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# MICHAEL ALLEN'S e-LEARNING ANNUAL 2012

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# Corinne Miller

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By leveraging a 25+ year career in leadership positions at companies such as Motorola, Rockwell International, Northrop, and TRW—across engineering, learning and development, business operations, and innovation platforms—she delivers an unparalleled service to both large and mid-size corporations.

As an early adopter of telecommuting and virtual teaming, Corinne has over 20 years of experience in virtually managing both domestic and global organizations in a variety of functions.

Always the innovator, Corinne was instrumental in creating and delivering a number of high-tech products throughout her engineering career. She also broke new ground applying innovation to business operations and learning and development as the director of Motorola University.

Corinne holds a BS, mathematics and computer science from the University of Illinois and an MS, communication, from Northwestern University. Her publications can be found at [innovatingresults.com](http://innovatingresults.com) and [managingvirtualworkforce.com](http://managingvirtualworkforce.com).



# E-LEARNING INNOVATION: USING PAST E-LESSONS TO SHAPE THE FUTURE OF LEARNING

Corinne Miller

We're at an interesting juncture in the e-learning field today, pinned between practices born out of an environment very different from today's and the needs of a very different tomorrow. Author Corinne Miller draws on her considerable experience in deploying strategic corporate training solutions to ponder what e-learning innovations will deliver on tomorrow's needs. By examining the past four decades of e-learning innovations, Corinne garners three specific "e-drivers" and twelve "e-lessons" that can be applied starting today to prepare for the learning innovations we will need in order to succeed tomorrow. Will we have 20/20 e-vision? And who is "we"? She cautions, "Don't leave it to the e-learning companies alone. It will take innovative 21st century collaboration among the consumers of learning, the producers of learning, and thought leaders in research."

**WHY?** Why did *they* innovate the e-learning tools and practices used today? How can we take those "e-lessons" and use

them to create the future of e-learning . . . or perhaps I should just say learning? We need some provocative discussion around the future of learning, and through the lens of innovation, I'd like to jump-start that here. The "we" I refer to includes senior executives of the e-learning ecosystem. That means businesses that consume e-learning (talent executives), businesses that produce e-learning solutions, and research entities that focus on better ways to educate through the use of technology. Will we have 20/20 e-vision?

Join me now on a brief journey to understand how innovation happens, because there are indeed patterns, regardless of industry; then we will take what we learn to look back at the history of e-learning innovation to identify the specific conditions that drove

disruptive e-learning innovations. With those e-drivers in hand, as well as some e-lessons learned along the way, I'll suggest actions that can be taken today to best position us for the future, and I'll take a stab at what that future might look like.

## **AN E-LEARNING INNOVATION LENS**

The term Web 2.0 is widely used, but if you were to ask twenty people what it means, you might hear twenty

different answers. Same with e-learning. Same with innovation. For purposes of this article, I will use the term e-learning, a word that entered the language in 1997, as the overarching term for all computer-enabled learning, regardless of whether delivered on a mainframe, a PC, or a mobile device. When using the term innovation, I'll draw from the definitions that Harvard professor Clayton Christensen (1997, 2003, 2008) used in his books *Innovator's Dilemma*, *Innovation's Solution*, and *Disrupting Class*, as well as

my more than thirty years of professional experience in innovation, technology, communication, quality, management, and learning and development.

*Innovation* is the process by which new or novel ideas are put into practice to bring customer value. Innovations can be products, services, or methods such as business models (think Dell) or market approaches (think Nokia in India). It's really that simple.

Innovation and invention are frequently confused. *Invention* is a new or novel idea that has not been put into practice to bring customer value. The U.S. Patent Office knows all too well how many millions of inventions they have patented that consumers never see! Customer value is defined from the corporation's perspective: cheaper, faster, better ways to get the job done. We'll assume the job brings shareholder, customer, and owner value.

When we think *innovation*, we often think of revolutionary innovation—the “big bang” stuff, a new or novel approach that does not disrupt a market. Automobiles, telephones, and television are examples of innovations that started as revolutionary. They were at a luxury price point, only becoming disruptive when their costs came down. When adopted into practice by the middle class, automobiles then disrupted horse-drawn carriages. Telephones then disrupted telegraphs. Television then disrupted radio. Sound e-familiar?

Revolutionary innovations have relatively minor initial impact on changing how a large mass of people work, live, or play, but disruptive innovations do. *Disruptive innovation* is an innovation that, due to affordability, attracts non-consumers or certain lower-need customers of an existing market because the product, service, or method is viewed as

good enough, despite possibly being of less quality or performance than what the one that is disrupted. Think of digital photography. At first, cheap digital cameras produced images that were not nearly as good as those produced by film, but good enough for certain consumers. Did you buy one? Eventually, a whole new business ecosystem grew around digital photography, including online ordering, electronic albums, photo editors, and even digital video.

Christensen has identified the basic pattern and some of the pitfalls that companies fall into when they fail to recognize and appropriately leverage a disruptive innovation. Again thinking of the photography industry, where's Polaroid? Buy any film lately? What disruptive e-learning innovations come to mind? Take Christensen's concepts to the e-learning ecosystem level, that is, the businesses that utilize e-learning for their talent, the e-learning companies that produce professional e-learning solutions, the companies that provide web-based collaboration solutions, meeting or training platforms, and universities who research technology-enabled learning. At this time, when technology is taking yet another leap with Web 2.0, technology-enabled student-centric learning is a focus at universities, a new generation of workers who learn collaboratively is upon us, and business is speeding up. If we don't take a step back and take an aerial, ecosystem-level view, we might fall prey to the pitfalls of disruptive innovation. Then everyone will suffer—most importantly, the workers we need to keep America globally competitive.

So let's take a look back at e-learning's innovation history from two angles—professionally delivered e-learning solutions and

authoring tools. What was revolutionary? What was disruptive? What were the e-drivers of the disruptive innovation? and What e-lessons we can take away?

To jump-start us, e-lesson 0: forget what your teachers said—write in this book! As you read below, circle what you disagree with, check what you agree with, write examples of innovations I missed, note questions you have, and annotate where more information is needed. At the end, I'll let you know how we can collaborate. Let's start the discussion now!

### THE INNOVATION OF E-LEARNING: THREE E-DRIVERS

Like many innovations of the past, e-learning started out as an invention when it was created in universities as early as the late 1950s. It became disruptive in the university setting when it was used for distance learning, but it remained a revolutionary innovation in corporations until it became disruptive. I suggest the three primary drivers for that disruption were the *speed at which new knowledge and skills were needed* to get the job done, the average workers' *access* to the e-learning platform, and the corporation's view of the *cost/benefit* of the e-learning. These three drivers determined whether the e-learning solution had customer value, that is, Was it cheaper/faster/better? Do you remember when these three drivers came together for the perfect storm? It was when the average worker had a PC—thirty years after the invention that ran on mainframe computers. It's hard to remember a time when the speed of technology was that slow. Do you think that will happen again anytime soon?

The three drivers came together periodically throughout e-learning innovation history, sometimes one more gusty than the others. Some originated from the learning industry and some did not. Recalling the e-lessons from these times can help us understand where we are today in the next innovation cycle.

### 1960 to Mid-1970s

- e-Learning was a revolutionary innovation.
- e-Learning was rarely used in the corporate world.
- Authoring tools were a revolutionary innovation.
- Formal and informal training were on the job.

While universities were exploring the use of computers for education as early as the late 1950s with tools such as PLATO, neither e-learning nor the PLATO development language took major hold in corporations during the pre-1970 period.

The nature of work during this time was industrial and highly procedural because products were concrete. Products had multi-year cycles, which made for a much slower pace than we know today with multi-month cycles. Companies sought greater efficiency by bringing varying portions of the supply chain together under a centralized pyramidal management structure, which made for simple and obvious business ecosystems. This meant workers could mainly rely on known local resources to get the job done. Work processes were slow to change and workers spent most of their careers at the same company, so institutional knowledge was readily available.

The knowledge and skills needed to do the job didn't change often. Workers learned from each other via on-the-job training.

Face-to-face interaction was the "training platform." In the rare cases when technical professionals had access to mainframe computers as part of the job or were provided access for certifications and retraining, computers as well as a development language were used.

There was barely a breeze, let alone a perfect storm, for disruptive e-learning innovation during this period. None of the e-learning innovation drivers had much gust behind them. e-Learning was a revolutionary innovation, but not a disruptive one quite yet. Here are some e-learning innovation e-lessons that we can take away from this period.

- *e-Lesson 1:* An e-learning innovation for one population (universities) doesn't necessarily mean it's an innovation for another (corporations).
- *e-Lesson 2:* When a revolutionary e-learning innovation happens, initial uptake is by workers who use the enabling technology or are provided access to it as part of their jobs.

### Mid-1970s to Mid-1980s

- e-Learning sustaining innovations.
- e-Learning uptake increases among knowledge workers.
- Classroom and most e-learning was off the job.

Due to a desire for more advanced products, coupled with technology advancements such as minicomputers and rudimentary personal computers, a continuing increase in technical jobs meant a shift to more and

more knowledge work. A drive for efficiency through automation (beyond manufacturing) was on the rise and so e-learning became a new target. Why? On-the-job training and classrooms used people resources, and they were expensive.

During this period, e-learning continued to incrementally improve along its original trajectory as a result of increased computing power, software, and the more sophisticated use of video. The term "authoring tool" is believed to have been originated in 1979. Still somewhat difficult to use, PLATO-based authoring tools were mostly employed by larger corporations whose savings due to the large number of trainees offset the cost of the authoring tools and the highly skilled staff necessary to use them.

- *e-Lesson 3:* Just like other aspects of a corporation's operations, as training costs increase, training is a target for cost savings. This drive for cost reduction provides fertile ground for a low-cost disruptive innovation to occur.
- *e-Lesson 4:* Sustaining e-learning innovations are largely enabled by incremental software and hardware technology advances.

### Mid-1980s to Mid-1990s

- e-Learning disrupts classroom training when workers get access: PCs!
- Classroom and most e-learning was off the job.

Society's drive for a better life, coupled with the advancements in technology, continued to drive the increase of knowledge workers. Job complexity increased, and business eco-systems became more distributed. Jobs

at the moment. It can all change tomorrow.

- *e-Lesson 11:* e-Learning products or services that cram overshoot the market.
- *e-Lesson 12:* Innovation requires adoption into practice. Corporations care deeply about protecting assets and branding. Any e-learning tools and methods thought to violate that protection will not be adopted.

### **TOMORROW: IT'S MELDING TIME**

At the speed of business today, tomorrow is truly just a day away. 2020 will come quickly.

Remember 2000? It doesn't seem that long ago. No one really knows what tomorrow will bring, but for the sake of further stimulating the discussion, I'll put forward a few of my ideas that were influenced by the technology and job predictions of some futurists. In many cases, I think what is old will become new again.

1. Work will become indistinguishable from learning, because informal and much of formal learning will use the same medium, technology, which is the same medium that workers use to get their work done. Consider what futurist Ray Kurzweil (2005) says, "Technology is evolving so quickly that in the near future humans and computers will, in effect, meld to create a hybrid biomechanical life form that will extend our capacities unimaginably."
2. People will still want physical spaces to come together, but it will be more dialectic in nature, like ancient Greece. We will still possess the human desire to

physically connect and the need to remove ourselves from the day-to-day activities to reflect and build new knowledge, skills, and alliances.

3. The IT protection code will be cracked for the use of Open Source tools like Facebook, Twitter, and others to follow. Everyone in a company's business ecosystem is in Facebook. Like a constellation of stars in the sky, lines connect the stars. Workers are dots dynamically connected based on the company, the project, etc. Each constellation has certain IT privileges. As people move about from project to project, company to company, the dots reconnect and their IT privileges are adjusted accordingly. They use the features of Facebook, which get better and better to meet the needs. Wikis, blogs, documents, whatever the relevant assets, they are linked in as needed.
4. Professionals will continue to advance their value proposition in providing services and products that workers cannot do on their own in a timely or costly fashion. This will be especially true as traditional jobs, "regular activities performed in exchange for payment," disappear and their need for traditional e-learning solutions do too. Smart authoring tools will continue to advance. They'll allow the ability to mix and match and meld all the various learning options, sources, and connections into an integrative personal/student-centric learning environment. These tools will be disruptive, starting out simple and low cost. Over time they will hook workers, and this will create a demand to buy premium services and options. Think the best of Open Source with new spins on it we haven't thought of yet.

5. The corporate learning function will be re-invented because the lines between learning, communication, and work will approach homogenization, producing “hyper-jobs.” Hyper-jobs help humans focus on and leverage their “aliveness.” Since learning through use of your own learning style is an intrinsic motivator, I suggest that learning directly attribute to people’s feeling of aliveness and this will propel productivity in and of itself. (The World Future Society [WFS] suggests hyper-jobs in aliveness will occur in the future.) Characteristics of hyper-jobs include discovery, creativity, implementation, influence, and physical action skills. These characteristics will be powered by basic mental skills, symbolic thinking, and responsibility.

Instead of “learning and development,” we might have “learning and communication.” Instead of a provider of training, the function will shift to expert enabler and connector. An enabler provides the environment by which the learner can have access to learn, such as the ability for user-generated content and social networking. A connector is skilled in the art of finding the knowledge and skills the worker needs. Similar to finding a needle in a haystack, considering the plethora of information available, the connector can quickly point learners to those solutions through a number of mechanisms.

Perhaps what is called a learning professional in 2010 might still be called one or, because of various melding factors, such people might be called quality or communication professionals. Or perhaps a term might arise for those who are assisting

workers directly on a day-to-day basis. These professionals may be called professional work coaches or even professional concierges (similar to the Apple store concierge who learns what your needs are and then points you to the right Apple products and services). These professionals might be entirely embedded in the core business, having a skill set across learning, communication, and the specific business area, and be considered line workers. Some might be employees and some might be free agents as Daniel Pink (2001) describes in his book *Free Agent Nation*. These types of workers, free agents who work for themselves and travel between jobs in the business ecosystem, will be very valuable to understanding how learning enablers and connectors can improve business results. Those at the more strategic level might be continually collaborating with a diverse innovation-style team to find new and improved solutions.

Can you imagine it? No more discrete computers, just devices integrated as part of the job. Working is learning. Learning makes people feel alive. Productivity skyrockets from the pure intrinsic motivation of it all. Humans do what humans do best. Where are George and Judy Jetson?

### **A BRIDGE TO TOMORROW: WHAT CAN WE DO TODAY?**

I hope you have written in this book. I bet you had a lot of insightful thoughts and deep

questions. Perhaps you were making your own observations as well while you took our quick journey through the past.

and reinventing them. Remember what Christensen says: “An organization can’t disrupt itself.”

5. *Use Innovation.* We should be guided by innovation processes and methodologies to optimize our path forward. A great thinking tool might be a tree. Not the graphical kind, but the nature kind. Imagine a wall poster-sized tree with branches and leaves and writing all along it that describes the e-learning innovation journey from its invention to today, including pitfalls and e-lessons. Could the alliance, as described in number 1 above, draw the next-most upper portion of the tree? What would be in the sky?

## WHAT DO YOU THINK?

We’ve just taken a quick glimpse of the e-learning innovations of the past, suggested some actions we might

take today, and presented some thoughts about what tomorrow might look like through the lens of innovation. I hope you have lots written in your book, because my purpose for writing this was to stimulate provocative discussion about what we can do today to shape the learning of tomorrow. And at the speed of business today, tomorrow truly is just a day away. Will we have 2020 e-vision? Join the discussion on Twitter using #futureofe (stands for “future of e-learning”).

## REFERENCES

- Christensen, C. (1997). *The innovator’s dilemma: When new technologies cause great firms to fail*. Cambridge, MA: Harvard Business School Press.
- Christensen, C., & Horn, M. (2008). *Disrupting class: How disruptive innovation will change the way the world learns*. New York: McGraw-Hill.
- Christensen, C., & Raynor, M.E. (2003). *The innovator’s solution: Creating and sustaining successful growth*. Cambridge, MA: Harvard Business School Press.
- Dignan, L., Diaz, S., & Steinert-Threlkeld, T. (2009, July 22). Survey: 71% of IT departments block users from social networking. *Between the Lines*. ZdNet.com,.
- Kurzweil, R. (2005, November). The ideas interview. [www.guardian.co.uk](http://www.guardian.co.uk).
- Moore, G. (2003, February). No exponential is forever: But “forever” can be delayed. *Solid-State Circuits Conference: Digest of technical papers*. New York: Institute of Electrical and Electronic Engineers.
- Pink, D.H. (2001). *Free agent nation*. New York: Warner Business.
- World Future Society (WFS). (2009). *Special report on jobs. Future careers: The high-potential jobs of tomorrow*. Bethesda, MD: WFS.