



WHITEPAPER

# The Strategic Opportunity: Unlocking Student Potential in Higher Education



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# The Strategic Opportunity: Unlocking Student Potential in Higher Education

In an increasingly complex and interconnected world, the demands of the modern workforce are rapidly evolving. While traditional academic knowledge remains crucial, a compelling opportunity has emerged for higher education to better prepare students for success. The ability to think critically, solve complex problems, and communicate effectively is what separates a knowledgeable student from a truly valuable graduate, capable of adapting to rapid change, innovating new solutions, and making a meaningful impact in their field. CAE believes that institutions should take a strategic approach to seize this opportunity by integrating a proven, research-backed solution directly into the core of higher education.

## The Opportunity: Preparing Graduates for a Dynamic Future

Current industry data consistently shows that employers rank critical thinking as one of the most in-demand skills for new hires. According to a recent study by the Association of American Colleges and Universities, a large majority of employers believe that college students are not sufficiently prepared in higher-order skills (Finley, 2023). Research by CAE and the OECD confirms this gap, finding that upon graduation from a four-year institution, only 53% of students are proficient in critical thinking, problem solving, and written communication (Van Damme & Zahner, 2022).

This presents a clear pathway for higher education institutions to differentiate themselves and enhance student career readiness. By intentionally focusing on these core competencies, institutions can not only improve student outcomes but also directly address a critical challenge in higher education: student retention.

## The AI Age: Why Critical Thinking Is More Important Than Ever

In an era of rapid technological change, the rise of artificial intelligence is fundamentally transforming every industry. As AI systems become more powerful and accessible, they automate not just repetitive tasks but also sophisticated data analysis and content generation. This paradigm shift presents a profound opportunity for institutions to focus on what makes human intellect truly unique.

While AI can provide answers, it cannot yet ask the right questions. It can process vast datasets, but it cannot apply human judgment to evaluate the ethical implications of its findings. Critical thinking is the essential human skill that complements and directs AI. It is the ability to:

- **Question the Output:** Critically analyze the information generated by AI to identify potential biases, inaccuracies, or limitations.
- **Navigate Ambiguity:** Apply context and nuanced understanding that AI lacks to make informed decisions in complex situations.
- **Innovate and Strategize:** Use AI as a tool to explore possibilities and generate new ideas, while the human mind provides strategic direction and creative vision.

In a world where AI can handle the "what," the most valuable graduates will be those who can master the "why," "how," and "what if." By focusing on critical thinking, institutions are not just preparing students for a job; they are cultivating a generation of creative, ethical, and strategic thinkers who can partner with AI to solve the world's most challenging problems. This is the ultimate competitive advantage for both students and the institutions that educate them.

## The Benefits of a Strategic Partnership

A partnership with CAE offers significant advantages for an institution and its students:

- **Increase Student Retention:** CAE's research shows that students who have higher proficiency in critical thinking, problem solving, and written communication skills are more likely to have higher cumulative GPAs at the end of their senior year (Zahner et al., 2012). Our data illustrates a powerful causal link: enhanced critical thinking and problem solving skills lead to greater academic engagement and improved performance, which are key drivers of student persistence and retention. With 18.3% of first-time, full-time college freshmen at 4-year institutions not returning between the fall semesters of 2022 and 2023 (Hanson, 2025), a strategic opportunity exists to improve the outcomes for these students while providing a high return on investment for institutions.

- **Improve Student Outcomes:** Students who participate in CAE's program are better prepared to succeed in their careers and are more attractive to employers. CAE's research shows that students who have higher proficiency in critical thinking, problem solving, and written communication skills are more likely to have positive post-university outcomes as measured by employment, salary, and graduate school enrollment as well as employer ratings (Zahner et al., 2022). These factors directly translate to improved internship and job placement rates, higher starting salaries, and greater long-term career success for graduates. Our assessments mirror the type of case-based interviews common in many industries, providing students with a significant competitive advantage. With a 20% higher unemployment rate for recent college graduates than all workers (Federal Reserve Bank of New York, 2025) as of June 2025, graduates need these skills to improve their chances of landing their first job.
- **Enhance Reputation:** By becoming known for producing graduates with exceptional critical thinking skills, an institution can strengthen its brand and attract high-achieving students. This reputation can serve as a powerful differentiator in a competitive higher education landscape, attracting top talent, and affirming the value of a degree from your institution.
- **Demonstrate Institutional Value:** Administrators can use the data from CAE's assessments to show prospective students, parents, and accrediting bodies that the institution is effectively delivering on its promise of a high-quality education. As Dr. Shannon Deer, an associate dean at Texas A&M's Mays Business School, noted, "If we teach them to think critically, they'll have a better chance to be extraordinary." This data becomes a powerful tool for justifying tuition, proving ROI on educational investment, and meeting rigorous accreditation standards.

These benefits far outweigh the investment in CAE's Critical Thinking Skills Program and for most institutions, the increase in student retention alone will cover the investment in the program.

## The Solution: CAE's Integrated Approach to Critical Thinking

CAE, a research-driven nonprofit with over 20 years of experience, offers a comprehensive solution to help institutions seize this opportunity. Our approach is not a standalone program, but a strategic partnership designed to enhance an institution's existing curriculum. We focus on three core pillars that work in concert to create a robust system for skill development and measurement:



**Performance-Based Assessment:** CAE moves beyond traditional multiple-choice tests to use authentic, performance-based tasks. These assessments place students in real-world scenarios, requiring them to analyze information, evaluate evidence, and construct well-reasoned arguments.

This process authentically measures a student's ability to think critically and provides actionable data for both students and the institution. For example, a student might be asked to review a series of conflicting news articles, financial reports, and expert testimony to write a memo recommending a course of action.

This goes beyond rote memorization to truly test a student's capacity to synthesize disparate information and formulate defensible conclusions, mirroring the type of work they will encounter in professional settings.



**Intentional Instruction:** Our program provides faculty with instructional materials and professional development to seamlessly integrate the teaching of critical thinking into their existing courses.

This ensures that the development of critical thinking, problem solving, and effective communication skills is not an afterthought but an explicit and intentional part of the learning experience. For instance, a history professor might use a CAE performance task to have students evaluate conflicting primary sources to form an argument about a historical event, or a business professor could challenge students to use financial and market data to make a strategic business recommendation.

This hands-on, deliberate practice is essential for transforming critical thinking from a theoretical concept into an ingrained habit, allowing faculty to teach their subject matter while simultaneously strengthening the foundational skills that students will need throughout their lives.



**Measurable Outcomes:** The CAE platform provides robust data and analytics, giving administrators and faculty clear insights into student and program-level proficiency. This data can be used to demonstrate institutional effectiveness, inform curricular improvements, and prove to stakeholders that the institution is successfully preparing students for the workforce. This provides powerful evidence for accreditation, fundraising, and an institution's competitive positioning. Beyond a simple score, our analytics can reveal areas of strength and weakness across a cohort, allowing for targeted curricular adjustments and resource allocation.

## How It Works: A Simple, Scalable Model

Our model is designed for seamless integration and broad impact.

- 1 Diagnose:** The process begins by administering our performance-based assessment, CLA+, to a cohort of students, providing a baseline measurement of their critical thinking skills. This initial diagnosis establishes a starting point for measuring growth over time and helps pinpoint areas where a student or group of students may need more support.
- 2 Teach:** Faculty use CAE's instructional materials to intentionally teach and deliberately practice critical thinking throughout the semester. These modules are tailored to specific disciplines and can be embedded directly into courses. This hands-on, iterative practice is essential for transforming critical thinking from a theoretical concept into an ingrained habit.
- 3 Demonstrate:** Students retake CLA+ at key points in their academic career to demonstrate their growth. This data allows for comprehensive analysis of skill development at the student, course, program, and institution level. This assessment is not just a grade; it is a powerful metric of learning and skill acquisition over time.

## Professional Development: A Key to Success

Faculty buy-in is a critical factor in the success of any new program, and we recognize that instructors need to be equipped with the right tools and training. To address this, CAE provides robust professional development sessions to ensure that faculty are confident and competent in implementing our solutions. These workshops and one-on-one sessions focus on a variety of topics, including:

- **The "Why" Behind the Program:** Helping faculty understand the research and methodology behind CAE's approach. We dive into the cognitive science and pedagogical principles that underpin our instructional and assessment methods, giving faculty a deeper appreciation for the program's effectiveness.
- **Curriculum Integration:** Providing practical strategies for weaving critical thinking tasks into existing course content without requiring a complete redesign. We offer concrete, subject-specific examples and customizable modules, demonstrating how to seamlessly embed these skills into everything from a first-year writing course to an advanced engineering seminar.
- **Effective Use of Data:** Training faculty on how to interpret assessment data and use it to inform their instruction and provide targeted feedback to students. We provide guidance on navigating our data to identify class-wide trends, pinpoint areas where students are struggling, and use that information to refine teaching strategies.
- **Best Practices for Student Engagement:** Sharing techniques for motivating students and making critical thinking a meaningful and active part of their learning. We provide ready-to-use rubrics and feedback templates that help faculty communicate clear expectations and provide constructive criticism, turning assessments into powerful learning opportunities.

By investing in faculty development, we empower educators to become champions of the program, ensuring the highest level of implementation fidelity and, ultimately, a greater impact on student learning outcomes. This comprehensive support system turns faculty from passive users into active partners, making the program a sustainable and integral part of the institution's culture.

## Conclusion: A Partnership for the Future of Higher Education

In an era of rapid technological change and evolving workforce demands, the value of higher education is being scrutinized as never before. The data is clear: the future belongs to those who can think critically, solve complex problems, and innovate. By partnering with CAE, your institution is not merely adopting a new program; you are investing in a proven strategy to address the most pressing challenges in higher education today.

Through CAE's Critical Thinking Skills program, institutions can not only address the pressing demand from employers but also create a more engaging and effective learning environment that directly enhances student academic performance and retention. This strategic approach strengthens the institution's value proposition, improves student outcomes, and ensures graduates are truly prepared to thrive in a dynamic, modern world. With CAE, you can confidently prepare your students to be extraordinary, competitive, and ready to lead in the age of AI.

Greg Haile, previously president of Broward College, underscored the urgency of this educational shift. "In an era of rapid technological change, higher education must redouble its efforts to ensure graduates have the critical thinking, communication, and problem-solving skills needed to thrive. Partnerships like the one offered by CAE will help institutions equip students for success in the modern workforce and beyond." Developing these skills is not just a matter of improving outcomes, but a foundational responsibility of higher education in a changing world.

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—Greg Haile, Former President of Broward College

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