

# eLearning

## Winning Approaches to Corporate Learning on Internet Time

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**Jay Cross**



## Executive Summary

### eLearning?

"eLearning" is a model for what corporate training can become in the next three to five years. It is the convergence of:

- a vision of loosely organized corporate ecologies, a business climate of permanent white water, breathtaking advances in technology, high-speed broadband networks, and a shift of power and responsibility from organizations to individuals

- today's emergent best practices, from performance support through training to knowledge management. As novelist William Gibson observes, "The future's already arrived; it's just not evenly distributed yet."

eLearning is not a prediction. (Half of all major corporate software projects fail, as do two-thirds of all knowledge initiatives -- and eLearning is an even greater challenge.) Rather, eLearning is a target to shoot for and catalyst to spark fresh ideas.

### Who needs it?

Business people are so consumed with the day-to-day that they have little time to think about the future. They are "too busy chopping down trees to sharpen their ax." But in a scant three years, what we're calling eLearning will be a survival skill for corporations and individuals alike.

You're reading the hyperlinked summary of eLearning.

The hand points to research notes, sources, and other topical information.



In the original version of this document, the font jumped up to a larger size here, and all my graphics disappeared. That's **Moorphy's Law**\* in action. I had saved a Microsoft Word 8 file as a Web document (HTML). Microsoft changed font sizes, doubled the amount of code, switched a few things around, and added some syntax I'd never seen before. Life in 2002 will not be a day at the beach.

\*Moorphy? Moore's Law + Murphey's Law = Moorphy's Law. "Everything that can go wrong, will go wrong, on Internet Time, in spades."

Hop in the Internet Time Machine with me to survey the scenery ahead. Zot! It's 2002. Successful leaders inspire members of their organizations to work smarter. Collaboration, learning portals, and skill snacks have replaced Industrial-Age training. The Web is revitalizing personalized learning and meaningful apprenticeship. Learning is merging with work. People build upon one another's ideas. As the line that separates customers from employees blurs, learning initiatives embrace clients and suppliers.

Today's executives, IT managers, and training professionals are investing heavily in intranets, satellites, multimedia, and knowledgebases. Some are locking in on quick fixes and dead-end technologies. Many are automating the past rather than bridging to the future. Plug-and-play "poof" corporations spring up out of nowhere. Training directors receive a dozen calls from vendors touting new "solutions" every day. It's impossible to keep up with it all. We need to get up to speed right away to avoid the pitfalls and take advantage of the opportunities the future holds. That's what the eLearning project is all about.

## Research methods

- Freeform interviews with 50 high-tech, training, and Internet thought leaders.
- Extensive, multidisciplinary review of literature and Web.
- Hands-on experience taking web-based courses.
- Scenario learning exercises to push thinking.
- Findings posted for peer review on the Web.
- Reality-check presentation at TechLearn.
- On-going review cycles

## What matters



for elephant.

In the training jungle, corporate performance is the elephant. Training's only function is to hunt the elephant. Focusing solely on employees' learning needs does not bag elephants. The "e" in eLearning is not only for electronic; it's also

### All together now, what's the purpose of eLearning?

- Improve corporate performance
- Solve business problems
- Strengthen competitive position
- Improve customer relationships
- Increase stakeholder value
- (= Bag the elephant)

Let's hop back in the time machine to look at the economy, business, organizations, technology, and learning three to five years in the future.

## The Network Economy (circa 2002)

Networks changed everything. We're all connected. Nothing is ever finished. Old authority has given way to individual autonomy. You play by new rules or drop out of the game.

### Industrial Age

Tired  
Training  
Passive  
Listen  
Alone  
Teaching  
Just in case  
Classroom  
Absorb  
Graduate

### Age of Networks

Desired  
Learning  
Interactive  
Learn by doing  
Community  
Apprenticeship  
Just in time  
Anywhere  
Experiment  
In perpetuity



## Business & Organizations (circa 2002)

Business is in permanent white water. Passengers on the clue train know that hyperlinks subvert hierarchy, markets are conversations, honest conversation drives out hype, and power flows to the customer. Markets are global. Changes are rapid.

### Business Climate

- Everything increasing exponentially
- Half life of knowledge shrinking
- Front-line staff make decisions
- Services provided in real time
- Teams, not individuals
- Customers are on the team

Corporations used to have the life cycle of a box turtle - about 40 years. Now they're fortunate to live a dog's life - two decades. CEOs focus on corporate evolution and new-business incubation. (Back at the turn of the century, the business community realized that "reinventing the corporation" is impossible; an inventor creates an original only once.)



Business

Organizations are organisms, not machines. Ecology replaces bureaucracy. Responsive hyperorganizations replaces rigid organizational structures. Large organizations perform like schools of minnows, not whales. Members replace employees. Caring human beings replace mechanical jobholders.



Organizations

<b>Traditional Organizations</b>	<b>Hyper-Organizations</b>
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	Flexible
Rigid	Chaotic
Predictable	Flowing
Fixed	Complex
Simple	Relative
Absolute	Linked
Linear	Relationships
Transactions	Teams
Individuals	In context
Isolated	Iterative
One time	Mass customization
Mass production	Distributed intelligence
Central authority	Learner-focused learning

## Teacher-focused training

By 2002, the bottom line is no longer the bottom line. Leaders recognize that in an information economy, it's inappropriate to value intellectual capital at zero, to look at training as a cost rather than an investment, and to use industrial-age yardsticks to report performance. Qualitative, customized Balanced Scorecards replace explicit but misleading financial statements formulated under Generally Accepted Accounting Principles.

## People (circa 2002)

Responsibility is shifting from organization to individual. Everyone makes decisions on the spot. Organizational members help customers help themselves. We are each responsible for our own learning and development. (Pull learning has largely replaced push training.) People concentrate on problem-solving and customer service. Computers are delegated the linear, repetitive functions people used to do back in the twentieth century.



## Technology (circa 2002)

All of us are jacked into the Internet 24/7. Broadband and fiber have put interactive video on most desktops in the office and set-tops at home. Virtual private networks and individualization have eliminated firewall problems. Cornea and fingerprint scans insure that people are who they say they are. Wireless connectivity frees people to work wherever they please. We run applications and store files on the Internet, making them accessible from anywhere. Swarms of personal software agents continuously crawl the net, screening and feeding information to individual personal portals. An unimaginable array of connected gadgets and gizmos both complicate and simplify our lives.[1] The toaster talks.



Just as porn provided the critical mass to put VCRs in training departments, the Internet juggernaut funds eLearning's adoption of mass customization, collaborative filtering, object-orientation, production on the fly, easy-to-use authoring software, cheap video, rapid application development, plug-and-play modularity, wireless connectivity, and more.

The adoption of standards - XML and its children - enables computers to process routine tasks without human tortoises bumping up costs and slowing them down. Learning standards creating learning Lego-like objects - interchangeable, reusable, interoperable -- that slash costs and development time.

## eLearning (circa 2002)



As Charles Handy points out, "Real learning is not what most of us grew up thinking it was." Information is not instruction, telling is not teaching, schools are dysfunctional. Learning isn't pouring knowledge into heads; it's igniting a fire. A true learning organization is foremost a doing organization.

eLearning rests upon solid evidence, old and new, about how people learn. Hearts, heads, and hands learn differently - using different parts of the brain, so they require different sorts of schooling. The "soft stuff" is the hard stuff but it also generates the greatest return.

	<b>Hard Skills</b>	<b>Soft Skills</b>
	Learn facts, e.g.,	Change beliefs, e.g.,
	Programming	Selling
	Thinking/cognitive	Feeling/emotional
	Explicit	Tacit
	EQ = intelligence	EQ = emotional maturity

[Learning](#)

By 2002, people will be breaking free of the obsolete, inefficient model of learning imprinted on them by the school system. Real learning starts with the learner, not the teacher. People learn by solving problems, by making mistakes and correcting them, by hearing stories, by engaging multiple senses, and by following the call of their innate curiosity. Learning need not take place in classrooms, classes need not last an hour, and the strongest motivation comes from within. Pages, documents, classes, and files are anachronisms, vestiges of a bygone era of factories and smokestacks.

[Best info on standards](#)



[E-commerce](#)

All learning is social. People learn what works by conversing with one another informally. eLearning gives them freedom, unstructured time, and encouragement to learn this way (rather than stuffing their calendars with repetitive exercises and tests.)

Learning styles and multiple intelligences are a given. Howard Gardner says that differences in learning style "challenge an educational system that assumes that everyone can learn the same materials in the same way." While eLearning can't determine the right method to present this particular lesson to this individual, it does increase the odds of success by providing multiple paths for learning.

Amazon's model is

- customer focus
- customer-centric
- customer obsession

eLearning treats learners as customers. eLearning's credo is

learner-focus, learner-centric, and learner obsession (as long as the learners are hunting the elephant.)

## **Learners = Customers**

### **Lessons from e-Commerce**

- Know the lifetime value of a well-trained employee
- Open feedback channels galore and listen hard
- Take action on suggestions immediately
- Learn more about how each person learns, what they've mastered, and what they need next
- Tailor learning to the individual learner
- Get sticky. Make learning so relevant and exciting that learners clamor for more.
- Do what you do best & outsource the rest.
- Focus on people and projects that generate the greatest return.
- Put the fear of God into executives who support "training as usual."
- Offer fresh courseware to instill learner loyalty.
- Employ guides to help learners make choices and link up with the right resources.
- Couple online learning to on-job learning, coaching, mentoring, apprenticeship, buddy systems, study groups, electronic libraries, and trying things out in the "real world."

## **We don't need no stinkin' classrooms**

At our place of work, high resolution surround-screens flash with images and pulse with sound. On screen, the latest version of Windows makes it look as if you're really looking through squeaky-clean windows at people you're talking with and scenes you visit. It feels more and more like You Are There.

Personal portals connect us seamlessly to customers, colleagues, and learning resources. Smart systems and personalized bots track our preferences, performance, accomplishments, and learning signature in order to recommend learning experiences we may enjoy. Learners bozo-filter content whose evaluations by others fail to meet their standards. Collaborative filters suggest links enjoyed by others in one's professional and social communities. One link may call up an informative customer comment, the next a celebrity lecture on the net. An entire world of learning is but a micropayment away.

Not that all learning takes place on a desktop. People learn in smart rooms, from wireless portables, anywhere they please. Receiving learning or being entertained or "going" to work, all these are as easy as turning on the tap.

## **Putting it together**

Investment analysts appear to think that reaping the rewards of computer-assisted distance learning is a no-brainer. Convert your content to digital form, throw it up on the corporate intranet, and immediately save millions in travel, bricks and mortar, and instructor salaries while training all those IT workers everyone's needs.

Alas, real life is not so simple. eLearning won't work well unless we maximize learner choice, encourage participation, link learning goals to personal values, set positive expectations, prepare learners, employ genuine and empathic coaches, put learners in charge of their own learning, explain what the competence is and how to acquire it, break goals into manageable steps, provide opportunities to practice, give frequent feedback on performance, rely on experiential methods, support with groups and mentors, model best practices, encourage the application of skills on the job, and develop an organizational culture that supports learning.[2] Put a CBT program on autopilot and it rapidly morphs into shelfware.

## "Knowledge Management"

"Information and knowledge are the thermonuclear competitive weapons of our time. Knowledge is more valuable and more powerful than natural resources, big factories, or fat bankrolls," writes Tom Stewart In Intellectual Capital. If your company knew what your people know, profits would soar through the roof.

Get your crap detectors out. Anything this valuable generates hype beyond belief. "Knowledge management" itself is an oxymoron: knowledge is unmanageable.

Let's call knowledge "know-how," to emphasize its practicality and informality. Rather than managing know-how, what's really important is to generate it and to put it to use:

1. creating know-how takes slack time, trust, and an environment conducive to teamwork and communities of practice.
2. putting know-how to good use entails making maximum use of information that adds value for customers and handing off everything else.



Different situations call for different means of leveraging intellectual capital. The consensus is that most organizations should pick this low-hanging fruit:

- Set up a corporate yellow pages database that describes who knows what & how to find them
- Establish a best practices system to capture lessons learned
- Formally gather and maintain competitive intelligence
- Implement groupware and an intranet for collaboration and sharing
- Encourage experimentation, don't punish it
- Internalize a spirit of sharing and collaboration.

## Just do it

Free or cheap software is so plentiful that virtually anyone can prototype a learning or know-how application for next to nothing. As part of our research, we've experimented with video conferencing, shared applications, collaborationware, shared calendars, threaded discussions, chat networks, buddy lists, chatterbots, list servs, web logs, surveys, and more. For free. Do it, try it, fix it.

Every knowledgeable person is a potential eLearning author. Anyone with good clerical skills can knock out eLearning web pages almost effortlessly. I'm writing this with pre-release Office 2000. Every application supports on-line collaboration. Word 8.0 spits out HTML pages that look great (although they may be a bit convoluted underneath). PowerPoint publishes a presentation to the web with a couple of keystrokes - including streaming audio narration!

## Let's eat!

Learning is food for thought. Elliott Masie describes classroom events as the gourmet meal of training. They're fun, but you wouldn't want to make them your steady diet; they're expensive. Elliott also talks about junk food training (empty calories) and the need to stamp expiration dates on learning just like milk cartons at grocery stores.

While talking about the future of learning, Internal and External Communications' Suzanne Biegel started a riff on learning as food. I've expanded the analogy to dramatize the differences between conventional training and eLearning.



### Training Diner 1980

- Nothing à la carte - all meals take at least 50 minutes
- Limited menu - chef only cooks basic skills
- Nothing is prepared to order
- Open only at meal times
- No self service - the waiter delivers the meal when it's ready
- No take-out - learn in the classroom, not on the job
- Unneeded fat - e.g. travel, rehash what's known, overkill
- No substitutions -you eat what everyone else eats
- No eating between meals - learn only in class
- Eat your peas - because you

### eLearning Bistro 2002

- Smorgasbord - choose what you want
- Stay as long (or little) as you like
- Broad selection -- food for everyone's tastes
- Chef also prepares dishes to order
- Salad bar, desserts, and other items are self-service
- Eat at the table, at your desk, at home, while commuting
- Eat when you're hungry, open 24/7, have a snack
- Attractive, wholesome, fresh ingredients draw you in

should, not because you want to

- Wine choice is "red" or "white" of unknown origin
- Menu is "conventional" - and therefore out of step with the times
- Frozen ingredients - for convenience of the kitchen

- Menu is experimental, seasonal, accommodating
- Less fat/more fuel - more signal/less noise
- Waiter can describe six boutique chardonnays for you

If you were joining a new company, where would you rather eat?

## Next

Predicting the future is like teaching a pig to sing. You'll never do it, it's a frustrating experience, and it's not much fun for the pig either. Nonetheless, it's valuable to speculate on the possibilities. "To create the future, a company must first be capable of imagining it," Gary Hamel and C.K. Prahalad tell us in *Competing for the Future*. "Scenarios aim to stretch thinking about the future and widen the range of alternatives considered," writes Harvard's Michael Porter.

So, what can you do about all this? Use this material as a launch pad for envisioning your organization's eLearning scenarios.

Some organizations find "scenario learning" useful to drive this process. (The open box in my diagram represents mixing ideas together and thinking out of the box.) This needn't take a long time. At the end of the day, you prepare newspaper stories from the future. Some groups mock up a future Annual Report. The written outcome is always less important than the journey that leads to it and the controversy it creates. The more widely shared the conversation, the more thorough the awakening.

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## Author

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## Links

### [Web acknowledgements](#)

Expanded discussion of these themes in PowerPoint, [short](#) and [long](#) versions. Great stuff. But not advisable unless you have a fast connection to the net and are using Internet Explorer.



[The Learning Portal](#)

Also, my current [links](#) for learning and knowledge management.

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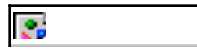
[1] New developments appear so rapidly that I've given up trying to describe them. Last month I hypothesized a wearable PC - voice-driven, size of a pack of cigarettes, i-glasses instead of a screen. This morning's *New York Times* had a picture of IBM's prototype of my fantasy.

[2] Laundry list from Daniel Goleman & Consortium for Emotional Intelligence.

Jayhoo!

Google

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