

Back to The Bay Keynote Script – AI + Workforce Development

Wednesday 20250813

Opening & Acknowledgments

Good morning, everyone. I am happy to be here with you at Back to the Bay and at Cal State East Bay.

In my six weeks on campus, I've met faculty, staff, and a handful of students and I am looking forward to meeting many more. I share of my impressions about the people I've met next week at convocation.

Beyond the wonderful people, I'm glad to be here because our mission, to provide students with a high-quality, affordable education that empowers them to achieve their career goals while sustaining economic vitality, gives me purpose.

It's an honor to give the keynote at Back to the Bay 2025. First, I want to thank the incredible team behind this event. Sarah Nielsen, our former Faculty Development Director; Dawna Komorosky, our current Faculty Development Director; and Roz McCall, our Faculty Development Officer Manager. Their leadership and collaboration have made today possible.

To all of the faculty who are presenting at today's sessions, thank you. Your commitment to the professional growth of our campus community is what makes Cal State East Bay a place where innovation thrives.

Today, I want to talk about something that's on a lot of minds. artificial intelligence. I'm not here to suggest that every classroom or every faculty member should use it. People have different views on AI, and some feel it shouldn't be used at all. Wherever you stand, my goal is to share how I see AI shaping the world our students are stepping into, and to start a conversation so we can build a shared understanding. I offer these thoughts in the spirit of sparking reaction and discussion. I want to look at the changes ahead, the skills our students will need, and how we can work together to prepare them for success.

One question that may be on your mind is

Why Does This Matter Now?

Several converging forces are shaping both higher education and the world our graduates will enter and be expected to contribute to.

(Higher education is standing at a crossroads.)

Next year the much anticipated demographic cliff will begin in earnest. The number of high school graduates is shrinking. nationally, we're looking at a 13% drop by 2041, about 1% every year. And while that alone is sobering, there's more. Over the past twenty years, public confidence in the value of higher education has steadily eroded based on a large Gallup poll, across political lines, across genders, across regions. Add to that the reality that students and their families are increasingly debt-averse. Here at Cal State East Bay, our graduates leave with an average of about \$16,000 dollars in student debt, and it takes them roughly 8 years to pay it off. I think we have a moral obligation to reduce those numbers.

In addition we have a financial tightening because there are no good replacements for declining revenue due to dropping enrollment.

All of these forces, taken together, make one thing undeniable: we have to be more intentional than ever in proving the value of what we offer, ensuring our students leave ready for a lifetime of success, and making the best use of our limited resources.

In concert, technologies predominately artificial intelligence is redefining what it means to be "entry-level" in the job market. This is not a distant trend. it's happening right now. Businesses will continue to adopt AI for speed, efficiency, and cost savings, prioritizing quarterly returns over people because that is how they are incentivized. And even for many consumers, including our future students, the question will be less about whether a service is human-delivered or AI-delivered, and more about whether it's fast, affordable, and meets their needs.

For us, that means our graduates will need to mature professionally at a faster pace. Employers will expect them to handle more complex, judgment-based work earlier in their careers. And we can't wait until a student's last year with us to start building those capabilities. those skills will need to be part of the college experience from the very beginning.

(Employer Expectations: Beyond Technical Skills)

Employers are telling us. they want **more than** technical competence.

They want graduates who can think critically. who can ask, "Does this make sense in this situation?" and "What assumptions am I making. and are they valid here?"

They want graduates who can communicate clearly. who can explain complex ideas to people outside their field, and tailor their message so it resonates with different audiences and contexts.

They want graduates who can collaborate with agility and work productively with both people and digital tools.

They want graduates who can adapt quickly. shift direction when new information or challenges arise.

They want graduates who can exercise ethical judgment. decide what **should** be done, not just what can be done. and anticipate and prevent potential harm or accidents before they occur.

I was reminded of this at a recent event celebrating our McNair Scholars. The Space Shuttle Challenger disaster in 1986 was caused by the failure of a rubber O-ring seal on a cold morning. but it was also a failure of decision-making, a failure to listen to engineers who had sounded the alarm. Ethical judgment also means ensuring our decisions and actions promote fairness, inclusion, and equity.

Employers want graduates who can demonstrate professional skills. manage their time, meet deadlines, act professionally, communicate clearly, and follow through.

They want graduates who can demonstrate curiosity. who ask questions that go beyond the assignment, seek out new perspectives, and approach problems with a genuine desire to understand before deciding what to do next.

One business person I know calls this peripheral vision, which she explains as the ability to see what comes before what an employee is working on and what comes after and understanding the impact of these as a system rather than as discrete pieces.

And they want graduates who can show relational intelligence. build trust, navigate differences, and sustain productive relationships.

These aren't "soft" skills. They are competitive advantages. And they don't just appear by accident during college life. They have to be intentionally built. through group projects, through community engagement, through interdisciplinary collaboration, and through solving real-world problems.

Skills Gap vs. Experience Gap

We talk a lot about the skills gap, the difference between what students know at graduation and what employers need. AI is closing some of that gap, for example, by helping engineering students run advanced simulations without expensive lab time, or enabling business students to analyze complex market data in minutes instead of weeks.

But there's a second challenge: the experience gap, the difference between being able to perform a task and being able to do it in the messy, real-world context of people, deadlines, and shifting priorities.

In social work, AI might quickly generate a case plan based on intake notes and risk assessments. But that doesn't mean the new social worker knows how to sit with a family in crisis, build trust over time, and navigate the web of community resources and cultural dynamics needed to turn that plan into meaningful change.

In the arts, AI might write a grant proposal for a new community program. But does the arts manager know how to sit down with local leaders, listen to what the community truly values, and shape the program so it becomes a lasting part of the cultural fabric?

In nursing, AI might suggest an evidence-based care plan. But can the nurse comfort a worried family, navigate language differences, show cultural sensitivity, and coordinate with an interdisciplinary care team?

In engineering, AI might design a structurally sound bridge. But does the new engineer know how to present it to a city council, respond to public concerns, and adapt it to environmental regulations?

I have been thinking a lot about **upskilling** lately.

When we talk about preparing students for the future, it's no longer enough to think in terms of a degree plus a set of technical skills. The world they're graduating into is moving too fast. New tools, new industries, and new expectations are emerging in real time. Many of the jobs that will be available to the students in high school don't yet exist.

If we stop at closing the skills gap but ignore the experience gap, we'll graduate students who can do the work in theory but struggle the first time they're tested in the real world. That's why we need an intentional Upskilling Framework for Students, and by upskilling, I mean deliberately adding new capabilities and mindsets that prepare students to thrive in

unfamiliar situations. a structure that ensures they're not just learning content, but building the adaptability, judgment, and creativity to apply that knowledge in unfamiliar situations.

Upskilling is about more than adding skills to a résumé. It's about helping students grow into confident problem-solvers who can learn quickly, communicate effectively, and work across disciplines. so they can thrive in a world where the only constant is change.

I want to share a three-part framework we can use to help students thrive in this environment.

AI Fluency. understanding how AI works, what it can and cannot do, and how to apply it responsibly.

In the biomedical sciences, it could mean working with AI-driven drug discovery platforms. Imagine a biochemistry major helping a faculty lab analyze molecular structures to identify promising drug candidates for rare diseases, then validating those leads with wet-lab experiments.

In nursing, AI-powered diagnostic tools might suggest a range of possible conditions based on patient data. A nursing student could learn how to integrate those suggestions into a holistic care plan. one that considers not just symptoms, but the patient's personal history, cultural background, and emotional needs. The student could then devise a communication plan to the patient and their family.

In the humanities, a history student might use AI-assisted archival research to scan thousands of digitized documents for references to a little-known or forgotten event, dramatically speeding up the early stages of research. But they would still need to critically evaluate sources, understand context, and synthesize findings into a coherent argument.

In the performing arts, a music student might analyze audience engagement data. ticket sales patterns, social media reactions. to refine a production schedule. Here, AI provides insights, but human creativity and cultural understanding drive final decisions.

In engineering, predictive maintenance systems use real-time monitoring to assess equipment health and forecast potential failures before they happen, allowing timely replacement. An engineering student working with the City of Hayward's water treatment plant could use AI to anticipate pump failures, saving the city thousands of dollars and avoiding service interruptions. But they would also need to recognize the system's limitations. such as false positives. and know when to seek human verification.

The next upskilling need is Human-Centric Skills. the interpersonal and cognitive abilities that AI simply cannot replace.

It's the ability to lead a contentious project meeting where stakeholders have opposing goals... and still move the group toward a productive outcome.

It's writing a grant proposal that doesn't just make a strong case... but inspires the reader to act.

It's mentoring a colleague through a challenge no one has encountered before. helping them find their footing without dictating every step.

It's guiding a cross-disciplinary team through a creative process... where the success of the final product depends as much on trust and collaboration as it does on technical expertise.

These skills are forged in moments that require empathy, judgment, and adaptability. the very qualities that give our graduates an edge in any workplace. And they don't just appear on their own. We have to design opportunities. in our courses, in co-curricular activities, in community projects, and in research. where students can practice them in real-world, high-stakes settings.

The third upskilling need is Agility. the ability to adapt quickly when conditions change.

It's the skill that allows a student to adjust course when the unexpected happens. and to do so with confidence rather than hesitation.

In economics, it might mean reframing a semester project mid-course when a major policy shift changes the assumptions behind the original analysis. Suddenly, the class is re-analyzing data, revising recommendations, and presenting a solution that reflects the new reality.

In design, it might mean reimagining a project when a key material is no longer available due to a supply chain disruption. Instead of halting progress, the student finds a creative alternative that not only works but improves the final product.

And in the performing arts, it could mean adapting an entire production plan when a venue unexpectedly closes. rethinking staging, sound, and audience engagement to make the show work in a completely different space.

Agility is about seeing change not as a setback, but as an opening for innovation. It's a mindset our graduates will need in every field. and one we can cultivate through or experiential learning, cross-disciplinary collaboration, and real-world problem-solving embedded in the curriculum.

Experiential Learning as the Bridge

Experiential learning is our most powerful tool for closing the experience gap. the gap between knowing how to do something and knowing how to do it in the unpredictable, real-world context where relationships, deadlines, and constraints all come into play.

Think about internships: A computer science major working at a fintech startup might use AI to detect fraudulent transactions. But the deeper learning happens when they present those findings to senior leadership, answer tough questions, and translate technical insights into clear business recommendations. That's where technical skill meets professional maturity.

Or community-based projects: A literature class could partner with a local museum to create an AI-assisted oral history exhibit. using transcription tools to process interviews, then applying human interpretation to weave a compelling and accurate narrative that honors the voices of the community.

Consider research collaborations: Undergraduate sociology students might join a faculty-led, AI-enabled study on housing patterns. integrating statistical analysis with on-the-ground qualitative research to inform local policy. They learn not just the methods, but how to navigate the human and political dimensions of their findings.

And right here on our own campus, we can treat the university as a living lab. A play ground to do experiments. Environmental studies students could use AI-powered energy modeling to recommend sustainability upgrades to our buildings, then present cost-benefit analyses to facilities staff. engaging in the same level of rigor and persuasion they'll need in professional roles.

The common thread is this: students leave with deliverables they can point to, clients or partners they've worked with, and feedback they've acted on. These experiences build credibility with employers and confidence in themselves and just think how student resumes would read. Employers would be lined up down the hill to hire our graduates.

Now imagine if experiential learning wasn't just something we offered in select courses or capstone projects in certain majors— but something built into every program AND every year of a student's academic journey.

In their first year, a student might work with a small team to design a low-fidelity prototype that addresses a real community need. like a simple mobile app to connect local volunteers with food pantry schedules, or a basic water-filter model for households in areas with poor water quality. The focus at this stage isn't perfection. it's learning to identify a problem, do basic customer discovery, brainstorm solutions, and take the first steps toward creating something tangible.

By the time they reach their senior year, those same students could be leading a project from start to finish. working directly with a company or community client or partner, conducting in-depth discovery interviews, refining requirements, and delivering a fully functional solution. It might be a software tool for a nonprofit to manage donor engagement, a marketing campaign for a local arts organization, a new product design for a regional manufacturer, a museum exhibit curated to highlight underrepresented voices in local history, a community storytelling project that preserves oral histories for future generations, or a public policy brief that translates complex research into actionable recommendations for civic leaders.

The progression is intentional: students grow from building ideas in a safe learning environment to delivering results in authentic, high-stakes settings. And when they graduate, they leave not just with a transcript, but with a portfolio of work, a record of real-world collaboration, and the confidence that comes from knowing they've done this before. and succeeded.

(Agentic AI: What's Next in AI)

Today's AI is mostly assistive. you prompt, it responds. But agentic AI is different.

Agentic AI can manage complex, multi-step tasks with minimal supervision. You set a goal, and it plans, executes, and even negotiates with other systems or people.

Examples:

A marketing AI agent designs, launches, and evaluates a full campaign, including social media posts, ad buys, and analytics reports.

A legal research agent reviews thousands of case files, extracts precedents, and drafts a legal brief in compliance with specific court requirements.

A biomedical research agent identifies promising clinical trial participants, schedules outreach, and prepares preliminary reports for ethics review.

Think about the impact on jobs.

Implications:

Agentic AI will fundamentally reshape the entry point into many professions. Tasks that once gave new graduates time to learn the ropes, like cleaning and organizing data, handling initial customer outreach, or drafting preliminary research, will increasingly be automated by AI agents.

That means our graduates won't have a long runway of low-stakes work before they're asked to make decisions that affect strategy, budgets, and people. From day one, they will be expected to operate at a higher level, engaging directly with clients, interpreting AI-generated outputs in context, and making ethical calls when the "right" answer isn't obvious.

And because agentic AI can interact with other systems and people, mistakes can cascade faster and farther than ever before. A poorly set parameter or an unchecked bias in an AI agent's process can have real-world consequences, from flawed marketing campaigns that damage a brand to legal briefs that misrepresent precedent. Our graduates need to be ready not just to use AI agents, but to anticipate and manage these risks, and critically question the results.

(a practical application)

In researching a new hot water heater for our Hayward home, I compared gas, electric, and heat pump models using criteria like efficiency, the number of bathrooms, the split level layout, installation cost, reliability, environmental impact, available rebates, and timelines. An AI agent streamlined this by gathering specs, rebate data, and reviews; identifying licensed installers; obtaining quotes; and ranking options based on my priorities. It helped me weigh upfront costs against long-term savings and sustainability more quickly and confidently. And it provided a list of local installers I could call to give quotes.

Our Response:

We must give students hands-on experience managing AI agents before they graduate. not just using them as tools, but leading them as part of a team.

That means building simulations where students set a goal for an AI agent, monitor its work in progress, and step in when adjustments are needed. It means teaching them how to structure oversight. checking for quality, spotting ethical red flags, and knowing when to override the AI's decision.

In business, that might look like students running a simulated product launch with an AI marketing agent, then analyzing campaign results and presenting recommendations to a mock board. In healthcare, nursing students might oversee an AI care-coordination agent, ensuring its recommendations align with patient needs, cultural considerations, and ethical standards. In the humanities, a history student could guide an AI archival agent to curate documents for an exhibit. then verify authenticity, context, and narrative framing before going public.

By making this kind of AI oversight a normal part of their education, we prepare graduates to step into the workforce already fluent in the leadership skills that will define the next generation of professional success.

Addressing skeptics

I know some of you are skeptical about AI. You may worry that it could diminish authentic learning, displace original thought, or devalue the craft you've dedicated your career to preserving and advancing.

I understand that concern. And I want to be clear. this isn't about replacing the humanities or the arts or engineering for that matter. It's about making sure they remain central to how we prepare students for the world they will inherit. If anything, AI's growing influence makes the human lens even more essential.

Here's why: our graduates will enter workplaces. in business, in government, in nonprofits, in the creative industries. where AI is already part of the workflow. If they've never learned to use it critically and ethically, they'll not get a job at all or they'll be at a disadvantage compared to peers from other institutions who are experienced with these tools. Avoiding AI entirely doesn't protect our students. in fact, it's the far riskier choice, in my opinion, because it leaves them underprepared. When we refuse to engage with AI and other emerging technologies as tools, We put ourselves, as an institution, on a path toward fulfilling the very fear students and their families already hold. that their degree may no longer be relevant.

That doesn't mean we hand over the learning process to algorithms. Quite the opposite. The value of the humanities is in interpretation, in contextualization, in the ability to ask not just what happened, but why it matters. AI can process vast amounts of data quickly, but it cannot care about meaning, context, and deep human relationships. That's our domain. and our students need to experience that distinction in action and understand the boundaries.

AI Plus: Technology Amplified by Human Insight

When we think about AI's role in education and the workplace, it's not AI versus humans. it's AI plus humans. AI on its own can analyze, generate, and predict. But when paired with human insight, context, and ethical judgment, its value multiplies.

AI can generate thousands of potential product designs in seconds. But it takes a designer's trained eye to choose the one that resonates with a brand's identity and the customer's emotional connection to it.

AI can analyze millions of medical records to identify patterns in patient outcomes. But it takes a medical practitioner's experience and empathy to determine which treatment plan fits not just the diagnosis, but the individual patient's circumstances, values, and support system.

AI can summarize archival documents in minutes, pulling together key themes and timelines. But it takes a historian's understanding of nuance, bias, and historical context to interpret those findings accurately and meaningfully.

This is AI Plus. where AI does what it does best: speed, scale, and pattern recognition. and humans do what we do best: interpretation, relationship-building, ethical decision-making, and creative synthesis.

Our job is to prepare students to thrive in that partnership. to understand AI's capabilities and limits, and to know how to add the human element that turns information into insight, and insight into impact.

Ask:

- Where could AI serve as an accelerant for deeper human interpretation in the work that you do?
- Where could not using AI be an intentional choice that itself teaches discipline, focus, and

originality?

These questions don't have not technical solutions. They are adaptive and involve purpose, and what we value most in teaching and learning. And they invite us to design learning experiences where the humanities, business, health professions, and science and engineering don't compete with AI, but stand alongside it. helping students make sense of complexity, challenge assumptions, and create meaning that endures.

Closing

Our students will graduate into a world where AI is as normal to use as email. Their ability to thrive won't just come from knowing how to use it, but from bringing uniquely human strengths to every project, conversation, and challenge.

We have an opportunity. and a responsibility. to design learning experiences that close **both** the skills gap and the experience gap.

If we do this well, our graduates will be ready not just to take a job, but to lead, to innovate, and to shape the ethical use of technology in their fields and engage in careers that are both meaningful and economically prosperous.

Thank you for the work you do every day to guide our students toward that future.

If we embed these experiences into our teaching now, we won't just keep pace with the future. we'll shape it. And our students will lead it.

I hope some points in this talk resonated with you and that others sparked healthy skepticism. I'd like to use the rest of our time for your questions and for an open discussion. Thank you.