AI in Higher Education

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Digital Transformation in HE

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Statement by well-informed, highly respected author of blog:

"The findings [report*] point to a widening gap between student behavior and institutional policy — one with significant implications for academic integrity, teaching practices, and workforce preparation."

* Survey report (Oct. 2025 by Gallup & Lumina Foundation) among nearly 4,000 US college students pursuing bachelor's and associate degrees.

"AI is already embedded in students' academic lives … Higher education has an opportunity and a responsibility to move from uncertainty to clarity. Students need transparent expectations, ethical guidance and practical training so they can use AI in ways that strengthen learning and prepare them for the workforce." (Lumina VP)

"… nearly three in 10 students say their school is not adequately training them to use AI effectively."

(Irving Wladawsky-Berger, *The State of AI in Higher Education: Widespread Use, Unclear Rules*, June 10, 2026)

[https://blog.irvingwb.com/blog/2026/06/the-state-of-ai-in-higher-education-widespread-use-unclear-rules.html#more-1966]

Some other recent surveys …

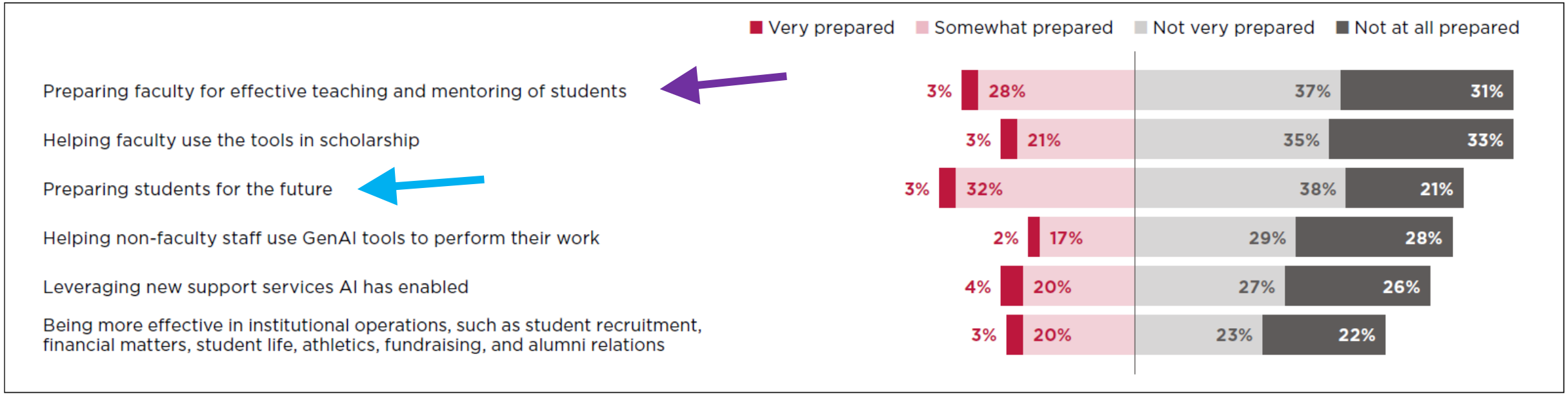
Survey (Am. Assoc. of Colleges & Univ., AAC&U) (Nov 2025)

The majority of faculty believe their schools are not very prepared for using GenAI tools effectively

More than half of these professors think that most of their colleagues in their departments are not well prepared to use GenAI tools in their teaching. In several other contexts, these scholars think their schools are not ready for using GenAI tools for key institutional purposes. They also believe spring 2025 graduates were not very well prepared for the world they face after college.

Teachers say their schools are generally not prepared for using AI tools very effectively

% of faculty who say their institution is prepared to use GenAI tools effectivity for these purposes



The AI Challenge. How College Faculty Assess the Present and Future of Higher Education in the Age of AI. AAC&U & Elon Univ. 2026. (1057 U.S. faculty members)

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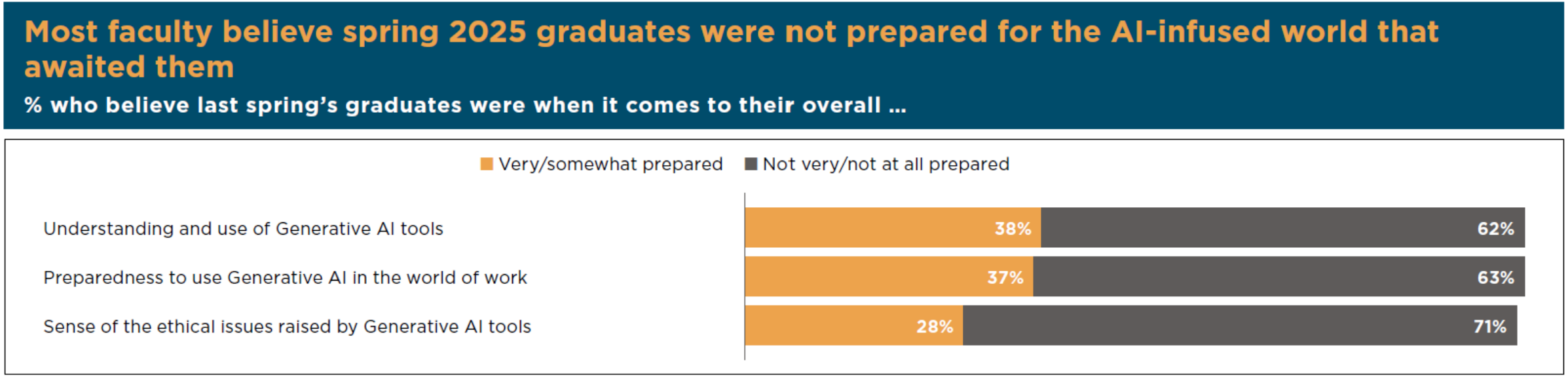

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… a more recent report on undergraduate students in the UK

HEPI / Kortext Student Generative AI Survey (2026)

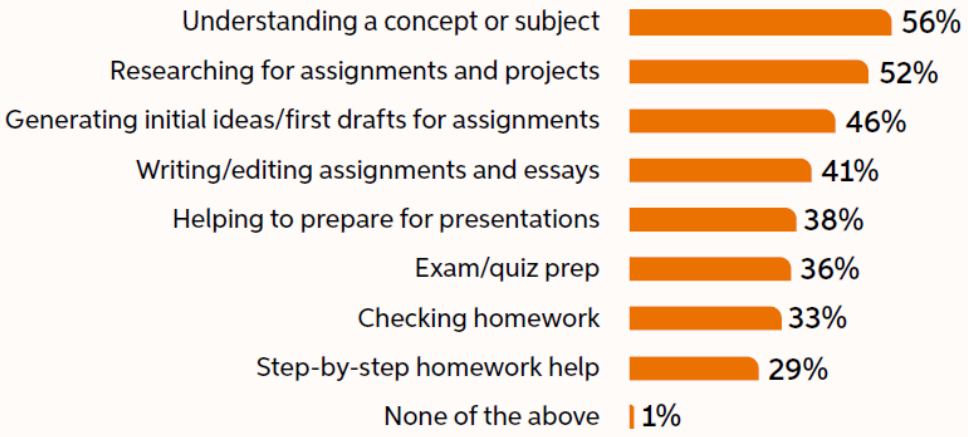
1. "AI use among students is now near universal and continues to reshape learning, assessment and institutional practice"
2. "Some 95% of students report using AI … "

Chegg • Global Student Survey 2025

GENAI AND LEARNING

Of those students who have used GenAI to support their university studies, more than half (56%) say they mostly use AI in their school/university work for "understanding a concept or subject".

GLOBAL

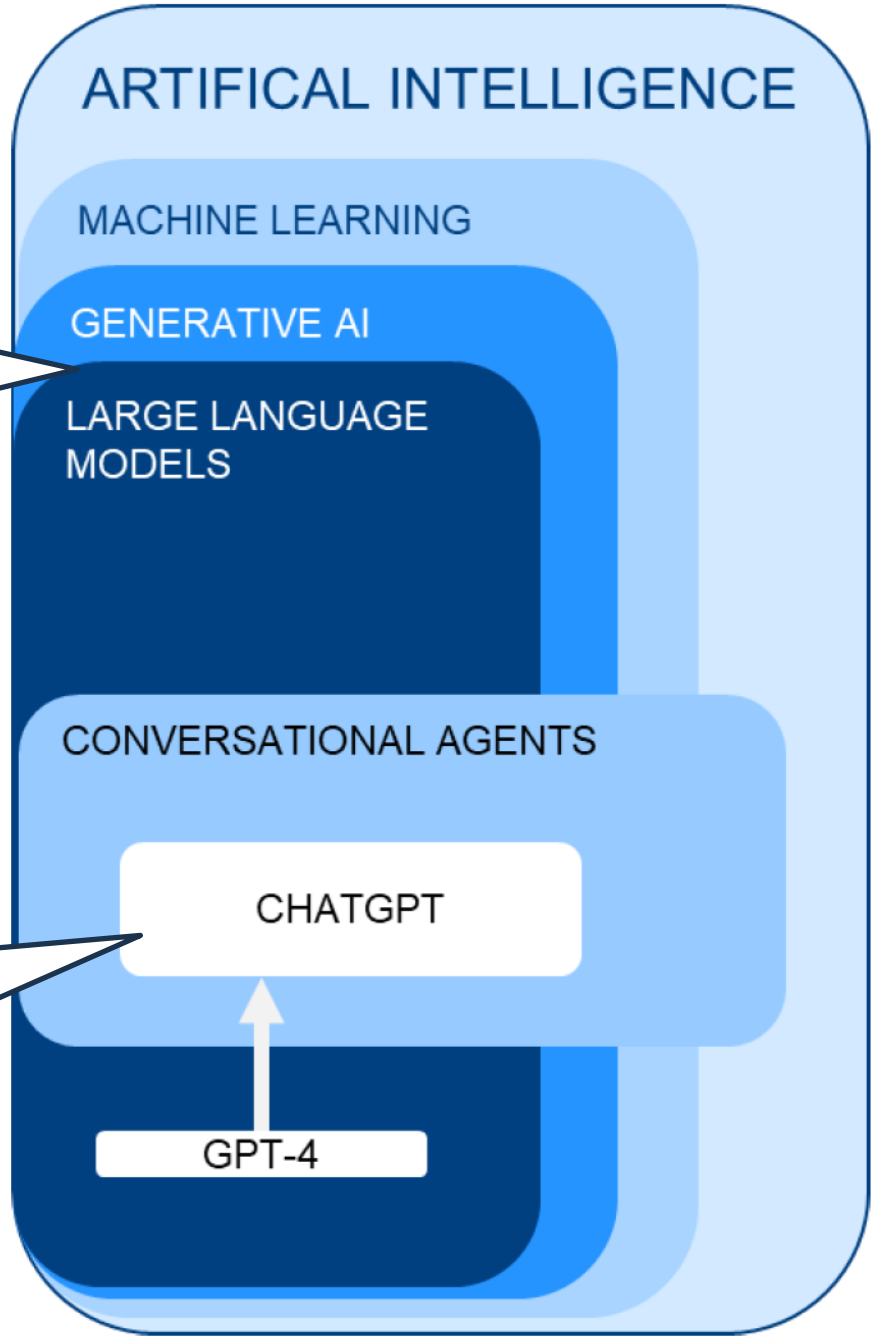


Q. How do you mostly use GenAI for your university studies?

Students use GenAI in different ways

Global Student Survey. Chegg.org. 2025

Where GenAI fits in within AI



Many other AI tools are built on foundations of AI or LLMs, or a combination of both, with even other elements of AI incorporated.

Or:
- Claude
- Microsoft Copilot
- Gemini
- Perplexity AI

[H. Gimpel et al., *(Generative) AI Competencies for Future-Proof Graduates. Inspiration for Higher Education Institutions*, 2024)

GenAI - Definition

"GenAI refers to a class of artificial intelligence that focuses on the creation of new content, whether it be text, images, video, music or code. Unlike traditional descriptive or predictive AI models, GenAI models learn from vast datasets to generate original outputs that mimic human creativity. This capability has positioned GenAI as a transformative technology with applications ranging from healthcare to scientific research and beyond."

[K. Abendroth Dias et al., *Outlook Report on Generative AI - Exploring the Intersection between Technology, Society and Policy*. 2025]

Saying it well – with a proviso

(Jim VandeHei (Axios))

(Newsletter for CEOs)

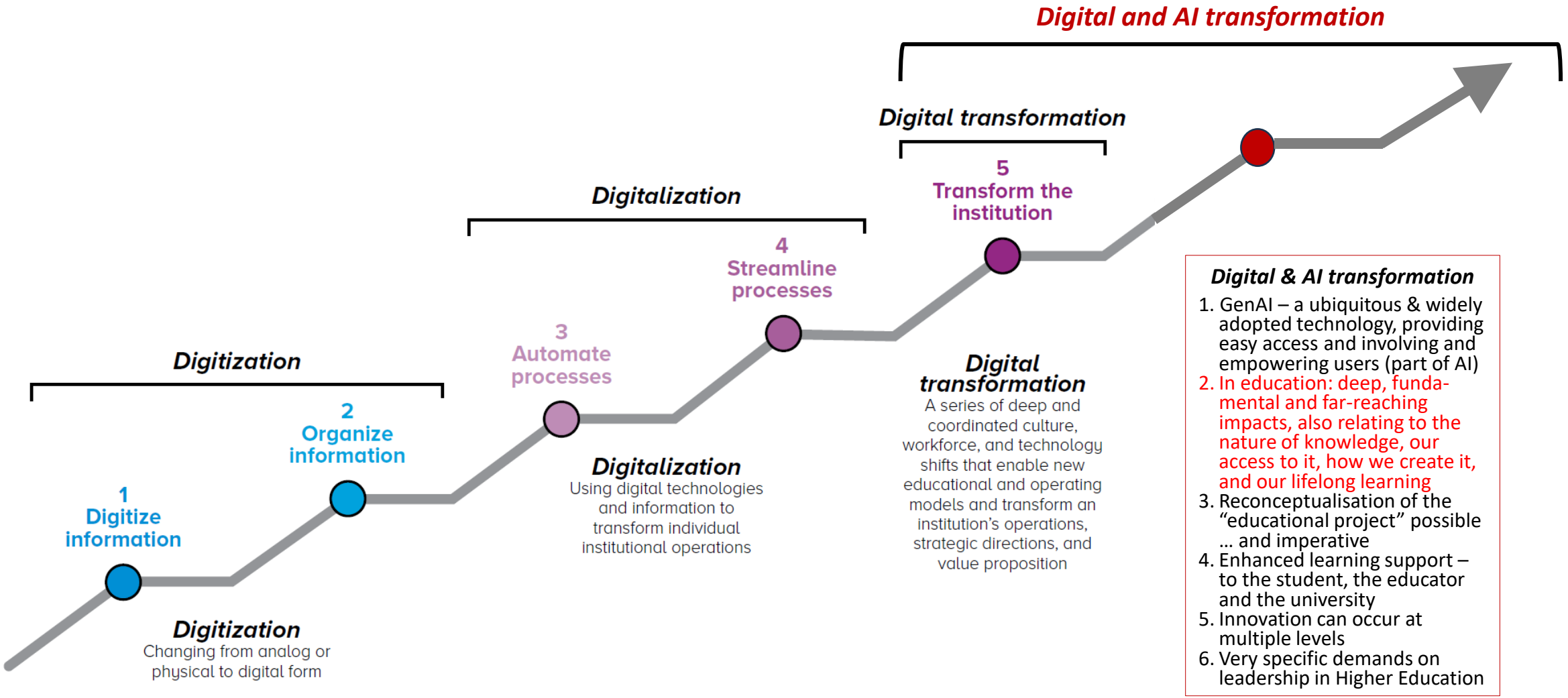
"In short: AI is way better, more accurate and mind-expanding than most think. (Sorry, it's true.) But it's colliding with hard human realities, making it confusing, clunky and chaotic for lots of people in its current form. …

It's way better than most think. … I'm still discovering it's way better than I thought possible. Its ability to think creatively and research deeply is extraordinary — *if and only if* you know how to use it."

This requires critical thinking capabilities; at universities, this implies and requires Guidance, training and support.

[https://mail.google.com/mail/u/0/?pli=1#inbox/FMfcgzQgMMDsHJBqtTFkPCVcVRNszBSL]

From digitization to digital and AI transformation



Digital & AI transformation

1. GenAI – a ubiquitous & widely adopted technology, providing easy access and involving and empowering users (part of AI)
2. In education: deep, fundamental and far-reaching impacts, also relating to the nature of knowledge, our access to it, how we create it, and our lifelong learning
3. Reconceptualisation of the "educational project" possible … and imperative
4. Enhanced learning support – to the student, the educator and the university
5. Innovation can occur at multiple levels
6. Very specific demands on leadership in Higher Education

[S. Grajek & D.C. Brooks, *A Grand Strategy for Grand Challenges. A New Approach Through Digital Transformation*, EDUCAUSE Review 3/2020; adapted here to take into account the AI (incl. GenAI) realities and shifts since the graphic was first proposed. (WTC)]

AI/GenAI impacts all dimensions

1. The impact of AI/GenAI is different from "digital" developments in general (incl. the internet)
   - Time it took to extensive application – timelines
   - Not only processes, but also our ways of accessing knowledge
   - Not only by institutional decision, but also by user preference and insistence, also a younger generation of enthusiastic users
2. AI is ubiquitous, pervasive, persistent and intrusive, in many ways regardless of whether we want to use it or not
3. Evidently, AI will involve all aspects of a university, being already on paths of digitalisation and digital transformation
4. At some point, the implications of AI across many of these aspects of university functioning will come the way of quality discussions in view of the impact of AI

ASG-QA Table of Contents

AI/GenAI impact all dimensions

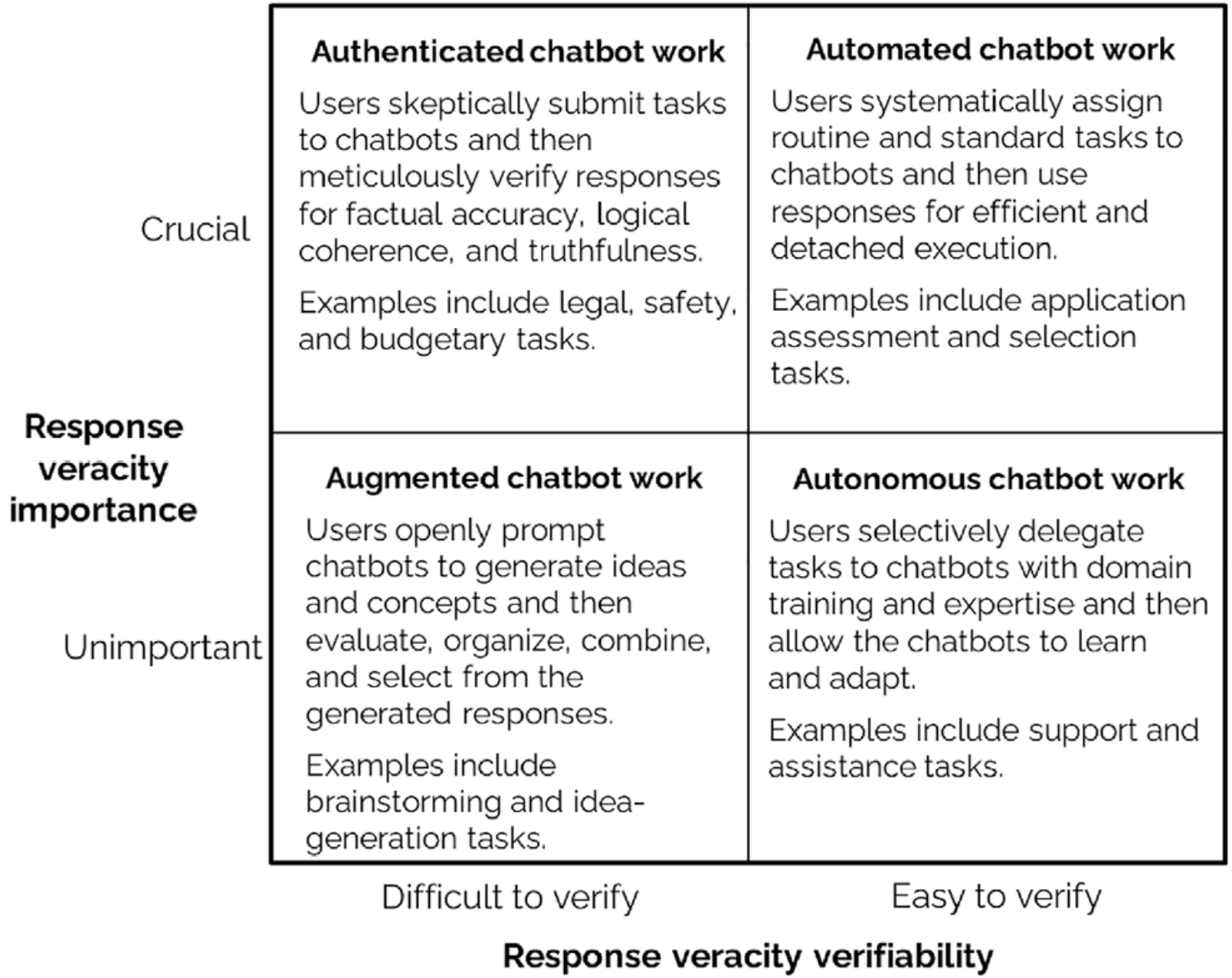
1. Some of the most fundamental aspects of change in view of AI/GenAI relate to
   - Knowledge and our ways of accessing knowledge
   - Learning and teaching
   - Skills required for life, study, work … and continuous learning
   - Confidence in using new tools incorporating AI/GenAI
2. Prompting has become a new skill that is required
3. Many persons who are "digitally literate" could find that they are not ready to use the new tools and handle the new challenges of the AI/GenAI era
   - Digital literacy **to** AI literacy
4. New/adapted frameworks come into play; bringing more divergence relating to digital & AI skills in groups of people – and in university staff
5. Some of the key differences relate to the nature of knowledge and what is provided by our chatbots and other AI tools. Amongst this: the correctness of the responses produced by the chatbot and how to evaluate it
6. Chatbots generate new outputs or "knowledge" all the time; there is no "knowledge base" in the sense of a database to which we get access

Looking closer at "knowledge" / reliability

Let us look at ChatGPT – because of its wide use in the HE context

1. It professes to provide knowledge – and we (most users) assume this is knowledge in the sense we roughly think about knowledge, coming from a relatively stable source such as Wikipedia
   - The same requests by different users can generate different responses
   - The same issue, phrased slightly differently, could lead to different responses
2. It provides fluent, well-written text and structured responses – but that could be misleading the user on the correctness, adequacy and appropriateness of the responses
3. It pretends to give an "objective" answer – but it takes into account previous interactions of the user with the LLM; knowledge about you
4. It can be sycophantic: trying to please the user, praise the user – but that could also mean locking the user into a limited subset of perspectives on an issue (sycophantic behaviour)
5. It does provide "hallucinations" and generate "fake publications"
6. It is not equally well in all areas and applications – the "jagged frontier"
7. Depending on the intended use of the output, it is necessary to check all outputs against reliable sources; epistemic risks

Four modes of chatbot work



Epistemic risk framework (ERF)

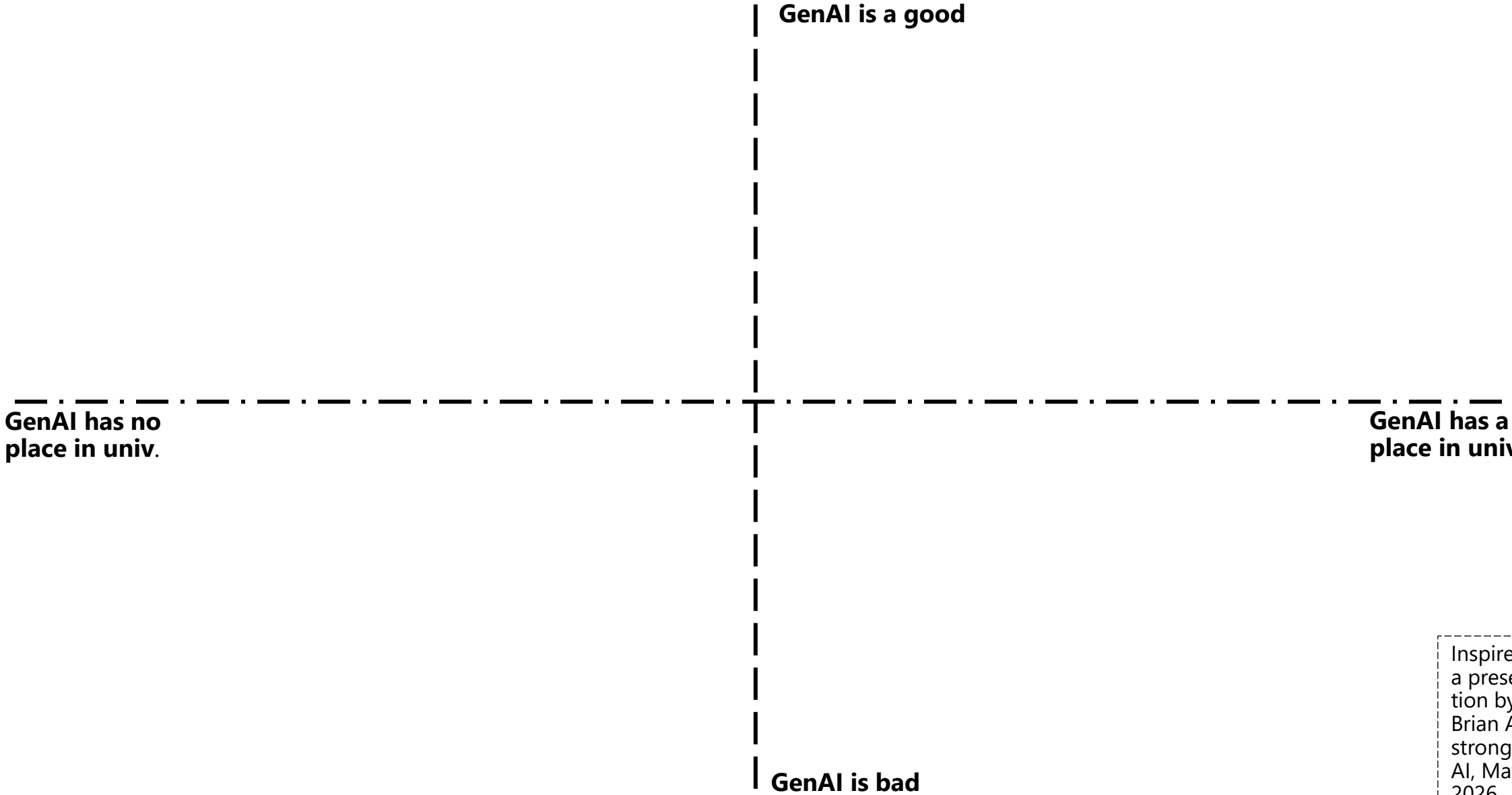
[T.R.Hannigan et al, "Beware of Botshit: How to manage the epistemic risks of generative chatbots." *Business Horizons* (journal) 67, 2024. Available on arXiv as pre-publication. 2024]

In universities …

1. LLMs are highly divisive – two strong (and often extreme) positions, both of which are based on legitimate considerations :
   - Concerns that thinking skills are not properly developed and that learning is eroded
   - Concerns that students are not properly prepared for work in a context where AI is embedded in everyday work for the most people
2. The tension:
   - allowing legitimate diversity of approaches, values, or practices), a.o. on the ground of academic freedom (pluralism)
   - while maintaining certain shared standards, rules, or principles (bounds), to assure that outcomes in the vision statement are reached.

   Sometimes called "bounded pluralism" (heavily laden concept; looking for alternatives).
3. The nature and boundaries can shift as evidence emerges, and as arguments and positions develop
4. Conceptually complex, but this is part of the new realities of universities
5. Complex scenarios re acceptance and resistance, with many shades of acceptance inbetween

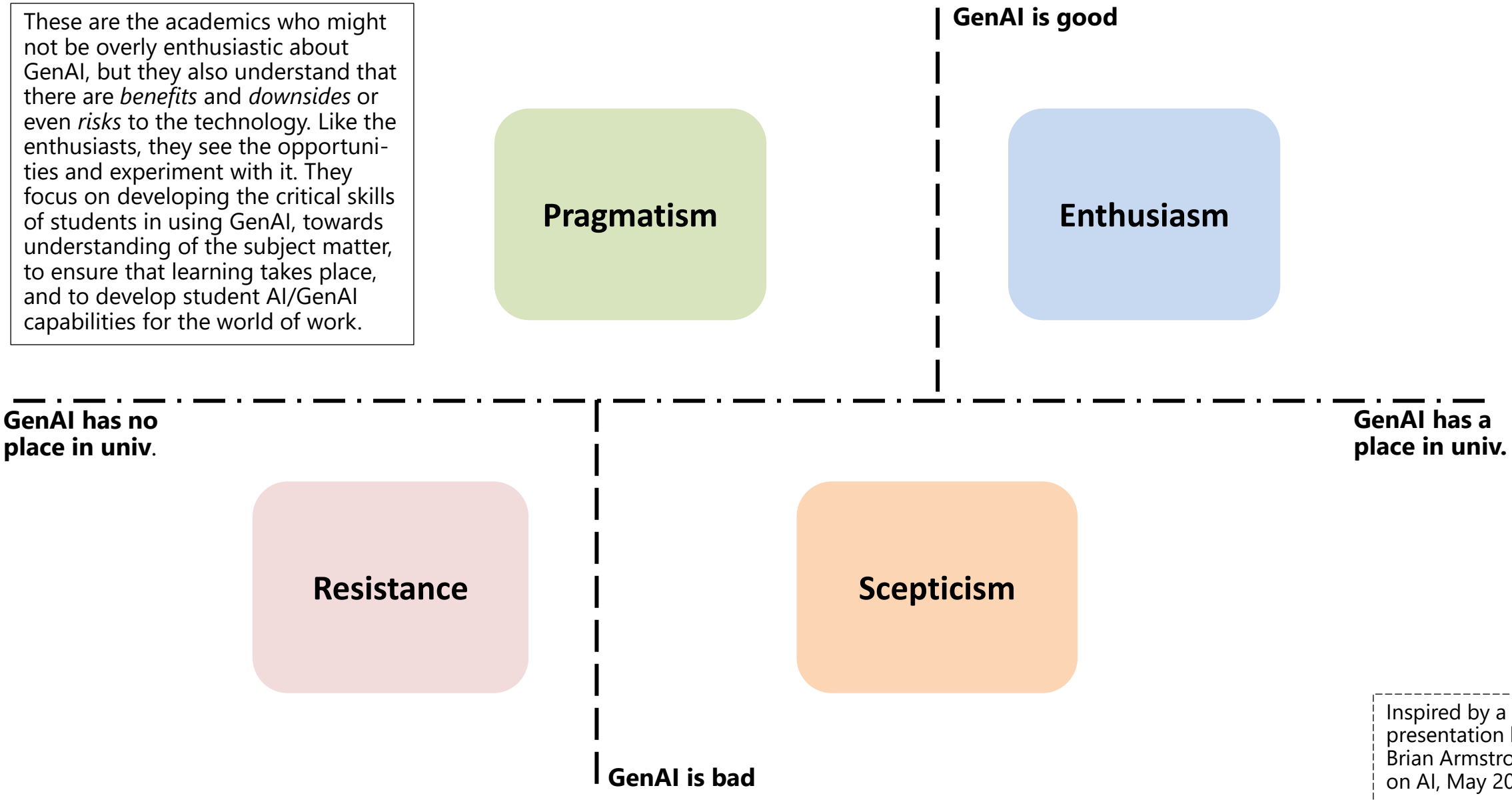
Landscape of GenAI in universities (academics/faculty)



Inspired by a presentation by Brian Armstrong on AI, May 2026.

Landscape of GenAI in universities (academics)

These are the academics who might not be overly enthusiastic about GenAI, but they also understand that there are *benefits* and *downsides* or even *risks* to the technology. Like the enthusiasts, they see the opportunities and experiment with it. They focus on developing the critical skills of students in using GenAI, towards understanding of the subject matter, to ensure that learning takes place, and to develop student AI/GenAI capabilities for the world of work.



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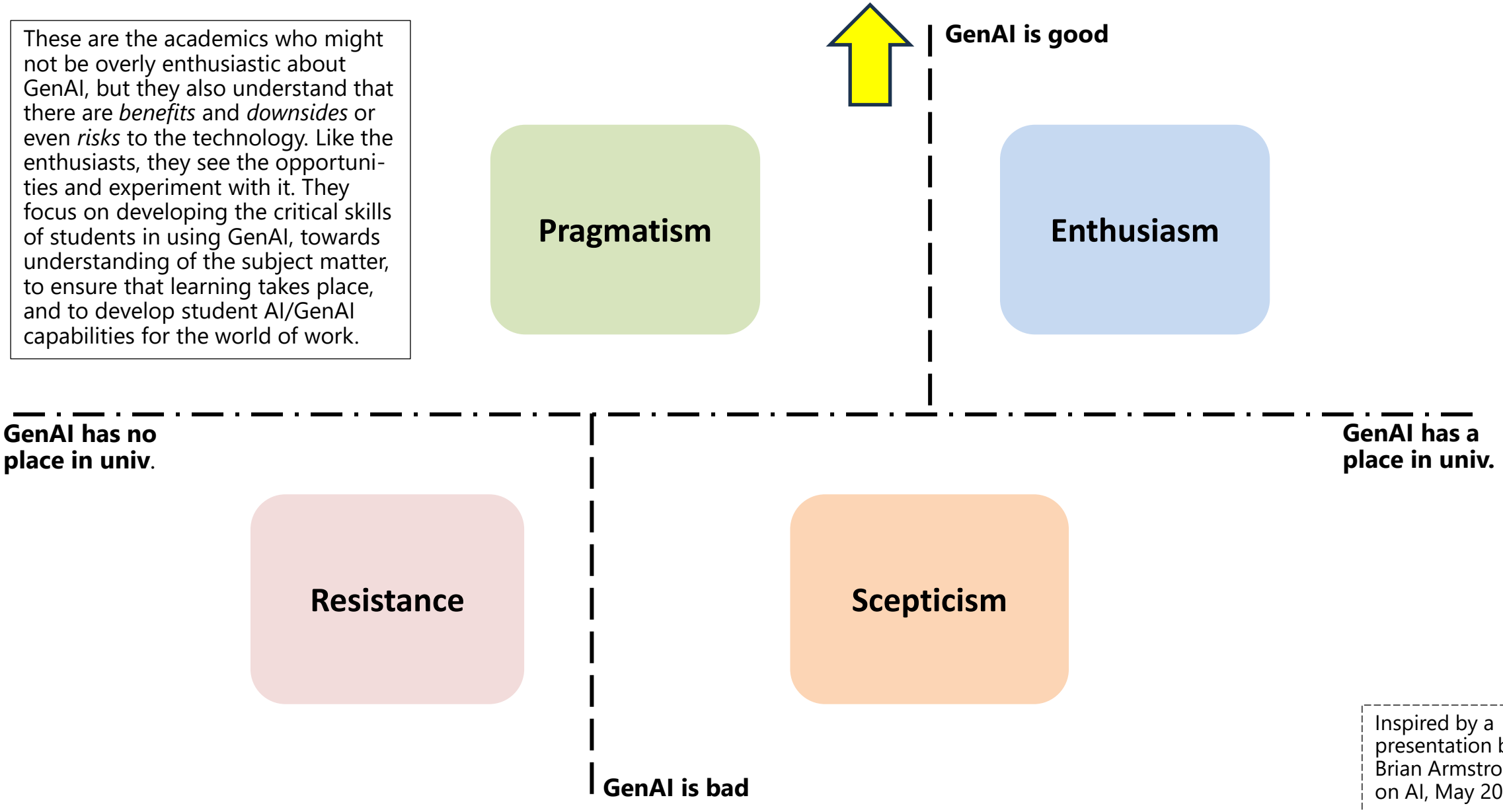

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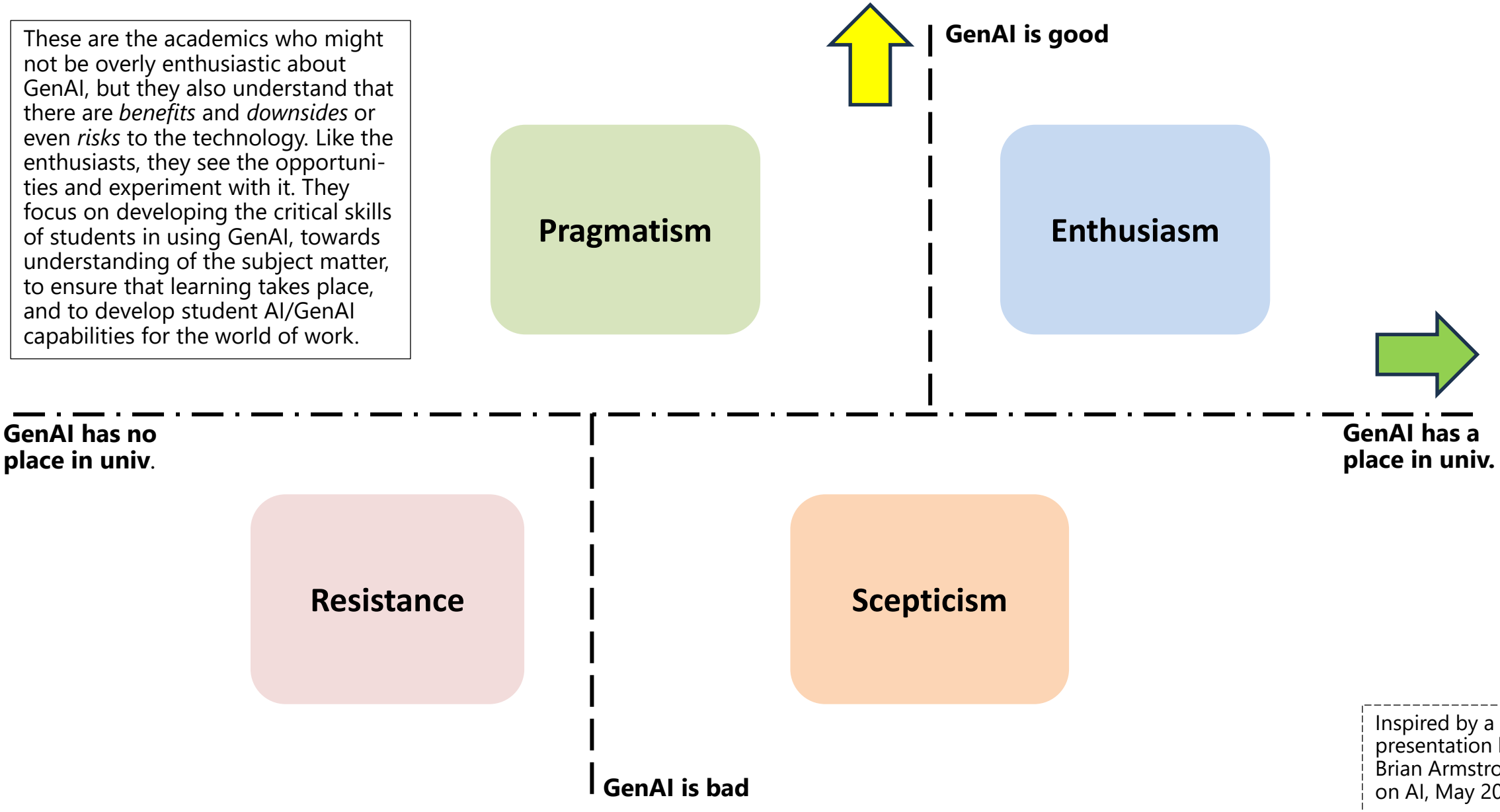
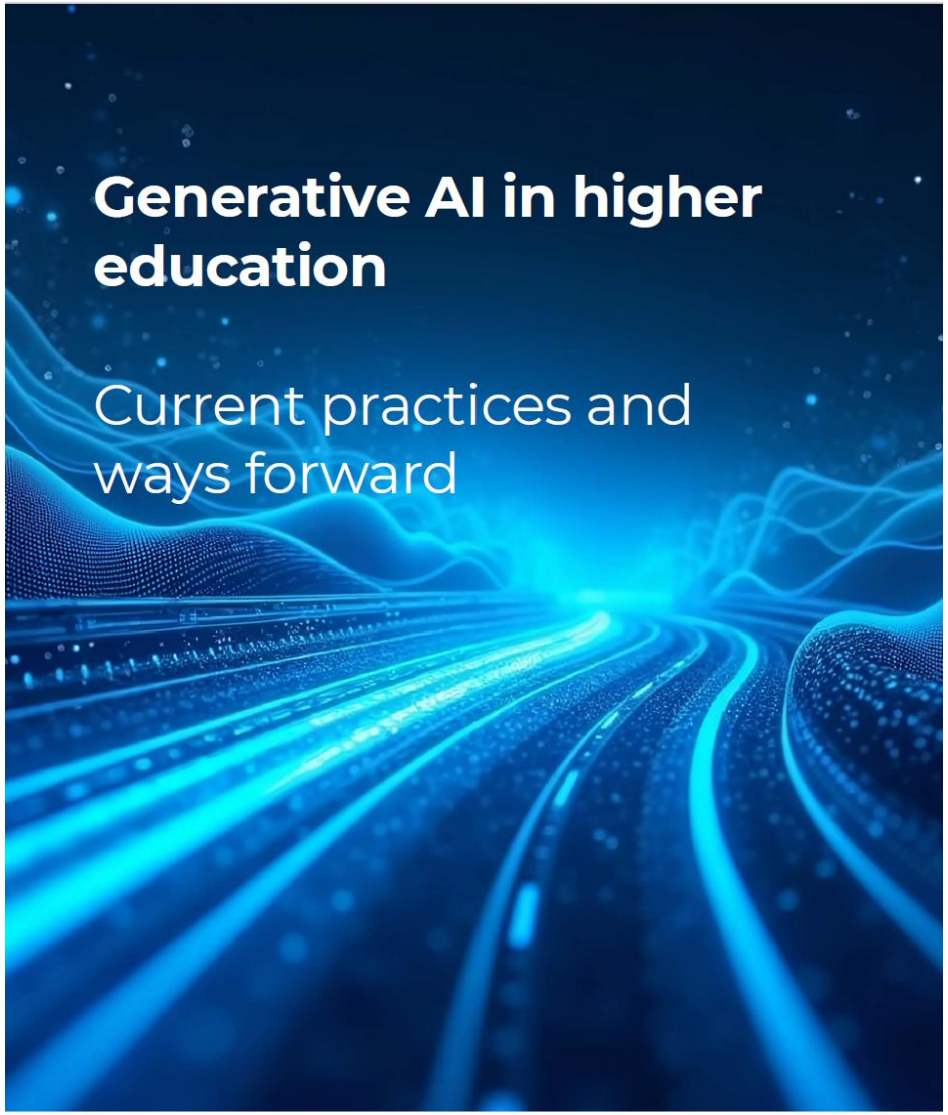


Inspired by a presentation by Brian Armstrong on AI, May 2026.

Just another technology?

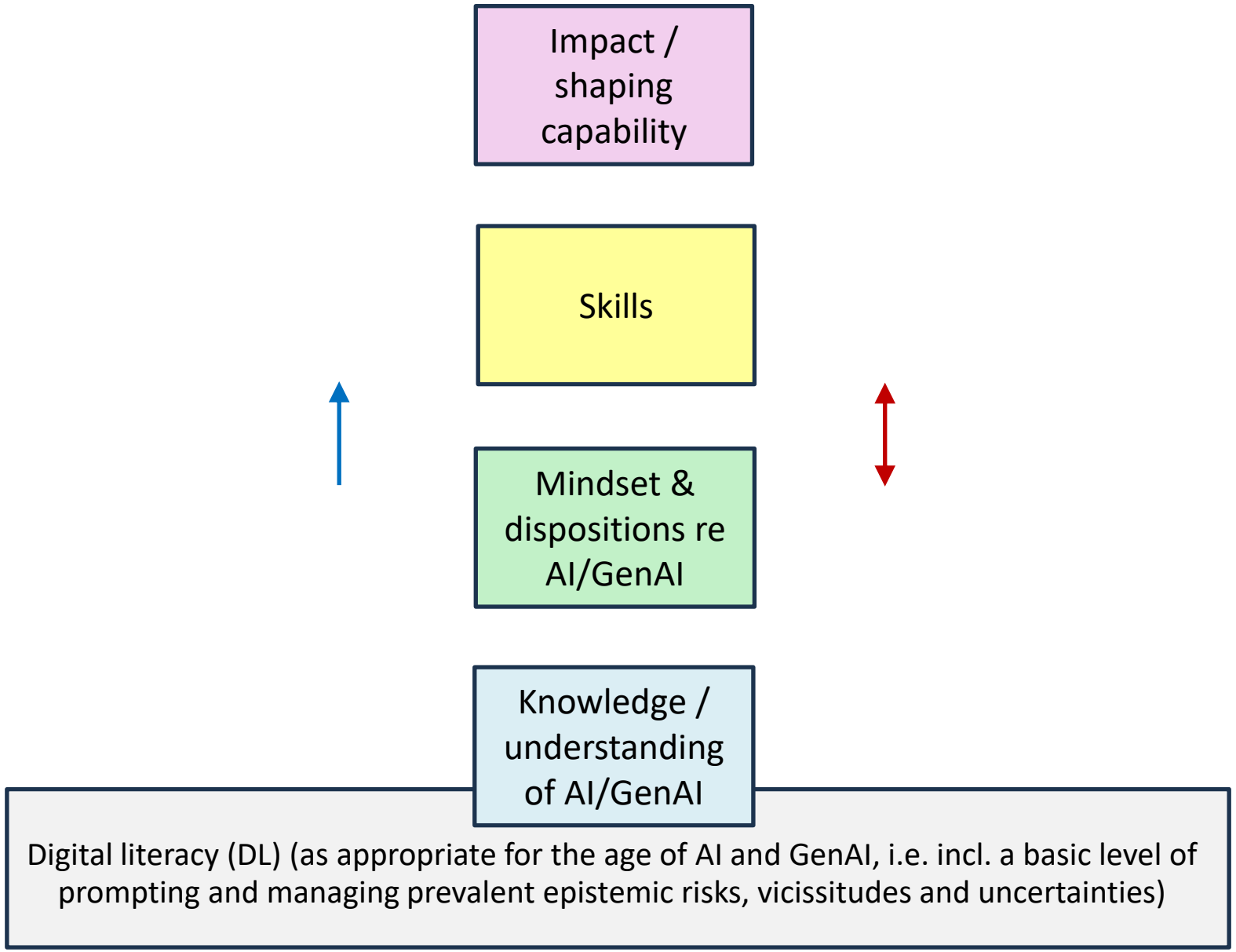
APRU study:

"The wide availability of generative AI represents a pivotal moment for higher education that goes far beyond merely accommodating another technological innovation. It fundamentally challenges our assumptions about teaching, learning, research, and the very purpose of universities." …
"…(instead of cautious and piecemeal approach) … higher education is now at a stage where it needs to transition to a holistic, supported, and scaffolded approach to generative AI adoption."
(*Generative AI in higher education: Current practices and ways forward*. 2025)
[Association of Pacific Rim Universities]



THE UNIVERSITY OF SYDNEY
THE UNIVERSITY OF BRITISH COLUMBIA
APRU
Association of Pacific Rim Universities

Pathways to success in managing and leading in areas where AI/GenAI are involved



Teaching, learning, assessment

From focus on AI detection to focus on assessment

1. 2023: attempts towards AI detection, into 2024 … and still increasing, despite evidence and doubts on its reliability; useful only as flag for further investigation
2. "AI humanizers" - race between detectors and ways to make AI-generated text difficult to recognize as such
3. 2025+: increasing realization that there are benefits to developing student critical skills in the use of GenAI
   - ✓ It circumvents the misuse of GenAI
   - ✓ Critical GenAI skills are also required in the word of work

   It is all about "critical AI literacy".
4. Attempts to achieve both objectives, a.o. the "traffic light approach"
5. Growing realization that we should move further to a model of nuanced usage and restrictions
   - ❑ Initially red – amber – green
   - ❑ Revised towards better descriptions and other colours

1	NO AI	The assessment is completed entirely without AI assistance in a controlled environment, ensuring that students rely solely on their existing knowledge, understanding, and skills **You must not use AI at any point during the assessment. You must demonstrate your core skills and knowledge.**
2	AI PLANNING	AI may be used for pre-task activities such as brainstorming, outlining and initial research. This level focuses on the effective use of AI for planning, synthesis, and ideation, but assessments should emphasise the ability to develop and refine these ideas independently. **You may use AI for planning, idea development, and research. Your final submission should show how you have developed and refined these ideas.**
3	AI COLLABORATION	AI may be used to help complete the task, including idea generation, drafting, feedback, and refinement. Students should critically evaluate and modify the AI suggested outputs, demonstrating their understanding. **You may use AI to assist with specific tasks such as drafting text, refining and evaluating your work. You must critically evaluate and modify any AI-generated content you use.**
4	FULL AI	AI may be used to complete any elements of the task, with students directing AI to achieve the assessment goals. Assessments at this level may also require engagement with AI to achieve goals and solve problems. **You may use AI extensively throughout your work either as you wish, or as specifically directed in your assessment. Focus on directing AI to achieve your goals while demonstrating your critical thinking.**
5	AI EXPLORATION	AI is used creatively to enhance problem-solving, generate novel insights, or develop innovative solutions to solve problems. Students and educators co-design assessments to explore unique AI applications within the field of study. **You should use AI creatively to solve the task, potentially co-designing new approaches with your instructor.**

AI Assessment Scale (AIAS) (Revised version)

(developed to support thoughtful assessment redesign, and assist in reducing misconduct through reframing of GenAI use; and further adapted)

[M. Perkins et al., *The AI Assessment Scale Revisited: A Framework for Educational Assessment*. Preprint. Dec. 2024]

From *focus on AI detection* to *focus on assessment* (2)

6. Many scholars exploring new ways
7. Prominent: Corbin et al. - focus on issues demonstrated by the titles of some key publications:
   - "Talk is cheap: why structural assessment changes are needed for a time of GenAI" (AEHE, May 2025)
   - "The wicked problem of AI and assessment" (AEHE, Sept 2025)
   - "Assessment after Artificial Intelligence: The Research We Should Be Doing" (JUTLP, Dec 2025)
8. Why research?

From focus on AI detection to focus on assessment (3)

- Corbin calls for a shift
  - **from** “discursive changes to assessment” (incl. the declarative / disclosure requirement sometimes required)
  - **to** “structural changes to assessment”
  - *Definition*: “Modifications that directly alter the nature, format, or mechanics of how a task must be completed, such that the success of these changes is not reliant on the student’s understanding, interpretation, or compliance with instructions. Instead, these changes reshape the underlying framework of the task, constraining or opening the student’s approach in ways that are built into the assessment itself.”

  In effect:

  - “… fundamentally redesigning how we structure assessments to demonstrate student capability. This will require significant effort and creativity from educators but has the advantage of allowing for genuine solutions to maintaining assessment validity in an AI-enabled world….”

Risks identified: Cognitive offloading

1. Recent study:
   "There is a growing body of evidence that using AI can short-circuit the cognitive effort required for sustainable, deep learning, thus creating "false mastery" with potentially long-term consequences."
2. "Two forms of offloading:
   - *Beneficial offloading* occurs when AI is used to manage extraneous cognitive load (e.g., checking grammar), freeing a learner's limited working memory to focus on essential, intrinsic tasks
   - *Detrimental offloading (outsourcing)* occurs when a learner uses AI to bypass this intrinsic cognitive effort (the desirable difficulties) required to build long-term knowledge schemas."

(*Artificial intelligence, cognitive offloading and implications for education*. Sydney. 2026.)

Confirmative evidence in further recent studies.

Implications for QA
best practices, etc.

Some implications – for universities

1. Potential changes to be made to many policies, strategies and implementation documents across functional areas, both academic and otherwise
   - Practically not possible in the immediate future; alternative strategies for effecting changes over time should be devised
   - Academic side: changes to be initiated as soon as possible; changes re curriculum, learning and teaching and assessment can take time
   - QA Unit might be in a good position to contribute to ensuring coherence across documents
2. Students should be clearly informed on policies and expectations re the use of AI tools
3. Disagreement can hardly be eliminated
   - Create conditions under which deep disagreement can coexist with institutional coherence and educational quality
   - Bring high quality evidence into play
4. Policies
   - Ensure coherence across university policies, strategies and activity (word for word)
     - Commitment to stakeholders & world of work – then prohibition of GenAI cannot be a solution
5. Foresight
   - Develop an “informed foresight” on AI futures in different functional areas; identify forward-looking experts.

Best practice, AI tools, etc.

1. As soon as possible, develop your, and the unit's "AI literacy"
2. Identify successful applications in your institution or in your country (or in other SADC countries) and spotlight them
3. Identify AI-based apps beyond chatbots that are useful for academics across a broader group of departments, and suggest support for that by whoever is responsible for IT/digital services, e.g. NotebookLM
   - It generates responses only from sources identified by the user and provided by the user
4. AI literacy
   - Identify (with experts at your university) existing AI literacy frameworks; there is no time to develop a new one now, rather adapt
   - Promote incorporating AI into existing courses for digital literacy
5. Support researchers trying to better understand
   - Chatbot use by students In specific subjects or use cases
   - Expectations by the sector or profession in your context/country
6. Develop an "informed foresight" on AI futures; identify forward-looking experts and engage with them
7. You and your team: be transparent on the use of GenAI in reports, etc.; disclose the use and the nature of the use. Trust lost, can be hard to regain.

Thank you

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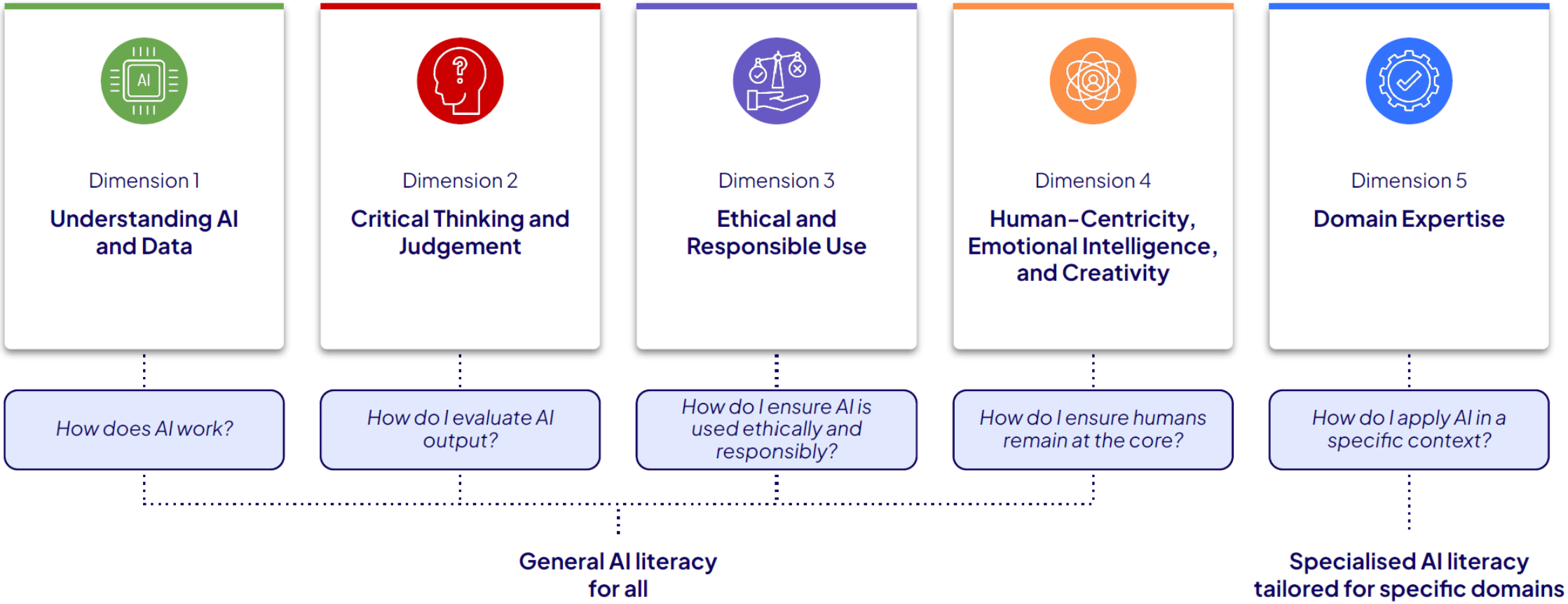
5 Dimensions of the DEC AI Literacy Framework

AI Literacy (Digital Education Council, 2025): *The essential knowledge and skills needed to understand, interact with, and critically assess AI technologies. AI literacy includes the ability to use AI tools effectively and ethically, evaluate their output, ensure humans are at the core of AI, and adapt to the evolving AI landscape in both personal and professional settings.*



[DEC, *AI Literacy Framework. AI Literacy for All*, 2025]

"Mindset" in my slides:
(stands for – comprehensively – " Digital and AI mindset and dispositions")

Core sub-dimensions of ***digital mindset***
(in most cases, think: digital and AI mindset)

1. Digital consciousness
   - Seeing digital change as an opportunity
   - Promoting digitalisation to improve daily life and working life
   - Analysing challenges and possible solutions through digital approaches
2. Digital expertise
   - Understanding (broadly) the processes within digital technologies
   - Interested in and familiar with trends in digitalisation and technology
3. Digital business acumen ("business" = here, not only financially, but activity towards organisational progress and performance)
   - Strategically assessing the added value of automation
   - Seeing opportunities to realize business potential

[Goldmann et al., Development and validation of the digital mindset scale, *Journal of Business Research*, 199, 2025. (Slightly adapted)]

WT Claassen 2026

Dispositions: "The relatively stable yet developable beliefs, values, ethical orientations, and interpretive frames through which individuals understand, evaluate, and respond to digital and AI-driven change – shaping how cognitive knowledge is translated into responsible action."

(Definition generated in interaction with ChatGPT, resulting from an intensive engagement on these and related topics. May 2026.)

Core sub-dimensions of ***dispositions***

1. Digital/AI acceptance, adoption or refusal (broadly)?
2. Ethical orientation and moral awareness
3. Beliefs about AI automation, and about the potential & limitations of AI & GenAI (see also "digital mindset")
4. Openness, curiosity, learning orientation and adaptability (incl. a "growth mindset")
5. Agency, responsibility and accountability orientation
6. Risk, trust and judgement under uncertainty
7. Human-centric orientation
8. Societal orientation