The future of higher education

Insights from the ACE Fellows Community

IBM

ACE FELLOWS Program™

Leaders from education aspire to improve their institutions' outcomes and value to society. With limited and increasingly constrained resources they strive to meet rising expectations from students, communities and businesses. To meet these goals, universities and colleges are exploring opportunities and innovations for the future of education.

To facilitate a dialogue among current and future academic leadership, IBM collaborated with the American Council on Education (ACE) through the ACE Fellows Program, the premier leadership development program serving US higher education, to convene a discussion on new ideas for the future of higher education. On December 16, 2011, IBM sponsored a roundtable event in Philadelphia, Pennsylvania. Participants in the roundtable were presidents and other senior higher education administrators who were ACE Fellows or who served as nominating presidents or mentors to Fellows during the Fellowship year. Current and recent ACE Fellows served as scribes for this event and also participated in discussions.

The roundtable focus group discussed emerging themes surrounding key leadership issues for higher education, investments in the coming years, and the role of technology in enabling transformation.

A vision for cultivating transformation in higher education

Several themes emerged from the roundtable discussions. To adapt to the changes in higher education, ACE Focus Group members cited the need for transformation in the campus culture and learning environments, as well as the need to embrace new business models. The general consensus was that higher education needs to adapt learning experiences to their students and focus on the development of future-relevant skills within a more sustainable cost structure.

Opportunities to evaluate and improve the educational experience

The role of higher education is to give students the skills and knowledge they need to succeed in a globally competitive world. Education isn't just about teaching students to take tests well, but rather to create lifelong learners who can contribute to a thriving society and competitive economy.

The face of higher education today looks different from the past because of changes in enrollment, technology, employment opportunities and the economy. One roundtable participant noted, "Today's students are more diverse in terms of their job needs, expectations, maturity, exposure to learning, technology knowledge, sense of self, independence of learning and learning preferences." The challenge in education is to meet these needs and empower a new generation of students who are engaged in their learning experiences and inspired to continually expand their skills throughout their academic and working careers.

Higher education is facing a shift in student and employer expectations

The employees and leaders of the future need different skills to compete in today's increasingly services-dominated job market. The Organization for Economic Cooperation and Development (OECD) studies indicate that the services sector accounts for more than 70 percent of the employment and the value created in member countries.[1] Even manufacturing firms are coupling services with their product offerings, according to The Work Foundation of the UK's Lancaster University.[2]

Employers increasingly hire workers who possess both job-related skills and foundational competencies that indicate an individual's potential to adapt to changing market and economic circumstances. These foundational competencies include problem solving, adaptability, global awareness and information technology proficiencies as top priorities for competitiveness.

A roundtable participant pointed out, "Today there is a disconnect between what employers say they want and who they hire." Employers increasingly hire workers who are proficient in problem solving, adaptability and information technology. But the skills that students are learning and current workplace demands are out of alignment. A recent report from McKinsey & Company indicated three million US jobs were unfilled due to the lack of qualified candidates, even with unemployment hovering around 8 percent.[3] The challenge facing higher education is how to encourage the transformation of the institution to support these evolving requirements for skills and knowledge.

Shaping the higher education institution of the future

In contemplating the institution of the future, the roundtable participants considered opportunities to create new models for learning, teaching, organizational structure and priorities. Delivering institutional success, or even understanding the worth and meaning of a college degree, is potentially polarizing. As an ACE Fellow asked, "What is learning, and how can you really measure what is being learned?"

Academic and operational performance outcomes are a result of a complex interplay of many variables. Mission, programs, faculty, student demographics, curriculum, legacy and culture are just some of the possible factors influencing organizational performance. Even when there is clarity on the goals and measures of success for an institution, there is a further challenge of aggregating data held in paper files or spreadsheets—possibly scattered across an organization—in order to get an accurate view of progress.

Transformation in higher education will require leaders to be courageous in enacting new business models and programs to embrace the future. To understand what institutional success means and to boost performance, educators need to work to establish common goals and gain insights from a range of areas. Answering key questions can help leaders determine what is working and make meaningful changes to what is not. Measuring, monitoring, analyzing and optimizing the following areas emerged as ideas from the roundtable that could lead to a better understanding of institutional performance:

- Agreement on mission and goals among all members of the learning community
- The ability to attract the right faculty to support strategy
- Clarity of the role of faculty in implementing change
- Creating a culture that supports and encourages innovation
- Creating a learning environment that engages and inspires students
- Academic programs linked to the larger community and economic impact

Applying new business models to provide more cost-effective education

Increases in tuition costs have drawn scrutiny and criticism in recent years from legislators and parents. According to the National Center for Public Policy and Higher Education, average college tuition and fees have risen by 440 percent over the past 25 years—more than four times the rate of inflation, and almost twice the rate of medical care.[4] Given the rising cost of higher education, many students (and parents) may question the value of a degree, but education still pays in higher earnings. In 2010, U.S. employment statistics showed that 14.9 percent of those with less than a high school diploma were unemployed compared to only 1.9 percent of those with a doctoral degree.[5]

Costs need to come down, but cutting faculty and educational services can't be the only consideration. One ACE Fellow said, "Higher education needs a new financial model or a new business model. Environments have been changed and will be tough in the next few years. So, we need to develop a more cost-effective model."

It is increasingly important for institutions to transform their operational and financial environments by leveraging new technologies to improve efficiency and performance to bring down costs. Educational institutions at every level are also facing demands for greater accountability, and for managing costs and other resources more effectively. A smarter approach to administration integrates data and insights for use in operations, giving administrators and business officers more information about institutional performance, such as asset management, financial trends and risk exposures. Management of educational buildings and campuses, focusing particularly on energy efficiency, is another area with major cost savings potential.

Technology as a force for cultural change

Technology can be a means to an end that frees up capacity for other purposes and uses. To build the skills needed in a twenty-first century global workplace will require fundamental changes in how higher education operates. ACE roundtable participants were asked, "How can technology solve some of our challenges? Have we even begun to mine the ways that technology can help us?"

Today, innovative teachers and faculty members are seeking out and using technology tools for interactivity, personalization and collaboration to engage students in real-life situational experiences that convey concepts, promote learning and develop lifelong skills. Some examples of new approaches include: replacing lecture-based classes with project-based learning that stimulates collaboration, teamwork, communication and problem solving; enabling students to view a lecture before class and then using class time for interaction and group discussion; or offering online learning and hybrid classes.

New programs can be monitored to determine they are having the intended impact. When gaps in learning arise, the competencies that need to be tackled can be readily identified. Intervention plans can be developed based on effective models and then coordinated among all the educators who are helping the student learn. Modern analytic tools such as predictive analytics and the use of early warning systems can help identify at-risk students and poor performance as early as possible. An intervention plan can then be coordinated among the

participants using advanced workflows and case management tools, which can make a significant difference in the quality and results of education.

Through cloud computing and virtualization, regional educational institutions also can deliver administrative services to multiple sites more efficiently and effectively. These shared services environments can increase the reliability and quality of services while gaining economies of scale through collaboration with peers and partners.

Defining a roadmap for the future

The themes that came out in the roundtable discussions tie into the higher education roadmap IBM has developed to meet the challenges confronting educators today. The core elements of the roadmap are based on the creation of a smarter campus. IBM helps higher education leaders use new models, methods, analytics and technology to foster process transformation, create an innovative and responsive curriculum, deploy digital instructional tools, and drive efficiencies in administration and operations to shift funds to learning and research activities.

By integrating operational data and insights, administrators can make better decisions. Decision management is a new discipline and a highly effective way to bridge the gap between data analysis, predictive insights and improved outcomes. Recognizing the importance of linking data to the personal interactions that occur every day, IBM has designed a variety of models, based on IBM® SPSS® Decision Management software, to provide predictions of outcomes for student achievement, enrollment, advancement and campus safety. Securely integrating information across educational and service providers can give faculty and leaders a full view of the institution's current and expected performance.

Conclusion

Education provides the foundation for a strong and vital society. It provides the human capital to fuel business and public sector efficiency, to encourage new ideas and innovation, and to develop nurturing communities. IBM is committed to working with educational institutions to help transform the educational experience into one of smarter learning environments that focus on positive outcomes and success for every student.

For more information

To learn more about IBM solutions for higher education, please contact your IBM representative or IBM Business Partner, or visit: **ibm.com**/education

The American Council on Education (ACE) represents presidents and chancellors of all types of US accredited, degree-granting institutions: community colleges and four-year institutions, private and public universities, and nonprofit and for-profit colleges. For more information on the American Council on Education, visit: www.acenet.edu

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