

Online Training Course Design and Measurement

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Abstract: In the era of knowledge economy, enterprises urgently need to build a more convenient, fast, flexible and independent online training system. This paper analyzes the characteristics and advantages of online training, and discusses the implementation of online training in enterprises. It also puts forward some suggestions for enterprises to carry out online education and training.

1. Introduction

The Internet, which began as primarily a communications tool, has become a very important information resource. Today's changing business and relentless competition require employees competently perform job-related tasks, adjust to change, and profitably use new technology. Employee competence demands that workers master basic and job-specific skills. Providing all the necessary training has become one of basic functions for training department. Traditionally, classroom training has been considered as the main method of improvement in employees' competence. But due to its increasing costs and decreasing productivity (taking employees away from the workplace) and with technology expanding their options, more businesses are moving training onto online training/ computer based training / e-learning instead of the classroom training and learning.

So, it is becoming crucial in such new trends for training professionals on how to effectively design and deliver online training courses. Course materials, feedback, assessment and evaluation are all areas where developments provide new possibilities for both distance education and supplementary course notes/exercises. The design, implementation and evaluation of these can offer educational enhancements and also pose particular problems for course designers .

Concentrating on my short online course designed, this article gives a critical evaluation including analysis of the materials, resources, communication elements, assessment, evaluation and learner autonomy and support. It goes firstly through the concept, significance and literature of successful online learning, then focuses on evaluation of the short course designed.

2. Definitions and Practical significance

2.1 Definitions

Online training marshals Web technologies to the task of training and learning. The term "web-based training" (WBT) is emerging to distinguish the use of the Web as a training and education tool from other applications [1]. WBT is the term that is used most often to describe the use Web technologies for learning within industry. It is the confluence of three social and technical developments: distance learning, computer-conveyed education, and Internet technologies.

From the context of relationship between computer and learner, Gery describes computer based training (CBT) as an interactive learning experience between a learner and a computer [2] in which:

- the computer provides the stimuli,
- the learner responds, and
- the computer analyzes the response and gives feedback.

Focusing on the goal to build job transferable knowledge and skills linked to organizational performance or to help individuals achieve personal learning goals, Clark (2002) define it as

instruction delivered on a computer by ways of CD-room, internet, or intranet with the following features[3]:

- Includes content relevant to the learning objective
- Uses instructional methods such as examples and practice to help learning
- Builds new knowledge and skills linked to individual learning goals or to improve organizational performance

It is recognized that online learning/training is bringing collaborative learning to the forefront and is affecting the way traditional courses are taught as well. So, Simply defined, it refers to courses offered via the Internet.

2.2 Practical significance

With the technological development in today's world, it is well-known that the worldwide Web has become a popular and useful instructional medium for a number of reasons. As one of collaborative tools, it has significantly enhanced the ability to train and educate electronically. Whether the materials are a stand-alone tutorial or a full-fledged on-line workshop, the Web provides significant new functionality in transmitting information to the learners or trainees and providing forums for exchange. As Becker (1994) describes, "www facilitates learner-centred approaches creating a motivating and active learning environment. It is easily accessible, it supports flexible storage and display options, it provides a simple yet powerful publishing format and a means to incorporate multiple media elements. Furthermore, productivity and effectiveness can be brought by it"[4].

Many organizations use this kind of training to reduce costs and provide self-directed learning. Approximately 43 percent of U.S. organizations with more than 100 employees use it[5]. In most organizations, ad hoc training supplements or replaces classroom training. It offers strategic training advantages, such as improved achievement and productivity, reduced learning curves, and increased employee satisfaction and motivation. Researchers have performed many studies on its effectiveness. With computers, organizations can approach training in ways that are otherwise impossible.

- Training can be suited to learners' pace, needs, and abilities.
- Employees at all locations get effective on-demand training.
- Learning outcomes are consistent—even when many employees with different backgrounds need instruction.
- CBT courses assess performance and give immediate feedback to the learner[6].

The other significance has been provided more and more in training and learning. They include:

Available anytime when training is needed.--With it, trainers don't need to wait until there are enough learners to justify a class. It is available for workers to brush up on learned skills whenever they want. Courses can be designed to allow "refresher" paths, so learners can review the information without taking the whole course again.

Available wherever learners are. With most online training systems, they can learn wherever there is a terminal or PC-at home, at their desks, on the road.

Available and equal to anyone. Because classroom training is so costly, organizations can't easily afford to send employees who simply want to grow professionally and acquire new skills. It lets organizations develop and retain their most outstanding and motivated employees, who become competitive candidates for promotion

Time Savings. Online learning saves time for organizations. Because it is self-paced and easily accessible, organizations can train large numbers of employees in minimal time. Such training also decreases the time employees spend in learning. Kamouri (1983), in a review of 20 years of research, concludes that programs save more time when they use a variety of instructional strategies[7].

Consistency. Because training courses are centrally developed, course contents are consistency. Consistent outcomes are important when a large trainee base needs consistent training.

Economic effectiveness. Research has shown that provides improved training at lower costs. An

analysis of 18 studies revealed that, on average, it costs about 28 percent less per unit of effectiveness than conventional classroom instruction[8]. In one organization's measurements of cost effectiveness, CBT was 80 percent more cost effective[9].

It's true that technology has evolved, and technology-delivered training is not only displacing the tools of the past, but changing the nature of training's future. The training professional who can use, justify, create and implement e-learning programs will flourish in the dynamic new environment and emerge as the modern trainer.

3. The Evaluation of Short Course Proposals

3.1 Literature of effective course design

The effective course design is an issue which comprised several parts. In 'Criteria for Evaluation of Internet Information Resources', two factors should be addressed in online course design: 1.Scope: What items are included in the resource? What subject area, time period, formats or types of material are covered? 2.Content: Sites can be useful both as information resources and as links to other information. Horton(2000) identify that the ideal course should be[10]:

- Step by step procedures.
- Scientific and business concepts.
- Syntax and vocabulary of human and computer languages.
- Mechanical skills that must be performed.
- Well defined knowledge.

However, in addressing assessment, Smith Alastair. (1997) suggests that the course design should count towards assessment of the subject in order to absorb trainees to use the materials or participate in the activity[11]. It should also reflect some changes made to the content and process of learning for trainees to learn regularly.

Alexander and Blight (1996), provide evidence on which to determine whether implementation will be successful, and guide thinking about the appropriate use of ICT[12]:

3.1.1 Context of learning

Who are the learners (age, experience of learning independently etc.)? What is the most appropriate location for these learners to engage in independent learning activities (home, work, other)? What kinds of technologies are available in those locations? What level of technological expertise do the learners have? What level of learner support is available in their location of learning and from the institution?

3.1.2. Information technology

Is this technology available and accessible for this group of learners? What is the cost of this technology to the learner? Does this technology support the most suitable learning design for this content? What kinds of interaction are possible with this technology? What level of support does this technology require?

3.1.3 Teaching/learning design

What kinds of learning are needed? What teaching strategies will best meet these needs? What kinds of learning designs are made possible? What kind of assessment activities do learners engage in?

The Alexander and McKenzie (1998) study summarized the benefits of the successful online learning/training as being of four kinds[13]:

- Step by step procedures.
- improved quality of learning.
- improved productivity of learning.
- improved access to learning.
- improved attitudes to learning.

Some of the case studies from the study also showed the following evidence of improved productivity in learning and teaching [14] :

- decreased time to learn through the use of animations.
- increased content of learning in a given time through the availability of multiple representations.
- increased interaction between academics and students through the use of a computer-based conferencing tool on the Internet.

Some other literatures of course design focus on the Learner's Perspective and Teacher's Perspective:

3.2 The Learner's Perspective

The effective course features should be learner-centered, it offers instructionally sound learning both during and after training. In a recent survey of U.S. workers, 74 percent said that technology made their jobs more interesting due to these features. In a larger analysis of 200 studies, the average effect of computer-based training on learner attitude toward instruction was a statistically significant increase. In general, a well-designed course promotes a more positive attitude toward computers [15], the topic, and the learning process itself.

When learners can access readily, they choose their paths and learn more as they request information.

3.3 The Trainer's Perspective

Effective instruction for adult learning includes the following aspects[16] :

- a problem-centered approach;
- hands-on experience solving real-world problems;
- building on previous experience and knowledge;
- learner control; and
- integrative, whole-systems thinking.

In order to be effective trainer centred, the course should be as following [17]:

- Keeping learners active and eases memorization. Graphics, sound, animation, and even games should be interesting.
- Branching, which is a flexible capability.
- Feedback, which engages learners in an interactive, two-way dialogue.
- Simulations, which show that people want to learn by trying new activities rather than read about them.
- Reporting, which shows areas of confusion, difficult and easy topics, outcomes and much more.

Literature gives us a specific outline on how to effectively design the online training course. some of them are concentrated such as course materials, feedback, assessment and evaluation, learner's and trainer's perspective, etc. However, due to lack of information technological skills and proposed situation activities in syntax and vocabulary of computer languages and relevant issues are not improved or limited.

4. The Strategy of Courses Proposals

What am I trying to do for the organization and learners are the critical consideration before I begin to design the course. For organization, it is to identify business goal firstly (Strategic business goal on the course home page and Sales mission in the course first part are identified in my design, for example), only then I contribute the best solution—to offer skills by training course, which can be received after 8 parts of training. For learners: I identify what to teach and to whom (Managing and developing skills for sales managers). Then start off by setting specific teaching objectives (on the welcome and introduction pages). Good objectives specify which learners will accomplish what results under what conditions and to what degree of success. So, the gap between organizational

needs and individual's needs is completed.

4.1 Write clear objectives

To help the manager lead the sales team, *Managing and Developing Salespeople* introduces tools for coaching and motivating salespeople, leading the sales team when working and learning together, and managing more collaboratively across the organization. A key aspect of the workshop is building and reinforcing your salespeople's attitudes, motivations, and skills.

Maybe, there are no magic formulas for writing objectives, but for element seem essential to all well formulated objectives:

- Who are the learners? --Whose knowledge, skills and attitudes to be altered? What group of learner to be designed for?
- What will training accomplish for them?
- How will they apply when they learn? -- Let people apply knowledge, skills and attitude in real world.

4.2 Try to specify what those circumstance are

Green and Gilbert (1995) suggest [18], the stated hope is that computing and information technologies will yield new levels of institutional and instructional "productivity". It is recognized that much of the activity in E-learning is taking place at the level of development of courses and their resources. The layer closest to the learner represents what the teacher does while the next layers involve the planning and thinking done by teachers. All levels are surrounded by particular teaching/ learning context. The most important, in both level is the requirements of the trainer/ designer to determine whether the online course met course participants' needs (i.e. increasing their understanding and knowledge of policy development processes) and whether the delivery strategies were efficient and effective (What do I want my trainees to learn or how can I deliver such "value added courses"?). So, my home page, introduction, sales policy & system , sales negotiations, discover, assess & persuade, competitive situations, follow through, and individual evaluation-They give a good content and meet learner's critical needs. However, the power/authority as mentor or evaluator plays an important role in the course delivery.

4.3 Finally, the online course is well conceived and managed

The layout was simple and easy to follow. The hyperlinks were clear, very directive, simplified and easy for participants to follow. The learning activities were challenging, stimulating and relevant to the social context and work environment.

5. The Sequence of Course Context

My proposed competency-based program provides managers with the knowledge and skills they need to implement including not only skills in sales negotiations and discover, assess & persuade but also skills in controlling competitive situations and follow through, this program also increases impact and enhance customer satisfaction, helping managers and their organizations become their fittest.

In preparing my teaching objectives, the business goal is kept in mind for the purpose of course design and I try to create a bridge connecting the business objectives and teaching objectives so that business managers can see how the objective work together.

It's quite confidential to consider the following contents in my short course design and improvement.

5.1 Welcome page

The welcome page greets learners as they first enter the course. It makes them fell at home or face to face and eager to get on with the course. This is firstly to motivate them to start the course. It has included: Course title, Welcome greeting, brief statement of what the course is about, attractive graphic and inspiration. In the notes there, I use two crucial aspects: One is attraction/motivation

with skills offered and certificate, the other is obligation / requirements to be a line manager. This guarantees that all the managers throughout world in the big international company involve my training course.

5.2 Curriculum

In defining curriculum, the criteria of knowledge, collaborative nature of online learning, standard reference works that cover an area and professional associations that present an area are all identified. For example, managers can be very clear about criteria of knowledge in 'introduction part' and they can be motivated by involving training objectives in 'course contents'. 'Assessment part' can collaborate feedback as well.

5.3 Specify course introduction page

Outline of the course with links to more detailed information (All main links in my course are presented on this page). For example, About the course, course overview, course contents course description, and course identification: Who should take the course? Coverage? How long it will take?

5.4 Content

Course contents are organized in modules with clear deadlines for the assigned work in each part. It also gives simple and clear assignments, and not assigning over-complicated tasks. Curriculum in it has been focused on application of knowledge to the real world and foster critical thinking skills with opportunities for an interchange of ideas among trainers and learners.

5.5 Materials

Materials themselves do not teach but provide a medium that with appropriate, which include teaching notes and lab exercises, are available through the page. In addition, the materials provide a handy access point learners to review concepts that were presented in workshops. Materials also include a set of tutorials especially designed for on-line learning. These tutorials are the recommended starting point for learners desiring to become familiar with the use of it.

5.6 Integrated assessment

Measures and assessments of achievement and outcomes from instructional settings play an important part in the teaching and learning process. Frequently with on line training, assessment measures bear little semblance to the environment in which the learning has taken place. Young (1993) suggests that 'assessment can no longer be viewed as an add-on to an instructional design or simply as separate stages in a linear process of pre-test, instruction, posttest; rather assessment must become an integrated, ongoing, and seamless part of the learning environment' [19].

Much of this can be achieved and supported through appropriate design of WWW documents and learning materials. The implications of this for instructional design are that some thought should be given to designing assessment which is concerned with the process as well as the product of involvement with the learning program. The enhanced interactive capabilities of the WWW provides the means for assessment of manager learning to extend beyond conventional essays and examinations. I have applied 'discussion', 'seminar', 'chatting', 'e-mail' and 'final report' as my frequent assessment, which could be very effective in the worldwide training.

5.7 Constitutive elements

It is now widely accepted that learning is enhanced by active environments in which students have cause to be engaged in processing personally relevant content and to be reflective during the learning process [20]. There are three mutually constitutive elements: the learner, the implementation and the interactive multimedia program to be useful in describing the roles and responsibilities within the learning process. The three elements correspond to the role of the teacher, learner and the materials themselves. So, in this context, Some factors show the most important and crucial:

5.7.1 Designing Trainees Roles

There are many ways in which the role of the learner can be varied within an instructional setting to influence and enhance learning outcomes. In my course, I briefly give ‘Challenges and Introductions’ in the second part to identify the trainees role.

5.7.2 Collaboration

The implications of this for WWW materials are that interactions and activities that engage higher-order thinking and critical reflection need to be included and opportunities presented to enable group and team work by the tools such as discussion board, chatting room , seminar and email as a part of assessment.

5.7.3 Reflection

Activities that encourage reflection through increased levels of learner control can assist students to focus more attention onto their own thought processes [21] .

5.7.4 Articulation

More effective learning environments ensure that the resources are used within a social context with students working in groups, discussing the issues, reporting back, presenting findings, interviewing and debating the issues to ensure that students have the opportunity to articulate, negotiate and defend their knowledge. Meanwhile, the use of e-mail and other communicative activities supported by the WWW provide opportunities for articulation enabling tacit knowledge to be made explicit.

5.7.5 Autonomy

Considering the issues involved with developing learner autonomy, we should think about how, where and why we should include work in the course which will lead towards greater autonomy in our learners. This could be related to, for example, giving our learners some choices and decisions - allowing them to plan what they should do next. I could have also included exercises which will encourage learners to reflect on their learning, and become more aware not just of the content of the knowledge, but how they discovered that knowledge.

All these considerations, however, point to some difficulties in assessing the level of autonomy in learners, and therefore the amount of responsibility for learning we can expect the learners to take. It is also important to offer that simply because you have created a form of learning where an individual is sitting alone at a computer, my course simply ask the individual to follow steps and procedures, without any choices or decisions being made.

6. Conclusions

As in any training or learning program, the challenge of E-learning is to build lessons in ways that are compatible with human learning processes. To be effective, instructional methods must support these processes. Drill and practice, feedback, simulations, testing, and graphics and multimedia capabilities all should be offered and make a try to improve the materials, resources, communication elements, assessment, evaluation and learner autonomy and support. They must foster the psychological events and motivation necessary for learning in this process to promote psychological engagement between learner/trainee and the lesson content in ways that help learners select, integrate, and retrieve new knowledge. On the other hand, although online based training gets high ratings as a learning tool, it's not sensible to rely on any one medium as the way to do all training. The best idea could be mixing such kind of training with classroom training from stage to stage to make learning and training more effective and efficient.

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