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The Future of Assessment: A Blueprint for Learner Evaluation in an AI World

Introduction

"**The College Essay is Dead**" pronounced Stephen Marche in The Atlantic on December 6, 2022, precisely a week after the public release of ChatGPT. He followed it with a subheading no less pointed, in which he identified the culprit for this brazen homicide and even alluded to a certain naivety on behalf of the victim: "Nobody is prepared for how AI will change academia," he declared.

Provocative language aside, Marche's article captures a consternation that has persisted in the higher education sector through the ensuing years. The widespread availability of generative AI has thrown into question all assessment processes, including tasks like essays and exams which have long formed the basis of learner evaluation. As institutions attempt to outline an updated approach to assessment that responds to the disruption of AI and the constantly changing modern economy, this paper is designed as a helpful starting point: in a world of speculation and catastrophizing, we've endeavored to produce a grounded summary of current assessment trends and how institutions can best position themselves to proactively respond to change.

This starts and ends in academia. For understandable reasons, a significant amount of recent academic research has been dedicated to evaluating AI's impact on assessment. Throughout this paper, we touch regularly on the latest in theory—both in terms of how AI can directly enhance assessments and learning outcomes, and instances where AI's rise will likely lead to broader adoption of already understood best practices. We complement this with insights gleaned from daily interactions with our global institutional partners and contributions from our Future of Assessment Working Group, all of which offer us a unique view of the intersection between technology and education and how this is likely to evolve.

The paper is broken down into two main sections. In the first section, we look at reasonable assumptions that institutions can make regarding the future of education. Institutions must prepare for a world where AI is ubiquitous, and move past thinking of AI as a threat to instead embrace the concept of co-intelligence, wherein human and AI capabilities are fused to achieve learning outcomes. Assessment must also respond faster to changes in the workforce, which demands a more flexible approach to curriculum development.

In the second section, we look at actionable steps that institutions can take today to prepare for an AI-augmented educational and professional environment. This includes foundational initiatives, such as developing AI literacy among instructors and learners and tightening data processes, before expanding to emerging pedagogical opportunities such as authentic assessment, adaptive learning, skills-based learning, credentialing, and more.

Reasonable assumptions for the future

Let's be clear: there is (sadly) no crystal ball here at Anthology HQ that can predict the future with absolute accuracy. In just three years since generative AI became widely available, we have seen remarkable changes in both education and industry, and accordingly any forecasts for the future need to be done with honesty and humility.

It is also clear, however, that uncertainty shouldn't form an excuse for inaction. There can be no reasonable doubt that the ongoing rise of AI will fundamentally change the nature of assessment—and, indeed, the process of education as a whole—making it essential that institutions start to immediately review their approach and prepare for what's to come.

To lay the groundwork, here are key assumptions we believe can be reasonably made—all of which have a fundamental impact on how higher education should approach assessment.

1 AI is quickly becoming ubiquitous

In the immediate aftermath of ChatGPT's launch in late 2022, media coverage was awash with predictions about what it might mean for the workforce. While the specifics varied, the implication was consistent: different industries would be impacted by AI to differing degrees, and as such, some jobs were more "AI proof" than others.

This thinking has already been revealed as largely erroneous. AI is going to significantly impact all major industries, with the list of the least affected jobs already reduced to those in the purely physical realm, such as the roles performed by professional athletes, dancers, and roofers. As **Ethan Mollick notes**, nearly every occupation now overlaps with AI in some way, and even those "safe" jobs are starting to adopt it for side work like marketing or scheduling. The distinction between jobs that are impacted and those that aren't is quickly fading.

The work of **Eloundou et al**, a research team at Cornell University, underscores this shift. Their study "GPTs are GPTs" finds that most U.S. workers will see at least part of their tasks touched by AI, and that higher paid, highly educated roles are often among the most exposed. Jobs should be seen as bundles of tasks, meaning AI usually reshapes rather than eliminates them. The result is not so much wholesale replacement as a steady reconfiguration of work across almost every sector—more like the arrival of spreadsheets in accounting or power tools in carpentry than the disappearance of entire professions.

Assessment has followed a similar trajectory. Studies across a range of academic disciplines, including intellectually demanding fields such as medicine, have shown that newer large language models (LLMs) are able to complete common academic tasks such as exams to a very high standard. Whereas GPT-3.5, the LLM which powered the initial release of ChatGPT, was only capable of achieving grades in line with student averages, newer models such as GPT-4 are often outperforming the top of the class (**Raman, Ramlogan, Ramlogan 2025**; **Liu et al. 2024**).

These capabilities are already being used daily by millions of learners, a figure that will continue to grow rapidly. As a result, we must be preparing for a world where learners have access to tools that can approximate human intelligence across all areas of reasonable academic inquiry.

2 AI must have an active role in pedagogy

Consequently, any illusion that we can immunize existing assessment processes against the rise of AI needs to be immediately shattered. Instead, what is required is a move towards co-intelligence, wherein our role as educators is to fuse AI with existing pedagogical techniques to develop the knowledge and skills that allow students to succeed in the modern world.

Encouraging news is emerging on this front. In recent years, a vast amount of research has been dedicated to understanding whether using AI can improve student performance, with results indicating that it can. **Dong, Tang, and Wang (2025)**, for example, have done a thorough literature review of studies covering the subject, and established that "students engaged in the learning process with the support of AI technologies had better academic achievement than their peers in traditional learning environments by an average of 0.924 standard deviations." The study captured AI applications for personalized and adaptive learning, gamification, project-based learning, and more.

Leading institutions are also observing this trend in their courses. As Stephanie Richter, Director of Teaching Excellence and Support at Northern Illinois University (NIU) and member of our Future of Assessment Working Group, explains, the use of **AI tools in Blackboard** is helping NIU's faculty to create inspiring and engaging courses. "The results from the AI Design Assistant have given me new ideas for assessments that I had not previously considered. The AI Conversation tool has changed my perspective on the value of discussions in assessment and reminded me that engagement is not learning inherently; it requires reflective thinking to become educational," Richter notes.

That said, there is clearly a role for discernment when it comes to applying AI in pedagogy. There are reasonable concerns that students are developing a reliance on AI, and thus fundamental pedagogical steps around the attainment and retention of knowledge risk falling by the wayside. Establishing the exact boundaries for co-intelligence will be an ongoing and iterative process for higher education.

3 Assessment will involve a program, not just a task

To return briefly to the world's collective hysteria in the wake of ChatGPT's launch, while many were questioning the security of their jobs, instructors were also mulling over similar concerns to those articulated by Stephen Marche in The Atlantic: chiefly, "what happens to assessment staples like essays and final exams?", and subsequently, "is there an AI-proof task that I can replace them with?"

In a world where AI is ubiquitous, it won't be possible to have a single, holistic task that accurately evaluates student understanding and proficiency. Assessment is much better thought of as a program that allows the instructor to gauge the learner's competence over time, rather than a stand-alone activity.

Here we see the potential for the rise of AI to advance existing pedagogical best practices. Research has shown that formative assessment—which involves frequent, low-stakes assessment rather than a large summative task at the end—can not only improve learning outcomes but also boost motivation and reduce stress for students (**Carney, 2022**). AI's emergence will require institutions to adopt formative assessment more broadly and employ a broader range of activities in order to truly understand student progress.

4 A changing workforce will require a more flexible assessment approach

Technological change means that employable skills are being recycled with increased frequency. According to the World Economic Forum's **Future of Jobs 2025** report, leading employers expect that 39% of workers' core skills will be different by 2030 compared with today.

If we're to conceive of higher education assessment as a means of evaluating a student's readiness to enter the workforce, the implication is clear: assessment will need to be more regularly updated to account for these changes in industry. Developing the flexibility to respond to market needs will be a fundamental component of the future of assessment.

It is possible that the handing off point between higher education and the workforce will also change over time. As Ethan Mollick (2025), co-director of **Wharton Generative AI Labs**, recently outlined in **an interview with CNBC**, one of the biggest changes will be how AI can replace repeated administrative tasks that have traditionally been an entry level job responsibility.

> *Expertise is gained by apprenticeship, which means doing some AI-level work [tasks that current AI models can do easily] over and over again, so you learn how to do something right. Why would anyone ever do that again? And that becomes a real challenge. We have to figure out how to solve that with a mix of education and training.*
>
> **— Ethan Mollick,** co-director of Wharton Generative AI Labs

In short, closer collaboration with industry will be essential for the future of higher education, and it's safe to assume that updated assessment processes will form a key part of this.

Five steps to take today to prepare for the future of assessment

With the above context in mind, here are some key initiatives institutions should investigate in the near term to evolve their approach to assessment and meet the needs of the AI era.

1 Immediately address AI literacy among instructors

Let's start with the low-hanging fruit. Currently, large numbers of faculty are less confident using AI than the students they're trying to teach and are thus resistant to evolving their courses for the AI world. No institution can consider their assessment practices future proofed while this remains the case.

Late in 2024, we embarked on the **Ethical AI in Action World Tour**, where we visited 25 global cities and spoke with education leaders about the opportunities and risks AI presents. The instructors we spoke with expressed concerns around a lack of clarity on AI policies at their institutions, and a hesitancy to engage with generative AI in a pedagogical context.

Broader research supports this view. A **global study by the Digital Education Centre (DEC)**, for instance, established that while 86% of instructors believe AI will play a role in the future of teaching and learning, currently only 17% consider themselves advanced users of AI tools. More concerning still, only 6% of faculty believe they have received adequate training in this area.

The DEC report concludes with essential steps for institutions to take in light of the results. These include:

- Ensure AI training is mandatory for all instructors
- Create transparent policy frameworks
- Promote interdisciplinary knowledge hubs: connecting expertise across (and beyond) the institution to allow for the rapid dissemination of effective approaches

Briefly, it is important to note that building AI literacy with students is also an important initiative. While many learners are digital natives who are adopting AI tools without trepidation, they often have lingering doubts as to what represents ethical practice in an education setting. Institutions who can create clear guidelines for all stakeholders, as well as make AI-powered tools available to students in a safe and controlled environment, will be best placed to future-proof their assessment approach.

2 Embrace—and expand—authentic assessment practices

At Anthology, we've been consistent public advocates for authentic assessment. Back in 2023, when the broader EdTech market was still advancing the idea that anti-plagiarism tools can accurately detect AI plagiarism, we took a different approach. Using our proprietary tool, SafeAssign, we conducted research which clearly showed that AI detection is biased and inaccurate, then released **a detailed whitepaper** outlining why a better approach for institutions is to adopt authentic assessment tasks. We then doubled down by **adding suggestions for authentic journals, discussions, and assignments to the AI Design Assistant in Blackboard**, which have proved popular with institutions. According to Stacy Ybarra, Director of the Center for Teaching Excellence at Our Lady of the Lake University and member of our Future of Assessment Working Group, pilot studies with faculty show these tools are helping more instructors use authentic assessment practices.

> *Initially, the concern was that AI would make assessment easier for students, but it's actually challenging us to design more thoughtful, AI-resistant assessments.*
>
> **— Stacy Ybarra,** Director of the Center of Teaching Excellence at Our Lady of the Lake University

Our thinking here continues to evolve. Specifically, we believe that authentic assessment will have a crucial role in the future, and have been investigating how it can evolve in the AI era. A clear question emerges: how can authentic assessment be fused with the benefits of AI instruction to create a revised approach to pedagogy?

Lisa A. Clark, EdD, associate vice president for academic transformation here at Anthology, has outlined our approach in her recent whitepaper, ***Reframing Bloom's for the Age of AI: A Whitepaper for Future-Ready Educators.*** Clark's work revisits the pedagogical basis of authentic assessment, Bloom's Taxonomy, and outlines how it can be evolved to suit a world in which generative AI is ubiquitous. It reviews each established level of the taxonomy—remember, understand, apply, analyze, evaluate, create—and provides a suggested reframing, before arguing the need for a seventh layer, transform, in which the student is required to leverage human-AI collaboration to drive meaningful real-world impact.

Traditional Bloom's Levels	Reframed Level (AI-Era)	Description	Example Assignment	Pedagogical Shift
Remember	Curate and Question	Move from memorization to source and evaluate information critically	Compare AI summary to academic sources and identify misinformation	**Recall >** Verification and credibility
Understand	Prompt and Explain	Communicate ideas clearly to generate inputs and explain outputs	Write a prompt for an AI-generated summary, then critique its accuracy	**Comprehension >** Translation for action
Apply	Adapt and Apply	Transfer knowledge to solve problems in unfamiliar scenarios	Revise AI marketing copy for a non-profit audience and justify changes	**Procedure >** Situational judgment
Analyze	Compare and Validate	Examine and compare AI-generated outputs for accuracy	Dissect an AI-generated essay for logical gaps, bias, or lack of nuance	**Categorization >** Critical deconstruction
Evaluate	Challenge and Reflect	Make ethical judgements and refine perspectives	Argue for or against the use of AI in hiring using ethical frameworks	**Opinion >** Justified, ethical reasoning
Create	Co-Create	Use AI as a starting point for original, iterative work	Generate design drafts with AI, refine independently, and explain design decisions	**Output >** Strategic, human-guided innovation
NEW LAYER	Transform	Apply knowledge and tools to drive real-world change and social impact	Launch a community-facing AI-informed solution, evaluate outcomes, and refine	From creating artifacts to generating systemic or social change through innovation

The paper also details how institutions can break down the barriers that prevent instructors from embracing authentic assessment, and how key functionality within Blackboard can allow best practices to be applied at scale within the digital learning environment. We encourage all to review Clark's work in detail as an important step in the broader re-thinking of assessment practices.

3 Align skills attainment with the workforce pipeline

As established earlier, a fast-changing economy has a direct impact on what employers seek from graduates. With industry increasingly prioritizing skills attained above degrees held, higher education must grow to meet these needs and set learners up for success. This involves two crucial components: firstly, adopting assessment practices which allow learner skills to be evaluated, recognized, and shared; and secondly ensuring that the skills being taught align with market demand.

Competency measurement lies at the heart of this transition. While traditional assessments can gauge knowledge recall, they struggle to capture the applied capabilities that employers demand: critical thinking, collaboration, adaptability, and problem-solving. Competency-based assessment shifts the focus to performance in authentic contexts—designing prototypes, analyzing real datasets, or negotiating scenarios with multiple stakeholders. When mapped to validated frameworks such as the NACE Career Competencies Model and assessed against transparent rubrics, these activities provide a credible, consistent signal of workplace readiness (**Klein-Collins et al., 2022, Moore and Thaler, 2023**).

In a skills-driven economy, the way capabilities are signaled is as important as the skills themselves. Micro-credentials offer one of the most agile responses, providing recognition for specific competencies that can be earned quickly and stacked toward larger qualifications (**Bozkurt et al., 2023**). Their portability makes them particularly valuable to employers, especially when they are tied directly to industry-defined outcomes and validated through real-world tasks. Portfolios then give these credentials narrative and context. An e-portfolio can contain project outputs, client deliverables, reflective analyses, and multimedia artifacts, each mapped to competencies, creating a living record of applied learning (**Yang et al, 2015**.). Employers report that this form of evidence offers a richer, more persuasive picture of a graduate's capability than grades or transcripts alone.

Authenticity is key to building employer trust, which is why real-world validation of skills is essential. Work-integrated learning—from internships to live-client projects—gives learners the opportunity to apply knowledge under conditions that mirror professional practice. When assessment in these environments is co-designed with employers and faculty, the resulting evaluations carry both academic and industry weight (**Daniel et al., 2025**). These can then feed directly into micro-credentials, stored in secure, machine-readable formats that employers can verify instantly. Such integration closes the feedback loop between learning and labor market relevance (**Littlejohn and Hood, 2016.**).

Members of our Future of Assessment Working Group report that they've seen success by using tools in Blackboard, such as the new Mastery Gradebook, to facilitate work-integrated learning. "Mastery learning is being piloted with a managed apprenticeships program, to demonstrate learner progression toward independent, safe workplace practices," notes one contributor from a leading technical college.

Finally, here again there is a significant role for instructor training and development: put simply, faculty can only create courses that meet market needs if they're provided the latest data on what those needs are. We recently conducted the 2025 Anthology Faculty Survey, where responses from thousands of instructors revealed **many key opportunities for institutions to provide better support and enhance teaching accordingly**. Fueling the workforce pipeline is one of the key areas: instructors consider "meeting the demands of a rapidly changing job market" as the second biggest challenge facing higher education, trailing only "rising tuition costs and student debt," and yet only 19% report being "very confident" that their courses align with the latest workforce trends. Institutions that provide their faculty with updated and actionable workforce data will be best positioned to deliver relevant courses, with skills-oriented, practical assessment tasks a core component.

4 Consider opportunities for adaptive learning to personalize instruction

In addition to skills-based learning, institutions should also consider the possibility of an adaptive delivery model. Adaptive learning involves leveraging AI to first evaluate a student's current level of proficiency, and then to tailor their learning path based on the areas where improvement is required. This allows institutions to do personalized learning at scale, and learners to efficiently build the skills they need to succeed.

This area has attracted a lot of interest among academics. The results indicate strong potential for adaptive learning; however, they aren't as conclusive as other pedagogical approaches we've touched on through this paper. **Casteleijn, de Plooy, and Franzen (2024)**, for example, conducted a literature review for all available studies around adaptive learning, and established that on 59% of occasions there was an uplift in learning outcomes.

Over the last 12 months, we partnered with Obrizum to do a pilot study of adaptive learning in Blackboard®. This involved four of our great institutional partners—Keiser University, San Jacinto College, University of Leeds, and Galileo Global Education—and spanned a total of six courses, all from vastly different subject areas. The results add color to the broader research findings, confirming that there is potential in this area but also outlining key steps which institutions will need to take for successful application.

The key benefit came through time savings. The most advanced students were able to complete their course up to 30% faster, as they weren't required to spend long periods on areas they already understood. For students nearer the mean, the saving was closer to 15%. This shows that adaptive learning is a good fit for initiatives like professional upskilling, where the learner starts with a high degree of knowledge and can focus exclusively on growth skills.

On the other hand, and with eyes to the future of assessment, the pilot also revealed that adaptive learning requires a change of culture, not just the addition of new technology. This includes:

- **A larger content pool:** Supporting personalized learning paths across large student cohorts requires more content than a standard modular course. Otherwise, there simply isn't the flexibility for AI to tailor a path that is unique to each learner's circumstance
- **Increased emphasis on MCQs:** As the model is dependent on an assessment of current learner capabilities, MCQs assume the utmost importance. Developing these requires a significant investment of time
- **Training:** The combination of the two points above demonstrates that a move to adaptive learning requires a new approach for instructors, which in turn requires that there are resources in place to support them through the transition

We encourage institutions to keep these considerations in mind when evaluating the role of adaptive learning moving forward. We further recommend focusing any trial or pilot initiatives on highly practical courses—such as short courses, extension courses, micro-credentials, or professional upskilling—as our research indicates these are the easiest starting point for this style of instruction.

5 Leverage data to inform assessment design

Data sits at the core of a future-proofed assessment approach. Instructors and instructional designers will have increased opportunities to optimize their assessment tasks, with the addition of AI meaning that they can spend less time mining the data for insights and more time working on their courses.

Much of the academic research on learning analytics focuses, understandably, on the student. The rise of online learning has left researchers with a raft of data on student engagement, leading to a plethora of papers on how this data can be best applied, with particular focus given to the identification and support of at-risk learners. At Anthology, we have developed technologies to help institutions do this at scale, highlighted by the recent integration between Blackboard and the Anthology® Reach CRM which places academic insights from the LMS in advisors' hands to directly influence their outreach to learners.

Less conclusive is the research around how data can inform instructional design. Recent years have seen a shift in focus to "learning analytics design", which explores the possibility of "a synergistic and dynamic relationship between learning design and learning analytics. These two perspectives—design and analytics—have heretofore primarily operated independently of each other, separated by time and space due to the complexity of dealing with interactional data in educational settings" (**Dobozy and Gibson, 2018**). These studies have shown potential for this fusion of data and learning design to enhance pedagogy, though further research remains a priority.

In our opinion, the rise of generative AI will supercharge this space. In brief, the future of assessment will include more scope to:

1. Understand how different students interact with learning content, and automate personalized learning paths (see point four above)
2. Analyze assessment and broader course design tasks in depth, covering not just student performance but a more in-depth view of task design and opportunities to optimize
3. Leverage AI to develop a broader pool of assessment tasks. The AI Design Assistant in Blackboard is already providing this functionality to hundreds of institutions across the world, with 96% of instructors agreeing that it saves them time
4. Combine academic data with other data sources to provide a holistic view of student progress
5. Easily mine this data to unlock insights, with natural language queries and actionable responses that empower instructors to take action

Of course, the broader application of data brings with it a host of responsibilities related to privacy, security, and ethical use. These already form key priorities for institutions today—as outlined in recent directives from **EDUCAUSE** (US), **JISC** (UK), **CAUDIT** (Australia), and corresponding bodies in other markets—and will only become more important as we look to the future.

The Future of Assessment: A Summary

Reasonable assumptions for the future:

1.	**AI will become ubiquitous**	Every industry and area of study will apply generative AI in some capacity.
2.	**AI must have an active role in pedagogy**	"Co-intelligence" will become central to assessment, where human and artificial intelligence are combined to achieve desired objectives.
3.	**Assessment will involve a program, not a task**	It will be important to evaluate competency via varied assessments over time, rather than a single task such as an essay or exam.
4.	**A changing workforce will require a more flexible approach**	Assessments will need to be updated more regularly, to align with the specific skills that are sought after by industry.

Five steps to take today to prepare for the future of assessment:

1.	**Immediately address AI literacy among instructors**	Only when these technologies are understood can they be applied in an innovative and ethical way.
2.	**Embrace and expand authentic assessment practices**	Review our recent whitepaper for detailed steps on how Bloom's Taxonomy can be evolved for the AI era.
3.	**Align skills attainment with the workforce pipeline**	Consider opportunities for badging, micro-credentials, and other emerging modalities, and align closely with industry needs.
4.	**Consider opportunities for adaptive learning to personalize instruction**	AI brings strong potential to personalize assessments; review emerging results and opportunities to evaluate whether this is right for your institution.
5.	**Leverage data to inform assessment design**	AI can help aggregate data from varied sources, providing valuable insights to optimize assessment tasks.

Conclusion

Higher education must immediately prepare for a world where AI is ubiquitous. This has implications right across the institution, but nowhere is it more important than in assessment. Institutions of all types and sizes need to review how they evaluate learners, develop a program of related tasks to do so in an effective fashion, and fuse AI into existing pedagogical practices to promote the best student outcomes.

This paper has laid out five key areas where institutions can focus their attention today in order to prepare for the future of assessment. This starts with immediately addressing AI literacy among instructors, as it is impossible for them to prepare their students for the AI world if they don't feel comfortable applying AI themselves. From there, further initiatives can be advanced—including a reimagined approach to authentic assessment, skills-based learning, adaptive learning, and more.

By understanding the skills that are most in demand in the workforce, and leveraging partnerships with industry to develop these capabilities, institutions can develop assessments that achieve outcomes that benefit learners beyond the classroom.

This is not designed to be an exhaustive list. The future of assessment will be multifaceted and include elements that haven't been covered in depth here—**accessibility and equity**, for instance, is a key theme presently in education that will only grow in importance as time goes on. The five areas covered should be seen as foundational pieces in a strategy for the future of assessment, rather than the complete picture. We encourage all of our great institutional partners to continue to use the Anthology Community, including the Idea Exchange, to discuss these vital subjects, and work collaboratively to develop learning technology that meets the demands of the AI world.

About Anthology

Anthology delivers education and technology solutions so that students can reach their full potential and learning institutions thrive. Millions of students around the world are supported throughout their education journey via Anthology's ecosystem of flagship SaaS solutions and supporting services, including the award-winning Blackboard® (LMS), Anthology® Student (SIS/ERP), and Anthology® Reach (CRM). Through the Power of Together™, we are uniquely inspiring educators and institutions with innovation that is meaningful, simple, and intelligent to help customers redefine what's possible and create life-changing opportunities for people everywhere.
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