Personalized and Adaptive Learning
Shaping Employee Development for Engagement and Performance

19% say most of their learning is personalized.

55% use adaptive learning.

83% use personalized learning.
A Note From McGraw-Hill Education

In recent years, adaptive learning platforms have been heralded as the future of corporate training, and the reason is simple. Today’s fast-paced and often disruptive work environment means it’s more difficult than ever for talent development professionals to upskill an existing workforce or increase proficiency. They face the constant challenge of training a multigenerational team with diverse skills, abilities, and backgrounds, often separated by geographic dispersion.

Advanced artificial intelligence technology rises to the challenge and enables adaptive platforms to find incredible success where other methods fail. By personalizing instructional content, these platforms dramatically cut wasted time, giving talent development professionals a learning tool so adaptive and intelligent that it’s like having a one-on-one instructor for every learner.

Many L&D teams say measuring learning impact is their top priority. Given business pressures and technology that advances the transparency of business initiatives, learning teams need to articulate a next-generation vision of training that is both human-centric in design and delivery, and directly tied to business outcomes.

L&D leaders seek to elevate the conversation around learning through personalization, research-based theories, and data-driven insight. Concepts like on demand, seamless, invisible, personalized, network driven, and evidence-based already prevalent in consumer technologies are translating into the corporate learning market. Adaptive technology is positioned at the nexus of these trends and able to deliver a holistic package of organizational benefits, including fine-grained measurement, verifiable mastery, greater efficiency and engagement, and enhanced organizational agility.

About McGraw-Hill Education

McGraw-Hill Education Learning Science Platforms apply artificial intelligence to learning through adaptive technology. The platforms transform content into personalized experiences that adapt
in real-time to each learner’s behavior and performance. Every moment is optimized, so that the right content is presented at the right time for each learner. Greater learning efficiency, effectiveness, and engagement are the immediate results, improved training ROI and organizational performance the ultimate results.

Learners focus on challenging areas, fight memory decay, and move knowledge from short- to long-term memory, all while remaining engaged. The technology is based on educational theory and cognitive science that explores memory, metacognition, and the personalized delivery of concepts.

Refined by millions of learners and thousands of authors and subject matter experts, the platforms offer enterprise-grade security and integration capability with major LMSs. They are also highly scalable, and backed by the McGraw-Hill Education brand and services. Learners receive the right content at the right time, maximizing learning efficiency, effectiveness, and engagement. Trainers and managers grasp cohort dynamics through real-time analytics and know exactly what their learners are struggling with, so they can quickly adapt training. Authors and subject matter experts understand what content works and doesn’t work, so they can continually refine content.

If you would like to see adaptive learning in action, contact christina.yu@mheducation.com. For more information, visit www.mheducation.com/platforms.
Executive Summary

Disruptive technologies, volatile markets, and shifting customer (and employee) preferences have traditional business models and workplace practices falling by the wayside. Against such a backdrop, a one-size-fits-all approach to talent development cannot provide the engaging, relevant, and fast-paced training employees routinely access in their personal lives (think YouTube or TED Talks) and need at work to drive success in an agile, competitive organization.

In that supercharged atmosphere, organizations—especially market leaders—are evolving the use of personalized and adaptive learning. Their aims? To drive greater speed and agility by enabling employees to focus on learning most critical to their performance, and to build workforces with the continuous-learning and growth mindsets that innovation, competitive advantage, and sustained business excellence demand.

This research explored current practices and trends in personalized and adaptive learning, and revealed a changing learning landscape tempered by challenges and driven by the promise of better performance.

Most organizations (83 percent) report using personalized learning to at least some extent. While only about one in five talent development professionals described most of their current learning assets as offering personalization (instruction tailored to learners’ interests, learning speed, job roles, or other individual qualities), change is anticipated. Nearly a third said most of their portfolios will feature personalized learning in two years.

Adaptive learning—which this report defined as technology-enabled personalized learning that uses algorithms and artificial intelligence to modify content to learners’ responses in real time—is much less widely used. However, talent development functions are exploring the advantages of new technologies, and project that use of artificial intelligence in adaptive learning will nearly triple in the next two years.

Talent development professionals struggle with technology challenges, new content design considerations, and other factors that hamper their ability to achieve the highest levels of success with personalized—and especially adaptive—learning. However, many are working to improve their outcomes, and the research found strong links to market performance and learning effectiveness with personalized and adaptive learning use.

83% of organizations personalize at least some learning assets.
One champion of this new learning modality, Adrian Stevens, vice president of learning and professional development at global technology innovation firm Hewlett Packard Enterprise, observed: “If companies are going to be more agile and innovative, learning has to be less rigid and more fluid. Everyone learns differently, and they have varied levels of experience and ability. For talent development, personalizing learning is about how we light a positive fire to inspire individuals’ appetites to become lifelong learners committed to building their acumen. For organizations, that translates to employees who bring greater value to meetings, decision making, innovation, customer engagement, leadership—all the elements that drive business performance.”

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—Adrian Stevens, Vice President, Learning and Professional Development, Hewlett Packard Enterprise
Whitepaper

In a world in which YouTube, Khan Academy, and other online sites make skill building and customized learning instantly accessible to individuals everywhere, businesses cannot afford to fail when it comes to providing that same convenience of just-in-time, contextual learning for employees. Personalized and adaptive learning use has expanded significantly in the past couple years, and talent development professionals expect continued, rapid growth in the months ahead.

*Personalized and Adaptive Learning: Shaping Employee Development for Engagement and Performance* (hereafter, the Study), a new study from ATD and the Institute for Corporate Productivity (i4cp), sought to determine the current organizational practices and trends in personalized and adaptive learning.

Dan Lovely, former chief learning officer of insurance firm AIG and thought leader in the personalized and adaptive learning space, says, “I think it’s generating a bit of a crisis for us in learning and development, and causing us to grow up as a discipline. Do we have up-to-date knowledge of technologies? Do we have the skills we need to be effective users of personalized learning? We have a huge opportunity to affect business performance in a far more impactful way than we have to date, and in a way, that draws more attention to the value we can create. But we have a lot to learn if we’re to embrace personalized learning and do this. But if we don’t, somebody else will.”

**Research Overview**

A total of 271 talent development professionals responded to a 2017 online survey. Sixty-two percent represented organizations employing workforces of 1,000 or more. Just over half (53 percent) worked for global or multinational organizations, and 57 percent of respondents held management positions, ranging from supervisors to C-level officers. Interviews with talent development leaders from commercial and government organizations added further insights into personalized and adaptive learning.

For the purposes of this report, personalized learning, adaptive learning, and artificial intelligence were defined as follows:

**Personalized learning** provides instruction tailored to an individual based on their interests, experience, preferred learning methods, learning pace, job role, or other factors.
Adaptive learning is personalized learning that uses computer-based technology to modify content to a learner’s needs. Applying algorithms or artificial intelligence, the technology modifies content in real time based on learner behaviors and interactions.

Artificial intelligence describes development of computer systems capable of performing tasks that typically require human intelligence, such as speech recognition, decision making, and visual perception.

Key Findings

- **High-performance organizations are far more effective at personalized and adaptive learning.** While 90 percent of all respondents surveyed claimed at least some degree of success with personalized learning, only 35 percent were highly effective at it. Among high performers, 48 percent reported a high degree of success (versus 21 percent of low-performance organizations). More than half of adaptive learning users considered their use to be at least somewhat effective, with 13 percent of talent development professionals rating their efforts highly. However, those from top companies were more likely (22 percent) to report high levels of adaptive learning effectiveness.

- **Market-leading organizations choose personalized learning to help drive long-term performance.** Improving organizational performance was the top motivator of personalized learning for all companies represented in the survey. High-performance firms lay the foundation for long-term business success by applying personalization to drive greater engagement in learning, employee ownership of learning, and development of growth mindsets. Top companies also created personalized learning plans for more of their leaders, employees, and high-potential talent.

- **Personalized learning use is expanding.** Most organizations (83 percent) already offer at least some personalized learning options, yet only 19 percent described the majority of their learning assets as personalized. However, within two years, nearly a third of learning professionals expect that most of their development portfolio content will feature personalized learning. Use is linked to better market performance and learning effectiveness. Most organizations with personalized learning used a blend of technology-based and non-technology personalized learning.

- **Major growth is ahead for adaptive learning, too.** While half of surveyed talent development professionals currently include at least some adaptive learning in their development portfolios, only 7 percent said that applies to the majority of offerings. But in just two years, 20 percent (and one in four respondents from top companies) expect most of their learning assets to utilize adaptive learning. Adaptive learning usage links to better market and learning performance, and the strength of those correlations increases as adaptive learning is used for more offerings.
About the Data

This research includes two indexes that enable identification of learning practices that differentiate organizations excelling in talent development effectiveness and in market performance. ATD’s Talent Development Effectiveness Index provides a snapshot of operational capability in learning delivery, technology, and support for business and learning goals. The Institute for Corporate Productivity’s (i4cp’s) Market Performance Index identifies high-performance organizations based on their results over time in revenue growth, profitability, market share, and customer satisfaction.

Correlation Analysis

This report includes data from correlation analysis, which measures the strength and direction of the relationship between two variables. The closer a correlation is to +1 (-1), the stronger the positive (negative) relationship between the two variables. Correlations do not imply a cause-and-effect relationship between the variables involved. Rather, when a correlation between two variables is found to be statistically significant, it means that the measured relationship is not coincidental. Statistical significance is represented by p-values. For instance, a correlation with p < 0.05 implies a less than 5 percent probability that the measured correlation is a result of chance. A correlation with p < 0.01, which represents the majority of correlations reported in this Study, shows a 99 percent confidence that these results represent a statistical relationship.

Personalized Learning Is Established and Expanding

At present, 83 percent of organizations represented in the Study offered at least some personalized learning options, yet only 19 percent described more than 60 percent of their development assets as personalized. Sixteen percent said that most of their learning solutions featured personalization two years ago.

When asked to project their activity two years in the future, nearly a third of learning professionals said they expect most of their development portfolio content to be personalized.

Currently, 24 percent of respondents from top companies affirmed that most of their learning offerings feature personalization. The figure is expected to reach 40 percent in the coming two years. Personalized learning use is strongly correlated to better market performance and overall learning effectiveness; and as utilization expands, the strength of those correlations rises.
Adaptive Learning Use Is Not Yet Widespread

Only 7 percent of survey participants reported that a major portion of the learning assets their organizations offer was adaptive (Figure 7). But in just two years’ time, 20 percent (and one in four respondents from top companies) expect most of their learning assets to utilize adaptive technologies. That growth should be a good investment for talent development functions—adaptive learning use is tied to better market performance and learning effectiveness, and the strength of those correlations rise as adaptive learning is utilized more extensively.
The Study found growth in adaptive learning already under way. Two years ago, 56 percent of respondents said that none of their learning assets were adaptive; 35 percent said at least some assets were. At present, nonusers have dropped to 43 percent, while some use is up to 52 percent. Given that growth, and its projected continuation in the coming two years, it is clear that adaptive learning is an area of vibrant interest in organizational learning, and one for which talent development functions should be actively preparing.

FIGURE 7: Growth for Adaptive Learning

Indicate the portion of your organization’s learning portfolio that you delivered, deliver, or will deliver as personalized learning two years ago, currently, and two years from now (expected).
Conclusion and Recommendations

Talent development functions in more than 80 percent of organizations already personalize at least some of the learning initiatives they offer. And in about one in four market-leading companies, most learning is personalized. Adaptive learning—especially approaches that leverage the power of artificial intelligence to modify speed, content, and other variables in real time—isn’t yet widespread, but is quickly gaining traction, and fast growth is forecast for the near future.

Learning professionals have plenty of challenges ahead as they work to optimize personalized and adaptive learning in their organizations. Some lack the learning technologies they need to create personalized learning assets, while others struggle with organizational infrastructures that are insufficient to ensure consistent learning delivery to their workforces. Within the talent development function, learning professionals are working to master new approaches to content design while keeping pace with products that evolve quickly.

Despite challenges, the benefits and possibilities offered by personalized and adaptive learning have talent development professionals eager to be a part of the continuing evolution. Many employees are excited, too, that the technologies they rely on in their personal lives are bringing the convenience of tailored learning and find-it-now capabilities to the workplace.

In contemplating the growth of personalized and adaptive learning in the next several years, HPE’s Adrian Stevens expresses what must be in the minds of many talent development leaders: “My wish would be that learning becomes so integrated that it doesn’t feel like learning anymore—that adaptive learning utilities like the one we’re using will support the continual deepening of our capabilities and become even better at tapping into and circulating the latent knowledge of our team members. I think that’s the real potential of personalization—not just learning, but genuine knowledge dissemination across the business.”
Recommendations

Personalized and Adaptive Learning makes the following recommendations:

Know where you stand with personalized and adaptive learning.

Whether your talent development function leverages personalized learning currently, or plans to start, an assessment of your current situation is step one.

Auckerman and her team at ATD spent a year talking, planning, envisioning, and creating their adaptive approach for ATD Elements. At HPE, Stevens and his team brainstormed, researched, talked to suppliers, and experimented with a small-scale pilot that was strategically evaluated for relevance and value.

Evaluate where you are, and then move forward:

- **If your existing initiatives are working:** Assess your efforts, and learn from them to fuel further growth. What are you doing right? What could you do better? How will you expand your use of personalized and adaptive learning?

- **If you’re ready to try personalized learning:** Mobilize your team and do your research. Assess the business imperatives personalization might satisfy. Does your talent development function have the technologies, skills, and resources needed? Are your employees and your organization ready? What kind of pilot would help you test the waters?

Embrace technology—and partnerships.

As personalized and adaptive learning expand, so does the use of technologies to enable them. Those technologies will continue to grow in complexity. Talent development–IT partnerships will be critical to the continued success of personalized and adaptive learning.

External partnerships will take on greater importance, too. The learning team in New Zealand’s Department of Corrections has allied with other government entities to fund and build a state-of-the-art training facility. With adaptive learning, in particular, HPE, ATD, and other organizations recognize the design and deployment benefits to be gained from alliances with suppliers. Explore the partnerships your organization needs to drive personalized and adaptive learning success.
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- Members of i4cp’s Chief Learning and Talent Officer Board and facilitator John Coné
About the Author and Contributors

The Association for Talent Development (ATD) is the world’s largest professional membership organization supporting those who develop the knowledge and skills of employees, improve performance, and achieve results for the organizations they serve. Originally established in 1943, the association was previously known as the American Society for Training & Development (ASTD).

ATD’s members come from more than 120 countries and work in public and private organizations in every industry sector. ATD supports talent development professionals who gather locally in volunteer-led U.S. chapters and international member networks, and with international strategic partners. For more information, visit www.td.org.

ATD’s researchers track trends, inform decisions, and connect research to practice and performance. By providing comprehensive data and insightful analyses, ATD’s research products, which include research reports, briefs, infographics, and webcasts, help business leaders and talent development professionals understand and more effectively respond to today’s fast-paced industry.

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The Institute for Corporate Productivity (i4cp) improves corporate productivity through a combination of research, community, tools, and technology, focused on the management of human capital. With more than 100 leading organizations as members, including many of the best known companies in the world, i4cp draws upon one of the industry’s largest and most experienced research teams and executives in-residence to produce more than 10,000 pages of rapid, reliable, and respected research annually, surrounding all facets of the management of people in organizations. Additionally, i4cp identifies and analyzes the upcoming major issues and future trends that are expected to influence workforce productivity and provides member clients with tools and technology to execute leading-edge strategies and “next practices” on these issues and trends. For more information, visit www.i4cp.com.

Carol Morrison, author and i4cp senior research analyst, has written numerous ATD and i4cp collaborative research studies on such critical topics in talent development as mobile learning, MOOCs, social learning, the role of the CTDO, learning culture, instructional design, and experiential learning. A veteran of human capital, learning, and business performance research, she has written features for Talent Management magazine, Chief Learning Officer, HR Executive, and in other leading print and online media.

Lorrie Lykins edited this report.

Andrew Dixon provided statistical analysis for this Study.
Appendix: Survey Overview

Target Survey Population

The Study targeted talent development leaders representing organizations in a variety of industries worldwide. The survey population numbered 271, with 62 percent of respondents from large organizations—those employing workforces of 1,000 or more.

Survey Instruments

In this survey, multiple questions used the customary 1-5 Likert-type scale, with a 1 rating generally indicating a “not at all” response and a 5 rating indicating a response of “to a very high extent.” A total of 38 questions comprised the survey, including 11 designed to capture respondent demographics.

Procedure

Research took a blended approach, combining quantitative data from survey results with qualitative input based on interviews of talent development leaders. A link to the online survey was emailed to the target population in October 2017. Telephone interviews were conducted in November.
More From ATD Research

Mentoring Matters

In Mentoring Matters: Developing Talent With Formal Mentoring Programs—the latest research report by the Association for Talent Development (ATD)—results show that formal mentoring programs aren’t very common. In fact, only 29 percent of participating organizations had a formal mentoring program in place, although nearly 6 in 10 participants indicated that their formal mentoring programs were effective at helping to meet learning goals to a high or very high extent. For more information, visit www.td.org/mentoringmatters.

Advancing Innovation

Most companies struggle to achieve high levels of effectiveness in their innovation efforts, according to talent development leaders surveyed by the Association for Talent Development (ATD) and the Institute for Corporate Productivity (i4cp) for Advancing Innovation: High-Performance Strategies for Talent Development. Designed to explore the roles talent development functions play in organizational innovation, the study found a largely untapped area of opportunity. Advancing Innovation also uncovered many complexities involved in driving successful organizational innovation. For more information, visit www.td.org/innovationreport.

The Science of Learning

In the report The Science of Learning: Key Strategies for Designing and Delivering Training, the Association for Talent Development (ATD) presents a framework of five learning concepts and three teaching strategies that contribute to learning. The framework is designed to help talent development professionals enhance their organization’s learning experience by highlighting the key concepts and strategies necessary for them to understand. These concepts and strategies include memory, cognitive load, motivation, connecting to prior knowledge, creating appropriate difficulty in learning, retrieval practice, spacing, and interleaving. For more information, visit www.td.org/elearningreport.

Next Generation E-Learning

Despite speculation in industry media and other sources that e-learning is in decline, Next Generation E-Learning: Skills and Strategies—the latest research report by the Association for Talent Development (ATD) and the Institute for Corporate Productivity (i4cp)—found the practice thriving in nearly 90 percent of organizations. Further, talent development leaders and practitioners say they anticipate not only continued growth, but also exciting changes for e-learning ahead. For more information, visit www.td.org/elearningreport.

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- Analyze data.
- Author report(s).
- Disseminate findings.
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