

IBM Institute for Business Value

Inheriting a complex world

Future leaders envision sharing the planet



IBM Institute for Business Value

IBM Global Business Services, through the IBM Institute for Business Value, develops fact-based strategic insights for senior executives around critical public and private sector issues. This executive report is based on an in-depth study by the Institute's research team. It is part of an ongoing commitment by IBM Global Business Services to provide analysis and viewpoints that help companies realize business value. You may contact the authors or send an e-mail to iibv@us.ibm.com for more information. Additional studies from the IBM Institute for Business Value can be found at ibm.com/iibv

“Organizations need to start looking at the world as if they were standing on the moon. Driving innovation, managing and analyzing data, and delivering value to customers – all with a global view – will lead to the most successful organizations.” – *Student, United States*

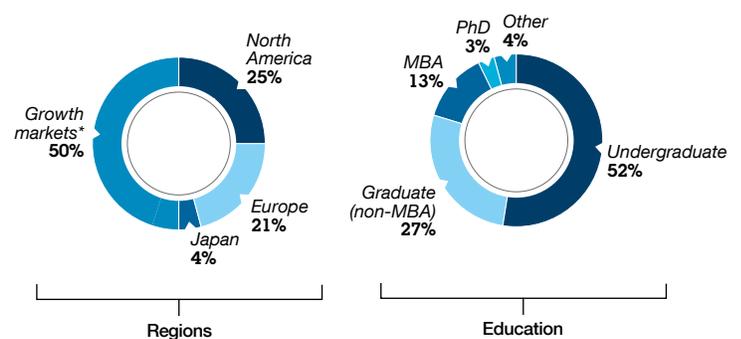
Introduction

Since 2004, IBM has published a Global CEO Study every two years to understand and articulate the goals of leaders worldwide. In 2010, for the first time, we supplemented insight from our CEO Study, published in May, with the Global Student Study 2010.¹

We asked college faculty and administrators to invite graduate and undergraduate students to participate in a Web-based survey between October 2009 and January 2010. We received over 3,600 responses from students in more than 40 countries across the world (see Figure 1).²

By asking students many of the same questions we asked CEOs, we were able to discern areas of commonality and difference. Side by side, these two studies provide views of leadership as experienced by two distinctly different groups, as well as implications for the future.

In a few short years, the “Millennial” generation, sometimes called “Generation Y,” will make up half of the workforce worldwide.³ In light of our respondents’ relative inexperience (88 percent have under five years of professional experience), their viewpoints about private and public organizations may be tempered over time. However, there is a growing body of research suggesting that the attitudes, behaviors and leadership styles of Millennials – tomorrow’s leaders – will be markedly different than previous generations.⁴



*Growth markets include Latin America, Asia Pacific (excluding Japan), Middle East and Africa.

Figure 1: Globally 3,619 students responded to the online survey.

Our analysis confirmed that students' perceptions have been profoundly shaped in unexpected ways by the globalizing, flat, digital and interconnected world of their earliest years. But, how did the experience of growing up with instant connections to friends, news and events influence their perceptions of the role of business? What do they believe organizations should do in order to succeed? And what do they believe will they do differently?

The Global Student Study is based on students' responses to a detailed questionnaire about a range of topics and their impact on organizations. We found that students have much in common with CEOs in terms of their outlook on the new economic environment and how organizations should respond. But we also discerned a new ethos about the roles of public and private organizations. Owing perhaps to the challenges of today's economic environment, students revealed distinctive viewpoints on the issues of complexity, information and decision-making. Beliefs about globalization and sustainability were even more defining. We found students were much more concerned with these issues than CEOs, and most importantly, saw them as inherently connected.

The CEO agenda

In the 2010 IBM Global CEO Study, leaders charted a new direction in response to complexity. To our surprise, students shared CEOs' views for the most part, and even agreed on very specific courses of action:

Embody creative leadership. Facing a world dramatically more complex, CEOs selected creativity as the most important leadership quality. Creative leaders, CEOs told us, were determined to shed long-held assumptions and upset the *status quo*. They knew what had helped them get to where they were today would no longer be sufficient for the next leg of the journey.

Like CEOs, six out of ten students rated *creativity* among the top three leadership qualities, more than any other attribute. "Companies should have adventurous spirits and get out of the constraints of traditional thoughts and operating patterns," a student in China commented on the importance of creativity.

Reinvent customer relationships. Customers keep getting connected – but more often to each other than those they buy from. As a result, more enterprises feel customers pulling away instead of getting closer, as new social networking channels capture a greater share of customer attention. "Standout" organizations, those that outperformed their peers (both long term between 2003 and 2008, as well as short term during the economic crisis in 2008 and 2009), were focused on developing new channels to improve customer experiences, getting closer to customers and deriving important new insights. Students, as might be expected, believed organizations should concentrate to a greater extent on establishing new channels for their customers. And like CEOs, they felt access to greater information and insight was critical to establishing closer relationships.

Students set the bar high. "Understanding needs is a very important factor," said a student in the United States "But it's important to understand that this must be on a personal level – not simply a 'buying behavior' level."

Build operating dexterity. Organizations, CEOs told us, must be exceedingly fast and flexible to identify – and be first to reach – the pockets of opportunity emerging in new markets. Students agreed overwhelmingly that organizations today can't move fast enough to keep up with the pace of change. They must simplify operations to shed unnecessary complexity, another sentiment students agreed with wholeheartedly.

Growing up in a complex world

For all the areas of agreement between students and CEOs, there was still a deep divide, which may be attributed to having a different experience of the world. Events that were wrenching for today's leaders were a given for students today: the end of the Cold War, the Chernobyl nuclear accident, global terrorism, acid rain and new environmental mandates. For many, their first lessons in social sciences and economic thinking taught them the tenets of a "flat," globalized world. It took an earlier generation decades to absorb and assimilate those implications, while today's students learned them very quickly.

Their experience of information and media was different as well. More than 90 percent of the students we surveyed were born after 1980, so for them, games, music, mail and data have almost always been digital (see Figure 2). They came of age in a world of interconnections, even hyperconnections. To find information for school reports, they learned to follow links instead of directions from librarians. They used Facebook instead of phone books to connect with friends – and friends of friends.

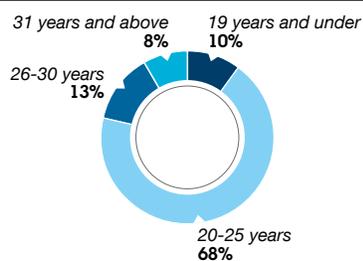


Figure 2: Age of participating students.

This generation of students doesn't need to be told what a network is. They understand implicitly and intuitively that economies, societies, governments and organizations are made up of interconnecting networks. Once viewed as discrete and independent, it is clear now that these spheres – both manmade and natural – connect in a myriad of ways. We may not have even needed to define complexity: they seemed so familiar with the term for an interconnected, multifaceted environment. "Interconnection," said a student in Brazil, "is the word of the century," adding that "almost everything in our life will be connected by technology."

Students and CEOs both viewed the new economic environment as significantly more complex than before, students even more so (69 percent compared to 60 percent). MBA students saw the greatest complexity (see Figure 3).

Of all regions, student perception of complexity was highest in Japan. There, among CEOs and students alike, a common emphasis on complexity reflects the important need to step out in a global marketplace. Both groups recognized the urgency of moving beyond Japan's traditional base of mature markets and high-value products to seek growth in rapidly developing markets.



Figure 3: Respondents who say the new economic environment is increasingly complex.

In regard to complexity, the most striking differences between students and CEOs appeared in our results for the mature markets of the Western world. In North America, one-third more students than CEOs saw major impact from growing interconnectedness; in Europe, one-quarter more students did.

A not-so-uncertain world

Students may have perceived more complexity in the new economic environment, but surprisingly they saw significantly less uncertainty and volatility than CEOs (see Figure 4). They were more confident that information and analysis can be used to better understand even the most complex environments.

A student in France noted matter-of-factly, “We will have more data, so it should be more predictable.” In Turkey, a student acknowledged that the environment is more complex. “But it’s not more uncertain, because man has more technology and knowledge that grows day by day.”

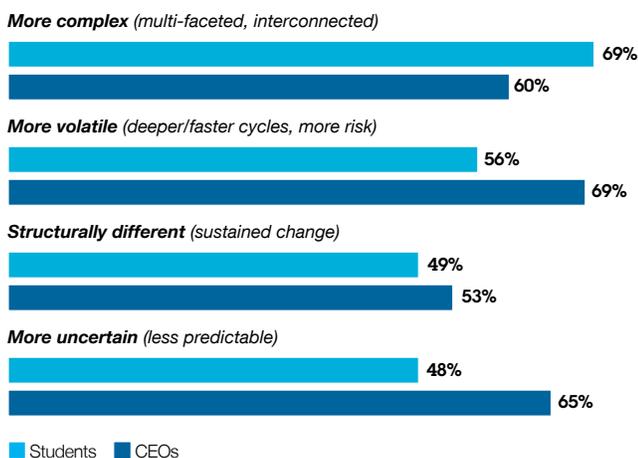


Figure 4: Respondents who experience the new economic environment as distinctly different.

When we looked just at those students who had the greatest expectation of accelerating complexity, we found they put much more emphasis on the analytic and predictive capabilities of information. They were 50 percent more likely to expect significant impact from increased information than peers who did not have that same expectation. And they were 22 percent more likely to believe organizations should focus on insight and intelligence in order to understand a more complex world and act on new opportunities (see Figure 5).

Students clearly expected that the abundance of information available today could be put to better use; that it could be analyzed for patterns and predictive insights so leaders can anticipate and do a better job of shaping future events. Many were optimistic that lessons learned from the recent economic downturn could be used to avoid crises in the future.

In order to have more control of what happens, a student in Mexico noted that organizations will need “to have information and the power to interact with it. They need to gather all different sources and types of information (such as economic news, weather forecasts, blog updates and technology news).” In Argentina, a student expressed both confidence and impatience: “I think it’s high time to manipulate as much data as possible in order to understand this changing world better.”

For the most part, views about the information explosion were fairly uniform across regions; similarly, there was little difference between students and CEOs. A striking exception was China, where students were 67 percent more likely to see a large impact from the information explosion than CEOs. And compared to CEOs in all other regions, those in China were least likely to see such an effect. This generational and regional divide points to a potential organizational disconnect as these students join the workforce and move into leadership positions.

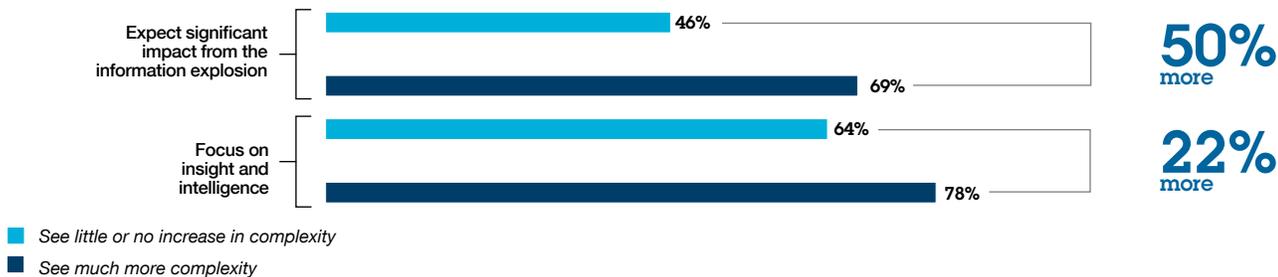


Figure 5: A heightened sense of complexity increases the value of information and insight.

Making decisions with more information

Leaders pride themselves on their judgments, and commonly ascribe the source of their best decisions to “gut instinct.” Given the complexity of the new economic environment and the explosive growth of data, reliance on personal experience and intuition may be grossly inadequate to the challenges ahead.⁵

Future business leaders indicated they will need to lean more heavily on data analysis to reach their strategic and operational goals. And as fact-based decisions begin to prevail, they may well need to pioneer an entirely new management style – one that continually enriches personal experiences with new sources of insights based on “fact checks” rather than “gut checks.”

Are today’s students ready for this new type of decision-making? Overall, students and CEOs preferred a hybrid decision-making approach based on a common belief that stopping to check for facts slows down response speed. “You need facts, but instinct and gut take the paralysis out of analysis,” said a student in the United States. A student in

Mexico talked about the importance of self-confidence: “You have to base decisions on facts, not instinct. But you have to act rapidly, which involves a little bit of experience and trust in yourself.”

However, students preferred a primarily fact-based approach over a predominately instinctive or experience-based approach (see Figure 6). “The balance between experience-based, and fact- and research-based decision-making is very, very often out of balance,” said a student in Belgium. “If you just think about why a decision is made, you often find out it’s based on someone’s fantasy more than a realistic, fact-defended case.” Many young graduates expressed a belief that too often in business, fact-finding was undertaken to support decisions that were already made.

CEOs were asked a comparable question, with a choice between speed and thoroughness. Those who relied on just one approach rather than a hybrid one preferred speed, suggesting a preference for quick decisions rather than more time-consuming ones.

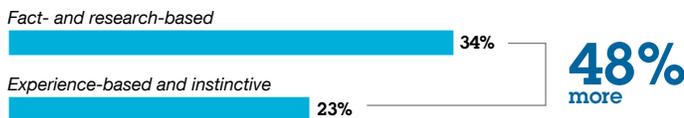


Figure 6: Students' preferred style of decision-making.

Decision-making is another area in which students in China stood out: their rigorous focus on facts was 74 percent higher than for students in other regions (see Figure 7). A Chinese student said, "I like a decision made by leaders if based on research and fact rather than solely on experience. It is better to conduct research based on the facts to decide what will happen to our organization in the future." In China, a results-oriented culture that prides itself on pragmatism, students pursue information for strategic advantage, according to Devin Stewart, senior fellow and director of Global Policy Innovation at Carnegie Council.

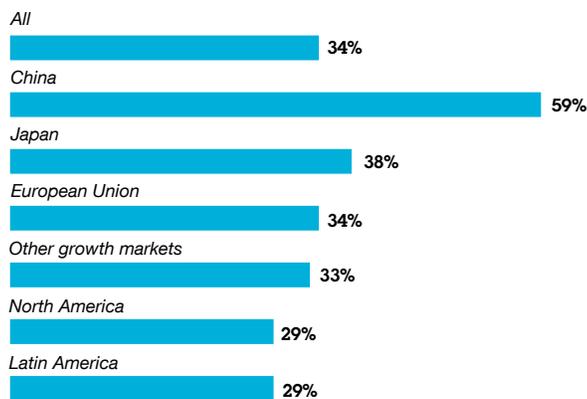


Figure 7: Students who prefer a fact- and research-based style of decision-making.

A new student ethos

Wherever students had the opportunity to identify and comment on issues, there were two themes that consistently differentiated them from CEOs. *Globalization* was one; *sustainability*, both environmental and societal, was the other. Students' comments made it clear that, for them, the two themes were very much intertwined.

As one student in the United States noted, an emphasis on sustainability leads to awareness of the effects of globalization, and with that comes the "idea of becoming a global citizen and having responsibility to others in the world."

Students' views were stronger than CEOs on every one of the ten questions relating to these topics, and, as their comments made clear, called for bold and immediate action. They spoke about a new relationship among societies and business, economies and governments, and the need for a new definition of "value" on what they see as a shared planet.

Learning as consumers

Students learned about globalization and sustainability as consumers during a time when online, mobile and in-store purchases began taking on higher levels of transparency.⁶ Almost as soon as this generation of students started buying their own athletic shoes and food, they learned about ingredient labels, product safety and global supply chains. Many saw that companies were being held responsible not just for their own actions, but also for the shortcomings of their suppliers.

Making difficult choices, they soon realized, was the price to be paid for enjoying the benefits of a globalized economy. They learned about recycling, landfills and ozone holes – not to mention global hunger, pandemic health risks and resource scarcity. Many routinely studied and traveled abroad, maintaining their international connections through social networking sites. Globalization to them was not "diversifying a portfolio," one young leader told us, but an "urgent call to action."⁷

A student in the United States commented, “As events take a more global scale and with the increase of information available to the general public, it is important to keep in mind all aspects of an organization’s possible effects on the world as a whole.”

Globalization: a persistent theme

What they learned as consumers may explain why students saw globalization as the most important force likely to impact organizations over the next five years. Among nine factors considered, only two – *globalization* and *environmental issues* – were much more relevant to them than CEOs. Twice as many students selected these areas as having a significant impact on organizations (see Figure 8).

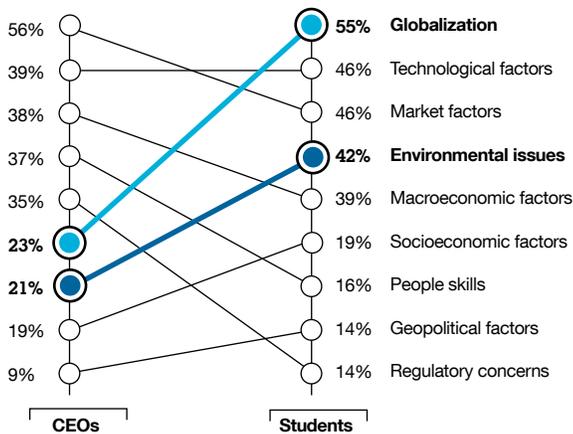


Figure 8: Respondents’ choices for the top three factors that will impact organizations.

Significantly, global market shifts had a clear connection to sustainability. Students who expected organizations to experience a major impact from the shift between mature and developing markets were 20 percent more likely to also expect major impact from *scarcity* issues. And they were 35 percent more likely to expect major impact from *sustainability* issues (see Figure 9).

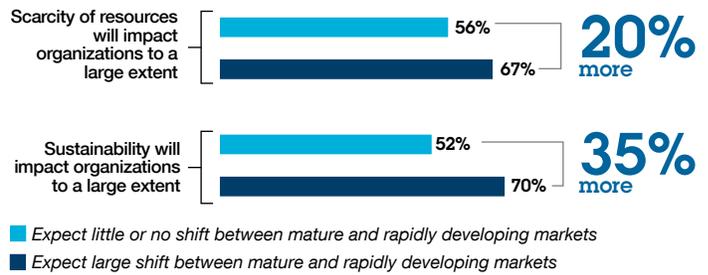


Figure 9: The global shift to rapidly developing markets intensifies shared planet concerns.

Students were distinctly more prescriptive in regard to the benefits of globalization: 48 percent of students compared to 31 percent of CEOs said that organizations should optimize their operations by *globalizing*, rather than *localizing* or *doing both*, to meet their strategic objectives (see Figure 10). Bold positions like these came about because students perceived that globalization provides an opportunity for organizations to create new value.

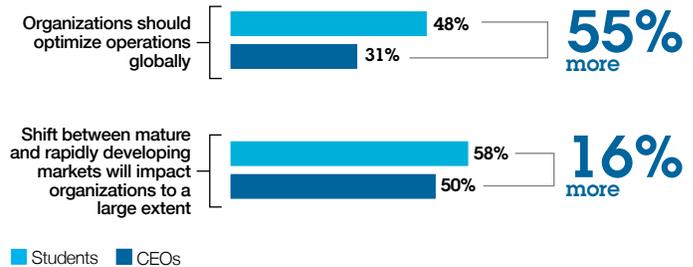


Figure 10: Across multiple questions students indicated more focus on globalization than CEOs.

Sustainability concerns run deep

CEOs and students both expected sustainability issues to have a large impact on organizations over the next five years. Students, however, were particularly passionate about the implications.

For example, students were more keenly concerned with global competition for energy, water, metals and other resources. They were more than twice as likely as CEOs to expect major organizational consequences from scarcity of these resources (65 percent compared to 29 percent, see Figure 11).

Some students recognized national policy implications. “Resources are depleting heavily. Governments will now take things into their hands and keep their resources in their country so they will last longer,” predicted a student from India, where resource depletion, particularly from global organizations, has created growing public concern. A student in the United States took another view: scarce natural resources would create “a need for collaboration among nations to find solutions to these problems, which means that organizations will be more interconnected.”



Figure 11: Students are substantially more focused on sustainability than CEOs.

Across all regions, views on sustainability diverged most sharply between the generations in North America. Students there were almost three times as likely as CEOs to expect *scarcity of natural resources* to have a significant impact. Twice as often, they selected *environmental issues* as a top external force. And 54 percent more students than CEOs in this region anticipated that *customer expectations for social responsibility* will increase significantly.

Students responded to these challenges on both personal and organizational levels. A student in France commented that living sustainably called for nothing less than “the need to rethink what wealth means,” explaining that “I’ll consider economic performance and societal/environmental performance as two parts of the same process of wealth creation.” Businesses, said many students, needed to create value by addressing responsibility for local community and global issues.

“Environmental and social concerns are going to become huge public concerns and will affect everybody’s lives,” said a student in France. As a group, students expect organizations to put these concerns at the center of every process.

Highly aware of the complexity inherent in an interconnected world, students appeared far from naïve about the social and environmental challenges they will face in their careers. As a result, they expressed some very different expectations from previous generations about the leaders they work for and the leaders they intend to be.

Rethinking the value of business

It is clear that the convergence of globalization and sustainability has become an urgent concern for students, who are forthright about the immediacy of issues that affect their lives and families. As one student in Canada commented, sustainability has always been a “next year issue” for most businesses, something to tackle in the future. Millennials see it differently.

We found that students believe globalization is more than an approach to business growth or organizational structure. Rather, emerging markets will shape their own future directions. The next generation of leaders will face challenges in providing business value under today's global conditions: natural resources are finite and unmet social needs are especially acute in emerging markets.

A student in Malaysia said organizations should “concentrate on working with third world countries to offer solutions to shortages of resources, such as water.” A student in Denmark commented that: “The richer part of the world has been very selfish for many generations in exploiting people in the third world. I think for organizations to survive they’ll have to adopt a more environmental and socially acceptable way of doing business. I don’t want to work at a company that furthers the destruction and unfairness of this planet.”

Implications for leadership

Students and CEOs were in striking agreement about one aspect of leadership. Overall, creativity was the leadership quality most frequently selected by both groups. Students and CEOs alike viewed creative leadership in terms of disrupting the status quo and taking bold rather than incremental steps. Additionally, CEOs who stood out from their peers were most likely to continually develop new strategies and business models instead of relying on yearly planning sessions. Creative leadership like this makes the best fit for future leaders eager to pursue new approaches.

Beyond this commonality, there were strong differences that were entirely consistent with students’ values about sharing the earth. Among the nine leadership traits CEOs and student could choose from, students placed a higher emphasis on only two leadership qualities – *global thinking* and a *focus on sustainability* (see Figure 12).

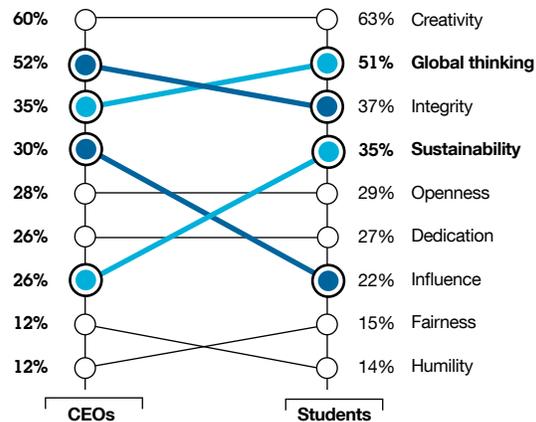


Figure 12: Respondents' choices for top three leadership qualities.

Students were 46 percent more likely than CEOs to view *global thinking* as a top leadership quality. And they were 35 percent more likely to include *sustainability* in the top three. A student in Japan commented on the connection between the two characteristics: “Global thinking is a must for leaders, but it must be associated with a focus on sustainability and integrity, otherwise businesses will be short-lived.”

In China, students rated *global thinking* and *creativity* much higher in importance than any other leadership qualities, not surprising in a region poised for dominance in the global marketplace. *Global thinking* even surpassed *creativity* (76 percent compared to 72 percent), China was the only region where creativity was not the leading characteristic.

Students in the United States and Canada selected *integrity* as a top leadership characteristic 41 percent more frequently than students overall. This priority was probably influenced by the business upheaval underway during the survey, and an overriding concern for more openness.

What students want to do differently

In a survey with many multiple choice selections, students welcomed an open-ended question that gave them the opportunity to frame their thoughts about the future: “What will you do differently in your career compared to previous generations?” The students did not hold back. With few exceptions, they expressed commitment to the responsibilities of global citizenship. To meet this commitment, they said they needed to understand and respond to diverse cultures and local needs, whether economic, environmental or social.

A student in the United States summed up the commitment to a new type of business value for this generation of digital natives: “The emphasis on sustainability will be more present in my career, and for others of my generation. We are more aware of the effects of globalization and have taken them in stride, and with that comes the idea of becoming a global citizen responsible to others and the world.”

With global thinking and sustainability as necessary responses to the changing environment, many students also recognized that this path to leadership would require re-imagining the concept of success at a personal and professional level. And that could require entire organizations to re-invent their values.

What organizations need to do differently

Given students’ concerns about globalization and sustainability, we found a gap in educational experiences, as well as business expectations. Asked how well their education has prepared them in a number of areas, sustainability and emerging markets were lowest on the list (see Figure 13).

One reason for this educational gap may be the siloed nature of academic programs. “Sustainability education is a new and dynamic challenge for universities. Five years ago, sustainability was synonymous with environmental concerns, yet today it also embraces economic, social and cultural concerns,” said Christopher Adkins, director of the undergraduate business program at the Mason School of Business, College of William & Mary. “This broader perspective opens up new approaches for sustainability education, particularly in the areas of innovation, entrepreneurship and emerging markets.”

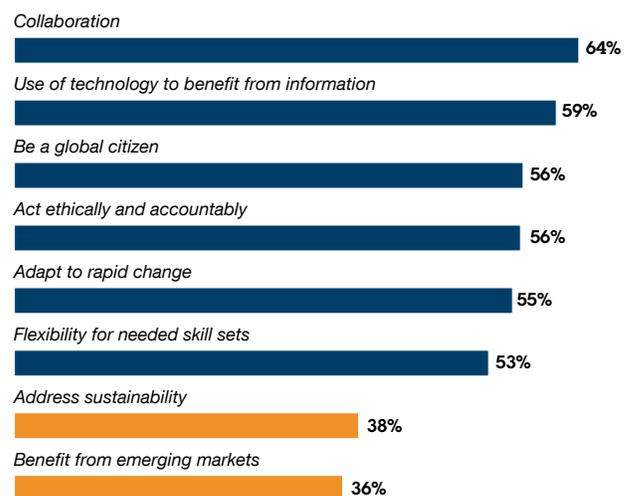


Figure 13: Students who feel education has prepared them well in these areas.

Student voices

We asked students to describe what they will do differently in their careers compared to previous generations, and selected a sampling of their answers to give voice to the values of the world's future leaders.

Global perspective

"Global thinking leaders are intelligent in that they can foresee patterns, potential and unheard-of competitors."

– *Canada*

"I will view the increasing exposure of my business to global forces (other economies, markets and competitors) as an opportunity rather than a threat."

– *United States*

"I will be less aware of what country I represent. I will have more opportunities to work with non-Japanese employees and non-Japanese markets."

– *Japan*

"I will be globally minded, more interested in the big picture (both positive and negative ramifications) and more knowledge-focused (gathering, interpreting and understanding large data sets)."

– *United States*

"I believe (or hope) my generation is more aware of the global market. We are much more in tune with other cultures and will make decisions that are more collaborative in nature."

– *Japan*

Responsibilities

"I will combine personal development with social accountability. Before, there was either one or the other. They need to be combined."

– *Mexico*

"I will have a more intense sense of social responsibility, and enhanced degree of global concern."

– *China*

"I would like to adopt a different perspective concerning social and professional responsibility, while striving to reach higher levels of collaboration with my partners and co-workers."

– *Romania*

"I will be a leader with two wings. One of my wings will carry the professionalism, skills and necessary equipment; the other will represent social responsibility, sincerity and dedication. I will have insight."

– *Turkey*

"It is imperative to view oneself as a global citizen. The driving external forces are larger than one's immediate environment. This is a serious break in thinking from previous generations. I plan to continue this trend with a strong emphasis on personal accountability."

– *United States*

Interconnections

"I believe that global veneration and perspective on arising issues will be a strength. My generation has a completely different view and understanding of unbounded, unlimited social connectivity, science and technology, and cultural conglomeration. This will lead to more open, interconnected ambitions."

– *United States*

"I will be able to get in contact with more people around the world due to improvements in technology with regard to the speed and access of communications. This will make me think in a more global sense and make decisions, taking into account all these global factors and not only think locally."

– *Argentina*

"I think I'll consider economic performance and social/environmental performance as two parts of the same process of value creation. We need to rethink what wealth means, and this is the path I want to take."

– *France*

Meeting the challenges ahead

How can students better prepare themselves for leadership in the complex world they will inherit? The growth of online education and the rise of universities across the globe are leading to more educational choices than ever before. Major Western universities are establishing satellite campuses and increasing numbers of students are going abroad for their education. Emerging economies of China and India, as well as the Middle East, are on a fast path to create world-class universities capable of creating innovative leaders focused on long-term economic growth.⁸ As a result, students can now look beyond the educational choices available to previous generations. And those who do choose traditional schools can work with faculty and other organizations to co-create non-traditional educational programs that represent their values.

What can CEOs do? In meeting the challenges of an interconnected world, organizations can look forward to formidable capabilities among the ranks of future leaders. One United States CEO told us, “I am excited about our next generation of leadership and the new level of energy it brings.” That energy, we found from our Global Student Study, is fueled by a drive to meet higher standards of social and environmental sustainability in both mature and emerging markets. In addition, the next generation of leadership will be more comfortable using large amounts of data for decision-making, an approach that can cut through complexity.

We discussed the results of this study with members of the Carnegie New Leaders Program, young leaders who have successfully made the transition into the workplace. Many of them attributed the gap in shared-planet priorities to the depth of responsibilities shouldered by CEOs and the short-term timelines that constrain their decision-making.

At the same time, the young leaders warned against minimizing the values held by students. “Perhaps students are more concerned than CEOs with the welfare of the world and people, but that doesn’t mean they are more idealistic. In fact, maybe their concern with sustainability is more realistic, as they study and experience the effects of poverty and environmental disaster around the globe,” observed one of them.

Creative leaders at organizations that educate and employ future leaders should absorb the values of future leaders in an integrated way. To do that requires more than relegating sustainability courses and programs to a “nice to have” niche. By making these values core to their mission and operating strategy, CEOs and college presidents alike can seize an immediate opportunity to prepare students to translate values into effective actions that will benefit their organizations, as well as current and future generations.

New forms of collaboration. Public and private organizations often collaborate in creating learning or training experiences that are exciting and valuable to future leaders. For universities seeking to develop curricula and research for future leaders, the expanding scope of sustainability requires interdisciplinary collaborations across faculty and programs, and an appreciation of students’ global experiences and expectations.⁹ Holistic problem-solving in their courses and research requires students to solve realtime sustainability problems. This “experiential” preparation will be particularly powerful because it will lead to collaboration among local communities, businesses, governments and universities.

Organizations that collaborate and look at this complex world in the way that students do will be better positioned to inspire a new generation. Together, they can help future leaders address the global challenges they are poised to inherit.

Acknowledgements

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The IBM Institute for Business Value, part of IBM Global Business Services, develops fact-based strategic insights for senior business executives around critical industry-specific and cross-industry issues. This Global Chief Executive Officer Study is part of our ongoing C-Suite Study Series.



Notes and Resources

- ¹ Capitalizing on Complexity: Insights from the Global Chief Executive Officer Study, IBM Institute for Business Value. May, 2010.
- ² Responses to questions were weighted based on Gross Domestic Product (GDP). IMF World Economic Outlook Database, 2008 Actual Regional GDP, October 2009. <http://www.imf.org/external/pubs/ft/weo/2009/02/weodata/index.aspx>
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