Shifts in IT's role in organizations have caused soaring demand for SOA skills.

Working in IT barely resembles what it did one and two decades ago, which creates an ever-shifting set of demands placed on IT professionals.

"Twenty years ago, we'd visit companies and walk into this room in the back of the building that was disconnected from the strategy of the company. Senior executives had no idea what they were doing; they simply provided a back-office service," said Mark Hanny, vice president of global alliances and academic initiatives at IBM.

IT is now a central part of business strategy, causing organizations to rebuild their business strategies around it.

"You look at it now, and IT is pervasive, from life sciences to environmental engineering and Procter & Gamble," Hanny said. "The future business leaders are coming from IT."

However, finding the future IT business leaders is more challenging than it sounds. The snowballing effects of the impending retirement of 70 million Baby Boomers, who make up the bulk of the IT work force, and the general disinterest of younger workers in pursuing IT careers vex not only schools but also industry leaders.

"There is this unfortunate myth that there are no jobs in IT, that they've all been outsourced to India. But this isn't true. There has never been a stronger demand for IT skills as there is now," Hanny said.

IBM is one of several large tech companies that are preoccupied with how to build what they see as the crucial business and technology skills for the 21st century economy, as the need for professionals skilled in IT architecture, business process management, security services and project management has created new classes of IT jobs.

Working with computer science and engineering schools, IBM is helping integrate what are deemed key IT technologies into their curricula. IBM announced June 16 that it will be providing online access to software, tutorials and resources at no cost in areas such as enterprise computing, Web 2.0 programming and database management.

IBM is banking on new global employment opportunities emerging that demand integrated business and technology skills.

"Colleges and universities worldwide are being challenged to develop a curriculum that [offers] students a practical combination of business and technical skills to meet industry demands," said Kevin Faughnan, director of IBM's Academic Initiative. "This is why we're making available the largest collection of learning resources specifically on the key skill areas our customers are looking for."

One of the biggest demands IBM is seeing is in SOA (service-oriented architecture), as businesses need IT professionals who can integrate business functions in a flexible way. The number of companies investing in SOA has doubled in the past year in every part of the world, creating innumerable job opportunities, according to a report released by analyst company AMR Research in February.

"SOA was barely seen in job openings four years ago, and now it has gone through the roof," said Henning Seip, president of SkillProof, a technology firm that specializes in job market data collection and research.
The opportunities lie across industries, the AMR Research report found. Among respondents who said that they'd used SOA in at least one project, 59 percent were in retail, 54 percent were telecoms and 42 percent were in financial services firms, which spent the most on these projects.

"As much as we like to talk about how technology can be helpful, if you don't automate your processes, you cannot recreate successes. Business process modeling is our biggest job area in the United States today. This position didn't exist a year ago," Seip said.