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THREADS OF MEMORY: NAVIGATING THE AI-HUMAN BORDER IN CULINARY EDUCATION

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Morning light falls across the stainless steel workbenches as I watch Aroha adjust her apron with quiet determination. The scene holds a poignant tension. Her hands move with the muscle memory passed down through generations, yet beside her, a laptop screen flickers with algorithmic suggestions for her grandmother's pork and puha recipe. This moment in my institute's training kitchen crystallises a concern that has occupied my thoughts for months.

As a senior lecturer on the Bachelor of Culinary Arts programme at Otago Polytechnic in Ōtepoti/Dunedin, New Zealand, I recognise that AI tools offer remarkable advantages in tertiary education. However, my concern is that their unchecked adoption threatens to erode authentic learning, cultural knowledge preservation, and the creative thinking capabilities this world desperately needs. What is unfolding in my culinary classroom resembles similar scenes in lecture theatres, art studios, and science laboratories throughout this institution and beyond.

My attention drifts between Aroha's methodical preparations and her classmates' varied engagements with technology. Computer cameras monitor stress levels, AI analyses plating arrangements—and an AI-generated cooking assistant even provides guidance on cooking techniques, sounding a lot like celebrity chef Gordon Ramsay. Though they might seem futuristic, these technologies already exist. Within the next few years or decades, Artificial General Intelligence (AGI) might well have arrived, capable of performing any intellectual task humans can, with the ability to learn, reason, and adapt across all possible contexts.

The Digital Education Council's 2024 Global AI Student Survey confirms what I'm seeing. Eighty-six percent of university students now rely on AI for information gathering and summarisation (Digital Education Council, 2024). More troubling is what Ethan Mollick terms "illusory knowledge," where students mistake AI assistance for genuine learning even as their actual understanding diminishes (Mollick, 2024).

My father never worked professionally in a kitchen, yet his relationship with the beer he served in the pubs where I grew up mirrored the intuitive mastery I now observe in accomplished chefs. I recall watching him move between beer barrels, his fingers touching the wood, head slightly tilted as though listening to something imperceptible to others. He knew intuitively whether a beer had fully fermented or if a barrel needed turning. This knowledge was not gained through formal education but through total immersion in his craft.

These memories surface frequently as I observe students becoming increasingly reliant on AI for culinary guidance. What subtleties might they never discover, overlooked by guiding algorithms?

I'm reminded of Philip K. Dick's prescient warnings about technological dependence in novels such as *Minority Report* (Dick, 1956) or *Do Androids Dream of Electric Sheep?* (Dick, 1968), adapted as *Blade Runner* (Scott, 1982). His stories often portray worlds where human intuition and improvisation become endangered qualities, much like the culinary instincts I fear our students might lose. In his worlds, as in our kitchens, the ability to question, create, and adapt beyond programmed parameters ultimately proves essential for survival and meaning.

At Otago Polytechnic, I see this tension daily. Some students eagerly embrace AI to discover new insights and deeper understanding, while others, like Aroha, express unease about drifting from their cultural backgrounds. Her adaptation of pork and puha represents more than a dish: it embodies her connection to heritage and shows a personal creativity that algorithms cannot replicate.

My kitchen has become a microcosm of broader institutional challenges. Across campuses worldwide, administrators are purchasing large-scale AI licenses, often motivated by promises of control and equity rather than substantiated learning advantages. Marc Watkins aptly characterises this as “panic purchasing”: institutions investing substantial funds, hoping to shape or regulate AI usage without clear plans for promoting authentic learning outcomes (Watkins, 2025).

During discussions in various AI advisory groups, the divide becomes apparent. Some colleagues voice concerns about the uncritical adoption of AI, while other staff emphasise the need for our students to be AI-ready for the workforce. Nursing educators worry about clinical judgement being undermined, while design tutors speak of creative intuition being compromised. This duality of opinions reflects a fundamental question that transcends disciplinary boundaries: how can tertiary institutions embrace technological advancement while preserving the essential human elements that define higher education? The kitchen, with its blend of technical precision and artistic expression, simply makes visible the tensions that exist across our entire academic sector.

The AI-augmented classroom is not a future possibility but a present reality reshaping higher education across all disciplines, from the humanities to the sciences. By next year, even greater advancements will challenge our teaching methods, creative processes, and the nature of learning itself. The critical question becomes not whether AI belongs in tertiary education, but how we maintain genuine creativity, cultural fluency, and human empathy at the centre of our teaching, whether in kitchens, laboratories, or lecture halls.

I stand quietly at the edge of the kitchen as Aroha plates her completed pork and puha dish. Despite the AI-generated suggestions accumulating on her screen, her final presentation reflects something deeply personal, a combination of ancestry with modern technique, guided more by her grandmother’s teachings than AI’s algorithms. At that moment, I recall the whakatauki: “E kore au e ngaro, he kākano i ruia mai i Rangiātea” (“I shall never be lost, I am a seed sown from Rangiātea”), a poignant reminder that identity and resilience spring from cultural roots that cannot be automated.

My thoughts return to my father’s pub, to the worn wooden bar where he’d sometimes let me sit after closing, explaining the subtle differences between beers as he cleaned glasses. Those moments held no algorithms, no digital assistance, just the transmission of knowledge through story, observation, and shared experience. It seems vital that, amid technological advancement, we preserve such spaces for direct human connection and knowledge transfer.

For me, this represents more than an academic concern: it’s a deeply personal challenge. As I observe students navigating these technological advancements, I recognise my responsibility to help shape AI’s role in our classrooms rather than passively accepting corporate-defined guidelines. If we fail to act thoughtfully, we risk replacing the artistry of cooking, with all its cultural and personal significance and creative potential, with mere technological reproduction. My father’s intuitive knowledge of his craft, Aroha’s connection to her grandmother’s recipes, and countless other personal relationships to food and beverage preparation remind us what we stand to lose.

I have committed myself to engaging with these technologies by questioning how they transform learning, exploring their capabilities while remaining critical of their limitations, and demanding that they serve education rather than dictate its terms.

Through active leadership in this conversation, we can prepare the next generation of tertiary graduates to thrive in an AI-driven world without sacrificing human creativity, cultural depth, and whanaungatanga. I want to see this positive change not just in our culinary programme but across all faculties.

Our obligation extends beyond merely incorporating AI into teaching. We must critically evaluate whose interests these technologies serve. We must also work to preserve the uniquely human aspects of learning that no algorithm can replace: our intuitive knowledge passed from generation to generation, the cultural understanding embedded in our disciplines, and the creative impulse that elevates education beyond the mere transfer of information towards a transformative experience. In kitchens and classrooms, even as the digital tools we employ grow increasingly sophisticated, what makes tertiary education meaningful remains fundamentally human.

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