

E-training study



1. Introduction

The evolution of user-friendly computing technology has been greatly fuelled by the invention of the graphical-user-interface (GUI) and also Microsoft Windows in 1990. An even greater boost was observed in 1994 with the invention of the World-Wide-Web (www) that compose the internet by Tim Berners-Lee and his team of scientists (WCO, 2003).

Nowadays, individuals and companies are trying to benefit the most out of the computing technology, implementing in all aspects of work from production to monitoring of sale etc. This is especially in managing the most precious assets of the company, i. e employees, where the human resource manager would have to look into the human resource planning, staffing, performance evaluation, training and development, compensation and benefits as well as labour relations/safety and health training of the employee. With the great step forward by technology, training of the employee has taken a drastic turn, in which a suffix “ e” is added to make e-training.

2. So what is E-training?

Let's look at the suffix “ e”. It stands for many things, only one of which is electronic. The suffix is added to show that it is done electronically. Mail has been around for centuries but now there is e-mail which is electronic mail so are e-books and of course e-training. But what is the actual definition of e-training?

“ E-Training is training that involves interaction between a learner and a computer. It may use text, graphics, narration, sound effects, music, video, and animation to enhance the learning experience.” PMB Associations Inc (Online).

Another definitive answer is provided by Waller(2001), in which he defined e-training as “ the effective training process created by combining digitally delivered content with (learning) support and services.”

Waller and Wilson (2001) also come out with a classification matrix in which training are classified into; types of media, accessibility and learner support which enable any technology based training to be easily identified and understood.

However, technology is ever-changing and hence e-training is still-evolving discipline, and what might be considered a good definition today may not even be in the ballpark tomorrow. (Piskurich, 2003)

3. The Need for E-Training

Technology has dramatically increased the complexity and speed of the everyday work environment. Virtually every worker has to process more information in less time. Information also becomes obsolete faster, whereas knowledge and skills must be delivered faster. Skilled labour is hard to find and it's only getting worse and thus demand for skilled labor has exceeded supply.

According to HKNET (2003), a study carried out by PricewaterhouseCoopers found out that 70 percent of the world's 1, 000 top-tier companies express the lack of skilled workers is their number one barrier to sustaining growth.

Hence, organizations throughout the world are combining new technologies and methodologies to create new and quite different learning experiences for both individuals and institutions. CEO's and chief training officers are talking about e-training because it has the potential to change the fabric of learning through global and continuous delivery, rapid learning development as well as ability to be suited to one's speed (Masie, 2003). As Sczempka (2001) put it, " E-training can build skills faster, smarter and better."

John Chambers, President & CEO, Cisco Systems also state that, " There are two fundamental equalizers in life - the Internet and education. E-learning eliminates the barriers of time and distance creating universal, learning-on-demand opportunities for people, companies and countries. The benefits of e-training would be illustrated further below.

4. Benefits of E-training

There are both strategic and tactical advantages to adopting an e-training program.

4. 1 Flexibility

The main and most sought advantage of e-training program lies in its flexibility i. e. training can be delivered at any time and can be adapted to the needs of the company

The ability of e-training to be conducted worldwide without barriers and time constraints enable an employee to be able to take the training whenever he/she wants and where the need arises. Because of its method of delivery (e. g. through the internet, intranet or CD-ROM), e-training provides great convenience and easy accessibility. E-training has the capacity to provide workers or customers with the same learning experiences, regardless of physical location on the globe or whether or not they are working at a desk with computers.

The fact that e-training program provides ' just-in-time' training that not only delivers the training when it is needed, the employee also has the ability to take the course at their leisure. For example, if users are brought in for training in January that they will not use until March, retention may be a problem. With an e-training program in place, users can ' take the class' when it will be most beneficial to their careers and at a time that is convenient to them, from home, for example. In a survey conducted by Time2Learn (2003), it found out that e-learning takes place mainly in the company and especially at the employee's office, occurring at no specific date or time.

Sczempka(2003) and HKNET(online), also highlight that employee can learn at a pace that is suitable for them that correspond to Maise's (2003) view that e-training has the " ability to deliver exactly what is needed, by the trainee, at that moment, rather than a set of content that is based on an average set of needs, or even worse, the needs of the slowest learners."

E-training programs can also be easily catered to the needs of the organizations. This can be done both by outsourcing through insourcing, both with their pros and cons. For outsourced e-training, some provider like 'Custom Guide' provide print-on-demand course that distribute the materials in 2 formats, a Microsoft Word document and Adobe Acrobat (PDF) file-or e-book. The first enable alteration of content to fit into the company's profile, whereas the PDF format allows distribution of the provided courseware content via CD-ROM or internal network, whereby allowing users on site to view or print the courseware on their own computers (CustomGuide, online). Insourcing though would take up more resources can be developed to cater to the full needs of the company.

4. 2 Costs

Due to fiercer competition in the market, it is a known fact that companies that train employees compete better. In fact, a 1999 study by the American Society of Training and Development (ASTD) found a direct correlation between business performance and spending on training. But cost pressures today are enormous and margins are thin and hence cost is a major factor when considering training of staffs.

The price of e-training is an advantage in comparison with traditional training sessions. Due to that e-training services are now designed for managers or engineers and hence such a tool is usually cheaper than hiring a consultant or a coach to help the managers. This is verified by Training Magazine, which reveals that the cost of online courses can be 50 to 75 percent less than instructor-led training (HKNET, 2003).

E-training can also help save business cost in terms of travel, lodging, even parking and lunch that are normally associated with traditional training.

What the businesses need are just computer terminals which are a must have in most offices nowadays. Businesses, especially smaller ones, can also manage unanticipated situations without having to cancel planned (and perhaps prepaid) training which would often cost them a lump sum of money (Sczempka, 2003).

Thus the only way around the cost benefit of e-training is to forgo all training which is definitely an awful idea.

4. 3 Consistency

E-training is consistent and current. There are few or no bad training experiences with e-learning because it is delivered in a consistent way. This is because e-training has the capacity to provide employees with an ongoing continuous set of learning, knowledge, and performance experiences, rather than a one-shot event of learning (Piskurich, 2003). The employee thus, would be able to pace the learning according to his ability. This lack of excessive pressure to keep up with the rest of the class would enable greater absorption of content. In addition, the employee is able to check back on any parts that he/she miss out without the feeling of being dim-witted since it's done in confidence. This would boost positive attitude towards the lesson plan and hence increase interest in the course.

Training kits and tools can be updated easily since the web can be totally revamped rapidly and development time from concept to delivery can be

shortened. This update would ensure that all employees are kept posted of the latest change that they need to know and understand.

4. 4 Other Benefits

E-training are able to cross the language barrier when educating a global workforce or being able to offer just-in-time learning in that worker's native language resulting in greater knowledge retention. Through e-training, the employees would also gain more knowledge in operating the computers which is what most companies want, computer-efficient employees. E-training also aids in improving business processes - a factor not often considered when measuring the success of an e-training deployment. This is particularly true when an enterprise deploys a learning management system where the employees' progress is tracked, their gaps in skills are analyzed and the registration and reporting is automated. With the timesaving, travel and related costs and faster response times for new product development and innovations, the company could focus on their primary goal of increasing productivity and profitability.

5. Shortcoming of E-training

5. 1 Availability of Resources after Learning

One of the main disadvantages of e-training is how employees after training can quickly reference the material they have just learned without having to log into the e-course for the information. This problem is further exaggerated if there are virus attacks or system crashes that may render the system inaccessible to the employee. The lack of an internet-connection or even a

personal computer at home may also deprive the employees from making further research to gain in-depth knowledge of the course. This problem however is partly solved by some e-trainer through the provision of textbook references or other training aids and material together with the e-courses.

5. 2 Interactivity

The other main problem in e-training lies in lack of interactivity. Time2Learn and HKNET (2003) have revealed that for most companies, the main disadvantage of e-training program lies in the lack of human interaction (with both teacher and peers) and the lack of group dynamics. As human are social animal, the employees can learn better in a group and stimulate their interests in the training. Thus the lack of interaction tends to reduce the employees' motivation in learning since they could not network or connect to other learners.

Support is crucial in any training program, but certainly in an e-training program. Discussion can be as much a part of the learning experience as is the content. Employees need acknowledgment of completion and success and an incentive to continue to improve.

Interactivity within e-learning activities however, remains possible as e-learning takes place with a tutor in 66% of the cases. (Time2Learn, 2003) And in 53% of the cases, there is some degree of interactivity between teachers and students either through e-mail, web forums, mailing lists, or telephone conferences.

5. 3 Other Considerations

Shortcoming of e-training is the need to ensure that their employees will have the technical infrastructure (hardware, software and bandwidth) that they need to take full advantage of the courses. More robust eLearning systems will also require more technology investments including database development and maintenance, potentially data warehousing capabilities, firewalls and security protection. (Gilhooly, 2001)

Other inadequacies of e-training include high cost of developing high-quality training content and of initial investments for customized training kits.

Customizing e-training content can also result in increased costs. The cost to design a customized course can range from \$20, 000 to \$100, 000 per course hour

Frequently, too much time and money went into selecting the right learning management system, the necessary hardware, integrating e-training into the corporate network and purchasing the courses. All too often, insufficient attention was devoted to “managing the introduction” of new learning initiatives into the organization, designing the right mix of online and offline instruction or finding appropriate ways of motivating the staff.

HKNET (2003) also made the interesting remark that e-learning is often misperceived as the ‘holy grail’ of education and thus leads to disappointment when companies fail to meet the objectives set forth by e-training.

6. E-Training in the Future

John Chambers, in a major speech at the fall 1999 Comdex show, said he believes that e-learning will surpass e-mail as a use of the Internet. That's a powerful prediction. (Masie, 2003)

Some analysts have predicted that e-learning will lead to "trainer-less" learning. The idea of a wonderful portal, containing all the high-powered learning in the world, just a click away, would make the training process magical, without the headcounts and limitations of trainers.

Learning will be seen as less of an event basis and more of a subscription to a continuous, drip of content delivery and performance support. The learner will be part of an ongoing community of learning and practice. Learning will become device agnostic. Old technologies like phones and voicemail will find new roles in e-learning, as well as mobile devices like handheld computers and cellular phones. In addition, we will see equipment developed that has Internet access for learning embedded within the hardware.

7. Case Study: My Experience with E-training in MINDEF

The government sector is one of the major hirer in any country. With about 600, 000 people in the Singapore army alone, the human resource manager do really have to look into the training of the personnel especially with the ever-changing battle tactics and upgrading of equipments. It's fortunate that the government is an early adopter of technology and one of the major pushers in the use of technology.

Training for the army in recent years is no longer like before, a lot of training are held no longer in the field but at the comfort of the air conditioner in a

classroom, facing the computer terminal. This is especially true for tactical units like artillery unit which I serve for my national service. Almost 35% of the lessons are held in 'leisure', with a sufficient time of more than 2hrs given to complete per course module. This enables me to take my own sweet time to click and click whenever I want. But then to my disappointment, there is always an instructor or e-trainer present to answer to any of our queries and also to guide us along the way.

In a way it's good since there is increase level of interactivity and there is someone approachable for any enquiry, but it occurs at the expenses of our 'napping' time. Technology has been used to extend that even firing range took place in an air-conditioner stimulation room before proceeding with actual ammunitions. This e-training has greatly minimized manpower insufficiency for the army and improve the quality of training for me, the trainee. The illustration used in e-training also shows a clearer picture of the trajectory of the rounds and the impact of the various factors, enabling greater understanding of the study course.

Distribution of CD-ROM at the end of the course also enable me to conduct my own refresher course a in our luxury time. Moreover, a link to MINDEF website (www.miw.gov.sg) is given. Any new updates are made online and can be downloaded anytime. MIW also provide learning through games, following the steps of United States Army, which enable me to play yet renew my knowledge on movement tactics.

8. Conclusion

Due to the great improvement in technology, e-training has become common in businesses. The availability of e-training, because of their immense flexibility, lowered cost and consistency is the top choice for human resource manager when training of staffs comes into the mind. This is especially seen in big International Corporation as they can cut costs through use of e-conferences and internet training. The government sector is one of the earliest adopters of e-training due to the huge numbers of people it hires. The e-training which I went through is really helpful and enable a greater understanding of the course.