. As she noted, “We’re stuck with a very tricky issue, which is, how do we correct the memory in the history of our own cultural production?”

Large language models (LLMs), often seen as repositories of knowledge, also embody the biases and limitations of their creators (Buyl et al., 2024). “These LLMs are *us*,” Dr. Pratschke emphasized. “The bias, the discrimination—they’re a reflection of us, but also more than that. They’re a production of Silicon Valley white men.” Her observation

here reflects an urgent call for diverse perspectives in AI development and the importance of addressing systemic inequalities embedded in these technologies (Warr et al., 2024).

Moreover, GenAI’s increasing focus on affective and emotional intelligence raises new ethical concerns. While AI tools are evolving to engage with users emotionally, their capacity to influence vulnerable populations is also fraught with risk. Dr. Pratschke reflects on both sides of this dynamic, saying:

I’m deeply worried about affective AI—social AI. Like anything in technology, it’s a double-edged sword. There’s the terrible story about the student who committed suicide. But then, there are students who are lonely, who need someone to bounce their ideas off, because maybe they live in a household where their identity isn’t recognized, or they can’t speak freely. The technology isn’t neutral. It’s about how we use it and where we use it.

This duality highlights the need for ethical guardrails to ensure that AI technologies are developed and designed to serve as tools for empowerment rather than harm. However, Dr. Pratschke notes that educators are rarely properly equipped to implement AI responsibly. “Educators are not AI literate yet,” she observed, noting, “They’re not equipped to do the things we need to implement it ethically in a way that will actually serve students.”

She also addresses the ethical dilemmas posed in education, particularly the risks of disadvantaging international and multilingual students. With a high proportion of university students coming from international backgrounds, she worries about policies that penalize students for using tools like Grammarly or translation software, noting that it begs the question of “Where’s the line between helping them and it being an assistive technology versus hurting them?”

Her concerns also extend beyond individual classrooms to broader systemic issues. She emphasizes the importance of aligning AI practices with institutional values and policy frameworks. The global variability in AI regulation, from the EU AI Act to the U.S. regulatory landscape, complicates implementation. Yet, she sees this alignment as crucial:

We need to look at alignment at all levels of practice. Pedagogical alignment for instructors is essential to support learning processes. But we also need institutional alignment—how do we ensure students are safe, that we abide by mission-critical goals like equity, diversity, and inclusion, sustainability, and UN goals?

Dr. Pratschke believes the path forward requires that we develop AI literacy and agency at all levels—among educators, institutions, and governments. “We have to work to correct the problems with these systems as much as we can,” she says, calling on both creators and users of AI to

critically address its biases while harnessing its potential to tackle systemic inequities. This focus on equity extends to another key area of her work—language and cultural preservation. The rise of AI has added a new dimension to this effort, bringing her full circle to the early years of her research.

Cultural Preservation, Minority Languages, and AI

Dr. Pratschke's PhD research focused on mid-twentieth century Ireland, a period when the Irish language was declining, in part due to significant cultural and social barriers. "In the 1950s, Ireland didn't have TV, until 1961," she explained. "People went to movie theaters to watch the news, and newsreels were still shown before feature films up until 1964." This historical context set the stage for an innovative approach. A group called Gael Linn sponsored the production of a series of Irish-language documentary films, followed by newsreels, called *Amharc Éireann*, Irish for *Look at Ireland*:

The idea was to use modern media to promote Irish—a minority language that wasn't particularly popular. They created a documentary and news film series to link Irish with the allure of new technology like film and TV. The challenge wasn't the technology; it was the mindset. People didn't really want to learn Irish, and the idea was to make it more attractive by linking it to modern media, and thereby instill a sense of pride in the language.

This work shaped Dr. Pratschke's understanding of how media and technology can influence cultural preservation [explored in her book, *Visions of Ireland* (Pratschke, 2015)]. It also showed the limitations of technology as a standalone solution. "The technology was always there to learn a language," she noted. "But the real challenge was people's attitudes and opposition," and the political, social, economic events—the wider historical and cultural context—that led to the decline of the language.

Today similar dynamics are at play with GenAI. While technology has evolved, the cultural and structural challenges of preserving minority languages are ever-present. Minority languages—languages spoken by relatively small communities (e.g., Irish or Basque) which are overshadowed by dominant national or global languages (e.g., English, Spanish, or Mandarin)—are frequently at risk of decline or extinction (Austin & Sallabank, 2011). GenAI offers powerful new tools for multilingual education and instant translation. Yet, its limitations for minority languages are clear, as Dr. Pratschke noted:

LLMs are not natural partners for minority languages. They're large language models, and these are minority languages. The challenge is finding a large enough dataset to train a language model for minority language education. It's hard to find the data.

This data scarcity points to a critical gap in current AI development. Minority languages often lack the extensive digital records needed to train large language models effectively. Without intervention, these languages can be further marginalized or endangered, as technology prioritizes widely spoken languages. Yet, Dr. Pratschke sees opportunities for progress. She points to examples where technology can support linguistic diversity, such as virtual reality, which has been used to teach Indigenous languages and cultures in Canada and the U.S. However, she emphasizes the need for concerted efforts to align technology with cultural preservation:

I always try to link what's happening with the technological capabilities to policy and practice—those are my three pillars. For example, the movement toward sovereign AI could be good for minority or smaller language groups if national or regional governments invest in creating GenAI models specific to their languages and cultures.

The "sovereign AI" that she refers to involves AI systems developed and governed by specific nations or regions to align with local cultural, linguistic, and policy priorities. Unlike global models from corporations like OpenAI or Google, these initiatives aim to retain control over technology and data while reflecting regional values (Mügge, 2024). In Europe, where cultural preservation often aligns with funding and policy initiatives, she sees hope in frameworks like the EU's Regional Development Fund and funding for cultural initiatives, saying "I believe we need region-, language-, and culture-specific GenAI models."

Still, she acknowledges that geopolitical challenges complicate this. Global competition among AI developers often rewards dominance over cultural identity. "The movement for sovereign AI right now is more about geopolitical competition than cultural identity," she noted. However, she remains optimistic that this competition could lead to tools that benefit minority languages, if aligned with cultural preservation goals.

For Dr. Pratschke, the stakes are high. Minority languages are more than communication tools; they are vessels of cultural identity, history, and heritage. Without deliberate action, such languages—and the unique perspectives they carry—could be diminished or lost. By aligning technological innovation with efforts to preserve linguistic and cultural diversity, GenAI might offer a tool to support endangered languages and safeguard the cultural identities they embody.

Yet, as AI reshapes how we interact with knowledge and culture, it is also redefining the roles of educators and the very nature of teaching and knowledge itself.

Teacher Knowledge and Evolving Roles in the Age of AI

In the rapidly evolving landscape of education, the role of the teacher is undergoing significant changes as AI challenges traditional notions of knowledge and pedagogy. For Dr. Pratschke, this transformation raises both opportunities and tensions, particularly as educators adapt to a world where domain expertise and teaching are increasingly mediated by AI systems, as she noted:

Teacher knowledge is not unique to teachers anymore—and it hasn't been for a while. The AI is going to become the domain expert. This shift has been underway for decades, moving from teacher-centered to learner-centered approaches, but GenAI is accelerating it.

This acceleration brings both opportunities and uncertainties. GenAI, described by Dr. Pratschke as a form of “domain intelligence,” opens new possibilities for collaboration between humans and machines:

What I mean by domain intelligence is that this formerly teacher-centric knowledge, through our interaction with AI, is now becoming a shared, generative process. Teachers can take their domain expertise, interact with GenAI, and create something new.

Yet, this evolution raises fundamental questions about the teacher's role. In higher education, where many faculty members see themselves primarily as experts in their disciplines, the shift is particularly pronounced. “What happens,” she asked, “when domain expertise becomes domain intelligence, and the AI knows more and can do more? Where does that leave the university professor who doesn't want to be a facilitative guide or counselor? That's not why they did a PhD.”

Despite these challenges, Dr. Pratschke still believes in the potential of GenAI to support teachers in new ways, particularly through pedagogical alignment and learning design, noting that:

If we're going to use generative AI to support learning, then pedagogical alignment is absolutely 100% the most important thing. Learning design becomes key because tools must be designed to guide students through the cognitive steps needed to build their own knowledge and understanding.

This design-oriented perspective reframes the educator as more of a learning architect. This is also a perspective that has been foregrounded in educational views of the role of teachers as grounded in design knowledge (Kirschner, 2015). Dr. Pratschke agrees with this view of teacher-as-designer, saying, “The critical role for the educator going forward,” she said, “is to become an educator-designer. That doesn't mean every professor needs to be an instructional designer, but they will need to integrate their pedagogy, methodology, and critical approaches into custom tools that align with their learners' needs.”

Dr. Pratschke also highlighted the dynamic interplay between AI tools and students, where there is an exciting opportunity for students to gain agency in their own learning. AI presents the possibility of students being able to create personalized learning experiences for themselves. She noted that, “While personalized learning has become a cliché, it is still true that tools offer students a way to scaffold their own learning, particularly for those with learning challenges or motivational issues.”

The potential for AI to enrich education extends to research as well. Dr. Pratschke pointed to recent developments in interdisciplinary collaboration, where AI agents serve as disciplinary experts within teams, saying:

In Stanford's Virtual Lab, AI agents are being used as experts in an interdisciplinary research team. This allows a solo disciplinary team to become truly interdisciplinary by using the agents to bring in domain expertise it wouldn't otherwise have. That's the promise for higher education—not just replacing domain expertise but enabling new forms of collaboration and discovery.

Ultimately, Dr. Pratschke sees generative AI as both a catalyst for innovation and a challenge to traditional educational paradigms. As she reflected, “We don't have easy answers, but this is an exciting time. The tools we're developing can help us forward our research and our teaching, but only if we approach them critically and thoughtfully.”

Conclusion

Dr. Pratschke offers us important insights on the profound shifts that GenAI is bringing to education, creativity, and culture. Far from being a simple tool or challenge, AI represents an inflection point—a moment requiring educators, researchers, and institutions to rethink long-held assumptions about teaching, learning, research, and the role of knowledge in society. From her interdisciplinary lens to her emphasis on ethical considerations and cultural preservation, Dr. Pratschke's perspectives remind us that AI's promise lies not in its outputs alone, but in how we choose to engage with it.

At its best, generative AI has the potential to foster collaboration, amplify creativity, and support learners in new and dynamic ways. For Dr. Pratschke, this is the promise of AI: not to supplant human creativity but to expand its horizons. Yet, its potential pitfalls—bias, inequity, and misuse—remind us of the need for thoughtful, deliberate approaches, and designs that align technology with human values. The challenge, then, is not just to adopt AI, but to align it with the principles that define meaningful, inclusive, and equitable learning for all.

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