

The MASIE Center



**The Future of e-Learning Models and
the Language We Use to Describe
Them**

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Executive Summary

I. KEY FINDINGS

While a more expansive definition of e-learning has been much discussed, requirements are now emerging that seek to make real some of those ideas (e.g. performance support, augmented reality, on-demand personalized instruction).

While cultural change continues to be cited as one of the main hurdles to successful implementation of e-learning, no e-learning vendors seem to be packaging change management with their products.

M-learning continues to gain buzz and momentum with the following as particularly visible interest points:

- “M” means mobile – it doesn’t have to mean connected.
- People are looking for content beyond simple Flash
- Device selection questions continue with much confusion around features
- Multimodality and its design implications
- The falling boundaries between, learning, training and performance support
- How to sell the idea up and down in your organization
- Security – but not sure what that means
 - Transmission
 - Data
 - Physical security

Economic models for selling e-learning will have to shift away from ‘catalog’ shopping to a service-oriented model.

Gaming and simulation are poised to make huge impacts in this market space.

Copyright and other legal issues pose potentially great problems for the future of e-learning.

The ‘course’, as a meaningful unit of instruction, may well be doomed.

The cell phone is almost universally considered a learning device.

A continuation of the move toward “pay as you go” could actually allow smaller shops to get up and competing by providing lower barriers to entry.

Globalization is forcing a hard focus on US-centric practices and content.

This research will continue.

II. Executive Summary

*"You see, Dad, Professor McLuhan says that the environment that man creates becomes his medium for defining his role in it. The invention of type created linear, or sequential thought, separating thought from action. Now, with TV and folk singing, thought and action are closer and social involvement is greater. We again live in a village. Get it?"
The New Yorker Magazine 1966 - The Medium is the Massage*

There is currently a game available called [Wild Divine](#). The game is described as "inner-active" and uses a biofeedback system to test how well you can control things such as breathing and heart rate in response to certain events. There is a new P2P program called [Skype](#) that allows you to make Internet-based phone calls from computer to computer anywhere in the world. SMS (short message service) traffic for the United Kingdom during February of 2003 passed the [55 million mark](#) for average daily traffic. The NPD Research group [reported](#) that total U.S. retail sales of video game hardware, software and accessories grew 10 percent in 2002 over 2001 and that the video game industry generated \$10.3 billion in sales, surpassing the previous record high of \$9.4 billion in 2001. [IDC](#) reported in July of 2003 that "World stock markets will continue to languish in 2003...investment in training companies will remain soft and mixed, reducing "hype" and putting a premium on capability." So, markets are uncertain, new technology is emerging which could re-shape the way in which people communicate and sectors of the market which have long been marginalized are approaching dominant levels of financial success. Sounds like a great time to look to the future.

A Google search on the terms 'future' and 'e-learning' returned a dizzying 912,000 results! Given that, it should be noted that this research seeks neither to be definitive nor necessarily complete. It does however seek to identify some important trends shaping this space and some challenges confronting it. Most importantly, it seeks to contribute to and help further the global discussion of the future of e-learning – the sheer scope of which should hearten those who consider learning a most important human activity.

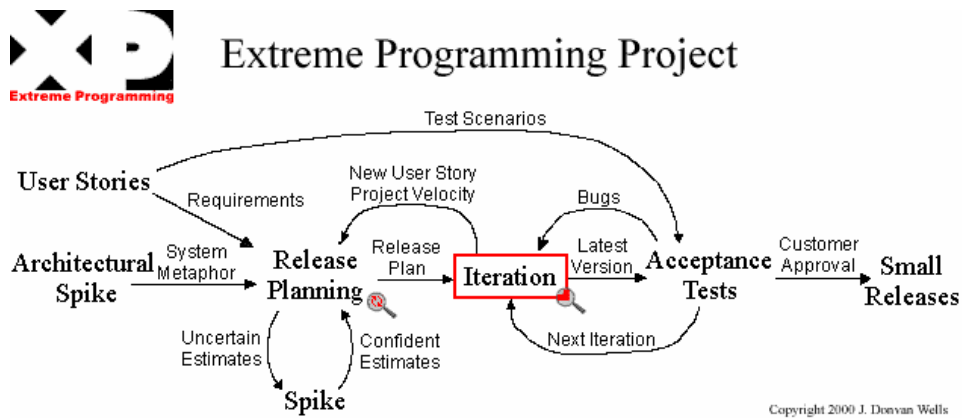
This research could be troubling to some. Not for its content per se but for its methodology. A statistically significant group was not a goal of this project. The e-learning space is so varied and includes so many different audiences representing myriad interests that statistical studies typically only represent narrow or less than complete slices anyway. The way in which the interview portion of this research was conducted then had more to do with being able to add some depth to the more 2D pictures typically presented. The research methodology itself was also intended to be part of the project in a way not normally done.

The methodology used to conduct this research should also be considered – and was intended to be – as part of the project. If we are to master or harness in some degree the potential of these new technologies and the possibilities they bring, then we must begin to use them. Anthropologists believe in "living in the village" to truly understand it; thus the idea behind using a blog as an organizing schema for this project. The experience of

interviewing subjects in a blogging environment begs for further practice-based research. An example of a new dynamic here would not only be the ability of the general public to view the research as it is being conducted but to actually comment on it and potentially alter its course by so doing. It is certainly not beyond the pale to think of this as a new cousin to oral histories or ethnographic studies. The day is probably short in coming when we use SMS or moblogging in similar fashion.

The specific focus of this research has behaved much like its subject in that it has been evolving even as it was being studied. While the original proposal called for the establishment of a baseline model of current e-learning what was discovered was some of the more prominent vectors at work in the e-learning world. The research led to an early conclusion that attempting to build these forces into one or more coherent models would be counter-productive and instead the focus would continue along the lines of discovering those powerful forces at work in this space.

The original plan also included a segment proposing an examination of the language used to describe current models. That piece is not gone but is rather slated for a separate piece of follow-on research. What remains is an honest and at times uncomfortable examination of e-learning, its assumptions and potential for the future. This research and [the blog](#) that contains much of the data and will serve as a continuing rally point for this topic, and there are some incredibly interesting ideas to rally around. Elliott Masie has in fact agreed to allow this research project to continue to investigate the future of e-learning even after these initial findings are reported at Techlearn 2003. This is an important development in that it will allow the research to exist in almost an [extreme programming mode](#).



Current Deployments, Problems and Cultural Issues

When asked about why their particular organizations had currently deployed e-learning in some form, survey respondents' answers ranged from those groups producing e-learning to those who view its power as transformative to those for whom e-learning fills what has come to be the more expected roles of extending the reach of training.

One cultural/organizational problem that was mentioned was a difference in thinking about how to use the e-learning system. A respondent mentioned that employers wanted to "use the technology to control and track learners, rather than motivate learners." This sounds like a common complaint heard regarding the design of LMSs in the first place –

namely that these are systems built to administer courses not provide learning. This design seemingly flies in the face of users' experience with the Internet and the Web in general – the norm being one of almost complete user control over a process. One unmet need that was identified by multiple respondents deals with the cultural problems which often accompany implementations of e-learning.

Interestingly though no respondents identified e-learning vendors who were attempting to package cultural or organizational change management with their traditional product lines. Most respondents, in discussing this issue, mentioned that vendors were only providing marketing help for internally launched courses. One respondent hammered this point by asserting that “trainers don't know how to do market research...they wait until the course is launched and then complain about drop-out rates.”

Economics and Law

The lead question in this category dealt with respondents' feelings in terms of what would be the dominant economic model for selling e-learning 10 years in the future. The majority of respondents agreed that the model of the future would resemble the Web services market much more than the current situation. The downfall of the current models focusing on numbers of users or number of courses purchased was predicted multiple times. Key phrases here included “pay-as-you-go” and “transactional models.” One respondent described vendor pricing models as a “pet peeve” and stated that vendors “still want to sell butts in seats and sell their entire library” but that their model needs “to be something like how many clicks do we pay for, and how do they sell things by the chunk.”

Other respondents indicated that they were already seeing shifts of this nature and that some companies were already benefiting from them. “Many of these new vendors do not call their products learning technology and consequently fly in under the radar of the established companies” was how one description read. This “new breed” of “Business Process Management” vendor is starting to take over ground typically held by training and e-learning companies. Product offerings from these new companies offer what Sam Adkins refers to as “[workflow-based e-learning](#).”

Regarding the pricing of e-learning, one respondent asserted that while “the cost of developing an hour of DL must go down” so too must “companies must work on ways of producing effective & engaging content, and interfacing to new technologies (e.g., simulations, PDAs, embedded training.)”

Some respondents also noted that the corporate/institutional timelines for purchasing decisions related to e-learning were stretching out; “Very senior managers have been suspicious of training for a long time. They're now downright hostile. Training departments may not exist in a decade as the general management of knowledge takes over.”

A range of responses was generated by a comment Elliott Masie had made during a summer meeting of the Consortium. Elliott remarked that he thought one future look for LMSs might resemble that of Amazon.com That is - an interface that customizes itself on the fly to the learner based on needs, past performance, etc. The responses included:

- “That model must succeed in order to realize the dream of training tailored to individual learners' needs. I think it is more of a long-term thing.”

- “Desirable - yes, but as the lady sez', the Devil's in the details. Feasible in the short run - depends on what "short run" means. Actually making it work is, as they say, a non-trivial task.
- “Absolute nonsense.”

The majority of respondents in this research were nonplussed on the issue of legal challenges which may impact this market; perhaps due to facing other, more seemingly immediately pressing issues. The respondents who did voice opinions on this topic however, did so at length and with passion. Two main issues occupy the space in this camp; those related to copyright and those related to patents.

This area is clearly one in which e-learning vendors, purchasers and users should all develop, at a minimum, a higher awareness. One could look at the schedules of the recent e-learning conferences and see a dearth of sessions addressing this important vector.

Globalization

An area which generated a great amount of heat was clearly the one which dealt with issues of globalization and the problem of U.S. centric content. One respondent recounted a story heard at TechLearn in 2001 of “Centra sessions run by a US oil company into the Middle East using synchronous learning on a Friday when everyone was in the mosque.” Translation also continues to be a problem. The white hot core though of this area is the light in which U.S. culture is view from an international perspective. It was described by various respondents as “inflexible”, “arrogant”, and suffering from hangovers from the current U.S. foreign policy and from an ignorance of international legal issues.

e-Learning and the University

Respondents were asked to consider whether they saw a convergence or divergence between the worlds of corporate e-learning and e-learning in the higher education field. One was particularly frank, stating that “the corporates [sic] see the word ‘university’ as aspirational [sic], yet universities have little to offer in terms of content, pedagogy etc. Higher education is driven by people who don’t really want to teach – they’re normally introverted researchers – that’s why they’re in Higher Education! Both sides will wallow in their own primitive ideas, while the kids get on and use the technology.” Other responses focused on the partnerships between the corporate world and higher education. One respondent made the point that while an ever-increasing “numbers of students are attending non-traditional institutions, such as the University of Phoenix” there have also been some high-profile miscues such as “California Virtual University, Columbia-Fathom, and Open University U.S.A.” and some such as Universitas 21 and WGU, which “live on life support.” This could be seen in several lights including a clash of cultures or simply a reflection of the larger tech bubble which gave rise to some of the more prominent mis-marriages in history. The success of an organization like [University of Phoenix](#) however, argues for more research into the factors which make this particular business so attractive to so many students.

Technology

This section examined potential areas of concern in the e-learning world specifically related to new and emerging technologies. One question in the interview focused on how

the people that [Marc Prensky](#) refers to as “digital natives”, will change the face of e-learning. The question was; what will happen to training departments when kids who have been raised with a PS2, broadband access, Pocket PCs, as their baselines hit the corporate world?

Respondents offered provocative predictions:

“They’ll be despised. But these kids will inherit the earth and change it anyway. This is simply a generational thing. HR is dominated by techno phobic people who want to keep themselves in employment, no matter how inefficient the process turns out to be. These kids will have gone through 13-18 years of dull classroom teaching and know what a waste of time most of it can be.”

and

“As you can imagine, it won't be pretty. I am wavering - either the training departments will be completely changed or they will be ignored. It's hard to think of learning in the future as something that is packaged and delivered by a corporate training department.”

The consensus among all the responses is that training departments will certainly be changing probably drastically and perhaps being absorbed into other parts of the organization completely.

M-Learning

This is one area clearly receiving much attention. The future of this area however, is probably murkier than almost any other since it is my definition, more technology dependent than other areas. It is also an area that is open to a definition of its parameters. One respondent describes a future e-learning “environment” as something approaching the Matrix.

Particularly visible interest points:

- “M” means mobile – it doesn’t have to mean connected.
- People are looking for content beyond simple Flash
- Device selection questions continue with much confusion around features
- Multimodality and its design implications
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Gaming and Simulations

Given that gaming, game-based learning and simulations are highly visible [memes](#) currently, respondents were asked to discuss their impact on the world of e-learning.

“Fundamental” remarked one respondent. A DOD respondent noted the power and at least potential pitfall in the employment of this technology; “They are close to making a

major impact, but developers & R&D types need to realize we don't let Army second lieutenants loose in live training events without observer/controllers – yet if we don't put some sort of AI O/C into game-based simulations, we are in essence doing just that. We are in danger of endorsing negative training.”

There is a growing body of research being published on the positive aspects of video/computer games. Recent [articles](#) which outline positive health benefits of gaming are accompanied by recent books such as those authored by [Clark Aldrich](#), [James Paul Gee](#) and [Marc Prensky](#) which detail the positive educational and cognitive aspects of learning through games and simulations.

e-Learning and Design

A quote from William Gibson's latest book, *Pattern Recognition*, was used to focus respondents' attention on the place of instructional systems design (ISD) in a future that feels as if it is moving at an ever-increasing pace.

The following questions were then asked:

- How do you see ISD surviving in a world with very little 'now'?
- Do you see the 'course' surviving as a meaningful unit of instruction?
- How can ISD survive / add value in an environment that demands dynamic updating?

Respondents typically offered less than sanguine views, the briefest reply to the question of whether ISD will survive being; “it won't.” Some stated that it would survive but not outside of a 5-10 year window; “but it won't simply die, it will morph imperceptibly...its decline will not be seen equally in all places; it will linger on much longer in rigidly structured cultures and learning environments...corporate and military learning, the first to really embrace it with open arms, will be the last to let go.” Other also offered chances for ISD, in some cases, focusing on the risk mitigation aspects of the process although allowing that even that will be “compressed and quick.” The “course” however, was given few chances to survive.

VII. CONCLUSIONS

There is truly danger and opportunity represented in the future of e-learning. The danger it seems comes mainly from ignoring the powerful vectors now acting either closely or at a distance on the e-learning market. These range from the need to shift pricing models, to the increasing pressures of a global economy to issues concerning copyright and patent law – the effects of which may not fully manifest themselves for years.

The goal of this report was not to provide a clean ending to the story of this research but rather should be viewed as a progress report. There is still a world to be covered. Recently the BBC has recently [released plans](#) to digitize and make public its entire archive of content. Programs like ['bit torrent'](#) are offering new ways to distribute content while minimizing the impact on bandwidth. Movements like [machinima](#) are re-writing the precepts of content production. The surface has also just been scratched on such technologies as RSS, wiki, augmented reality, IM, and the power of an iPod as a learning device.

More than ever, what you say about the future of e-learning depends on how you define it. Seemingly for the traditional attempts to replicate classrooms and courses online, the future is fairly bleak. If however, you define e-learning as an environment, rich in context, interaction and opportunities for collaboration - then the evidence seems to point to a bumpy road but with a worthy destination.