Pedagogical Attributes - An Approach to E-Learning Websites

S.Prathiba¹, P.Nageswari², K.Rajakumari³

¹Lecturer, Department of Information Technology, Bharath Institute of Science and Technology, Chennai, India ²Lecturer, Department of MCA, Bharath Institute of Science and Technology, Chennai, India ³Lecturer, Department of MCA, Bharath Institute of Science and Technology, Chennai, India

Summary

As the time changes, the technology moves its path from Traditional Learning to Web based E-Learning. E-learning is referred to the intentional use of networked information and communications technology in teaching and learning. It has been explore during recent years both on theoretical and practical levels. Educational activities are increasingly exploiting technological innovations. Web-based E-Learning offers academics to raise maintenance-related knowledge and competence. It may take the form of structured training programs, fully online or in blended schemes, with communities of practices. Effective E-Learning thrives at the nexus of web usability, communication, relationship and documentation. E-Learning website shows its tremendous growth in educational field and it should gratify all the pedagogical attributes. Pedagogy refers to the correct use of instructive strategies. The website that satisfies the Pedagogical attributes must considered as the innovated E-Learning website. This paper highlights some of the pedagogical attributes in E-Learning websites.

Key words:

E-Learning, Facilitator, Learning Management System (LMS), Pedagogy, Traditional learning, Web based learning.

1. Introduction

E-Learning (or electronic learning) is a term that encompasses all forms of Technology-Enhanced Learning (TEL) or very specific forms of TEL such as online or Web-based learning. E-learning facilitates the learner to learn anywhere at any time, with a properly configured computer. E-learning can be CD-ROM-based, Networkbased, Intranet-based or Internet-based. It can include text, video, audio, animation and virtual environments. The information and communication systems, whether network or not, serve as specific media, which includes online learning, virtual learning, distributed learning, network and web based learning [1].

E-Learning comprises all forms of electronically supported learning and teaching. Primarily, they all refer to educational processes that utilize information and communication technology. It can be self-paced or instructor-led. Therefore, the quality of the electronicbased training, as in every form of training, is in its content and its delivery must be pedagogically empowered

Manuscript received March 5, 2012

Manuscript revised March 20, 2012

to enrich the learner's knowledge through the E-Learning phase. To make E-learning as an effective learning, the content has to be developed with set of pedagogy. In E-Learning, education is rapidly increasing and online doctoral programs have even developed at leading research universities.

2. Delivery Methods of E-Learning

E-Learning is done over the World Wide Web. Some of the common delivery methods used in E-Learning is in Fig.1.

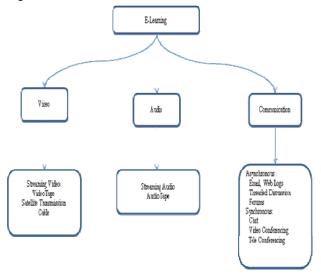


Fig.1. Delivery Methods of E-Learning

The delivery process may be any one of the following type's video, audio and communication. Through any of these methods, E-Learning can be effectively delivered to the learners. Mostly in the worldwide education system, the E-Learning websites play a vital role. This shows more and greater enhancement in the field of edification. By using the above delivery, methods mentioned in Fig.1 delivery of the content can be effective, but there is a question if effective learning has been taken place. Therefore, for effective learning by the learners, the content to be developed with pedagogical approach.

3. Pedagogical Apprroach

Pedagogy, referred to as the correct use of instructive strategies. In correlation with those instructive strategies, the instructor's own philosophical beliefs of instruction are harbored and governed by the learner's background knowledge and experience, situation, and environment, as well as learning goals set by the learner and facilitator [2]. The E-Learning key topics are learning objectives and pedagogical methods and based upon type of the topic, topic associations and its occurrences [8]. The above table 1 describes the learning objectives and pedagogical methods through which the E-Learning can be made effective.

4. Processing the Pedagogical Attributes

The important Pedagogical aspects to be present in an E-Learning website to reach the individual more are: Every E-Learning course must have a main and well-defined objective that explains the need for this course and helps in developing and mapping of the course. This will also enable the learner to understand what he will be gaining by taking this course. It is important for an Instructional Designer to understand the content and the context in which the course is going to be taken by the learner - the what, why, and how of it. Next, consider the authoring tool. This is a tool that helps the Designer to not only create content but also to package it and send it to the end user or to the client. Deciding on the appropriate authoring tool is one of the primary jobs of the Instructional Designer because it is useful in the development of interactive training content, which is the backbone of any E-Learning course. In the groundwork chore the facilitators must follow the steps according to the Learners centric. The guidance program of study has to comprise the above-specified attributes. The facilitator has to review the capacity of the learners before they enter in to the guidance task.

The enlightenment has to be shown by the facilitators according to the acquaintance gained after testing the learner's performance in the pre-evaluation. As they follow, the learning objectives, which have to be accessed through some of the occurrences, specified in the table. As in the next step, it must follow the four major representations, which followed here in the pedagogical attributes. They are specified as presentation, demonstration, application and integration. The skills in achieving all these attributes must follow in all the elearning websites. These are the attributes, which moves the learners in their path to highly efficient and towards the innovated world. These are the foremost mission to be taken when we enter our way in to E-Learning websites. As the way it shows how the pedagogical approach helps in structuring the e-learning websites. The E-Learning websites, which satisfies all these attributes, gives both the learners and the facilitators an ease of learning and teaching.

5. Missing strategies in E-Learning Websites

In some of the E-Learning websites, few of the pedagogical attributes are missing. Fig. 2 shows the missing strategies of pedagogical methods in E-Learning systems.

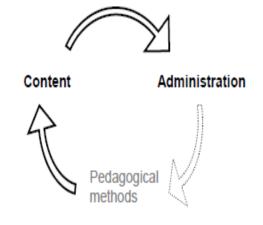


Fig. 2 Representation of Missing Link

In the absence of Pedagogical methods, the E-Learning website is considered an ineffective E-Learning website and also it does not provide effective E-Learners. It creates lack of communication between the learners and the facilitators.

6. Effective E-Learning Websites

E-Learning website must pursue three approaches and it consists of Content, Administration and Pedagogical Methods. It is very essential for the Designer to decide on the content based solely on the course objectives.

Good visual design does contribute in creating an effective learning environment for the learner. It helps the learner to understand what he sees on the screen, understand the purpose of the elements and thereby, learn about the content by focusing on it. The benchmark of a good training module is not just the content but also the interface and the look and feel of it. A bad interface can lead the learner to believe that it is a sheer waste taking the course. On the other, a simple yet engaging interface helps the learner understand the efficacies of the course better. The challenge for the Designer is always to create something simple and interesting by blending aesthetics with functionality. A lot goes into developing an engaging course that sparks the interest of the learner and makes him want to continue with the course.

Having a course, which is highly interactive, is a good way to ensure the success of the developed course. Pageturners are definitely out of question these days unless there are restrictions for the course. People prefer learning by doing to learning by reading (and answering questions at end). The most common way to make a course interactive is by the use of simulations and scenarios. Simulations model the real world and give a scope to make mistakes yet not get penalized and learn at the same time. Similar is the case with scenario-based learning. It helps in creating engaging learning opportunities that mirror the real life and thus enable the learner to learn by making mistakes. It is imperative for any E-Learning course to have assessment provided along with, be it inline testing or assessment at the end of the course. The assessment should map to the objectives and reinforce learning. Ideally, the assessment should help the learner clear all his doubts based on the course and at the same time, learn a little bit more about the same. A good E-Learning course should provide immediate feedback so that the learner is able to judge how well he has understood the content of the course. The feedback should not be such that it discourages the learner and makes him feel like he does not know anything. A feel good factor is very important for the learner after he takes the course along with the assessment. The following will explain the E-Learning systems.

6.1 Content

E-Learning website must possess the content in a highly understandable way as follows:

1) Exposition: By exposition, we mean the delivery of learning content to the learner with little or nothing in the way of interaction. The learner is not choosing the content; it is delivering according to an established curriculum. Any passive content can be used in this way – web pages, podcasts, e-books, videos, slide shows and so on.

2) Structured instruction: Structured instruction is also a teacher-centered approach, because it is likely to include a great deal of questioning and other practical activities can be much more responsive to the progress being made by learners. Structured instruction is ideal for novices and more dependent learners, especially where the aim is to develop new skills.

3) Guided discovery: Guided discovery is a structured process, but one in which the learner is given considerable

freedom to make mistakes and explore different options. The process is inductive, moving from the specific to the general. The hope is that upon reflection, the learner will be able to generalize from their experiences of a specific case, scenario or situation.

4) Exploration: This is the most learner-centered of the approaches. The 'teacher' here takes on the role of facilitator, helping learners to explore the available resources and to mould their own learning strategies. This approach is going to make most sense for independent learners who have 'learned how to learn'. Online content can vary from public websites to online book sites to performance support materials to user-generated content to material originally intended for formal exposition.

6.2 Administration:

The Course providers called the Administrators must follow the Learning Processes. In E-Learning, learning process is said to be Learning Management Systems (LMS) [6]. LMS are integral in the development and facilitation of online, blended and web facilitated learning. Investment in these, including development of the capacity of facilitator and learners to utilize them effectively and efficiently, as well as in the proprietary LMSs, is the key to the effectiveness of e-learning and blended learning. LMSs have the following features that are valuable for teaching and learning: Manage users, roles, courses, instructors, and facilities and generate reports, Course and notifications, Student messaging calendar, Assessment/testing capable of handling student pre/post testing, Display scores and transcripts, Grading of coursework and roster processing, including wait listing and Web-based or blended course delivery.

6.3 Pedagogical methods:

Pedagogy defined as the art of teaching. It refers to the strategies, methods and styles of instruction. The adoption of technology adds another element in course design to consider. To produce, effective online learning and teaching requires a comprehension of the processes by which learners learn and interact with technology. Before a new course produced, it recommended that teachers acquire an understanding of the pedagogy, which will underpin their online environment. This paper aims to provide the foundation by which teachers can comprehend the strategies for creating effective E-Learning websites. E-Learning websites has to track the Pedagogical attributes. The attributes are as follows: Drill, Presentation, Tutorials, Gaming, Demonstration, Discovery, Simulation, Discussion, Cooperative learning.

7. Conclusion

E-learning websites is based on the axiom that the learning takes place anywhere, anytime. The skills for acquiring knowledge play a greater role in success than knowledge concepts. It is becoming increasingly prominent in educational websites. E-learning as a pedagogical issue has brought many benefits to learners. The pedagogical attribute develops a thick rapport between the learner and the facilitator. Among the most visible and valuable attributes of e-learning techniques the delivery is that they potentially give learners greater access to education, in comparison to traditional learning. The websites that developed by satisfying all the attributes of the pedagogical methods is considered the best and it shines well. There are some procedures that have to be satisfied in the E-Learning websites, which a posse through the pedagogical attributes. In the upcoming world and in the near future the E-learning, websites ha to be filled with all these content, administration and pedagogical methods. In this fast growing world, both the learners and the facilitators have to be be facilitated. So then, the process of achieving in the field of education is quite simple and it is gratified to the world. The facilitators must facilitate learning. Through the pedagogical approach, the teaching can be satisfied in an effective manner. E-Learning is the one, which facilitates the learners through facilitators. Likewise, in E--Learning websites the facilitators must have keen knowledge in pedagogical attributes and it facilitates the learners. This paper mainly stresses the importance of pedagogical aspects to be present in the E-Learning websites. It also suggests some methods through literature, how to reach the learning objective and the pedagogical aspects.

REFERENCES

- McGhee, R. and Kozma, R. (2003). New Teacher and Student Roles in the Technology-Supported Classroom Available: http://edtechcases.info/papers/ teacherstudentroles.pdf
- [2] Britain, S. and Liber, O. (2004). A Framework for the Pedagogical Evaluation of eLearning Environments. http://www.cetis.ac.uk/members/pedagogy/files/4thMeet_fr amework/VLEfullReport
- [3] Salmon, G. (2000). E-moderation The Key to Teaching and Learning Online. Kogan Page, 0-7494-3110-5
- [4] Itmazi, J. A. and M. M. Gea (2005). Survey: Comparison and Evaluation Studies of Learning Content Management Systems. MICROLEARNING2005: Learning & Working in New Media Environments. International Conference, Innsbruck, Austria.
- [5] Woelk, D. (2002, June). E-learning: Semantic Web services and competency ontologies. In Proceedings of ED-Media 2002 Conference.
- [6] Kljun, M., J. Vicic, et al. (2007). Evaluating Comparisons and Evaluations of Learning Management Systems.

Proceedings of the ITI 2007 29th Int. Conf. on Information Technology Interfaces, Cavtat, Croatia, IEEE.

- [7] Piccoli, G., Ahmad, R., & Ives, B. (2001). Web based virtual learning environments: a research framework and a preliminary assessment of effectiveness in basic IT skills training. MIS Quarterly, 25, 401–427.
- [8] Line Kolås (2008). Topic Maps in E-learning: An Ontology of Computer and Information Science.