In the future: learning will reshape our world at work, at home and at school.

Preparing today for success tomorrow
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Ready or not
We have entered an era where innovation is a critical factor to growth. People, working in teams, are charged with finding new ways to enable more rapid responses to the needs of customers and the marketplace. Yet success on all levels requires the right skills and knowledge. For individuals and organizations alike, learning has become critical to earning.

And while the role of learning is changing, learning itself is evolving—from a static, instructor-led, classroom-based experience to a dynamic, student-centric and highly interactive experience. Learning can give organizations the ability to quickly and continually respond to the change that is so inherent in our world today.

To understand the significance of learning in driving innovation and growth, it’s important to first consider what is driving the evolution in learning. The answer is far from simple but is the result of the complex convergence of three powerful forces: rapidly changing markets, technologies and demographics.

Market changes
On the market side, globalization is fostering an unrestricted flow of information, ideas, services and people across both borders and time zones. The emerging dominance of a service economy is shifting organizational focus to customers. A new plug-and-play work infrastructure is creating symbiotic relationships between employers and employees, promoting horizontal execution across the value chain. Entire supply chains, once strictly linear, are becoming dynamic networks comprising players from all sides. Human capital is replacing physical capital as a source of organizational value.

Technology changes
At the same time, computer technology has become more powerful and affordable. Increases in bandwidth, availability of mobile media and global tracking technologies are helping to create an “always on” infrastructure that lets learners access whatever learning they need whenever they need it. New tools for collaboration, multimedia authoring tools, context recognition, personalized filters and reusable learning objects are giving people new ways to interact. New technologies such as virtual reality, voice recognition, shared displays and text-to-speech conversion are engaging multiple senses in learning. Intelligent devices that sense, process, display, communicate and interact with people and other devices are enabling the delivery of anytime, anywhere learning. Biotechnology developments such as biometrics, eye-tracking interfaces and assistive technologies are enabling learning systems to detect and adapt to learners’ specific and unique needs and capabilities, such as physical handicaps, learning disabilities, native languages and more. Technology advances are personalizing and democratizing learning.
Blending learning approaches to maximize outcomes

To survive and succeed in this volatile climate, organizations must effectively harness the full potential of an increasingly fluid and dispersed workforce. They must find ways to enable—and capture—dynamic collaboration between employees, partners, suppliers, customers, students and families. And they must develop the ability to adapt quickly, re-creating and innovating just as quickly as market requirements change.

The good news is that many organizations are finding that investments in learning can help them overcome these diverse challenges. Learning is becoming a critical enabler of continued organizational success. And by strategically combining learning programs using a blend of learning methods, organizations are beginning to achieve measurable learning and business outcomes in key strategic areas of business, including:

- Workforce transformation—such as developing competencies, implementing compliance programs, rolling out enterprise applications or providing performance support
- Citizen education—such as workforce development and self-service education
- Supplier/partner education—such as e-procurement training, partner awareness and training, training to support virtual supply chain activities and enterprise resource planning education
- Service optimization—such as service methodologies, citizen service transformation support, process knowledge and service tools training.

Workforce changes

The workforce is changing significantly, too. Globalization is creating a culturally diverse and mobile workforce, with immigrants accounting for an increasing percentage of the overall population in developed countries. Rightsizing and downsizing initiatives are forcing many employees to perform new roles, and existing roles are expanding and changing, making continuous retraining and cross-training more necessary.

Populations in the developed world are living—and working—longer, creating a new multigenerational workforce with diverse learning needs and expectations. In the U.S. for example, 76 million people will reach retirement age (historically, 65 years of age) within the next 30 years, and many people in this age group expect to work well past the traditional age of retirement. At the same time,
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Younger generations are beginning to expect more from learning—more interactivity, more personalization, more convenience. Kids, teenagers and college students today are as comfortable surfing the Web—for chatting, playing games, researching homework or downloading music—as they are surfing channels on TV. In 2002, nearly 85 percent of children under the age of 18 have access to the Internet, and online spending by teens was more than US$1 billion in 2002.4

How learning is changing

In response to these complex, interacting forces, learning is expected to undergo dramatic changes:

- Learners will be empowered to shape, rather than just passively receive, their learning experiences.
- Opportunities to learn will become embedded in process workflows, enabling learning while doing.
- The focus of learning will extend beyond learners as individuals to include learners as teams and organizations.
- Learning will become a key vehicle to enhance relationships across the enterprise and its entire value chain.

Empowering learners

Today, most learning is structured to deliver a consistent, uniform experience. It is typically centralized and formal, with the curriculum generally prescribed by the institution. The role of the instructor is to give information, and the role of the student is to receive information.

In the future, learners will be increasingly empowered to shape when, where and how they learn. Organizations will continue to define learning paths, assess value and reward outcomes in support of overall organizational objectives, but learners will have greater flexibility in how they achieve these objectives and consequently impact business results.
Technology and new delivery options will enable just-in-time access to information that supports learning within the context of the individual’s role or the task being performed and the amount of time available. This type of learning delivery will profoundly impact productivity. Learners will become both producers and consumers of information. They will be expected to update organizational data sources with the latest insights from real-world market experiences so that others within the enterprise can benefit and leverage that understanding, enabling organizational learning.

**Embedding learning**

In most organizations, learning now is focused on disseminating information before an action or event. As technology evolves to transparently weave learning into our lives at work, at school and at home, learning will focus on giving information at the time of an action or event. By saving time on the front end of the process, embedded learning will allow learners time to analyze actions and understand where improvements can be made. This higher-order learning is a critical differentiator for future organizations.

Movement toward embedded learning is already occurring through offerings that allow organizations to deploy enterprisewide portals designed to give users a single, consistent interface, tailored by job role, to access content, applications, business processes and people. Ongoing advances in technologies will further embed learning into our lives. For example, smart devices, contextual search capabilities and multisensory input and output options will allow individuals to access learning around the world and around the clock.

“Call it the resilience gap. The world is becoming turbulent faster than organizations are becoming resilient...big companies are failing faster...corporate earnings are more erratic...performance slumps are proliferating...In the past, executives had the luxury of assuming that business models were more or less immortal. Companies always had to work to get better...but they seldom had to get different—not at their core.”

—Gary Hamel and Lisa Valikangas
Organizational learning
For most organizations, getting better at business-as-usual is no longer enough to guarantee survival. In these turbulent times, they are finding that they must do things differently—and do different things—just to stave off failure. To succeed, they must become good at creating and innovating. And so they are making strategic investments in organizational learning, shifting focus from learners as individuals to learners as teams and organizations. For these organizations, learning is becoming a primary enabler of the resilience they so desperately need.

For example, organizational learning can enable geographically dispersed teams to form around specific projects or priorities and disband when objectives are completed. Organizational learning can teach whole teams new ways of thinking, helping to stimulate creativity. Organizational learning can facilitate the transition from static to dynamic business models. As important, learning can help quickly align employees with changing organizational priorities and strategies, no matter how much or how frequently they change.

Extended enterprise learning
Learning has the power to enable organizations to integrate horizontally—not only inside the enterprise but outside as well. For example, in the extended enterprise, the speed of the supply chain can’t go faster than the speed of learning for suppliers; accelerating learning opportunities can help suppliers better understand an organization and address its needs more effectively. Similarly, business partnerships are built on trust and around awareness and appreciation of each other’s unique capabilities. Learning can help organizations build solid, trusting partnerships that deliver value more quickly. Learning methods can also be applied to marketing and customer support programs to deepen client relationships by increasing understanding of an organization’s products and services.

“When teams learn together, not only can there be good results for the organization, members will grow more rapidly than they otherwise would have.”
—Peter Senge
Characteristics of excellent learning
The journey toward the future of learning is different for each organization, driven by different starting points, different objectives and different organizational imperatives. Still, all learning initiatives should aim to create learning experiences that reflect the following important qualities:

- Relevant—Learning should be intelligently responsive, designed specifically to the learner’s needs and delivered just in time.
- Compelling—Learning should engage multiple senses, not just a single sense, through audio, visual and tactile tools. Learning environments should be designed to stimulate a heightened sense of engagement and curiosity in each learner.
- Collaborative—Learning should enable learners to access knowledge and subject matter experts whenever needed, stimulating innovation and deepening the sense of community.
- Continuous—Formal and informal learning should be embedded in work and life, enabling learners to keep developing throughout their lives.
- Outcome-focused—Learning should be directly tied to organizational goals, with tailored and adaptive learning paths defined to drive performance in a dynamic world.

To ensure a successful journey to the future of learning, organizations should focus on three key areas: strategy and accountability, content and delivery, and technology. Each component requires a cultural shift in how people think about learning and e-learning—at all levels of the organization.

Strategy and accountability
Most important, an organization must develop an enterprisewide view of learning, aligning learning investments with organizational priorities. It must develop and continuously refine a model for accountability and governance in learning and a standardized method for demonstrating and documenting measurable outcomes.

Content and delivery
An organization must develop and deliver the most effective learning programs available. It must find or create compelling digitized content. It must strategically integrate formal and informal learning into everyday workflows so that it can be accessed whenever and wherever it is needed. It must also develop ways to create and deliver learning experiences that are customized and personalized to each individual learner—based on learning styles, special needs, age and more.

Technology
Underlying these efforts are careful investments in evolving learning technology. An organization must plan to integrate its learning technology investments across the enterprise. It must enable the creation and support of a truly pervasive learning environment. And it must design and implement a scalable and resilient learning infrastructure.
Creating the future of learning

At IBM, learning is in our DNA. IBM offered its first customer training classes in 1918 and opened its first education center in 1925. Today, learning is an inherent part of our strategy for delivering value to our customers and shareholders. IBM management has high expectations for the role that learning plays in enabling our ability to innovate on demand. In fact, IBM spends over US$700 million every year on its own learning initiatives.

We believe that many elements of the future of learning are already here. We are working actively with our clients to create a future in which learning is a driver of organizational performance and a source of competitive differentiation. And we are working to help organizations tap the potential of learning today while laying the foundation for learning tomorrow.

For more information

To learn more about how IBM Learning Solutions can help you prepare today for learning tomorrow, please contact your IBM representative, or visit:

ibm.com/learning