Part two – E-learning

E-learning markets and providers: some issues and prospects

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Abstract

Demonstrates how digital technologies are affecting the organisational learning process, drawing on material presented to an industry forum. Reviews the rise of the knowledge-based organisation, examines how the Internet has created "e" learning, investigates why organisations are impelled towards e-learning, provides some estimates of the size of the e-learning market and outlines the activities of some e-learning provider organisations. Shows that the corporate e-learning market is undergoing strong growth with a wide range of providers and alliances emerging and some consolidation expected. Organisations now seek metrics for evaluating e-learning and quality benchmarks are recommended.

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Introduction

In November 2000 an Industry Forum was held by the University of Technology, Sydney (UTS) with the specific aim of bringing together users and providers of e-learning to explore a range of issues around e-learning markets and provision. The forum sought perspectives on the market parameters and business models being identified by educational providers. The forum also sought these perspectives from intermediaries such as management consultancies and venture capital financiers. Additionally, contributions on current issues in implementation were requested from major companies recognised as successful corporate users of e-learning. The forum was fully subscribed and was attended by over 120 industry participants. Presentations were received from the University of Technology, Sydney, Cisco Systems, Deloitte Consulting, Technology Transactions/iglobal, SmartForce, and Ernst & Young.

Knowledge and the learning organisation

Global change in markets and organisations has become a central concern for effective managers (Drucker, 1995), as has the management of knowledge (Coulson-Thomas, 1997; Davenport *et al.*, 1998; Fahey and Prusak, 1998; Teece, 1998; Broadbent, 1997).

Digital technologies are clearly altering the strategic perspectives and operational context of many organisations (Castells, 1996; Griffiths and Williams, 1998, pp. 229-38; Giddens, 1999; Dicken, 1998). The transformation of enterprises in this global environment suggests that an organisation's strength is best measured by the knowledge vested in its people (Glass, 1998). KPMG, for example, is investing 1 percent of its global revenues in knowledge management (Power, 2000).

The concept of "the learning organisation" (Garvin, 2000, pp. 3-17) now has a significant bottom-line attraction. The success of an organisation can depend upon its recognition of itself as a social learning system engaged with communities of practice (Wenger, 2000), intersecting its learning with corporate knowledge through leveraging from

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experience (Taylor, 1998), gaining competitive intelligence (Sbarcea, 2000b) or creating internal "intraprises" as the pace of the innovation cycle overtakes that of the planning cycle (Miles, 1998; Pinchot and Pinchot, 1998). Thus organisations seek suitable quick and cost-effective means of transforming the knowledge and organisational practices of their employees. This paper shows that many are turning to e-learning as their strategy for transition and corporate development.

Defining e-learning

The forum focus took an inclusive definition of e-learning as "delivery of training and education via networked interactivity and a range of other knowledge collection and distribution technologies" (Fry, 2000) although some saw only Internet delivery as "e" learning (Bibby, 2000) and others preferred to speak widely of "distance education" that uses a wide range of device independent technologies (Lance, 2000). The value of a diverse approach was stressed by Ernst & Young's chief knowledge officer (Australia), who pointed out that people learn in different ways and that the personnel of organisations can contain many generations, with differing learning preferences concerning the use of technology (Sbarcea, 2000a). Cisco Systems commented that in general its personnel were all happy to accept e-learning on the Internet because they tended to come to the organisation with a technological bent (Gill, 2000).

Paul Henry, international vice-president of SmartForce, the world's largest provider of online training, noted that for some time SmartForce had recognised that the Internet "was going to give us all sorts of capabilities … was going to open up all sorts of doors that had never been opened for us" (Henry, 2000, p. 11). He outlined how SmartForce is moving its business model towards a total Web learning environment to capitalise on the wider range of resources, extensive distribution capacity and possibilities for collaboration now opened up by the Internet.

E-learning was defined by this organisation as an expansion of different elements in the learning process, with a major advantage being that is is highly adaptive. With the Internet, the rate and ease of changing content is much quicker than with the traditional CD-ROM courseware SmartForce has provided. It sees this, plus the scope for customisation and personalisation at multiple levels, as the major advantage of Web-based education and training. In its perspective, the Internet is "beginning to significantly elevate the whole concept of learning", by bringing together richness and extensive reach, developing a move from "point-driven" learning to learning that supports change and transition (Henry, 2000, p. 15). There was consensus in the forum that rich media and personal tailoring would improve the e-learning process, which was also a key finding in a major industry study drawn from the world's top 2,500 companies (Forrester Research, 2000).

Organisational drivers of e-learning

Forum speakers noted that the calibre of personnel shapes the business model, the corporate identity and the actual performance of knowledge organisations. The rapid obsolescence of knowledge and training combined with a need for lifelong training that is cost-effective in delivery and scalable in efficiency were identified as corporate drivers for the use of e-learning. Ernst & Young cited its use of e-learning to reach 80,000 workers worldwide (Sbarcea, 2000) and Cisco Systems indicated e-learning was used for 38,000 employees across 225 offices in 80 countries (Gill, 2000). Flexibility too was a major strategic driver for both of these companies, with e-learning enabling delivery across geographical and time boundaries. Cisco Systems cited PricewaterhouseCooper's finding that 70 per cent of Fortune 1000 companies nominate lack of trained employees as their number one barrier to sustaining growth (Gill, 2000).

The forum heard that e-learning solutions can support strategic outcomes. Strategic enhancement is "one of the key reasons why learning is now becoming a strategic investment and becoming a topic for CEOs and boardrooms" (Bibby, 2000, p. 19). This reinforced the Ernst & Young Center for Business Knowledge view of e-learning in a knowledge management context, where strategic development is assisted by asynchronous discussion groups and online

communiites of practice, plus personalisation and profiling technologies (Sbarcea, 2000a).

Deloitte Consulting recognised that an accounting "book value" may now be placed on personnel and that knowledge is seen as a "key differentiator" of organisations (Bibby, 2000). Cisco's vice-president of Worldwide Training has suggested that classrooms solve training problems, while e-learning solves business problems (Gill, 2000). The forum noted that fostering B2E (business-to-employee) relationships through e-learning could have the positive effects of developing new reservoirs of knowledge, creating new synergies, decentralising the organisational power base and improving workplace democracy (Fry, 2000).

Universities and other educational providers were driven to e-learning by the change from "learner-earners" to "earner-learners" as more students seek part-time study and life-long learning (Alexander, 2000). Universities also seek e-learning solutions in order to maintain institutional market position in a time of evolving knowledge, evaporation of public subsidy, and rise of new providers and alliances (Fry, 2000). Some reservations were expressed about whether universities could and should pursue Internet e-learning initiatives, as some grand alliance schemes have failed to come to fruition and face-to-face education would always have appeal, especially when students become frustrated by technological glitches (Alexander, 2000). The forum was also concerned that e-learning could disadvantage those on the wrong side of the "digital divide" (see Gladieux and Swail, 1999).

Productivity benefits of e-learning

Cost savings and convenience emerge as the strongest drivers for corporate uptake of e-learning (Forrester Research, 2000). Forum participants were told that Cisco Systems makes between 40-60 per cent cost savings using e-learning when compared with instructor-led training, and that more than 80 per cent of Cisco's technical employees currently participate in online training, with 100 per cent of the sales force being directed to online learning, saving time which is then spent directly with customers (Gill, 2000).

Deloitte Consulting told the forum that existing training methods were "not cutting

it" as they were expensive and slow, and that e-learning was driven by the faster time from knowing to doing, by multiple e-business initiatives, a distributed user population, a wide vendor and broker distribution network, mergers and acquisitions, and occasionally, the desire to set up a corporate university (Bibby, 2000).

Research suggests that only about 30 per cent of companies introducing e-learning now effectively track usage and evaluate outcomes (Forrester Research, 2000; Berry, 2000). This will undoubtedly increase, as there are strong incentives to find the metrics that justify expenditure on e-learning systems (Bibby, 2000). The forum was presented with evidence from Forrester Research and The Giga Information Group indicating that up to 95 per cent of firms surveyed intended to introduce online learning to supplement classroom training, provide on-demand instruction, and to support sales and field representatives (Fry, 2000; Gill, 2000). Deloitte Consulting quoted an American Society of Training and Development study that shows investment in learning is an important predictor of a company's stock price the next year. It also advised that sales per employee in firms with an above average investment in learning are 58 per cent higher than those with a lower than average investment, and that employees are 300 per cent more likely to leave an organisation within their first year if they haven't had a learning experience (Bibby, 2000).

Metrics that assess the impact of e-learning go far beyond assessments of individual performance in tests and examinations and extend to metrics of knowledge management outcomes (Sbarcea, 2000a). Metrics can include the gaining of additional revenue or market share, tracking how sales change after training is offered or assessing how quickly new learning is applied in context. A "time-to-understanding" metric can capture downtime and the opportunity costs of training. A "return on expectation" metric (ROE) can use management interviews to judge how much the learning has met management expectations (Berry, 2000). Qualitative analysis seems to provide the most reliable tracking of e-learning effectiveness so far – i.e. asking managers to assign values to growth attributable directly to e-learning. Companies such as PwC, KPMG and Cablevision all claim a bottom-line effect

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from e-learning, but acknowledge difficulties in obtaining a discrete measure (Berry, 2000).

Estimating the market for e-learning

The e-learning market covers the academic, corporate and consumer fields, and has a variety of segments, including content providers, technology vendors, and service providers. A range of estimates were presented to the forum, generated by diverse assumptions about growth rates and with widely divergent definitions of the field under review. A broad perspective from Morgan and Keegan estimates that expenditures on all forms of education now exceed $750 billion in the USA and $2 trilllion worldwide, with revenue growth for e-learning expected to outstrip that in all other sectors of the education industry (Cisco Systems IQ Atlas, 2000).

The forum heard that the higher education e-learning market is potentially vast. IDP Education Australia was noted as suggesting that the world Internet education market could be worth $50 bilion in two years, $1.7 billion in the Asia-Pacific region alone (Fry, 2000). However, some scepticism is warranted. The dissolution of the Universitas 21 consortium agreement with News Limited and clear indications that higher education e-learning content was not particularly rich or innovative, produced the observation: "So you really do start to wonder about the impact of these partnerships" (Älexander, 2000, p. 26). It was suggested that e-learning in higher education was going into a "trough of disillusionment", even though a "slope of enlightment" may eventually emerge (Alexander, 2000).

Nevertheless, governments in Australia and elsewhere still promote higher education e-learning as a solution for funding shortfalls. This was seen as unrealistic. Research reviewing $3 million worth of funded academic multimedia projects in Australia indicated high e-learning development costs in academia and suggested limited academic capabilities with the technology and techniques (Alexander, 2000). However, paralleling the USA, most Australian higher education institutions are fast putting subjects, or parts of them, online.

Growth figures and projections for the corporate arena are stronger. Gartner Group predicts 70 per cent of corporate instruction will be outside classrooms by 2003. The US Department of Labor estimates that corporate e-learning revenues are expected to increase from US$550 million to US$11.4 billion, a projected 83 per cent compound annual growth rate between 1998-2003 (Cisco Systems IQ Atlas, 2000). A venture capital provider at the forum estimated the US market capitalisation of the listed corporations involved in e-learning as US$50 billion, reaching $US200 billion in three years: "To put that in perspective, it would be more than the asset value of Australia's 36 or 37 universities added together" (Lance, 2000, p. 37).

The forum was informed that the e-learning sector is still favoured by investors. E-learning companies (e.g. Saba, DigitalThink, SmartForce) continue to sell on very strong revenue multiples. These high multiples, up to 25 times the current yearly revenue, are still holding firm, despite the downfall of dot.com companies in general. What has changed is that venture capital providers expect management teams to respond now to the public equity market, applied quarterly. They are required to "outperform expectations in every accounting period" and to have a sustainable business plan (Lance, 2000, p. 38).

The range of e-learning providers

There are now over 1,600 US corporate universities and the US Department of Labor suggests they may outnumber traditional universities by 2010 (Cisco Systems IQ Atlas, 2000). The US Department of Education has referred to them as "a parallel universe of education" (Fry, 2000). Originating as product-specific providers of training in IT, management, sales, customer service, and more recently, professional development, some are now seeking e-learning alliances with traditional universities. As in other e-commerce fields, alliances offer flexibility. Brokering organisations emerge to bring together education and training offerings of various sorts into an e-learning mode of provision. The field is becoming highly competitive and diverse, with over 5,000 providers identified in the USA alone (Henry, 2000). Forum presenters expect to see much consolidation happening in it.

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Provider organisations operate in local, national, regional or global markets, and some have a niche market in one product or industry or particular competency (Bibby, 2000). Currently, provider business models are fairly fluid. Some concentrate on content, some on technology and some on services. Others work as providers across all three areas. Most providers engage in some brokering for partner organisations; others, particularly management consultancies, aim to provide independent advice services (Bibby, 2000).

The forum heard that SmartForce are developers across content, technology and services but that their business model also has the flexibility to engage in brokering with other providers in all three areas as well. The iglobal model was self-described as "a tidal channel", providing courses, services and coordination through partnership alliances. The Deloitte Consulting model is to concentrate on adding value through services, advising on outcome focused learning choices. It provides assistance with alliances concerning technology and content, assistance in vendor selection, assistance in integration of management services, and project management (Bibby, 2000). Client organisations include those introducing e-commerce into established companies, e-businesses needing to provide customers with training, dot.coms wishing to outsource staff development and companies seeking comprehensive and strategic knowledge management (Bibby, 2000).

Implementing e-learning in organisations

Effective e-learning requires planned implementation: "you have a great capacity to create a chaotic environment if it is not structured properly" (Henry, 2000). This point echoes other calls for organisations to seek coherence in implementing e-learning strategies (e.g. Rosenberg, 2000). SmartForce told the forum that while there are constraints, often technical, associated with Web provision, trying to replicate Web richness through corporate intranet environments and in private network environments can also produce compromises (Henry, 2000, pp. 13-15). For universities, the technical issues in Web-based delivery

and student verification can be substantial: "I'm not convinced that we have technology that is reliable enough for us to rely as heavily on it as we are talking about doing" (Alexander, 2000, p. 31).

The forum heard from several presenters that in both universities and corporate arenas the key benefits of e-learning were in flexibility and self-pacing, and the key obstacles were availibility of bandwidth and cultural resistance. University students were claimed to display considerable resistance to some self-directed e-learning, raising the issue of the responsibilities of learners (Alexander, 2000). While e-learning can offer a risk free environment for individual trial-and-error learning, there can be a fear of being electronically surveilled. A lingering preference among corporate employees for face-to-face instruction is reported by the Gartner Group, despite equal outcomes from e-learning(Cisco Systems IQ Atlas, 2000).

Some data from Forrester Research was presented, identifying the perceived benefits of e-learning in a sample of the Fortune Top 2,500 companies. These were: cost savings (67 per cent), available anywhere anytime (36 per cent), provides JIT learning (28 per cent), improves instructor availability (21 per cent), ease of use (18 per cent), fast distribution (23 per cent), enables self-paced learning (13 per cent), easy-to-change content (10 per cent). The perceived obstacles were nominated as: lack of interactivity (56 per cent), cultural resistance (41 per cent), bandwidth limitations (36 per cent), difficulty measuring ROI (8 per cent), browser problems (5 per cent), firewalls (3 per cent), problems with standards (3 per cent). Forrester recomends more evaluation, more individual tracking and more use of intranet tailoring, plus increased richness of content (Forrester, 2000).

SmartForce recommends building computer-based training, classroom-based training, and "other knowledge building events" into a "total e-learning system" through the capabilities of the Internet (Henry, 2000, p. 12). It admits that the total Internet solution may have constraints, "some of them real, and some imagined" (Henry, 2000, p. 13), and offers an internal CBT package, a hybrid package of Web and intraprise, and a stand-alone Internet package. It provides the world's largest e-learning generic content resource, engages

in third party hosting, and has content publishing capabilities. SmartForce now spends up to 50 per cent of its research and development budget on technology platforms "to manage this now very complex e-learning environment" (Henry, 2000, p. 13) in a move away from spending most R&D on content development.

There are four elements to what SmartForce terms its "learning management system", which allows learner personalisation and company customization through a global Web interface. These four elements are:

(1) *instruction* (concept, demonstration, workshop, seminar, reference articles, white papers, Web links);

(2) *collaboration* (24/7 mentoring, expert led chat, peer-to-peer chat, seminar, threaded discussion, mentored exercise, discussion board, workshop, study group, meeting);

(3) *practice* (software simulation, interactive exercise, role-play simulation, quantitative simulation, Web project, application workshop, online lab); and

(4) *assessment* (pre-assessment, performance test proficiency assessment, certification prep test, customized assessment, certification tools).

This led to forum discussion on the range of pedagogies involved and the need for quality assurance.

A series of benchmarks for ensuring e-learning quality and evaluating program effectivness has been proposed by the US Institute for Higher Education and Policy. These include a documented technology plan, with password protection, encryption, backup systems and reliable delivery; established standards for course development, design and delivery; good facilitation of interaction and feedback; and the application of specific standards for evaluation (study outlined in Cisco Systems IQ Atlas (2000)). The forum concurred with the need for all of these quality benchmarks to be in place for successful e-learning initiatives.

Cisco Systems particularly stressed the importance of continuous assessment and feedback, and commented that it offers financial and other incentives for employees to undertake e-learning programs (Gill, 2000).

Conclusion: the e-learning organisation

This paper has reviewed evidence that globalisation is producing "learning organisations" that are knowledge focused, where companies "learn to earn" (Riem-Tan, 1999) and their strategies shift from "trainers training" to "learners learning" (Griffith and Williams, 1998, p. xii, 257-76). It documents the rapid expansion of e-learning markets and the strong growth of corporate e-learning providers and brokers. It has shown that organisations value the scalability and cost-effectiveness of e-learning and that there is an economic imperative to create, harness and manage organisational knowledge. It identifies a shift towards an e-learning organisation. The quality of technological delivery and developing effective learning pedagogies for a variety of educational and strategic objectives will be crucial issues in shaping this organisational e-learning future.

References

Alexander, S. (2000), "Higher education markets and providers", in Fry, K. (Ed.), *The Business of E-Learning, Bringing your Organization in the Knowledge E-conomy*, University of Technology, Sydney.

Berry, J. (2000), "The e-learning factor", *Internet Week*, 6 November.

Bibby, G. (2000), "The consulting perspective", in Fry, K. (Ed.), *The Business of E-Learning, Bringing your Association in the Knowledge E-conomy*, University of Technology, Sydney.

Broadbent, M. (1997), "The emerging phenomenon of knowledge management", *The Australian Library Journal*, February, Vol. 7 No. 24.

Castells, M. (1996), *The Rise of the Network Society*, Blackwell, Cambridge.

Cisco Systems IQ Atlas (2000), at www.ieng.com/warp/public/750/iq/ele/tre/res/ele

Coulson-Thomas, C. (1997), "The future of the organization: selected knowledge management issues", *The Journal of Knowledge Management*, Vol. 1 No. 1, September, pp. 15-26.

Davenport, T., DeLong, D. and Beers, M. (1998), "Successful knowledge management projects", *Sloan Management Review*, Vol. 39 No. 2, pp. 43-57.

Dicken, P. (1998), *Global Shift: Transforming the World Economy*, 3rd ed., Chapman, London.

Drucker, P. (1995), *Managing in a Time of Great Change*, Butterworth Heinemann, Oxford.

Fahey, L. and Prusak, L,(1998), "The eleven deadliest sins of knowledge management", *California Management Review*, Vol. 40 No. 3, pp. 265-75.

Forrester Research (2000), "Online training needs a new course", Research Report, at www.forrester.com/ER/Research/ReportInterviews/O,1338,10060, FF.html

Fry, K. (2000), "Forum focus and overview", in Fry, K. (Ed.), *The Business of E-Learning: Bringing your Organisation in the Knowledge E-conomy*, Telcam Group, University of Technology, Sydney

Garvin, D. (2000), *Learning in Action: A Guide to Putting the Learning Organization to Work*, Harvard Business School Press, Boston, MA.

Giddens, A. (1999), *Runaway World: How Globalisation is Reshaping our Lives*, Profile Books, London.

Gill, M. (2000), "E-learning technology and strategy for organisations", in Fry, K. (Ed.), *The Business of E-learning: Bringing your Organization in the Knowledge E-conomy*, University of Technology, Sydney.

Gladieux, L. and Swait, W. (1999), *The Virtual University and Educational Opportunity*, The College Board, Washington, DC.

Glass, N. (1998), *Management Masterclass: A Practical Guide to the New Realities of Business*, Nicholas Brealey Publishing, Sonoma, CA.

Griffiths, K. and Williams, R. (1998), *A Learning Approach to Change*, Gower, Aldershot

Halal, W. (1998), "The economic imperatives of knowlege", in Halal, W. (Ed.), *The Infinite Resource: Creating and Leading the Knowledge Enterprise*, Jossey-Bass Publishers, San Francisco, CA.

Henry, P. (2000), "Business models of e-learning provision", in Fry, K. (Ed.), Keynote Address, *The Business of E-learning: Bringing your Organization in the Knowledge E-conomy*, University of Technology, Sydney.

Lance, D. (2000), "Venture capital viewpoints and e-learning futures", in Fry, K. (Ed.), *The Business of E-learning: Bringing your Organization in the Knowledge E-conomy*, University of Technology, Sydney.

Miles, R. (1998), "The spherical network organization", in Halal, W. (Ed.), *The Infinite Resource: Creating and Leading the Knowledge Enterprise*, Jossey Bass, San Fransisco, CA.

Pinchot, G. and Pinchot E. (1998), "The intelligent organization", in Halal, W. (Ed.), *The Infinite Resource: Creating and Leading the Knowledge Enterprise*, Jossey Bass, San Fransisco, CA.

Power, K. (2000), "Capitalising on knowledge", *Image & Data Manager*, November/December.

Riem-Tan, S. (1999), "Truth and knowledge", *Business Review Weekly*, 23 July.

Rosenberg, M. (2000), *E-Learning: Strategies for Delivering Knowledge in the Digital Age*, McGraw-Hill, New York, NY, October.

Sbarcea, K. (2000a), Using e-Learning in Knowledge Mangement, in Fry, K. (Ed.), *The Business of E-learning: Bringing your Organisation in the Knowledge E-conomy*, University of Technology, Sydney.

Sbarcea, K. (2000b), "Intelligence shifts gears", *Image & Data Manager*, November/December.

Taylor, G. (1998), "Knowledge companies", in Halal, W. (Ed.), *The Infinite Resource: Creating and Leading the Knowledge Enterprise*, Jossey Bass, San Fransisco, CA.

Teece, D. (1998), "Research directions in knowledge management", *California Management Review*, Vol. 40 No. 3, pp. 289-92.

Wenger, E. (2000), "Communities of practice and social learning systems", *Organization*, Vol. 7 No. 2, pp. 225-46, Sage.