

Authentic Assessment in the Age of Al:

Designing for Capability, Context, and Human Becoming





Provocation

"If your assessments can be completed by GenAI or passed by a chatbot, you're not testing what makes us human."

This paper challenges the fear-driven responses to AI that have emerged across higher education and assessment design. It argues that generative AI exposes—not creates—the fragility of systems built on recall, repetition, and standardisation. It calls educators, especially those serving learners combining work with study, to reimagine assessment not as a gatekeeping measure of what has been memorised but as a practice for learning: one that honours capability, judgment, and context, and fosters who learners are becoming.

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Al Disclosure Statement

In preparing this paper, Al tools were used to support original research, synthesise data, and refine language during the final editing process. Al-assisted image generation was also employed to create illustrative graphics that complement the narrative.

All content was reviewed, validated, and finalised by the authors to ensure it reflected the paper's original intent, upheld scholarly integrity, and was grounded in the cited evidence base. No generative Al tools were used to produce core research findings, original data, or final authorial judgments.

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Executive Summary

Artificial intelligence (AI) broadly, and Generative AI (GenAI) specifically, is redefining what can be known, done, and assessed. As machines increasingly perform the academic tasks once used to evidence learning, the case for authentic, human-centred assessment becomes urgent.

This paper extends *Future Ready 2025:1*, which positioned the Human Capability Standards Reference Framework (HCS)¹ — a reference framework underpinned by 25 years of research that defines durable, transferable capabilities beyond technical skills — and the development of cross-curricular mindsets as central to future-fit higher education. Here, we turn to authentic assessment, understood as assessment that requires learners to apply knowledge and skills in realistic, meaningful contexts. Authentic assessment is not merely a response to AI, but a realignment with what matters most: developing and evidencing human capability.

This is not presented as a detached academic exercise. It draws on personal expertise, long engagement with capability frameworks, and critical reflection on what assessment has too often become. It offers both a provocation and an invitation: to see AI not as a threat to be policed, but as a mirror that reveals the fragility of inherited practices, and a catalyst to design something more enduring.

In an age of volatility, automation, and accelerating complexity, assessment must shift from measuring what students know to capturing who they are becoming. Authentic assessment links capability development to real-world tasks to foster the growth and maturation of judgement, self-awareness, and context-driven reasoning — the very qualities so critical in the Age of AI and absent from the technology. It enables not just equity, but emergence; allowing learners from diverse life circumstances to demonstrate capability in ways that are meaningful, situated, and transferable across contexts.

The question is no longer, "How do we police students using AI?"
It is, "How do we build assessment frameworks so powerful that AI cannot replace the human within them?"



What This Paper Offers

This paper is not a catalogue of arguments but an invitation to walk with me through the terrain of assessment in the Age of AI. Along the way, we pause at four landmarks, each offering a different perspective on where we have been and where we might go:

1. Reclaiming the Human in Assessment

We begin by asking why authentic assessment matters more, not less, when machines can already replicate so many of our traditional academic tasks.

2. The Al Provocation

Here, I show how machine capability unsettles old notions of validity and judgement, reminding us that originality is always social, constructed in dialogue, context, and human interaction.

3. Designing for Capability and Micro-Credential Pathways

We then move to the practical: how capability-centred learning and assessment can be recognised and valued, opening meaningful pathways through microcredentials and beyond.

4. A New Framework for Assessment

Finally, we turn to design, not for neat attainment, but for momentum, emergence, and the fuller possibilities of human becoming.





Contents

Exe	cutive Summary	iii
	What This Paper Offers	iv
1.	Introduction: Misplaced Fear	1
2.	When Memory Masquerades as Mastery	3
3.	When Assessment Becomes Real	5
	Assessing Learning	5
	Ambiguity as a Generative Force	6
	Then Came Al	7
	Learning as Navigation, Not Submission	7
4.	When Assessment Becomes Real	8
5.	Al as a Mirror, Not a Mask	9
	From Detection to Design	9
	The Apparent Risks	10
	Enhancing Assurance and Compliance	10
6.	Reclaiming Context: Human Capability	13
	The McDonald's Archways to Opportunity (ATO) Pilot, 2025	15
7.	Designing for the New Majority	16
	The Disrupted Life as Default	16
	Designing from the Edges In	16
	From Personalisation to Validation	17
	Micro-credentials, Macro-Lives	17
	Mini-MBA Leadership Program, MyState Group, 2020+	19
8.	A New Logic to Amplify Authentic Assessment	21
	The North Star and the Compass: Two Metaphors for a New Framework	22
	Reframing the Assessment Agenda: Validating Capability and Character	22
	From Methods to Mindsets	22
	Why This Matters Now	23
9.	Conclusion: Reclaiming Assessment for Human Possibilities	25
	Beyond the Score: Toward Human Possibility	25
	Designing for Emergence, Not Efficiency	25
	Next Steps	26
End	Notes	27



Authentic Assessment:

Designing for Capability, Context, and Human Becoming

1. Introduction: Misplaced Fear

"If your assessments can be completed by GenAI or passed by a chatbot, you're not testing what makes us human."

This is not a rebuke. It is a reckoning.

It signals that the threat lies not in the tool, but in the mirror it holds. A mirror that reflects not student deceit, but the shortcomings of educator design. If we fear that AI will undermine assessment, it is likely because our assessments have already drifted from what truly matters. The integrity of education does not collapse because of generative AI; it collapses when we continue to rely on tasks that no longer prepare learners for the work and complexity of today, let alone tomorrow.

For decades, we have privileged content over context, recall over exploration, standardisation over sensemaking. We have taught students to extract meaning from rubrics rather than from the world. In this system, learning becomes a transaction: complete the task, get the mark, move on. The faster the better. The more efficient the better.

But efficiency is not wisdom. It is not judgment. It is not learning.

Al completes what we ask — elegantly, predictably, and without complaint. That is not the problem. The problem is that we have asked it to do what we should never have been testing in the first place.

If a chatbot can write your essay, then perhaps the essay was never the point. If a generative engine can complete the reflection task without ever having the experience, perhaps the task only ever tested form, not insight.

Authentic assessment dares to ask something more. It asks, what can you do with what you know, in the presence of ambiguity, constraint, and complexity? It places the learner in motion, within a story not yet finished. It requires them to notice, to navigate, to decide. Above all, to be accountable. Not just to a grade, but to a moment of judgment, to the consequence of their actions in a context.

These are not things AI does well. They are the terrain of being human.



When assessment is anchored in human capability, in real-world complexity, emotional reasoning, contextual judgment, and the ethical weight of choice, AI becomes a partner, not a proxy. A prompt, not a replacement. A mirror, not a mask.

So, if we are to reclaim assessment, we must first reclaim what it is for. It needs to illuminate learning, not just audit it. To confirm personal growth, not just evidence comparative results. To deepen capability outcomes, not just measure task output.

Assessment, at its best, is a form of witnessing — not of perfection, but of progress. It affirms the learner's growing capacity to act, to decide, to reflect, and to apply what they know in unfamiliar terrain. And that kind of assessment cannot be outsourced to machines. It is too human to be replicated, too contextual to be templated, too consequential to be completed by a chatbot or Al agent.





2. When Memory Masquerades as Mastery

Since medieval times, the academic charter for universities rested on a quiet bargain; those who mastered a body of knowledge earned the right to teach it.

Disciplines emerged from the research interests of scholars. Over time, this knowledge was codified into textbooks, curated into syllabi, and credentialled through degrees. Teaching followed research. Assessment followed teaching. As a result, students were not so much invited into inquiry as initiated into inheritance. They were recipients of curated content, repackaged into learning outcomes and rendered assessable by rubrics.

The role of the academic was clear, to curate and transmit knowledge.

The role of the student was to demonstrate retention.

It was a model designed for industrial scale and control grounded in factory-like stability rather than individual regard. Built to uphold certainty, hierarchy, and replication, it reinforced the independence of academics rather than their responsiveness to political, social, or economic change. Nor did it demand adaptability to the evolving needs of students entering a world of work being reshaped in real time. The system privileged epistemology over ontology, expertise over empathy, curriculum over curiosity, and content over context. It was not designed for an age in which knowledge is ambient, always-on, and instantly retrievable.

So what happens when machines can remember more than we do, and do it faster?

When a GenAI agent can produce plausible essays, pass basic case studies, or mimic a confident professional tone, it reveals something uncomfortable. Like the Emperor's New Clothes, the technology doesn't corrupt our assessments, it exposes them. Perhaps our rubrics were always built for imitation. Perhaps we've mistaken fluency for understanding and fidelity for insight. We've elevated student engagement, but too often we've assessed for conformity. We've embraced critical thinking, but we've rewarded repetition.

Constructivist theory has long emphasised that understanding emerges through social interaction and shared meaning, not recall alone.² The arrival of AI forces us to confront how often assessment has ignored this principle.

The arrival of AI does not signal collapse. It marks unveiling.

If a chatbot can pass a subject, the problem is not the chatbot. The problem is the pedagogy.

This is not an attack on academics. It is a reckoning with the industrial legacy of higher education, a system designed for efficiency, not authenticity; for control, not adaptability. Where predictability is rewarded over judgment and recall prized over reflection.

As Paul Wilson and I argued, universities have long operated under a production logic, to transmit content predictably, assess it efficiently, and credential it at scale. In such an industrialised model, learning outcomes become linear, hierarchical, and predefined.³



The result for the academic? They are all too often reduced to knowledge brokers dispensing expertise on demand, with little space to nurture the complexity of cognitive understanding that translates into real-world capability.

In this light, the panic around "cheating" with AI begins to sound hollow.

Because what AI really threatens is not academic integrity but orthodoxy.

It disrupts the quiet deference we have long given to disciplinary mastery. Many educators have built their teaching around the arc of their research journey, as they were trained to do. But in doing so, they often construct activities that ask students to rehearse inherited truths, not challenge or apply them. These academics remain tethered to content — teaching what they know, then testing who can echo it back.

Al breaks that mirror. It exposes the illusion that fluency equals understanding.

I have long argued that "capability, not content, is the new currency" of learning).⁴ That insight now carries urgency. If knowledge is ubiquitous, distributed through search and surfaced through prompts, then the role of the educator must shift. From delivering lectures to finding and highlighting human nuances, from content push to designing for student-centric needs. From handing down truths to coaching judgment. From content expert to learning architect.⁵

This is not about reducing rigour. It is about reclaiming it.

If we are no longer assessing what students remember, we must assess what they can do.

- Can they apply knowledge in unfamiliar contexts?
- Can they justify a choice when there's no obvious right answer?
- Can they reflect not only on what they did, but how they thought?
- Can they partner with AI not to avoid thinking but to deepen it?

These are the frontiers of learning worth assessing. They demand tasks that cannot be completed by outsourcing, nor fabricated by algorithm. They demand assessment that captures sensemaking, values ambiguity, and rewards growth.

The result? We turn not to stricter plagiarism rule or enforcing AI controls and declarations, but to acknowledging assessment that is messy, human, complex, and real.



3. When Assessment Becomes Real

"Teaching is effective when all components – curriculum objectives, teaching methods, and assessment – are aligned to support learning"

Assessing Learning

In a lifetime of academic study, there are few works that linger long enough to shift how you see the entire system. For me, one of those was John Biggs' work on *constructive alignment*. It offered a clear model: align Intended Learning Outcomes (ILOs) with Teaching and Learning Activities (TLAs) and Assessment Tasks (ATs) to create coherence in design and clarity in purpose. That simplicity gave power to the framework.

So inspired was I that, already holding a PhD in another field, I returned to study and completed a Master of Education focussed on assessing outcomes-based education. I was immersed in Australia's national training reforms at the time, and the idea that learners actively construct knowledge resonated deeply. But something in Biggs' elegant model fell short.

The Biggs model, for all its influence, begins with a core assumption, that the purpose of teaching is learning, and the goal of assessment is to confirm its achievement. That works in many contexts, particularly for traditional full-time students on a linear journey progressing from school. But I was dealing with vocational education, professional development, and workplace learning contexts, the inelegantly termed non-traditional learners. These were learners not just absorbing knowledge but transforming through it. Their learning was messy, experiential, situated. Their success could not be measured solely by alignment to pre-defined outcomes.

I needed more than alignment. I needed authenticity learners would value and employers would trust.

That search led me beyond pedagogy into competency-based, and eventually heutagogical and capability-centred, models of learning where the learner's autonomy, reflection, and context became central, not peripheral.

It wasn't until my work with DeakinDigital from 2013 to 2017 that this shift became fully realised. Working with leading educational and industry innovators, we built Professional Practice Credentials support Deakin University's vision of a next-generation university. I witnessed how assessment could move from a mirror to a catalyst — not only confirming prior learning and experience, but accelerating the growth of future ready capability.

The principles in Table 1 below align more closely with capability- and outcomes-based assessment than with Biggs' original conception. The learner is not moving along a tidy conveyor belt toward fixed outcomes. They are navigating the local terrain, developing discernment, racing ahead or slowing down development in ways qualifications packaging cannot match, and applying knowledge in ambiguous, evolving, real-world contexts.



Table 1 Shifting principles of outcomes-based education

From....

Seat Time

Recall of knowledge

Outputs tied to learning outcomes

Mass education

Personalised learning

Standardised Marking

Compliance

To....

Mastery and transfer

Application and reflection

Cognitive process

Personalised learning

Validation of growth

Relevance

Biggs and Tang provided a powerful navigational tool: constructive alignment ensured that curriculum components — learning outcomes, activities, and assessments — all pointed in the same direction. Their 3P model further explained how student characteristics and teaching context (Presage) shape learning approaches (Process) and outcomes (Product).8 Yet the constructive alignment largely ignored the wider terrain in which learners live and work, their life stage, cultural background, neurodiversity, workplace pressures, collective sense of purpose, and personal values.

Constructive Alignment helped me frame a direction. But authentic assessment is the journey, my North Star that helps with all the switchbacks, false starts, and emergent forms of learning. In a world reshaped by AI, where machine outputs often exceed human performance on academic tasks, our assessment models must shift from alignment alone to amplification of the distinctly human.

This is where heutagogy begins.

Where pedagogy assumes content must be taught, and andragogy recognises the learner's experience, heutagogy places the learner at the centre of their own learning journey. It embraces complexity. It celebrates reflection. It acknowledges that capability is not delivered to learners, but developed by them through practice, feedback, self-direction, and sensemaking in real-world contexts.⁹

Ambiguity as a Generative Force

As David Cormier argues in his discussion of rhizomatic learning, knowledge is not delivered; it is negotiated through contextual, collaborative learning experiences and mutable, socially-constructed premises. ¹⁰ In capability-centred models, ambiguity isn't a mistake but a spark that stretches our thinking, creates friction, and encourages us to reflect. Constructivist pedagogy shows that we build knowledge through experience and conversation; capability-centred learning asks us to go further by not only building knowledge but also questioning it, adjusting it, using it, and thinking about its worth in different situations.

This reflection is not a teaching 'bolt-on'. It is diagnostic way for learners to surface their judgment, ethics, and values. It is not just what they did, but why they did it and how they might respond differently next time. This is where assessment becomes real.



Then Came Al

Generative AI didn't break assessment in the higher education sector. It simply accentuated the problem with existing practice.

When the chatbot produced a passable essay or simulated a structured argument, it didn't cheat the system. It revealed the system. It showed that many of our assessments rewarded formatting over fluency, citation style over insight. We were measuring how well students mimicked the expected shape of knowledge, not how deeply they engaged with its meaning.

The initial institutional reaction was predictable: detect, control, punish. But that response misses the point. If a machine can complete the assessment task to an acceptable standard, the question is not, "How do we catch the student?". The question is, "What were we really assessing and why?".¹¹

The presence of AI in education invites us to re-ask foundational questions. It exposes how many of our rubrics are designed around polish rather than process, neatness over nuance, reproduction over reasoning. In doing so, it uncomfortably but necessarily forces us back to the purpose of assessment itself.

Al doesn't undermine authentic assessment. It demands it.

When we invite students to use AI transparently, we gain a new lens on their metacognition. We can now ask:

- o How did you prompt the generative model?
- O What did you choose to keep or discard?
- o Where did you intervene, reflect, reshape?

These are questions that do more than detect misuse. They uncover human judgment — the thing no algorithm can fake.

Learning as Navigation, Not Submission

At the heart of this shift lies a simple but radical proposition: assessment should not just test learning; it should develop capacity. This means we must design for the messy middle — the moments of uncertainty, the forks in the road, the chance to choose between ethical trade-offs, interpretive ambiguity, or competing perspectives.

This is not just pedagogy. It is heutagogy, where learning where the learner's agency, judgment, and reflection are not incidental but foundational. It is not enough to align objectives and tasks. We must amplify the learner's ability to navigate, to inquire, to decide what matters.

This is the terrain where human capability grows.

And in an age of intelligent tools, it is the only ground that remains uniquely ours.



4. When Assessment Becomes Real

All too often, the pedagogy and andragogy of higher education have prioritised imitation over imagination. Generative Al didn't create this. It exposed it.

For decades, assessment design has rewarded the measurement of learning as recall and reproduction, rather than assessment *for* learning. Traditional exams and essays have emphasised memorisation, while authentic assessment requires learners to apply knowledge in real-world contexts. Standardised formats, time-limited exams, and scaffolded rubrics became proxies for fairness. In our pursuit of consistency, we smoothed over the very messiness that defines human understanding. Too often, assessment asks: *Can students reproduce what they've been told?* Rarely does it ask: *Can they navigate uncertainty, interrogate assumptions, or forge meaning in unfamiliar terrain?*

Authentic assessment, long championed by Wiggins (1990) and more recently adapted for Capability-centred learning, offers an antidote. ¹³ It repositions assessment as performance in context, demanding learners transfer, adapt, and apply knowledge in dynamic and realistic settings. It is less concerned with what students know, and more attuned to what they can do with what they know.

As Bowles & Ghosh (2025) argue, this shift is critical not only for learning but for employability:

"When assessments mirror authentic contexts, they not only evidence capability—they shape it." 14

This reframing shifts the focus from measuring outputs to developing discernment. It means designing assessment tasks that require judgment, negotiation, reflection, and collaboration. It asks educators to build complexity into learning, not strip it out. And crucially, it challenges us to see students not as vessels to be filled, but as agents in the making who are capable of thinking critically, acting ethically, and applying tools like AI with purpose.

Such design is not incompatible with rigour — it deepens it. To grapple with ambiguity, weigh competing values, and reflect on one's own cognitive stance is not a soft skill. It is the new hard.

Just as importantly, authentic assessment invites students to bring their context with them; their identities, lived experiences, and digital fluencies. As the GENIO Report (2025) reminds us, the new majority of university learners are diverse, mobile, and often balancing study with work, caregiving, or precarity. ¹⁵ A timed exam does not capture their capability. But an authentic challenge, one that invites the use of AI, collaboration across difference, or reflection on lived complexity, can.

This is not about indulgence. It is about alignment. We must evolve assessment to reflect the real, relational, richly mediated world students are entering and already navigating.



5. Al as a Mirror, Not a Mask

When Generative AI entered the classroom, it didn't cheat the system. It simply walked through a door we had already left ajar. What it revealed was not the cunning of students, but the complacency of our assessments.

If AI can complete the task, we must ask, "What exactly are we assessing?"

Too often, our rubrics reward the outer garments of learning; the format of citations, the paragraph structure and the flow of an argument, the word count met with mechanical precision. We set volume of learning requirements to standardise course design and timetables. These commoditise education but all too often are mistaken for enriching thought. But they are not thinking itself.

The truth is sobering. All exposed faults with existing approaches to assessment. It exposed our pedagogy of polish, our grammar of compliance. It unmasked our reliance on mimicry as a stand-in for mastery. We policed plagiarism and enforced academic integrity, but too often we rewarded repetition, not insight. Fidelity, not fluency. Format, not meaning.

From Detection to Design

The institutional reflex was control; to block access, to detect prompts, and to punish deviation.

But a deeper response invites a different gaze. All use in education may highlight challenges in instructional design rather than solely indicating student misconduct. It reflects our habits, inherited constraints, and discomfort with ambiguity. It exposes the extent to which assessment has become decoupled from learning. It unravels the illusion of rigour, revealing redundant practice and pedagogical obsolescence.

Yet this moment offers a turning point and an opportunity to return to what matters most.

As discussed earlier, constructive alignment taught us that curriculum, teaching, and assessment must cohere, yet it often reduced outcomes to predictable targets, detaching them from the lived complexity of capability. In contrast, heutagogy and Capability-centred education call for a different form of alignment and one that centres on learners as agents, acknowledging that deep learning emerges through reflection, complexity, and ambiguity.

In Capability-centred education, ambiguity is not avoided, it is embraced.

It is the crucible in which learners grow. Ambiguity becomes the generative tension where experience meets application, where neat problem solving processes hit speed bumps, where judgment is forged, and where reflection gives rise to insight.

This returns us to the foundations of constructivist pedagogy, where knowledge is not transmitted but constructed and shaped through context, inquiry, social exchanges, and meaning making. Ambiguity, in this view, is not a flaw in design. It is a feature. A necessary tension.



As we noted earlier, when capability becomes the lens, assessment shifts.

The aim is no longer just to prove what students know, but to illuminate how they think, decide, adapt, and act, especially in contexts that resist simple answers. These are the precise dimensions AI cannot replicate, namely ethical judgment, creative insight, empathetic connection, and resilience through self-awareness. These remain stubbornly human and profoundly valuable.

The Apparent Risks

Yet to stop at design is to miss the deeper risk.

When we allow AI to complete the cognitive work of learning — to plan, generate, refine, and summarise — we risk bypassing the very mechanisms through which thinking develops. Emerging research from neurocognitive labs suggests that habitual reliance on generative tools may impair metacognition, weaken problem-solving pathways, and blunt the neural processes responsible for synthesis and insight. The brain, like muscle, adapts to disuse.

The danger is not that AI is too intelligent but that we allow its fluency to atrophy our own.

Reflection, decision-making, and ethical judgement are not just outputs. They are cognitive practices, biologically reinforced over time. Especially for emerging adults, the act of struggling through ambiguity, self-correcting, and articulating why a choice was made is not a luxury. It is how capability is built. It is how identity, resilience, and discernment are grown.

Recent studies also suggest that learners who use GenAI actively and critically **amplify** their cognitive activity more than those who either avoid it or rely on it passively. ¹⁷ But this amplification is not guaranteed. Thinking is not just an outcome, it is a habit, a practice, a biological investment that rewires the brain, especially in the formative years of adult learning. The more we offload to AI — to assemble, interpret, or initiate our thoughts — the more we risk narrowing the mental circuits responsible for synthesis, reflection, and self-regulation

If we do not design for that, if we mistake tool use for thought, we do not just risk redundancy. We risk eroding the very faculties we claim to educate.

As universities strive to improve relevance through authentic assessment, the question is not only whether tasks feel real but whether they develop the human capabilities needed to thrive in a real-world context.

These risks highlight why the assurance of learning cannot rest on surveillance or detection alone. To safeguard both educational quality and regulatory integrity, we need assessment designs that make human capability itself the evidence of assurance.

Enhancing Assurance and Compliance

Regulators speak the language of "secure points of assessment", as if integrity could be guaranteed by a locked room or a watchful eye. ¹⁸ But true assurance does not come from supervision. It comes when students must show what only a human can: judgment in



ambiguity, reflection in context, and the courage to account for their choices. In this sense, authentic assessment does more than meet compliance — it deepens it, making integrity visible in the very act of learning.

Authentic assessment can therefore enhance both assurance of learning and regulatory compliance by:

• Embedding authenticity as integrity

Secure assurance comes not from invigilation, but from designing tasks where judgment, reflection, and contextual reasoning are visible — qualities AI cannot fabricate.

Linking program outcomes to capability standards

Mapping assessments to durable human capabilities provides clear evidence for regulators that graduates meet course-level learning outcomes, while also addressing employability.

Reducing reliance on fragile detection methods

Designing assessments that cannot be outsourced makes compliance less dependent on fallible AI-detection tools.

Balancing integrity with equity

By avoiding over-reliance on time-limited exams, authentic tasks provide secure evidence of learning while maintaining inclusivity and fairness for diverse learners.

Supporting systemic coherence

When authentic assessment is used across a program, institutions can demonstrate progressive assurance of learning outcomes and compliance against threshold standards, while still preserving educational quality.¹⁹

In this way, authentic assessment is not only assessment for learning, but it also compliments compliance and assurance requirements. It positions integrity not as surveillance, but as the visible demonstration of human capability in action.





6. Reclaiming Context: Human Capability

Universities increasingly seek to design authentic assessments that mimic real-world tasks and build student readiness. Yet the opportunity goes further: to move beyond realism to situated relevance and assessing not just professional tasks, but the human capabilities that underpin them. Authentic assessment must do more than simulate work; it must surface a learner's potential and who they might become when their capability is grown over time. This is where capability-centred design shifts the paradigm.

Authentic assessment does not need to be staged in classrooms. It lives where learners already work and live, in roles with real stakes and real consequences.

Capability-centred education reframes what it means to learn, know, and become. It is not simply a pedagogical method. It recognises that knowledge without context is inert, and that meaningful performance demands more than test success.

Capability is not proven in abstraction but revealed when theory meets complexity and action must be taken.

In this frame, learners are not vessels of content, but agents of transformation. Capability is not simply another word for skills. It moves beyond task, job or discipline competence. It represents the deeper architecture that enables transfer, resilience, and adaptation. Where skills are specific, capabilities are generative. They are the enduring human qualities, like judgment, curiosity, collaboration, or resilience that allow individuals to transfer learning across unpredictable and shifting domains.

When capability becomes the lens, assessment no longer asks, "Has the learner mastered the content?" It asks, "Can they adapt, apply, and extend their knowledge in diverse and dynamic contexts — not just once, but again and again?"

This demands a return to contextual learning, where the situation is not a backdrop but a co-author. Tasks are framed in authentic conditions, ambiguity is preserved, complexity isn't hidden, and multiple pathways to valid responses are expected. In this way, the assessment is not just about right answers — it is about how the learner navigates complexity, exercises judgment, reflects on implications, and demonstrates ethical discernment under pressure.

Such complexity cannot be simulated by generative AI. While machines can parse text and pattern, they cannot feel context. They do not sense risk, negotiate meaning, or shoulder responsibility.

Here, human capability is not an explicit, codified skill or item of knowledge to be measured, but a *tension to be revealed*. It is disclosed through formative activities and performed in unpredictable settings, not rehearsed tasks in contained environments. That is why authentic assessment is not just a technique; it is an ethical stance.

It says to the learner, You are not being tested on your ability to comply, but on your capacity to contribute.



It says to the educator, You are not designing a hoop to be jumped through, but a mirror in which the learner might recognise their own growing agency.

It also invites institutions to reframe their metrics. Time in class or completing assignments, contact hours, standardised grading curves, and rubric checklists, often reflect institutional convenience more than learner development. These proxies may capture compliance, but they miss growth. They track effort, but rarely insight. They quantify output, but struggle to detect the emergence of agency, judgment, reflection, or contextual reasoning, and these are the very outcomes that authentic assessment seeks to elicit.

In a capability-centred model, we move beyond momentary achievements, to uncover durable indicators of human abilities and future potential. Once revealed, they retain value across roles, disciplines, locations, and a lifetime of career choices.

To design for this kind of assessment, we must go beyond *what* we assess, and focus on *how* we create the conditions where human potential can emerge. This requires a shift in institutional mindset — from curating content to cultivating capability. It also invites a deeper question, asking why do we not do more to recognise and validate the learning that many students already bring from work, life, and community? While most universities offer Recognition of Prior Learning (RPL), it is typically mapped against the prescribed learning outcomes of a specific course, rather than a broader framework of capability standards or graduate attributes that span all courses. This means valuable experience is only recognised if it mirrors pre-defined content. When lived experience is devalued or forced to conform to narrow criteria, we fail not only to honour the learner but to expand what education can mean.

This is not a hypothetical proposition. It is already happening in industry. The McDonald's Archways to Opportunity pilot shows how authentic assessment, tied to capability standards, can reframe careers and learning in practice.





The McDonald's Archways to Opportunity (ATO) Pilot, 2025

McDonald's Australia faced a familiar challenge: high turnover among frontline staff moving into management, with many leaving to pursue tertiary education or other careers. While over five percent of Australians had started their working careers at McDonald's Australia while still at school, internal career paths were seen as short-term, disconnected from real qualifications or employability.

The Archways to Opportunity (ATO) pilot reframed this challenge through authentic assessment. Instead of treating training as compliance, McDonald's embedded incremental, work-embedded assessments that surfaced real capability. Staff earned stackable micro-credentials, mapped to the Human Capability Standards (HCS) and linked to university pathways, so that what they did every day in-store became recognised, portable, and credit-bearing.

The impact was immediate: 100% of eligible staff earned credentials, retention and promotion readiness improved, and frontline roles were repositioned as gateways to both careers and further study.

Crucially, the design worked because it embodied the very principles of authentic assessment:

- **Contextual relevance:** Assessment was embedded in real work, reflecting the complexity and immediacy of live customer and operational contexts.
- Capability focus: Judgement, collaboration, and adaptive problem-solving were validated as evidence of progression — qualities no AI simulation could substitute.
- **Transferability:** The resulting credentials travelled beyond McDonald's, carrying recognition into universities and other employers.

This pilot shows how authentic assessment, tied to capability standards, becomes more than an internal HR initiative. It creates visible, trusted pathways that connect workplace performance with higher education recognition, and surfaces uniquely human qualities that AI cannot replicate.

Universities must move beyond theory to partner in these credentialing ecosystems. This does not mean more simulations or classroom proxies for work, but genuine assessment placements rooted in the contexts where learners already work and live. The opportunity is not to invent artificial tasks, but to recognise, validate, and extend the evidence of capability as it is demonstrated in real roles, under real conditions, and with real consequences.



7. Designing for the New Majority

For much of its history, higher education was designed for a minority. A particular age. A particular socio-economic group. For those seeking a particular kind of life.

The imagined learner was full-time, campus-bound, uninterrupted having arrived straight from secondary school with few competing obligations. The system was designed accordingly with fixed timetables, synchronous delivery, linear subject progression, and delayed recognition through summative credentials at the end of a multi-year journey.

That student is no longer the norm. What was once non-traditional has become a defining shift in the global education market.

The Disrupted Life as Default

Today's learners are navigating complexity as a constant. They are not interruptions to the ideal; they are the new majority.

They are:

- Parents returning after career breaks.
- Migrants reskilling midlife.
- Workers transitioning away from disappearing jobs and careers
- Casual workers building capability between shifts.
- Young adults balancing study, gig work, and care responsibilities.
- First-generation students who cannot afford to wait for recognition.

As GENIO Report (2025) confirms, these learners need more than flexible content delivery. They need faster cycles of proof, recognition aligned to reality, and capability validated in context rather than abstracted from it.²⁰

They come not to be moulded, but to reframe. Not to pass time, but to change trajectory. Not to absorb knowledge, but to make them employable.

Designing from the Edges In

The danger lies in designing for the centre for the 'average' learner who rarely exists. True equity begins when we design from the edges and for those with the most constraints, the least predictability, and the highest demand for relevance. In doing so, we raise the floor for all learners.

This is not a call for simplification. It is a call for authentic coherence in the design — where learning is shaped by context, driven by purpose, and validated through demonstrated capability growth.



When grounded in capability-centred principles, authentic assessment increases challenge, not reducing it, but it also increases *transferability* and *meaning*. It asks:

- Can the learner apply judgement in unfamiliar contexts?
- Can they justify their reasoning and decisions under ambiguity?
- Can they collaborate across difference of culture, time zones, technologies, or roles?
- Can they adapt, self-correct, and reflect in motion?

These are not academic luxuries. They are survival strategies in volatile careers and fluid systems.

From Personalisation to Validation

Capability-centred learning personalises based on purpose instead of pace. It treats learners as agents rather than recipients and considers their prior experience as foundational rather than irrelevant.

Students no longer arrive as blank slates. They bring:

- Work histories and career pivots
- Multilingual skillsets and cultural fluency
- Caregiving resilience and trauma-informed navigation
- Digital fluency born from side hustles, online platforms, or peer networks

This is **data**, not deviation. When assessment is reframed through capability, these experiences become *evidence*; they are visible, assessable, and valuable.

GenAI has a role to play as a reflective tool, not just a productive one. It can help learners map their own capability, identify patterns or gaps, and track development. But capability-centred design ensures that learning is not reduced to AI usage. It remains grounded in the *whole person*; their context, constraints, values, and intent.

The goal is not simply efficiency. It is **emergence**, the visible growth of judgement, decision-making, and self-awareness over time.

Micro-credentials, Macro-Lives

Delayed recognition is deferred opportunity. For many in the new majority, a three-year wait for a degree is not just inconvenient, it is unviable.

This demands a reordering of recognition logic. It deepens the argument how capability-based micro-credentials provide a way to redress how the, 'evolving shape of work and careers has accentuated the misalignment and perceived irrelevance of conventional diploma and degree programs.'²¹



These credentials are not vanity badges. They are *currency*. When designed around authentic assessment, they capture:

- Real-world complexity and transfer
- Generalist abilities innate to each person irrespective of the discipline or location (e.g. Judgement, ethical awareness, storytelling contextual to the audience)
- Evidence of capability that is observable and applicable
- Meaning, not just metadata

When micro-credentials based on standards or practice are aligned to and credit towards formal qualifications through frameworks such as the Human Capability Standards (HCS)²²,they do more than recognise skills and mindsets. They open alternative pathways through:

- Access to higher education with direct entry, advanced standing or credit
- Career progression within and across sectors
- Recognition for the previously invisible, excluded, or undervalued abilities

The measure of the worth of learning must shift, from time served to the lifelong capability demonstrated.²³

Micro-credentials underpinned by authentic assessment are not an alternative. They are the future-facing instruments through which higher education must now design learning aligned to how we live and work today.

This is not just a question of access and equity.

It is a matter of economic necessity.

Of raising the adaptive capacity and market relevance of public universities.

Of public confidence in the return on their investment.

This agenda is not speculative. It is already being tested by employers who recognise that the new majority of learners are not full-time students but working adults whose learning must be recognised in the flow of their work. The Mini-MBA Leadership Program at MyState Group shows how authentic assessment can link capability to the organisation's strategic and cultural priorities, assess and prioritise individual development, and design experiences that unite learning and assessment through the application of wicked problems.



Mini-MBA Leadership Program, MyState Group, 2020+

The MyState Group faced challenges common in financial services: high turnover among younger recruits, toxic behaviours undermining digital transformation, and gaps in leadership readiness that stalled cultural renewal. Traditional training failed to address the lived realities of work, often rewarding compliance with frameworks rather than authentic demonstrations of capability.²⁴

The response was the Mini-MBA Leadership Program, built on authentic assessment and mapped to postgraduate credit. The program did not rely on simulations or generic case studies. Instead, each participant undertook diagnostic assessments against the Human Capability Standards (HCS) to surface their leadership strengths and gaps. They then applied these capabilities directly to organisational priorities such as redesigning customer experiences, strengthening compliance culture, and improving team cohesion — outcomes that mattered to both learner and business.

Why it Worked:

- **Contextual Relevance:** Assessment was embedded in live projects and behaviours observable at work, and both online and face-to-face coursework scaffolded applied learning.
- **Capability Focus:** Adaptive leadership, judgment, and collaboration were validated in situ, rather than inferred from classroom exercises.
- Holistic Application: Learners were assessed not only on discrete skills but on how they mobilised multiple capabilities to solve complex, real-world challenges.
- **Transferable Recognition:** Micro-credentials stacked into formal postgraduate credit, culminating in the option to gain a graduate certificate qualification, bridging workplace application with higher education recognition and pathways.

This program illustrates how authentic assessment can reframe learning for the **new majority** of working Australians who cannot step away from work to study, but who can grow through assessment embedded in the very problems their employers need solved. For higher education, the lesson is clear that authentic assessment offers not just diagnostic insights, but a way to integrate and recognise real capability in workplaces, creating trusted pathways that unite industry relevance with academic credibility.

Authentic assessment must accommodate learners within their own contexts, whether in the workplace or the community. Universities can no longer rely on simulated realism or work that is merely integrated into the learning environment. The task is to partner within real-world ecosystems, validating capability through diagnostic and holistic assessment, and extending this into portable, credit-bearing recognition that serves both the learner and the employer.







8. A New Logic to Amplify Authentic Assessment

"The map is not the territory" by extension, the rubric is not the learner.

For too long, assessment has been a mirror held up to the wrong things. It reflects what can be easily measured, not necessarily what matters. Memory over application. Answers over inspiration. Submission over sensemaking. Format over reflection.

In the age of generative AI, this isn't merely outdated, it is dangerous. The risk is not that AI completes the task for students, but that the task itself never required human thinking to begin with.

If our assessments reflect what we value, then Table 2 makes clear that we must revalue what we measure, shifting from static knowledge checks to authentic demonstrations of capability in action.

Table 2 Traditional vs Authentic Assessment

Traditional Assessment	Authentic Assessment	
Focuses on what students know (content recall, correctness)	Captures who students are becoming (capability, judgement, identity)	
Approaches emphasise written work and knowledge application (e.g. exams, essays, case studies)	Approaches emphasise student engagement with real-world context and being work ready	
Designed for standardisation and efficiency	Designed for situated meaning and emergence	
Prioritises format and accuracy	Prioritises personal reflection, reasoning, and transfer	
Assumes a single correct answer	Embraces ambiguity, context, and complexity	
Conducted at the end of learning (summative)	Embedded throughout the learning journey (formative and developmental)	
Polishes surface-level understanding	Surfaces deep insight and growth trajectory	
Assumes educator as evaluator	Positions educator as co-learner and guide	
Is often disconnected from real-world relevance	Is grounded in real-world application and judgement	
Reinforces compliance and performance norms	Enables agency, adaptability, and contribution	
Can be easily simulated by Al	Exposes uniquely human thinking AI cannot replicate	

These shifts form the backbone of a new logic for designing assessment that surfaces human potential rather than simply confirming content mastery. If we do not evolve what we assess, we will soon be measuring machines, not minds.

To reassert the purpose of education, we must shift:

- from measuring what students know to capturing what they can do and become
- from assessment of learning to assessment for becoming
- from polished products to evidence of growth, judgment, and applied capability



The North Star and the Compass: Two Metaphors for a New Framework

Think of capability standards as a North Star, the fixed point that provides strategic clarity. Each strand — knowledge, skills, and behaviours underlying mindsets — must be interwoven in ways that are coherent, contextual, and durable. A single strand (such as content mastery) may be strong, but it cannot hold shape alone. It loses resolution without integration. The North Star calls for intentional design, where the innate attributes that make us human are addressed in a balanced manner using approaches that are meaningful to each learner and aligned to a clear sense of purpose.

Now picture authentic assessment as a compass. Its role is not to confirm arrival, but to orient the learner toward their own capacity for growth. There is no single perfect path. Learning and development are not linear, they represent movement in judgment, in adaptability, and in ethical reasoning.

The learner must find their North Star and a sense of purpose, but it is the compass that guides their journey through complexity, not to a predetermined destination.

Reframing the Assessment Agenda: Validating Capability and Character

To replace legacy models, we propose a Capability-Centred Assessment Framework grounded in standards such as the HCS and attuned to the demands of AI-enabled, real-world contexts. Authentic assessment must be aligned to durable, cross-curricular capability standards and professional outcomes, not just subject-level knowledge. Table 3 below synthesises what to assess, how to assess it, and why it matters. These capabilities cannot be faked by AI or reduced to prompts. They are forged in ambiguity and expressed through action, reflection, and ethical reasoning.

From Methods to Mindsets

This is more than a shift in tools. It requires a shift in institutional posture.

Authentic assessment is most powerful when aligned with real-world learning outcomes or grounded in durable human capability standards — frameworks that capture proficiency and progression across careers. This alignment enables learners to integrate theory, context, and character in ways that transcend the classroom while remaining anchored to assured, globally trusted standards.

Educators must move from content gatekeepers to designers of personal growth. Institutions must evolve from compliant curriculum providers into capability incubators. And AI must be reframed, not as an assessment threat, but as a diagnostic lens. It can help us identify where design is weak, where reflection is missing, and where personal purpose has been neglected.

This also means designing assessments that are:

- Not just individualised, but situated in context
- Not just rigorous, but meaningful and universally applicable
- Not just hard to fake, but impossible to fabricate because it is grounded in how humans think, feel, and relate to each other



Why This Matters Now

If we mistake AI fluency for human insight or conflate knowledge synthesis with genuine understanding, we risk bypassing the very neural and cognitive work that learning requires. We risk turning education into simulation

Authentic assessment protects and elevates the human. It fosters the development of judgment, reflection, and identity. It builds what AI cannot replicate: agency, adaptability, and metacognition through awareness of 'self-in-the-system'.

Assessment frameworks that are grounded in, or aligned with, capability standards make performance visible and comparable across disciplines. This approach shifts the focus away from mere content accuracy, instead emphasising contextualised reasoning, ethical discernment, the ability to transfer knowledge, and ongoing growth.

We should avoid designing assessments that machines can complete more quickly than human minds. Rather than feeding the fear that AI might replace our lecturers, we ought to create frameworks that truly reflect the futures we expect our graduates to shape.

Table 3 Assessing Capability and Character

Table 3 Assessing Capability and Character						
Human Capability Attributes	Assessment Focus	Assessment Method	Evidencing Outcomes			
Cognitive Agility	Ability to reason, analyse, shift perspective, and link insights across contexts	Al critique tasks, divergent thinking prompts, systems mapping, complexity simulations	Ability to justify conclusions with evidence in novel settings Use of deductive/inductive reasoning in live cases Change in metacognitive accuracy (self vs external assessment) ²⁶			
Adaptive Mindset	Response to ambiguity, disruption, and emerging complexity with learning orientation	Scenario pivots, reflection journals, decision-tracking and value-framing exercises	Reflective analysis scored against Tolerance for ambiguity, proactive coping, flexible decision-making, and willingness to revise assumptions Rubric-based assessment of self-regulation under uncertainty; peer/facilitator review of scenario response			
Ethical Judgement	Ability to assess trade- offs, reason with integrity, and act with ethical awareness	Dilemma-based simulations, stakeholder role-play, values-in- practice reflections	 Scenario-based rubric evaluating moral awareness, judgment process, and consequences appraisal²⁷ Peer/self-review of ethical reasoning Expert panel review based on ethical complexity and justification clarity 			
Creative Thinking	Imagination, originality, curiosity, and inspiring divergent idea generation	Metaphor generation, speculative design, innovation challenges, creative sprints	 Fluency, originality, and elaboration measured using Torrance or satisfaction of client/ user Expert review panel ratings on novelty/relevance of solution²⁶ 			
Empathetic Communication	Clarity, resonance, and sensemaking across diverse audiences and media	Multi-modal storytelling, peer translation, audience- sensitive presentations	Audience understanding and engagement levels (survey or peer review) Meaning formation with audience scored using validated rubric Change in self-perceived communication efficacy (pre/post) ²⁹			
Collaboration & Influence	Engaging across difference to build shared understanding and co- created outcomes	Team-based problem tasks, feedback negotiations, shared accountability activities	 Peer-reviewed contribution ratings Observed turn-taking, perspective-taking, and responsiveness Shift in stakeholder satisfaction ratings³⁰ 			
Real-World Problem Solving	Application of knowledge, skills, and judgement to live, situated challenges	Live briefs, client-based challenges, portfolio artefacts, problem audits	 Decision/ choice quality under ambiguity Causal analysis mapping Human impact of solution/ employer satisfaction³¹ 			
Self-Awareness	Self-reflection, courage, persistence, and adaptive learning through challenge	Growth logs, self-regulation tools, coaching feedback loops, metacognition checks	 Depth of reflective learning (Hatton & Smith model) Goal-setting accuracy and follow-through³² Ability to adapt learning strategies based on feedback (evidence of learning agility) 			





Conclusion: Reclaiming Assessment for Human Possibilities

Authentic assessment is not a pedagogical trend. It is a philosophical reorientation away from education as a transaction and toward education as transformation.

The arrival of generative AI did not destroy the old model. It simply revealed its fragility. It showed us how easily our assessments could be gamed, how shallow our measures had become, how vulnerable our systems were to automation, not because machines are clever, but because we had narrowed learning into predictable forms.

This issue goes beyond just the problem of academic dishonesty; it forces us to fundamentally reconsider what we prioritise and aim to achieve through education.

We can continue to measure compliance as a proxy for learning, or we can design assessments that grow and reveal capability.

We can measure what machines can memorise, or we can illuminate what only humans can make meaningful.

We can credential conformity, or we can nurture the potential to adapt, to contribute, and to grow.

Beyond the Score: Toward Human Possibility

The true purpose of education has never been to equip learners only with the skills needed for the job they want today. It has always been to reveal hidden potential and to stretch the horizon of who they might yet become. It is in discovering these future possibilities that we find what is uniquely human.

Assessment is not the end of learning. It is the inflection point where growth becomes visible. Done well, it reveals not just what a learner knows, but what they are beginning to understand about themselves, others, and the world they are stepping into.

This is not assessment for marks. Al can help you achieve better grades, but it cannot leverage assessment to create personal momentum, seize new opportunities, or reshape your mindsets.

Designing for Emergence, Not Efficiency

To reclaim the human purpose of assessment, we must reshape its logic. It has to be less about hurdles and a means to filter comparative results, or a means to control or contain learners.

If assessment can be reduced to an algorithmic response we are failing as educators.



Authentic assessment asks us to amplify human possibility. This means:

- Designing tasks that surface insight, not just output.
- Embedding ethical judgment, not just procedural accuracy.
- Valuing process as much as product.
- Recognising reflection as the site of transformation.

We must shift from assessing for what can be taught to assessing for what can emerge, whether that be in thought, in practice, in behaviours, in shared identity, or in contribution.

Next Steps

The tools now exist. There are an abundance of assessment frameworks and processes are in place. The diagnostics are ready and the regulatory guidelines are catching up.

What remains is the will to break away from industrialised higher education to design assessment systems that respect the complexity of learners.

To choose an education system that respects the complexity of learners, responds to their context, and sees capability not as a credential to be conferred, but as a possibility to be cultivated.

This is the deeper promise of authentic assessment, not just because it tells us who the learner is, but that it helps them discover what they are capable of becoming.

We must rise to the challenge and build frameworks worthy of the lives and the possibilities we wish our graduates to shape.





End Notes

- ¹ Bowles, M. (March 2025). *Integrating Human Capability Standards into Higher Education: Future-Ready Learning Pathways*. Future Ready 2025:1, The Institute for Working Futures™ & Capability.Co. https://www.workingfutures.com.au/publications.
- ² Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes, Harvard University Press.*
- ³ Bowles, M., & Wilson, P. (April 2024). *Shifting university paradigms: Why the academic gown must come to town*. The Future Normal, 2024:1, The Institute for Working Futures™ & Capability.Co.
- ⁴ Bowles, M. (July 2020). Why non-traditional education is part of the new normal, The New Normal: 2020:3, The Institute for Working Futures™ & Capability.Co.
- ⁵ Very much in the vein of Ramsden's Theory 3, where teaching is fundamentally about enabling students to change their understanding. Ramsden, P. (2003). *Learning to teach in higher education* (2nd ed.). RoutledgeFalmer.
- ⁶ Biggs, J.B. & Tang, C. (2011). *Teaching for Quality Learning at University,* 4th Ed., Maidenhead: McGraw Hill Education & Open University Press, page 53.
- ⁷ Biggs, J.B. (1999). *Teaching for Quality Learning at University*, Buckingham: Open University Press.
- ⁸ Biggs & Tang, 2011, 19-21.
- ⁹ Hase, S., & Kenyon, C. (2000). *From andragogy to heutagogy*. UltiBASE Articles, University of Southern Queensland. Retrieved from https://www.researchgate.net/publication/301339522 From andragogy to heutagogy.
- ¹⁰ Bali, M. & Honeychurch, S. (2014). Rhizomatic Learning. In Key Pedagogic Thinkers Dave Cormier. *Journal of Pedagogic Development*, 4(3). Retrieved from https://eprints.gla.ac.uk/98226/1/98226.pdf.
- ¹¹ Lodge, 2025.
- ¹² Cordingley, M. (2024). *A guide to authentic assessment*, Centre for Academic Innovation and Development, University of Chester.
- ¹³ Wiggins, G. (1990). The case for authentic assessment. *Practical Assessment, Research & Evaluation*, 2(2). https://doi.org/10.7275/ffb1-mm19.
- ¹⁴ Bowles, M., & Ghosh, S. (2025). *Authentic Assessment: Heutagogy in the Age of AI*. The Institute for Working Futures & Capability.Co.
- ¹⁵ GENIO. (2025). *The New Majority Learner Report 2025*. GENIO Education. Retrieved from https://genio.co/resources/research-and-insights/new-majority-learner-report-2025.
- ¹⁶ Kosmyna, N., et al. (2025). Your Brain on ChatGPT: Accumulation of Cognitive Debt when Using an AI Assistant for Essay Writing Task. MIT Media Lab. https://arxiv.org/abs/2506.08872; OECD. (2023). Skills for Life: The importance of meta-cognition in 21st century learning. OECD Publishing.
- ¹⁷ Noti, G, et al. (18 February 2025). *Al-Assisted Decision Making with Human Learning*. Cornell University. https://arxiv.org/abs/2502.13062.
- ¹⁸ Lodge, J. M., Bearman, M., Dawson, Pet al. (24 September 2025). *Enacting assessment reform in a time of artificial intelligence*. Tertiary Education Quality and Standards Agency. https://www.teqsa.gov.au/guides-resources/corporate-publications/assessment-reform-age-artificial-intelligence
- ¹⁹ Adapted from themes listed in Lodge et al. (2025)
- ²⁰ GENIO, 2025.
- ²¹ Bowles & Wilson, 2024.
- ²² Working Futures™ (2025). *Human Capability Standards Reference Framework*, The Institute for Working Futures, Sydney. https://www.workingfutures.com.au/human-capability.
- $^{\rm 23}$ Laitinen, A. (2012). Cracking the credit hour. New America Foundation.
- ²⁴ Bowles, M. (June 2025). From Recognition to Results: Verifying the Business Impact of Micro-Credentials, Future Ready 2025:3, Working Futures™ & Capability.co. Retrieved from https://www.workingfutures.com.au/wp-content/uploads/2025/06/Future-Ready-3-2025-Impact-of-Microcredentials-on-Business-5-June25.pdf.
- ²⁵ Korzybski, A. (1933). Science and sanity: An introduction to non-Aristotelian systems and general semantics. Institute of General Semantics.
- ²⁶ Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, 77(6), 1121–1134.
- ²⁷ Schwartz, M. S. (2016). Ethical decision-making theory: An integrated approach. *Journal of Business Ethics*, 139(4), 755–776
- ²⁸ Amabile, T. M. (1982). Social psychology of creativity: A consensual assessment technique. *Journal of Personality and Social Psychology*, 43(5), 997–1013.
- ²⁹ Deakin University. (2024). *Authentic Assessment Methods: A Practical Handbook for Teaching Staff*, Deakin Business School & Faculty of Business and Law.
- ³⁰ Katsenos, I. & Pierrakeas, C. (2025). Assessing Individual Contributions of Team Members to Team Achievement by Combining Peer Assessments and Digital Presence in an Academic Environment. *Education Sciences*, 15. 279.
- ³¹ Misko, J., Halliday-Wynes, S., & Stanwick, J. (2014). *Quality assessments: practice and perspectives*, National Centre for Vocational Education Research.
- 32 Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. Theory into Practice, 41(2), 64–70.