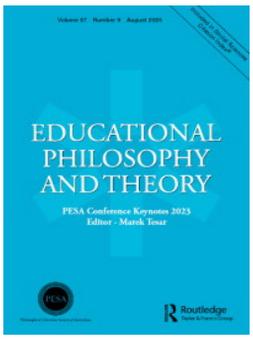

Routledge
Taylor & Francis Group

Educational Philosophy and Theory

ISSN: 0013-1857 (Print) 1469-5812 (Online) Journal homepage: www.tandfonline.com/journals/rept20

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To cite this article: Carmen Vallis (19 Mar 2025): Barbie meets generative AI in education: Neither artificial nor intelligent?, Educational Philosophy and Theory, DOI: 10.1080/00131857.2025.2480770

To link to this article: https://doi.org/10.1080/00131857.2025.2480770

Published online: 19 Mar 2025.

EDUCATIONAL PHILOSOPHY AND THEORY
https://doi.org/10.1080/00131857.2025.2480770

Barbie meets generative AI in education: Neither artificial nor intelligent?

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ABSTRACT

This article examines sociotechnical imaginaries of generative artificial intelligence (GenAI) through the cultural lens of the film *Barbie*. The hyperreal setting of Barbieland serves as a prescient metaphor for education in an increasingly synthetic world where the real and artificial converge. By analysing representations of artificiality and authenticity in the film, I argue that similar cultural assumptions and anxieties shape how GenAI is understood and implemented in education. The Barbie doll's transformation from plastic figure to 'real' human raises questions about embodiment and identity that parallel debates about human-machine relationships in learning environments. Drawing on concepts of simulacra and agential realism, I explore how narratives of technological empowerment influence educational practice. By juxtaposing Western-centric views of *Barbie* with Indigenous perspectives, particularly Ellen van Neerven's 'Water', the article critiques dominant cultural narratives about technology and intelligence. This comparison challenges commercial imaginaries of technological empowerment and suggests more diverse, culturally responsive approaches are needed to integrate GenAI in education.

ARTICLE HISTORY
Received 21 October 2024
Accepted 3 March 2025

KEYWORDS
Generative artificial intelligence; sociotechnical imaginaries; educational technology; authenticity

Introduction

Talk about generative artificial intelligence (GenAI) in education tends to extremes. These AI systems, which algorithmically generate text, images, and code, have also generated much debate in education (Peters et al., 2023; Sidorkin, 2024). GenAI is understood as a 'seismic shift' in technology and society, requiring an urgent response, as educational roles, responsibilities, and decision-making begin to quake (Bearman et al., 2023, p. 380). Technological advancement is expected to drive change in educational delivery, learning processes, and outcomes (Harasim, 2000). But does GenAI possess such power? GenAI is neither artificial nor intelligent, rather these technologies mirror our sociotechnical and educational imaginaries. Analysis of such imaginaries in popular texts may help reveal unseen assumptions that shape educational practice (Dishon, 2024).

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This article examines the implications of GenAI in education through deconstructing the hit film *Barbie* (Gerwig, 2023). The hyperreal world of Barbieland serves as a prescient metaphor for the challenges provoked by GenAI in our increasingly synthetic world, where the real and artificial converge. The iconic Barbie doll epitomises artificiality through its manufactured nature as a copy of an idealised, contemporary woman: an object and a woman objectified. Materially and culturally, Barbie operates as a synthetic signifier of consumer culture, a pink marketing confection that is both contrived and unnatural, yet has real, natural consequences and interactions in the world. I examine these conceptions of intentional fakeness and authenticity through Barbieland, where Barbie's transformation from plastic doll to human brings into focus issues of embodiment and identity that parallel current debates around AI.

I argue that the film *Barbie* and GenAI in education both play into myths and fears surrounding artificiality and intelligence, and these attitudes may be productively challenged by considering diverse social imaginaries. Echoing Dishon's (2021) call to clarify authenticity in educational technologies, this analysis advocates rethinking GenAI through language and cultural texts. To this end, I contrast Barbieland with an Indigenous speculative futures perspective from Ellen van Neerven's short story 'Water' (2014). Van Neerven, a Yugambeh writer from Queensland, Australia, presents fluid identities and alternative ways of knowing that question binary ideas of gender, embodiment, and the natural world, expanding our conceptual framework for AI in educational contexts.

Finally, I ask, do we choose Barbie as our posthuman prototype for education? What would education look like with more diverse social imaginaries and conceptual frameworks that consider artificiality and intelligence as emerging phenomena rather than fixed entities? This framing asks educators and policymakers to advocate for values to shift to more relational, inclusive and culturally responsive approaches.

Theoretical framing

Sociotechnical imaginaries, collectively held visions of technology's role in society (Jasanoff & Kim, 2009), underly the development and implementation of GenAI in education. These imaginaries influence policy decisions, educational practices, and public discourse about what AI can and should do in teaching and learning contexts (Rahm & Rahm-Skågeby, 2023). By analysing cultural representations like the film *Barbie*, we can surface the assumptions and values embedded in these imaginaries that inform educational approaches to GenAI.

To support this analysis, I draw on Barad's (2003) concept of agential realism, which rejects fixed, inherent properties and instead understands phenomena as emerging through complex intra-actions. According to this theory, matter and meaning are mutually constituted through material-discursive practices. The material world and human culture or knowledge are deeply connected to the ways we discuss and understand them, and to how reality is produced and experienced. Our ideas and language have real-world effects, just as physical realities shape our thoughts and communications.

Barbie, both as film and material object, participates in material-discursive practices that produce meanings and implications not predetermined by their nature. While Barbie's fantastic, plastic body may be perceived as 'unnatural' and artificial, it emerges from and contributes to complex societal, technological, and economic practices, and has real, natural consequences and interactions in the world. Similarly, GenAI outputs are inseparable from human inputs and interpretations; humans and technology affect one another, and are influenced by society's views and expectations, as well as how we use and interact with these technologies in practice.

Barbieland

Artificiality is at the plastic heart of the *Barbie* film (2023). Barbieland is a hyper-fabricated world that celebrates artificiality, revelling in Barbie's status as both an icon and a commercial product.

The film's vibrant pink sets, stylised lighting, and camera lenses and movements create a visually artificial aesthetic, while the costumes evoke nostalgia by referencing decades of Barbie fashion. In an interview, *Barbie* cinematographer Rodrigo Prieto describes how Director Greta Gershwig leaned into this intentional fakeness.

> Greta called it 'authentic artificiality.' We wanted this world to feel authentic even though it's artificial… There's a certain magic, and the only rule is it has to look lovely. Every day is perfect in Barbieland, until she starts getting existential. That's when things change (Hazlewood, 2023)

The hyperreal aesthetic parallels how educational AI is marketed: as a magical solution for effortless content creation. EdTech vendors amplify this narrative, but beneath the artifice GenAI remains fundamentally 'algorithms created by humans over time, enacted in software and running on machines' (Costello, 2024, p. 427).

In *Barbie*, artifice and reality are contrasted through visual design. While Barbieland appears perfect and plastic-like, 'real-world' scenes have a more naturalistic cinematographic style (Hazlewood, 2023). This contrast visually expresses the film's complex treatment of the interplay between fake and real, natural and artificial. The set design evolves with Barbie's character arc, as her existential crisis disrupts Barbieland's artificial perfection. Barbie's angst is echoed in Billie Eilish's soundtrack song 'What Was I Made For?', which asks after the purpose and authenticity of an artificial world.

As Barbie begins to question everything, the audience sees Barbieland change; perception changes the world. This reflects the Baradian idea that perception actively co-constructs reality. Just as the reality of Barbieland shifts with Barbie's increasing self-awareness, the integration of GenAI in education is not a fixed entity but one co-constructed through shifting perceptions and social imaginaries surrounding its potential. How we imagine GenAI's potential in education influences how we develop and use it.

In a broad sense, Barbieland reflects contemporary Western societies that are becoming more artificial and less natural, less authentic, in material and abstract ways. Digital spaces, particularly social media, are filled with copies and facsimiles of people, emotions, and texts, complicating our understanding of what is real or authentic. The representations are often performances designed for public consumption, further distancing users from any inherent reality (Taylor, 2022). Memes, in particular, express a sense of authenticity by deconstructing and remixing cultural truths or emotions that resonate with audiences that paradoxically become more distant with each iteration from the original source (Taylor, 2022).

The humour in *Barbie* is self-referential and self-aware, drawing attention to the artificiality of Barbieland with a knowing wink to the audience. The film has been praised for its smart, satirical exploration of gender roles, and the contradictions of femininity, consumerism, and societal expectations. Some argue that Barbie has evolved from a symbol of restrictive gender norms to an icon of female empowerment (Maines, 2024). Yet this transformation also suggests that artificial constructs can be repackaged for different audiences without changing their fundamental commercial purpose, a pattern that echoes the marketing of educational technology (Selwyn, 2022).

Similarly, influencers engage followers and promote brands by being 'authentic', appearing relatable and personal to their audiences, while balancing the expectations of brands as marketable commodities (Van Driel & Dumitrica, 2021). Culturally, it has become acceptable, even desirable, for social media influencers to position themselves as authentic and self-aware (Kádeková & Holienčinová, 2018). The ironic, self-aware tone of *Barbie* resonates with younger, more media-savvy audiences by aligning itself with contemporary cultural issues of feminism, gender identity, and consumerism while promoting licenced products.

However, the film's clever satire and social commentary licks rather than bites. In the film, real-world gender dynamics are playfully inverted—Barbieland is a female-dominated world where women reign and males (Kens) are ignored—how funny, what a fantasy! Mattel's

executives are lampooned as an elite corporate patriarchy, their power and privilege exaggerated in the sleek, minimalist offices of its towering headquarters. As a feminist critique, Barbie's unrealistic, distorted world is used to mock and entertain. Despite these playful social critiques, the film upholds the patriarchal, capitalist values it pretends to subvert (Balsam, 2023).

Barbie's artificial perfection and journey towards humanity parallel educational debates about AI authenticity. Just as Barbieland presents an idealised but problematic vision of empowerment through artificiality, AI promises of automated learning risk prioritising technological solutions over human relationships in education. The film's commercial imperative similarly mirrors how educational technology is often led by market forces and 'the visionary promises of inventors, investors, and industry figures', rather than pedagogical needs (Williamson et al., 2024, p. 427).

Barbie's unnatural body

In the film *Barbie*, bodies are both cultural artefacts and sites of meaning. The Barbie dolls exist through artificially constructed, perfect bodies; their being is uncoupled from biological needs and nature. Their experience of the world is mediated through these manufactured forms, making them both consumers and products of artificial ideals.

The film's inciting incident occurs when Stereotypical Barbie (Margot Robbie) is disturbed by negative thoughts and her feet suddenly flatten. Barbie decides to travel to the 'real world' to find the disturbed child playing with her and fix this malfunction. Barbieland limits Barbie's knowledge to believing girls love Barbie dolls because they embody unlimited potential and female empowerment.

Stereotypical Barbie leaves Barbieland and ventures into the Real World. There Barbie confronts her creators at Mattel, the executives who literally and metaphorically want to put Barbie back in a box. After battling a 'Kendom' in a changed Barbieland, she chooses to embrace humanity with all its flaws. At the end of the film, Barbie transforms from man-made object to a 'real' woman *via* a visit to the gynaecologist. Gender is ascribed as a biological and material process, rather than a cultural one. This shift from plastic to flesh-and-blood destabilises ideas about embodiment and how physical form defines our experience of reality. Barbie's understanding of reality is grounded in an imaginary plastic form that cannot have corporeal and sensory experiences like drinking and eating. Yet Barbie's embodied nature does not prevent her from perceiving and interacting with our environment in human ways.

Toffoletti (2007) contends that Barbie's plastic, artificial form transcends fixed categories of being, functioning as a posthuman figure that complicates our experience of reality and expands notions of identity. Barbie represents the merging of the nonhuman (plastic) with the biological (human form), becoming an object imbued with personality and agency and a symbol for fluid identity in our technologically immersed society (Toffoletti, 2007).

In the film, Barbie's choice to become human suggests artificial beings may have genuine agency beyond their predetermined nature. Barbie can override her manufactured forms and predetermined role. When Barbie asks, 'so being human is not something I need to ask for? Or even want? I can just… it's something I discover I am?', she voices one of our greatest anxieties about GenAI.

The posthuman and imaginary emerge as clear distinctions collapse (Dishon, 2024). Human thought, interpretation and actions are profoundly influenced by our interactions with physical objects and their associated symbolic meanings (Lacković & Olteanu, 2021). In *Barbie,* the technical, material, cultural, and commercial artificiality are entangled. Barbie may also be read as an ambiguous, posthuman imaginary and cultural text that anticipates challenges posed by GenAI as it increasingly blurs the lines between human and machine capabilities in education.

A fluid conception of identity and reality resonates with many Indigenous ontologies that view the world as interconnected, with permeable boundaries between human, non-human and more-than-human entities. Unlike Western dichotomies of nature/culture or real/artificial,

Indigenous ways of knowing often embrace multiplicity and recognise the agency of non-human actors in co-creating reality (Zembylas, 2023). This perspective offers a different view of Barbie's cultural and material transformation, alongside the parallel tensions emerging in GenAI-enabled education. While the film resolves these tensions through individual empowerment and consumer choice, Indigenous ontologies suggest alternative approaches to human-technology relationships in learning environments.

Barbie as educational technology

The *Barbie* imaginary promises a future of luxury and ease, powered by sheer aspiration, technology and consumerism. Likewise, AI is often framed as a progressive tool that can algorithmically transform education through adapting to students' individual needs and preferences (Wong & Looi, 2024). This consumer-driven model of empowerment is embodied by *Barbie* and in GenAI discourses of 'personalisation' from companies such as Khan Academy (Khan, 2023). Such imaginaries of empowerment provide superficial solutions and mask the deeper ethical, social, and human implications of these tools. They conflict with Indigenous epistemologies that value collective knowledge and relational ways of knowing (Martin, 2017).

The social, cultural, and economic influence of Mattel's Barbie dolls that shape and are shaped by human activity are well documented (Pearson & Mullins, 1999; Toffoletti, 2007). Stereotypical Barbie embodies an idealised, artificial standard of eternal youth and flawless beauty that is unattainable, reflecting Western society's ageist attitudes. In many Indigenous cultures, on the contrary, elders are highly respected for their knowledge and life experience, for their storytelling that imparts wisdom and encourages connections across generations and cultures (Souza, 2023). Mattel's sociotechnological innovation is to respond to evolving social mores by relentlessly reconstructing and commodifying plastic identities, to maintain the consumption of Barbie goods and entertainment through contrived narratives.

The film refers to Mattel's long tradition of marketing Barbie dolls as a tool for empowerment, encouraging girls to imagine themselves in any career, from astronauts to doctors. Barbieland is stocked with these dolls, such as President Barbie and Doctor Barbie. Much has been written about Barbie's social function (Griggs et al., 2023; Shah, 2020). In this sense, *Barbie* continues a long tradition of promoting a material, educational technology that teaches girls about feminine fashion and social roles. See Figure 1.

While Barbie functions as a technology through its modelling of social roles, its evolution towards intelligence complicates our understanding of artificial agents in educational contexts. Technologies, much like Barbie, participate in the ongoing reconfiguration of the world. Just as Barad's agential realism helps us understand Barbie as a phenomenon emerging through intra-actions, GenAI may be conceptualised as a fluid rather than fixed entity, shifting between algorithms, data, humans, and social contexts. Neither humans nor AI function as separate, autonomous entities.

Deconstructing Stereotypical Barbie's journey in the film from artificial to 'real', we find no fixed, inherent properties, not in the artificial perfection of Barbieland, nor in the supposedly 'real' world. Barbie embodies Baudrillard's concept of simulacra (1994), as a copy without an original. The film constructs multiple layers of simulation (dolls imitating humans, actors playing dolls, artificial worlds mimicking reality), just as GenAI systems generate synthetic content that simulates human-created work. This raises complex questions for education: How do we assess authenticity when GenAI can produce convincing 'original' essays? What constitutes genuine learning in an environment where both knowledge and its expression can be artificially generated?

When it comes to educational technology, discussions tend to polarise into deterministic binaries, seen either as inevitable disruptors or simplistic solutions (Matthews, 2021). This divide holds true for generative AI. For better or worse, GenAI is expected to transform

Figure 1. (1950sUnlimited, 2012) CC BY 2.0.

educational dynamics by redistributing authority, traditionally held by teachers, across staff, students, systems, and corporate interests (Bearman et al., 2023). Many researchers call for more critical perspectives of GenAI adoption (Baker & Hawn, 2022; Essien et al., 2024; Markauskaite et al., 2022; Peters et al., 2023; Williamson et al., 2024). Integrating algorithmic decision-making systems will require thoughtful evaluation of context, task criticality, and ethical dimensions to balance human and AI autonomy in teaching and learning (Bahroun et al., 2023; Prinsloo et al., 2023).

AI systems, intentionally or not, amplify biases by reflecting both statistical and societal biases from historical inequities and underrepresentation (Baker & Hawn, 2022). Barbie's plastic vacuousness parallels AI, which, as a 'stochastic parrot', mimics human behaviour, 'that reinforces and propagates stereotypes and problematic associations' (Bender et al., 2021, p. 617). In educational contexts, these biases manifest in unequal treatment of students from underrepresented backgrounds, reinforcing existing disparities in access and outcomes (Baker & Hawn, 2022).

(De)generative AI in education

Artificial constructs, whether material plastic or AI algorithms, are reconfiguring our notions of identity, authenticity, and education. The future of GenAI in education is unknown and unsettling (Vallis et al., 2024). Potentially, artificial intelligence could undermine the interpersonal and affective aspects of teacher-student relationships (Sidorkin, 2024). Synthetic media and AI-generated videos introduce new ethical challenges, including the potential misuse of deepfakes to simulate presence in online classes (Vallis et al., 2024). These transformative and potentially deteriorative processes reflect what we might call (de)generative AI.

Artificial systems follow similar patterns of decay. Both Barbie and AI, despite their appearance of permanence, are subject to natural processes of decay. The plastic PVC material of Barbie dolls degrades slowly: its complete decomposition takes centuries, as its polymer fragments into microplastics that leach chemicals into ecosystems. Similarly, the data in AI systems may also rot and drift, producing lower quality outputs when training data becomes outdated, algorithms accumulate errors, or they fail to adapt to evolving real-world conditions (Baker & Hawn, 2022). Increasingly AI deepfakes are so convincing that it's difficult to distinguish between human and code, between who is real and what is not. GenAI technology produces realities that feel authentic. Synthetic outputs seem so natural that ultimately, they may extend or transcend our conceptions of human intelligence and creativity (Peters et al., 2023).

This entails acknowledging both the creative potential and deteriorative processes of technology; what we might call (de)generative AI. Over time, AI may degrade human capacities and social structures, rather than improve them. GenAI's outputs, while impressive, can lack depth and human insight (Essien et al., 2024). Overreliance on AI-generated ideas can limit students' ability to think independently or develop more original solutions and reduce creativity (Habib et al., 2024). It might also hinder critical thinking and dehumanise education if AI takes over tasks that require empathy, communication, and personal judgement, diminishing the importance of these human skills (Bahroun et al., 2023). AI tools promise increased productivity and objectivity in research, but also pose significant epistemic risks, such as creating the illusion of understanding more than they actually do (Messeri & Crockett, 2024).

The implications of artificial constructs extend beyond their immediate effects. Much like Barbie, it is what we imagine GenAI is used for that produces harm. Both function as technologies that reshape understanding and behaviour through their commercial deployment. Barbie is a homogenised commodity; educational policy and practice must resist similar commercialisation and corporatisation of teaching and learning through GenAI. The true Barbieland is a brand and product ecosystem that functions as a technology for generating profits and shaping consumer behaviour, beyond physical dolls. Barbie's extensive transmedia franchise, spanning film, games, and apps, makes Barbie a commercial media platform (Bradshaw, 2023). This pattern of commodification is a growing risk with AI's expanding role in educational spaces (Selwyn, 2022; Williamson et al., 2024).

In society and education, the artificial and natural are increasingly entwined. We have an ethical responsibility to stop perpetuating stereotypes and cultural norms through these technologies (Selwyn, 2022), whether they take the form of plastic dolls or algorithmic systems. Philosophical questioning and theory help us understand and shape the future of education, so that we may avert making irreversible mistakes in how AI is integrated into educational settings (Sidorkin, 2024).

Indigenous perspectives: Rethinking artificiality

The consumerist narratives and technological solutionism embedded in Barbieland reflect limitations in how we imagine GenAI in education. Indigenous speculative fiction, particularly Ellen van Neerven's story 'Water' (2014), presents a radical departure from these frameworks. Whereas

Barbie's journey reinforces individual transformation through commercial choices, Indigenous perspectives centre relational ways of understanding identity, embodiment, and the boundaries between natural and artificial. At a time when the idea of intelligence and knowledge is changing, education needs a more relational, ethically engaged pedagogy, that shifts away from the Western philosophical traditions of *Barbie*. Comparing 'Water' to the film *Barbie*, it is apparent that the film reinforces the status quo, despite its surface-level focus on feminism and inclusivity. We can extend this comparison to GenAI in education, and debates surrounding its role in addressing bias, representation, and social impact.

In 'Water', van Neerven crafts characters who resist ontological boundaries, inviting readers to reconsider notions of being, identity, and reality from an Indigenous Australian perspective. The protagonist, Kaden, an Aboriginal woman, develops a romantic relationship with Larapinta, described as a 'plant person'. This interspecies relationship challenges Western ideas of 'being' and identity. Kaden asks herself, 'What will I discover in this uncharted experience? How much of what it means to be human will sway in my mind like a ship?' (p. 102) As Kaden embarks on an intimate relationship with a non-human, her preconceptions about gender and identity shift across biological horizons.

Van Neerven's narrative technique supports this fluidity. The narrative is constrained to Kaden's limited perspective, so that Larapinta's inner thoughts and motivations are unknown to the reader. Larapinta's ambiguous nature, neither fully human nor entirely plant, is further emphasised. By using poetic descriptions of the sexual intimacy between Kaden and Larapinta, the author creates space for readers to speculate and imagine, rather than constraining ideas with realistic, mimetic representations. The boundaries between human and non-human are permeable.

Moreover, 'Water' embodies an Indigenous understanding of the relationship between humans and their environment. Kaden's relationship with Larapinta serves as a metaphor for her reconnection to her Aboriginal identity and heritage. As she becomes a cultural liaison for the plant people, Kaden also reconnects with her Aboriginal family and ancestral land. She reflects on her feelings towards her home island of Ki: 'There is a groping sense of relief that I feel something: for this place, in this place. My country. My dad's country' (p. 107). Unlike Western cultures that often assume human superiority over nature, Van Neerven's story reflects an Indigenous worldview where all aspects of existence are interconnected. This connection is deeply rooted in spiritual ties to the land. In Aboriginal cultures, 'ancestral spirits inhabit the natural world and country is kin' (White, 2019, p. 99), entailing a sense of responsibility and reciprocity between humans and their environment. In stark contrast, Barbieland in the *Barbie* film represents a Western worldview, where nature serves as a backdrop for human or artificial activities. Barbieland is an environment controlled by commerce rather than harmony and connection with the natural world.

Kaden's uncle's identification of the plant people as 'our old people' and 'spirits' (p. 113) emphasises a blurring between human, non-human, and spiritual in Indigenous ontologies. Linear Western conceptions of time and identity are disrupted by the plant people: 'Something happened when the Dugai brought the sea up. They rose with it' (p. 113), suggesting ancestral spirits can manifest in new forms and times. This non-linear view contrasts with Barbie's monomythic hero's journey (Campbell, 2008), a linear narrative structure rooted in Western storytelling. Barbie's journey follows a clear path from her departure from Barbieland, and call to adventure and challenges in the Real World, to her eventual return and choice to embrace humanity. Barbie's story progresses neatly from problem to resolution while Indigenous narratives, like those involving the plant people, emphasise cyclical time and the fluidity between past, present, and future.

'Water' concludes with Aboriginal and plant people uniting against the government and corporate entities that plan to evacuate and destroy Kaden's ancestral home of Ki Island, among others, to build 'Australia2', a super-island intended to host First Nations peoples. Van Neerven draws parallels with the British colonial project, which aimed to erase Indigenous cultures, treating them as 'blank slates' on which white practices and norms could be inscribed (Watego, 2021). The story suggests that colonial narratives of progress can be challenged by reconnecting

with the past. 'Water' becomes a radical act of hope, imagining a future where Indigenous ways of being and knowing are not just preserved but triumphant.

Diverse and alternative narratives, such as Indigenous futurism, help us rethink how identity and human-nonhuman relations are conceptualised, paving the way for a more ethical integration of GenAI in education. Intelligent teaching and learning need to honour Indigenous ways of knowing, living, and being, which have historically been marginalised or dismissed in academic institutions as incompatible with Western epistemology, ontology, and practices (Zembylas, 2023).

Acquiring knowledge is paramount in Western cultures and often separates the knower from what is known. However, from a Māori perspective, for example, knowledge flows from relationship and connection: it involves being with or being a part of things in a holistic way, and transcends observation or study (Peters et al, 2023). Indigenous ways of knowing value experiential, land-based, and intergenerational forms of knowledge that are often overlooked in Western education systems (Martin, 2017). While integrating AI into education entails balancing human and algorithmic agency, educators must also reconsider what constitutes knowledge and intelligence.

Rather than viewing reality as fixed, boundaries and properties are continually enacted, and emerging emergent through ongoing inter- and intra-actions (Barad, 2003). In Indigenous worldviews, knowledge and ways of knowing are also more fluid, as they are based on relationality that connects people, Country, and entities in inseparable ways (Martin, 2017). These perspectives invite us to see Barbie, and by extension GenAI, not as discrete technologies but as phenomena. They come into being through complex material-discursive practices involving humans, non-humans, and sociocultural contexts which are neither natural nor artificial. Claims about authenticity affect how we view educational futures. Similarly, the uncritical acceptance of educational technologies as either inherently artificial or natural can shape educational visions in unintended and unwanted ways (Dishon, 2021).

When students use GenAI for writing assistance, for example, they engage in an intricate interplay between human creativity, algorithmic processes, and collective knowledge bases. The outputs are neither purely artificial nor authentically human; they emerge through this relationship. Educational policies and practices that simply allow or ban GenAI technologies are inadequate for entanglements of human and machine. Whether technologies are in organic, plastic or algorithmic forms, it is more helpful to consider them as dynamic entities and study the social, cultural, economic, and personal intra-actions they are part of.

Barbie and GenAI are perceived as tools that can help achieve technologically advanced futures but are there other imaginaries we aspire to in education? Barbie, as an evolving cultural symbol and sociotechnical imaginary, embodies shifting ideals of femininity, empowerment, and consumerism. Similarly, GenAI represents constructed visions of artificiality in human capacities like creativity and intelligence. Both Barbie and GenAI are shaped by societal aspirations and fears, influencing how we think about personalisation, empowerment, and the impact of technology on human life. Their evolving forms of artificiality also shape our views on education, creativity, and human development. By examining the dual narratives of empowerment and superficiality, Barbie's influence highlights the need to critically evaluate how GenAI might shape education and culture beyond the limits of consumer-driven frameworks.

(Re)generative education

(Re)Generative Education is inspired by the fluid identities and plant people in Van Neerven's 'Water'. Fluid, adaptive approaches to learning help students understand diverse perspectives and enable creativity (Vallis et al., 2025). Curriculum development should valorise diverse cultural perspectives on technology and intelligence in AI-related content and activities, as AI relies on pre-existing data (Habib et al., 2024). Similarly, the development and implementation of AI educational technologies, as well as educational design, should reflect and respect diverse

knowledge systems, moving beyond Western-centric models of intelligence and learning (Zembylas, 2023). Promoting GenAI as a neutral but transformative tool for learning often ignores the complex, everyday realities of educational institutions (Williamson et al., 2024).

Equally important is creating time and space for teachers to build capability with AI tools, and to engage with and facilitate nuanced discussions about the nature of intelligence and creativity in an AI-enhanced world (Markauskaite et al., 2022). Establishing ethical practices for AI use and insisting on human connection in teaching and learning practices, these are urgent issues in education (Vallis et al., 2024). By adopting these practices, educational institutions can work towards a more responsible integration of AI, and a genuinely generative education.

Barbie and generative AI are neither artificial nor intelligent. Rather, they function as dynamic sociotechnical imaginaries that trouble the boundaries of education, creativity, and human development. By interrogating narratives of artificiality and authenticity, empowerment and superficiality, this article critically evaluates how AI might shape and be shaped by higher education. Juxtaposing *Barbie* with Indigenous futurist perspectives draws attention to how cultural narratives mediate our technological horizons and are not predetermined. From this intersection, we glimpse the possibility of reimagining learning as a collaborative space where technology and human experience co-evolve, transcending reductive consumerist frameworks and opening pathways to other ways of knowing and being. From degenerative AI to indigenous futurisms, these insights could help make learning truly transformative.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributor

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