



e-Learning & distributive training are great but is there a downside?

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ABSTRACT

E-Learning stands at the edge of a worldwide educational market currently worth \$2.1 trillion, according to W.R. Hambrecht & Co. and this environment encompasses a variety of mediums today such as videoconferencing, web-based training, satellite broadcast, streaming media and audioconferencing. Each medium provides a unique learning experience and I will briefly introduce them along with some of the **CAUTIONS** to keep in mind regarding this tremendous and fast paced e-Learning market.

TREMENDOUS MARKET GROWTH

“The Internet is a powerful new means of communication. It is global, it is fast, and it is growing rapidly. Reaching to the far corners of the earth, the Internet is making the world at once smaller and more connected, transmitting information at nearly real-time speed. An estimated 377 million people are currently using the Internet, only half of whom are in the United States. The World Wide Web is bringing rapid and radical change into our lives—from the wonderfully beneficial to the terrifyingly difficult” (Web-based Education Commission, 2000, p.9).

For education, the Internet is making it possible for more individuals than ever to access knowledge and to learn in new and different ways”(Web-based Education Commission, 2000, p.9). In addition to the number of people using the internet, the overall market is projecting explosive growth as seen below:

- Education & Training are the second largest sector in the US economy at about **\$815 billion**.
- US Market for Streaming Media will exceed **\$2 billion** by 2004.
- Videoconferencing Potential Revenue **\$4.93 billion** by 2007 (11% ISDN, 87% IP & 2% ATM).
- Web conferencing Potential Revenue **\$797.5 million** by 2007.
- Global e-Learning market expected to grow to **\$365 billion** by 2003.



(Sources: Web-based Education Commission Report 2000, Streaming 4 Business Mag. 2000, Frost & Sullivan 2001)

“By 2003, Forrester [Research] projects that worldwide Internet commerce will grow to \$1.8-\$3.2 trillion. The educational content market is a huge business as well. Total U.S. spending each year on textbooks and instructional technology content (e.g., software and online course materials) amounts to approximately \$4 billion with the overall total U.S. Education & Training market standing at about \$913 billion. This includes but not entirely limited to simulation training, vocational training, association training, elementary, secondary (K-12) post secondary and higher education. Online content currently represents only a fraction of that market, although many expect the Internet to both capture a large share from offline content sources as well” (SunTrust Equitable Securities, 2000, p.6).

THE E-BREAKDOWN

The e-Learning industry can be broken down into asynchronous and synchronous learning for better understanding. Asynchronous e-Learning is when training takes place in different time frames and information is accessed at the trainee's convenience. Some examples of asynchronous training include:

- Self-Paced Computer Based Training (CBT)
- Internet / Training Delivered via Streaming
- Audio / Video Cassettes
- Bulletin Boards
- Electronic Mail (E-Mail)
- Postal Service

Asynchronous learning has its advantages and disadvantages such as the following:

Advantages:

- Convenient
- Accessibility
- Reusable Material
- Self Paced

Disadvantages:

- No Immediate Feedback
- Motivation depends on students
- Isolation of Learner

On the other hand, synchronous e-Learning means that training takes place at the same time and information is accessed instantly. This form of e-Learning provides more interactivity for a learner-centric world. Examples of synchronous e-Learning include:

- Audio Conferencing
- Satellite Broadcast
- Video Teleconferencing
- Internet Conferencing
- Chat Rooms

Synchronous learning has its advantages and disadvantages such as the following:

Advantages:

- Instant Feedback
- Real Time Learning
- Can adjust based on feedback

Disadvantages:

- Not Self Paced
- Time Zone Problems
- Inconvenient to Learners

Asynchronous and synchronous e-Learning are transported on a variety of mediums. Over the past 10 years I've watched and trained clients on how to effectively use learning mediums to convey their message or training in the most effective manner. I've found over this span of time that some users tend to make the e-Learning experience more complicated to encompass the latest tools and noteworthy toys of the trade. This is not the most efficient way to convey a message or conduct training. For example, audioconferencing has advanced to allow full-duplex conferencing with instructor control features such as voting, digital recording and play back for later use. The effective use of this tool / medium could convey a powerful and enriching e-



Learning experience for those who chose to plan out their training accordingly. So, planning is key to a successful implementation of e-Learning.

WHICH ONE CAN I USE?

Asynchronous and synchronous e-Learning requires an understanding of the tools, knowing your users, simplistic design and detailed planning. It goes back to the idea of walking, while chewing gum and rubbing your stomach at the same time. Some of us can do 2 of the 3 but very few can do all 3 at the same time. So, keep it simple by using and planning your e-Learning tools accordingly, validate feedback and make sure the use of multiple mediums function seamlessly as one. The following are examples that will help you in the proper medium selection for e-Learning:

- **One-Way Communication** = E-mail, Streaming Video, & Satellite
- **Two-Way/Interactive Communication** = Videoconference (VTC), Audioconferencing & Satellite
- **Timely Dissemination of Information** = VTC, Audio, E-mail, Streaming Video & Satellite
- **Communication to Several Locations @ Once** = VTC, Audio, E-mail, Streaming Video & Satellite
- **Visual Clarification for one or multiple locations** = VTC, Streaming Video & Satellite

CAUTION ... “E” AHEAD

Now that you've had a brief overview of asynchronous and synchronous learning..here comes the note of **CAUTION**, which individuals and organizations should keep in mind when evaluating and implementing an e-culture. Some of the following are just a short list and by far not an all-inclusive list because each organization and culture will differ in how they perceive e-Learning.

- **Lack of Network Planning** – The lack of network planning can kill your e-culture if you have not done the proper analysis and don't let the bill payer or latest industry toy drive common sense out the window. *P.S. Throwing bandwidth at a problem does not fix it in most cases.*
- **Slow Real-time Interaction in some cases** – Response time for feedback and tutorial help is critical.
- **Cost of Implementation / New Hype** – Don't be so eager to jump on the next wave without proper analysis. It may cost your organization more money to fix or undo this bad decision.

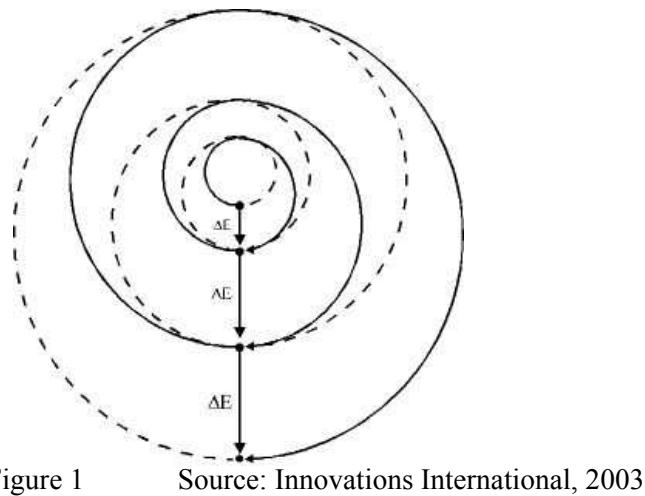
- **Staff / Faculty Concerns** – Job loss due to e-Learning, compensation for additional work loads with no organizational support are concerns that will need to be addressed within your organization.
- **Social Factor / Life Long Experiences** – Is there a correlation between the physically isolated technological society and an increase in violence? For example, a decade ago, children spent more time playing, and learning to interact with their peers, than playing on a computer as an isolated individual. What will be the social cost of this? How does the old way of making friends evolve in the e-Learning environment?
- **Lack of Personal Time / Time Management / Overload** – A 24 hour e-culture day is becoming the norm. There are pagers, palm devices, cell phones, e-mail and computers, which has migrated our society toward an instant access anytime for anyone at anytime culture.
- **Spell Check Syndrome™ / Literacy** – The **Spell Check Syndrome™** deals with learners who don't have the foundation to grammatically put together coherent documents and spell words correctly without Spell Check. There's a loss in general grammatical skill sets across the board.
- **New Medical Issues** – Carpal tunnel syndrome and any other related ailment from the emission of radiation from technological devices. These studies are just starting to hit the press, so keep an eye out!
- **Isolation of Learners** – There is a loss of real world communication between learners. For example, recently during an on-line class session...I sent an e-mail asking if our group could meet at the library to facilitate the completion of our group assignment. A few minutes later I received e-mails from most of my classmates agreeing, but one classmate would be unavailable to attend...she was in Australia!
- **Parental / Self Control** – The Internet is a tremendous tool but parents and scholars need to provide active supervision because the following sites are available on the web besides e-Learning: sexually explicit sites, alcohol & drug related sites, violence/hate & intolerance sites and gambling sites. For example, upon typing the word “videoconferencing” in your browsers search field...most likely it will pull up more sexually explicit information links than you could imagine. Today most companies can monitor users access to these sites and they maintain a no tolerance policy, which means the downloading, accessing and sending of explicit material will cost you your job!

VALUE IN “E”!

YES, e-Learning is wonderful but the previously listed areas will hopefully educate all of us on the **CAUTIONS AND DOWNSIDES** to watch out for in an information rich society. Don't be afraid...just be aware! e-Learning is here to stay and it will continue to grow at a phenomenal rate because of the following reasons:

- E-Learning is Cost Effective
- E-Learning Saves Time
- Training Can Happen Anyplace, Anytime for Anyone
- Improved Skill Sets
- Improved Efficiency
- Improved Learning Opportunities
- Closes the Gap on the “Digital Divide” for the “have-nots”
- Facilitates a Continuous Global Learner-Centric Society

Presently, the e-Learning industry is in an empowerment spiral growth rate, which represents a series of stretch projects / lessons learned that continually expand the empowerment of an individual, a team and eventually an industry according to Daniel Guillory, Vice President, New Business Development for Innovations International as seen in figure 1.



As we proceed with **CAUTION** we will need to expand and share our knowledge base, which will improve our e-Learning culture.



BIOGRAPHY

Reggie Smith III currently serves as the Deputy Director of Learning Technologies for the Training Transformation Initiative (DUSD/R) for Alion Science and Technology Corporation.

Other prior positions include Vice President of Operations, Program Manager of Enterprise Managed Videoconferencing Services, Manager (National Guard Support) of Advanced Distributed Learning (ADL) Co-Lab, Assistant Manager of Network Operations (GuardNetXXI), Videoconferencing Network Engineer, Videoconferencing Manager & Satellite Traffic Manager.

Smith, who has a bachelor's degree in English/Communications from Lincoln University in Pa., and a master's degree in International Management at the University of Maryland University College. In addition to contributing articles to leading publications such as *e-Learning Magazine* and *Web Techniques Magazine*, he is currently working on his first book and serves as Contributing Editor for *e-Learning Magazine*. He may be reached via e-mail at ersmith@alionscience.com

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