JUST WHAT EMPLOYEES ORDERED:
PERSONALIZED ADAPTIVE LEARNING

BY STEVE SWINK

As mobile devices and social media make inroads within the training industry, can learning and development (L&D) professionals leverage and manage these resources to develop truly personalized and adaptive learning? Can big data be granulated to allow instant branching and create truly prescriptive modules? As millennials become the largest cohort in the workplace and technologies accelerate expectations and shrink attention spans, will traditional delivery methods give way to more collaborative, synergistic experiences?

The U.S. Bureau of Labor Statistics predicts that this year, millennials will become the workforce majority, and by 2030, this technology-savvy and connected group will comprise three-quarters of the U.S. workforce. In fewer than five years, many predict there will be three times more Internet-connected devices than humans on earth.

Add it all up, and we can conclude that the shelf life of most training content is decaying faster than ever before. While these statistics may seem foreboding, they also offer exciting new opportunities to deliver better, cheaper and faster learning.

LEVERAGING BIG DATA TO GRANULATE LEARNING EXPERIENCES

If you've ever shopped online with a retailer like Amazon, you've seen big data used to personalize your shopping experience. Retailers' computer engines chew through

BIG DATA, BETTER OUTCOMES

During its pilot program with IBM Research, Skillsoft evaluated user interaction from direct email response behavior, learning patterns and user surveys. They found patterns indicating improved engagement with learning content, including the following data:

29%
OF USERS CLICKED ON **AT LEAST ONE** RECOMMENDATION IN THEIR **FIRST EMAIL** OPENED.

USER ENGAGEMENT WITH CONTENT **IMPROVED**
128%
COMPARED TO THE BASELINE.

84%
OF USERS STATED THAT **ONE OR MORE** RECOMMENDATIONS WERE RELEVANT TO THEM.

massive amounts of data to offer you suggestions and guidance, with messages like "people who bought this also bought" or "you may also like."

Learning organizations are taking a cue from retailers' playbooks by churning through the mounds of data that learning management systems and other databases offer and creating algorithms to personalize learning experiences. In November 2014, Skillsoft partnered with IBM Research to complete a pilot program with approximately 60,000 learning assets used by over 19 million learners. The program involved around 32,000 users and provided recommendations based on factors such as user-content interactions, content relationships and timing of consumption patterns. *(See sidebar on page 25.)*

"We now have documented proof that harnessing analytics and big data leads to improved learner engagement," said John Ambrose, senior vice president of strategy and corporate development at Skillsoft. "This level of adaptive, personalized learning will be paramount in the Learning Age. As the skilled worker shortage impacts organizations around the world, it's crucial that learners are engaged and given the right tools and content so they can quickly build their skills and fill the gap."

LEARNER'S CHOICE: SOCIAL OR SOLO?

In a world where personalization is becoming the norm, should learning experiences also allow participants to choose whether they want to learn as part of a community or on their own?

"The New Social Learning" defines social learning as "participating with other people to make sense of new ideas, learning with them and from them online or side by side." Augmented by a new slew of social tools, professionals can organically gather information and gain new context from people across the globe as easily as they can from those with whom they work.

In a 2010 blog article, Gretchen Wagner, an academic life coach, theorized that perhaps there is no such thing as "solo

SCHOOL IN THE CLOUD

In 1999, programmer-turned-educator Sugata Mitra wanted to see what would happen if children living in an Indian slum were given access to an Internet-connected computer. He placed a computer in a hole in the wall and mounted it three feet off the ground so children could easily access it. Without any formal instruction, in a matter of months, the children were browsing the Internet and teaching others to do the same.

The School in the Cloud adds two key elements beyond the hole in the wall: an open, sheltered room and remote mentors whom Mitra refers to as "grannies in the cloud." The grannies (who can be males or females) look "over the shoulders" of the children via webcams and act as surrogate grandparents, asking the students what they are doing and offering accolades and encouragement. However, students remain in control – thus the Self-Organized Learning Environment, or SOLE.

learning," because we are intricately connected to others, as demonstrated by social networks. She elaborates, explaining that "mirror neurons" cause us to instinctively mimic and, by association, learn from others.

There has been compelling research demonstrating that "emotional contagion," the notion that humans smile, gasp or yawn when they see others do the same, extends beyond the sense of sight. Subjects whose eyes and optical nerves were functional but whose brains had damage to the area involved in visual processing were still able to respond in kind because other parts of their brains took over.

When the goal of training is innovation, much can be learned from the wisdom of crowds. And perhaps because we are hardwired to interact with others, the

question should not be whether to give learners a choice between social and solo, but how to allow learners to organize and devise their own learning experiences. TED award winner Sugata Mitra has refined this concept using his "School in the Cloud" experiments.

Mitra gained notoriety for his hole in the wall experiments, which led to the TED prize that in turn helped to fund his School in the Cloud projects. During the projects' evolution, Mitra coined the term Self-Organized Learning Environment (SOLE) to describe a place where children can work in groups, access the Internet and other software, follow up on a class project, or go where their interests lead them.

While Mitra's projects focus on school children and transforming the traditional educational model, corporate learning leaders are starting to explore similar strategies. In the U.S., Henry County, Georgia schools personalize learning for the future workforce using five tenets:

1. **Learner profiles** are developed by students, families and school staff to create individualized learning paths.

2. **Competency-based learning.** Courses have clearly identified goals, and students move through the coursework as they demonstrate the mastery of each target. The learning is constant, but the time and place are flexible.

3. **Project-based learning and authentic assessments.** Students learn via real-world projects and problem solving, presenting evidence of their learning to authentic audiences such as businesses, community members or parents.

4. **21st century skills.** Learning experiences are designed around the four "C's": communication, collaboration, creativity and critical thinking.

5. **Technology-enabled learning** blends online and face-to-face instruction, which ensures facility in both modes and enables

CAPTURE AND UTILIZE LEARNERS' "SHOPPING HABITS" AND ASSOCIATED PERFORMANCE OUTCOMES.

students to better access learning and demonstrate understanding.

But does having less structure open up creative channels or open the door for a chaotic hodgepodge of colliding and random information?

COLLABORATIVE CURATION

Virtually every definition of social learning includes a collaborative component. Massive open online courses (MOOCs) are one example of a platform where participants can learn from one another. Companies have discovered the power of MOOCs to design and deliver collaborative online learning.

Another example of dynamic collaboration is taking place at Cigna. Karen Kocher, Cigna's chief learning officer, has long been an advocate of pervasive learning. She believes "active listening, positive collaboration and continuous learning will improve employee engagement." To that end, Cigna recently implemented a "Connect for Growth" performance initiative that leverages SAP's SuccessFactors Jam module. The tagline for the Connect for Growth venture is "energizing people and helping them grow through new and deeper connections for better customer, company and employee outcomes."

In the U.K., Sam Burrough, a learning consultant with insurer Unum, decided to take a creative approach to curation in 2012. After researching theories of leading experts like Harold Jarche, Beth Kanter, Robin Good and Harold Rheingold, Burrough settled on the "Seek-Sense-Share" model of personal knowledge management.

In her blog "Content Curation Primer," Kanter summarizes Rheingold's model:

- **Seek** – Defining topics and organizing sources
- **Sense** – Developing the "product" by writing with links and presentation
- **Share** – Crediting sources and answering questions

Kanter goes on to say that seeking should capture only high-quality content, sensing

must add value to the work or strategy and sharing includes the collaborative step of commenting on "other people's stuff."

Burrough said curation helped Unum address three key areas: improving digital skills, helping people take control of their development, and building stronger internal and external networks. Unum used the curation tool Scoop.it to share content in an appealing and user-friendly way.

"Scoop.it has all the functions we need to make the 'Seek, Sense, Share' model work," Burrough said. ⟳

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KEY TAKEAWAYS

What are some strategies and tactics that organizations wishing to implement a personalized learning approach should take?

LEVERAGE BIG DATA FROM VARIOUS SOURCES.
Offer learners a choice. Then, capture and utilize their "shopping habits" and associated performance outcomes.

ESTABLISH A CULTURE THAT ALLOWS LEARNERS TO ORGANIZE THEIR OWN LEARNING.
Mitra's SOLEs and initiatives like those in Henry County Schools are examples of how the workers of tomorrow are learning and setting expectations as they enter the workforce.

OFFER AND MANAGE A PLATFORM FOR COLLABORATION.
Whether it is through a MOOC or another collaborative tool like HipChat, Jam, Tribe or Yammer, allow and encourage employees to reach out to one another to solve problems across silos.

ACTIVELY CURATE AND MANAGE KNOWLEDGE.
Using the Seek-Sense-Share model as a foundation, proactively build a dynamic resource to spark synergistic and collaborative learning among employees.

Demographics, technology and consumer expectations are producing a seismic effect on both the higher education and corporate learning environments. The academic and business worlds can mutually learn from one another as the 21st-century workforce matures. Companies that personalize learning approaches for their workers will ride this wave of change and reap the rewards of a re-energized workforce.