Building Tomorrow’s Talent: Collaboration Can Close Emerging Skills Gap
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Business and academia in the U.S. have traditionally been able to equip new workforce recruits with the hard skills they need to perform at a high level in the workplace. But with the regular flow of new technologies and business models into the market, today’s employees must navigate all this change with a varied skill set.

This means soft skills such as adaptability and complex problem-solving are more important than ever for recent college grads, mid-career professionals, and seasoned executives. Employer needs are continually shifting in response to changes in industry and the marketplace, so workers also need to keep refreshing both their hard and soft skills.

The Widening Gap

A 2018 Bloomberg Next and Workday survey asked if business and academia were meeting these challenges, and what areas they might need to refine or rethink to improve outcomes.

The research team surveyed 200 senior-level individuals—100 each in academia and business—focusing on four primary themes: preparedness, skills, collaboration, and planning. Corporate, professional service, and nonprofit respondents came from organizations with at least 500 employees based in the U.S.

The survey results identified several significant issues.

- A majority of respondents said new hires are not well-prepared to perform at a high level in a professional environment, primarily because of insufficient soft skills.
- A surprising number of organizations lack formal plans and budgets for addressing the impact of emerging technologies.
- Business and academia are not collaborating as actively and effectively as they could be in preparing students for employment and reskilling individuals already in the workforce.

Preparedness of Recruits/Students to Perform at a High Level in a Professional Environment

Looking ahead, academic and business leaders who build on existing partnerships and develop new ones can give students and new recruits the comprehensive skills they lack and establish a framework for reskilling experienced workers.

New Recruits Need Soft Skills

If recent graduates are not well-prepared for their new jobs, it is not because their hard skills are deficient. Some 90 percent of corporate respondents and 88 percent of academics surveyed said new recruits have the hard skills, such as computer literacy and written communication, to do their jobs successfully.

But both groups, however, were far less satisfied with new employees’ soft skills. Nearly four in 10 corporations and almost half of academic institutions said new hires lack the soft skills they need to perform at a high level.

Survey respondents from both business and academia agreed the most important soft skills are teamwork, analytical reasoning, complex problem-solving, agility, adaptability, and ethical judgment.
Respondents also noted, however, that new recruits are not meeting expectations in such soft skills as emotional intelligence, negotiation and persuasion, and, notably, complex reasoning. This indicates that business and academia are failing to develop a skill they have identified as one of the most important.

This soft-skills deficit is problematic as it suggests new hires are ill-prepared to tackle some of the most difficult and common challenges they will face in today’s workplace. “Employees need to have the skills to work with different stakeholders both internally and externally,” said Tensie Whelan, director of the Center for Sustainable Business at New York University’s Stern School of Business. “They have to figure out how to build trust, alliances, and win-win situations, all with soft power, through persuasion.”

“The soft skills are the most important and the toughest to master,” said Marina Gorbis, executive director of the nonprofit Institute for the Future, which helps organizations plan strategically for the long term.

**Anticipated/Planned Action Items for Corporations**

1. Evolve job responsibilities to reflect future needs
2. Improve recruiting of diverse talent
3. Support mobility and job rotation
4. Invest in reskilling current employees
5. Collaborate with educational institutions to develop new curriculums
6. Offer apprenticeships
7. Replace a percentage of the current workforce with new talent to ensure the right skills
8. Collaborate with other companies across industries
9. Collaborate with other companies within specific industries
10. Reduce size of current workforce
11. Outsource current work
12. Hire more short-term workers

*Corporate respondents in organizations making $499 million or less in annual revenue are significantly more likely to offer apprenticeships (42%) than those in organizations generating $500 million or more in annual revenue.

### Persistent Challenges

It is clear that new hires are entering the workforce with an incomplete set of skills. The question is why? “I think we need to ask some questions of the business and academic communities,” said Dorian Warren, a fellow at the Roosevelt Institute and former professor at the University of Chicago and Columbia University. “There is clearly a disconnect between the two groups. Are they talking past each other? Are they talking enough?”

The survey shows a lack of planning by both business and academia. Only about half of businesses and two-thirds of academic institutions have a formal plan for addressing the impact of emerging technologies.

### Existing Talent Needs Reskilling

Some 55 percent of corporations plan to evolve job responsibilities to reflect future needs, which means existing employees need to be reskilled because their jobs will change. Mid-career professionals must adapt and meet the same challenges as new recruits. It is encouraging that more than 40 percent of corporations surveyed said they will reskill rather than replace employees when technology change requires it.

However, only 30 percent of corporations and 39 percent of educators said they are collaborating to help reskill and retrain employees. Business and academia need to address this critically important issue to ensure that the workforce is prepared.

### Formal Business Plans in Place to Prepare Future Workforces

<table>
<thead>
<tr>
<th>Corporation n=100</th>
<th>Academic Institution n=100</th>
</tr>
</thead>
<tbody>
<tr>
<td>No, we do not see this as an area of concern</td>
<td></td>
</tr>
<tr>
<td>No, but we’ve started to have discussion among senior leadership on this topic/we intend to address this soon</td>
<td></td>
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<tr>
<td>No, but one is in development</td>
<td></td>
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<tr>
<td>Yes, a formal plan has been created</td>
<td></td>
</tr>
<tr>
<td>Yes, a formal plan has been created and is currently being implemented</td>
<td></td>
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</tbody>
</table>

### 5 Most Important Soft Skills

<table>
<thead>
<tr>
<th>Soft Skill</th>
<th>Corporation</th>
<th>Academic Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Team-working skills</td>
<td>51%</td>
<td>62%</td>
</tr>
<tr>
<td>2 Analytical reasoning/critical thinking</td>
<td>46%</td>
<td>57%</td>
</tr>
<tr>
<td>3 Complex problem solving</td>
<td>39%</td>
<td>56%</td>
</tr>
<tr>
<td>4 Ethical and adaptability</td>
<td>46%</td>
<td>41%</td>
</tr>
<tr>
<td>5 Decision-making</td>
<td>38%</td>
<td>39%</td>
</tr>
</tbody>
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Decision making makes the top five for corporate respondents, while ethical judgment makes the top five for academic respondents.
Marina Gorbis of the Institute for the Future is deeply concerned about this finding. “It is critical that all organizations think systematically about the future, particularly in these times,” she said. “This level of planning should almost be a fiduciary responsibility. How do you innovate? How do you do strategic planning without rigorous planning and a view to the future? You can’t.”

David Williams, a principal with Deloitte Financial Advisory Services, believes the skills issue is really a collaboration problem. “Academia has every right to say they are turning out the smartest, best-educated students ever, but business clearly wants a different mix of skills,” he said. “I think the narrative really ought to be about collaboration. How do these groups collaborate around developing the skillsets that will produce the most important and relevant work product?”

Selection of Collaboration Statements that are True

<table>
<thead>
<tr>
<th>Statement</th>
<th>Total n=200</th>
<th>Corporation n=100</th>
<th>Academic Institution n=100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborates to establish education-to-work pipelines</td>
<td>38%</td>
<td>66%</td>
<td></td>
</tr>
<tr>
<td>Collaborates to shape curriculum to align skills</td>
<td>38%</td>
<td>66%</td>
<td></td>
</tr>
<tr>
<td>Collaborates on reskilling/retraining</td>
<td>30%</td>
<td>39%</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td>6%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>I don’t know</td>
<td>3%</td>
<td>6%</td>
<td></td>
</tr>
</tbody>
</table>

The survey highlights a lack of collaboration between business and academia. In addition to the data shown above, a majority of respondents feel their counterparts are motivated or highly motivated to collaborate (60 percent and 67 percent, respectively). But the level of actual collaboration is quite a bit lower, largely because businesses are not making it a priority.

Only 38 percent of corporate respondents are actively collaborating to establish education-to-work pipelines. Just 38 percent of businesses are working with their academic counterparts to shape curriculum. Academic institutions are doing better, with 66 percent of survey respondents collaborating with business to build education-to-work pipelines, and 66 percent working with corporations to align skills with what business expects.

Closing the Gap: Collaboration

Aligning training with workplace needs to better equip both new and seasoned employees requires strong and strategic partnerships between business and academia.

Zia Khan, vice president of innovation at the Rockefeller Foundation, challenges the conventional view that the skills-development pipeline always flows from academia to business. “I think we’re going to see a much less linear approach,” he says. “For one thing, it can work backwards where business feeds problems back to academia to guide their research efforts more productively.”

But, “Side-by-side collaboration might not even be realistic when organizations have different cultures, standards of quality, and pace. I expect we’ll see intermediate organizations—institutes or teams—that jointly work on objectives that draw on the best of their respective organizations without getting held back. We’ve seen this before with partnerships like Bell Labs and AT&T.”

Some leaders like Whelan at New York University are forging productive examples of collaboration that both feed back into the workplace and inform future instruction. In 2016, she established the Center for Sustainable Business at New York University’s Stern School of Business. She drew on her relationships with business leaders like Paul Polman, chief executive of Unilever, to understand what organizations need in sustainability professionals. She also established an advisory board with C-suite corporate leaders, and a group of advisors from the middle-management ranks representing several industry sectors.

“Together, they serve as a sounding board for the business community, to ensure that everything we do at our center is current and relevant,” Whelan said.

The center hosts business leaders who share sustainability strategies and relevant business cases. The center also conducts joint research projects with industry, most recently with a group of companies in the auto sector. It places students in internships so they “learn first-hand what businesses are confronting,” Whelan said, “and business can understand our students and their level of expertise.”

All of this interaction informs the center’s curriculum. “It’s very valuable input,” Whelan said. “It helps set direction and helps us know at a high level what courses are needed.”

New Approaches to Reskilling

There is strong evidence that business and academia can overcome these challenges, and numerous case studies provide lessons and examples.

For example, some 41 percent of businesses are investing in reskilling, according to the survey. Some 55 percent plan to evolve job responsibilities to reflect future needs, and a majority say their training budgets are going up. All of this says businesses are committed to their own people.

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1 Nokia Bell Labs, “History,” https://www.bell-labs.com/about/history-bell-labs/
Yet academic and business leaders caution that skills training is difficult to implement successfully. The Roosevelt Institute’s Dorian Warren noted that historically, government-led efforts like trade adjustment assistance programs have not been highly successful. “At the government and policy level, at least, these programs have not been considered very effective.”

Diana Farrell, president and chief executive of the JPMorgan Chase Institute, advocates for a more collaborative retraining model. “I recommend a more active collaboration, with a company or industry group working with academic institutions to provide a base level of credentials,” she said. For example, the auto industry recognized the need to invest in local community colleges and universities to establish programs that would help develop the talent they were going to need as the industry evolves.

“Rather than say we’re going to redeploy or reskill within a company, they said we’re going to participate in a broader effort for a population of workers, whether or not they come work for us,” Farrell said.

Beyond that, Farrell said it is time to look differently at skills development and retraining. She served on a task force in 2017 under the aegis of the Council on Foreign Relations. The resulting report, The Work Ahead, recommended numerous work-related and educational reforms. Farrell said reskilling should be an ongoing experience, not a one-time event. “You shouldn’t be reskilling because you lost your job. It should be about staying current in your job.”

With respect to education, Farrell said, “I am personally concerned that we have communicated to the world that you just need a college degree, and your employment prospects will be fine. That’s not the case for everyone.

“Soft Skills for Today’s Workplace

Ensuring students have the right soft skills to succeed is essential, and leaders like David Williams of Deloitte believe they know how to approach it.

“For me, these skills are so core that it is best for academia to take them on,” he said. “But these skills are also so particular to a business that it’s really important for companies to tell academia directly, almost in company-by-company terms, what they’re looking for.”

Williams also believes academic institutions need to adapt their methodology to teach skills like teamwork, collaboration, and how to develop emotional intelligence.

“These things are best taught in smaller groups than are typically used in undergraduate education, with a much more psychology-oriented curriculum within a business skillset—and a more design thinking approach than the traditional academic approach.”

”It’s really important for companies to tell academia … what they are looking for.”

Khan of the Rockefeller Foundation agrees that soft skills should be developed primarily at the university level. But he says it is up to business to send a stronger “market signal” to schools and job-seekers that soft skills are important. “Right now, schools and candidates might hear that these skills are important, but businesses are recruiting and interviewing primarily for hard skills. At best, they are sending mixed signals.”

New York University’s Whelan said that “Traditionally, students have been trained to deconstruct something, take it apart to its component parts, intellectually or physically. It’s part of the industrial revolution model.” But “today everything is interconnected. When you push one lever, something is affected somewhere else. You need to be able to think about things in a systems way. It creates business opportunity and it reduces risk.”


Planning for Innovation

Similarly, planning for the future means thinking differently and challenging the status quo. Khan said, "Many people who are planning for the future and impact of technology are making the mistake of trying to guess the future and planning for it. But if they can’t guess the future correctly, it creates a degree of panic and paralysis and people say, ‘What if we are wrong? Let’s wait and see.’

“People should take more of an option approach, putting several balls in the air and waiting to see what lands. People and institutions should build a range of experiments and skills that they can amplify if—as the future unfolds—some of those experiments and skills prove relevant. The successful corporations of the future will be those that invest in a range of experiments that they can quickly draw upon should the need arise.”

Peter Gross, director of strategy at MicroEnsure, an insurance intermediary, is encouraged to see that many institutions are planning to deal with emerging technologies by building agility into executive thinking. “Gone are the days of waterfall development teams that are built as though the world will wait for them to finish,” he said. “Technologists today know that their horizons are short, and that change is immediate and global. In a sense, the best plan is not to have a plan. Rather, build an organism that is robustly flexible.”

Conclusion

Business and academia already have a strong foundation for a powerful, collaborative partnership. They have identified the skills that appear to be missing in new recruits, and they are willing to invest in their experienced people. With the framework that’s in place, these sectors can bring new thinking and innovative approaches to address the learning requirements arising from technology-driven change. But they shouldn’t wait to collaborate, because employers need to solve for skills gaps now.