

E-LEARNING: THE NEXT WAVE OF EXPERIENTIAL LEARNING

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ABSTRACT

Technology is changing the way people communicate and will revolutionize education and training in the 21st century. This paper describes the rapid growth in e-learning and discusses the demand and supply forces creating that growth. One of the most intriguing factors is argued to be its potential for experiential learning in business education through the use of a wide assortment of "free" internet applications. Examples of experiential internet applications in finance are presented.

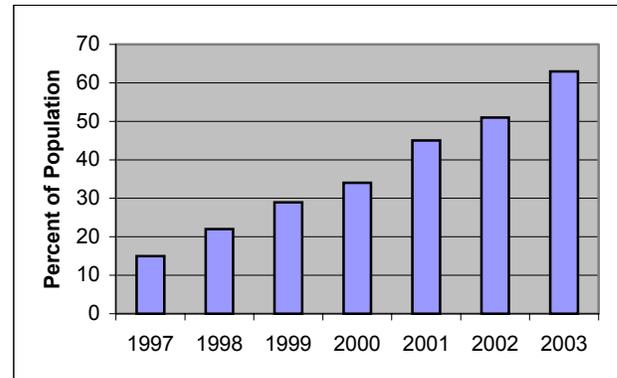
MARKET SITUATION: TRENDS & OPPORTUNITIES

E-learning is one of the fastest growing markets in education and training. E-learning is not just distance learning or on-line learning. E-learning is the delivery of content via all electronic media, including the internet, intranets, extranets, satellite broadcast, audio/video tape, interactive TV, and CD-rom. But the biggest growth media is clearly the internet.

The market for internet applications and services is growing rapidly. IDC estimates that by 2003, 25% of all U.S. B2B purchases will be done online, and 63% of all Americans will be using the web. The internet has emerged as the most powerful medium for providing information, communication, and facilitating commerce. By the end of 1998 there were 67 million web devices worldwide and this figure is projected to reach 346 million by the end of 2003, with 502 million users, representing a compound annual growth rate of 34%.

FIGURE 1

Internet User Growth as a Percentage of Total U.S. Population



Source: IDC, U.S. Census Bureau, and WR Hambrecht

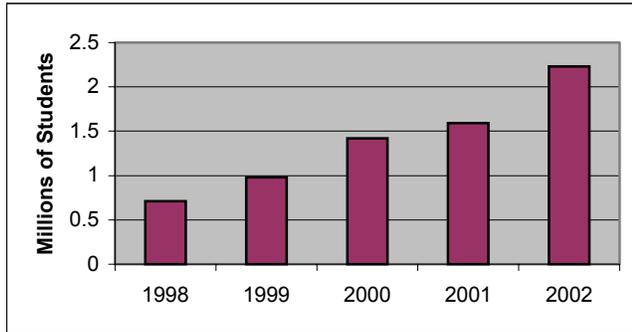
The huge growth of the internet provides a significant global opportunity for e-learning. The market for American higher education is a \$200 billion industry, and for-profit companies are working with traditional institutions to take advantage of this market. There is a growing national trend by universities to develop high quality internet courses. To accomplish this goal, universities are partnering with companies. As an example, Columbia Business School has teamed up with Unext.com, a company that sells online courses to corporate employees. It is expected the internet will become the main point of access for educational content, delivery, and service. (U.S. News and World Report, Jan. 24, 2000).

Distance enrollments at four-year accredited colleges and universities have increased dramatically. In 1995 only 400,000 students took part in distance learning courses (Independent Study Catalog, National University Continuing Education Association, 1995). In 1998 distance learning courses grew to 710,000 and, according to International Data Corporation (IDC), the number is expected to more than triple and reach 2.2 million by 2002.

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FIGURE 2

Distance Learning Courses Take Off, Fueled by Internet Growth



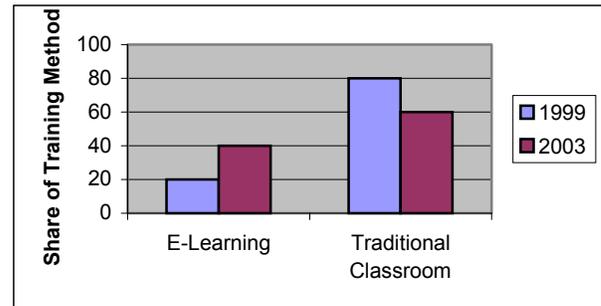
Source: IDC report, Online Distance Learning in Higher Education, 1998-2002

The same phenomenon is occurring in the corporate training market. According to training magazine, the market for formalized learning within U.S. companies is \$62.5 billion. The traditional instructor-led classroom approach as a delivery method is declining as a percentage of the total market. Between 1997 and 1998 training purchasers reported that technology-based IT training gained 5 points in market share and the technology-based percentage of IT training jumped to 24% in 1999. (IDC's Survey of Education Buyers, 1998)

vendor *alone*-UOL Publishing-says that it's on track toward a goal of enrolling 1 million learners by 2002 in its Web-based courseware campus." There is clearly a real opportunity for an educational institution to enter the e-learning market and growth with it.

FIGURE 3

Market Share Growth of E-Learning versus Traditional Classroom Training



Source: Corporate University Xchange, 1999

WHY IS E-LEARNING GROWING?

Growth in e-learning is occurring because of powerful demand and supply side factors. These factors are summarized in Table 1.

TABLE 1
Demand and Supply for E-Learning

| DEMAND FACTORS | SUPPLY FACTORS |
|---|---|
| <ul style="list-style-type: none"> • Cost effective (lower price) • Flexible access • Emailing, e-chatting, e-biz are becoming normal forms of communication • Eliminates barriers of distance for globally distributed workforce • Need for just-in-time training • Allows for individual differences in learning style • Permits alternative pedagogies – self-paced, interactive with audio and video, simulation & experiential. | <ul style="list-style-type: none"> • Growth of internet • Computers are becoming standard household items • Growth of B-to-B and B-to-C applications • Increasing bandwidth • Improved delivery platforms • Improved interactivity and media-rich content • Standardization of technology is reducing compatibility problems |

A survey by Corporate University Xchange concluded that the overall share of traditional classroom training will fall substantially and the corporate e-learning will double from 20% to 40% by 2003. IDC predicts the corporate e-learning market will grow at an 83% annual rate and reach \$11.4 billion by the year 2003.

A September 1999 article "Harnessing Online Learning" in Training and Development stated "The momentum behind the industry's migration to online learning is astounding...One WBT (web-based training)

On the demand side, education in the form of e-learning has the potential to be delivered at substantially lower cost. Significant savings are realized by reducing the need for expensive bricks and mortar classrooms, office space, student dormitories, travel and meeting time. Flexible access to programs, that are available in 24x7 format, without geographic constraints, is especially attractive to the part-time and non-traditional student. Traditional students in higher education today, ages 18-22,

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comprise less than 20% of all students. The focus of “knowledge” as a competitive advantage, rather than an HR training cost is increasing the demand for timely training and education in business. Individuals and businesses are becoming more comfortable with digital communication, and the trend is exponential. Diversity is increasing the need for different pedagogical approaches to accommodate difference in learning styles. E-learning allows for difference in learning methodologies from self-paced to synchronous.

On the supply side, the huge growth of the internet provides the delivery vehicle for education. Computers are becoming a standard household item. Emailing and e-chatting is becoming a normal form of communication. Increasing bandwidth and improved delivery platforms make e-learning a more practical and efficient alternative. There is much greater selection of high quality e-learning products and services, including improved interactivity and media-rich content. Standardization of technology is reducing problems of compatibility and usability of e-learning products.

EXPERIENTIAL E-LEARNING APPLICATIONS IN FINANCE

Another catalyst for growth in e-learning, is the possibility of applying internet applications for simulation and experiential learning. The world wide web is full of “free” experiential learning exercises that are ripe for effective educational applications. Internet business applications are extensive in all functional areas: finance, marketing, and management. The only limit is the creativity of the instructor.

In finance, there are numerous web sites that provide tools (calculators, analyzers, trackers, screening devices, charting, etc.) necessary to make informed business and personal investment decisions. These tools are both simulations and experiential applications. An excellent example of a reputable site, focused on financial investment, is Smartmoney.com. SmartMoney is published jointly by Dow Jones & Company, Inc., and Hearst Communications, Inc.

As an example, the following *tools* are available at (www.smartmoney.com) and may be used to develop “creative” experiential exercises to teach investment. All currently free.

Your Portfolio:

Tracks the performance of an individual's own investments and evaluates the asset allocation. Creates up to 50 separate portfolios with 50 stock symbols in each portfolio.

Map Your Portfolio:

Generates a visual map of how individual's investment portfolios are performing in relationship to each other.

Sector Tracker:

Evaluates the performance of up to 120 industry groups in 10 broad market sectors that the individual selects.

Asset Allocator:

Evaluates the allocation of an individual's portfolio with regard to the appropriate mix of assets, e.g. cash versus small cap, etc.

Mutual Funds Map:

Tracks and compares, with a visual map, the performance of the mutual funds selected by an individual.

Fund Analyzer:

Evaluates the best mutual funds in an individual's portfolio, ranking them by return, rating, fees, and volatility.

Buy or Rent - Mortgage Calculator:

Calculates an individual's monthly payments and analyzes the mortgage-interest deduction. The individual enters the down payment, mortgage amount, interest rate, and the term of the loan. The calculator is designed to do three things: (1) Calculate a simple monthly payment; (2) Figure the effects of prepaying the mortgage; and (3) Analyze the composition of the monthly payments in the future in terms of interest versus principle.

Home Buying Worksheet:

Evaluates how much an individual can afford to spend on a house. How much one can afford is a function of two basic inputs: How much one can borrow and the down payment. To make this assessment the worksheet requires ten entries, including such factors as: gross income, debt payments, real estate taxes and insurance, percent of income devoted to housing, term of mortgage, interest rate, selling costs, etc.

Buy or Lease :

The worksheet will evaluate whether leasing or buying is the better overall investment strategy. Entries include such factors as: price of car, down payment, lease payments, term of lease, rate of return on investment portfolio, value of car at end of lease, etc.

Retirement Worksheets:

Determines if one's current savings strategy will cover future expenses like college tuition for the children and required retirement income. The worksheet provides a graphical calculator to see how one's savings will grow -- and how long it will last after retirement. Other questions evaluated include: (1) How early can I retire? (2) What would happen if inflation took off again? (3) What is the impact on retirement savings of borrowing from a 401(k)? The results are based on about a dozen entries, such as: current age, retirement age, salary, expected growth in salary, desired retirement income, 401k savings, other savings, future expenditures, and inflation.

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Other Tools :

Numerous other tools exist in finance and other functional areas of business. Doing a search on accounting, marketing, operations, or management “tools” is all that is needed to uncover a wealth of interesting experiential learning applications.

CONCLUSIONS

E-learning is not argued to be a substitute for bricks and mortar education, rather it is a highly valuable supporting pedagogy. Bricks and mortar education will always be with us but universities that do not embrace the new technology in the traditional classroom will not be as effective. In this paper, one very important aspect of e-learning is highlighted, i.e. it's potential for *experiential* learning through the use of a wide assortment of “free” internet applications.

Several e-learning applications, well suited for experiential exercise, have been identified in the finance area. Many of these web sites are beginning to be utilized for classroom teaching in higher education as awareness of its pedagogical applications grow. A noteworthy reference is a personal finance textbook forthcoming by Woerheide (2001) that uses numerous internet applications as exercises in every chapter. A more general citation is the e-learning hub by WebCt.com, which has a large on-line community for the purpose of enhancing teaching. WebCT provides an extensive set of tools, simulations, academic discussion groups, homework help, and other on-line resources in all academic disciplines. The power e-learning as an experiential tool needs to be communicated to educators, and one of the best organizations to promote this idea is ABSEL- the national Association of Business Simulations and Experiential Learning.