

# Providing Interactive Environment in eLearning Using Virtual Classroom

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## **Abstract**

*The flexibility of eLearning is having a drawback. Students need to have self discipline, high motivation, and good time management skills. If one of these requirements cannot be fulfilled, then the ordinary learning is more suitable to them.*

*Attending a classroom and interaction with an instructor and other students are still the stereotype of the learning process. In order to increase the experience of eLearning, this paper will suggest the use of virtual classrooms as the mean to replace the interaction in a traditional classroom. Students can enter the virtual classrooms and interact actively with the instructors and/or fellow students. If they cannot attend class, they still can access the scripts/logs of the missed class session.*

*Keywords: eLearning, Interactive, Virtual classrooms*

## **1. Introduction**

eLearning is definitely a growing field in the educational world as the one of new models of learning. The rise of eLearning has also strengthened the existence of distance learning, which is a model of learning the students by which living remotely receive

the materials including the assignments by post. However, the growth of the Internet technology and utilization has opened a new way to distribute the study materials more efficiently in time and cost. It could even help to provide better services to distant learning.

By putting all materials on the Internet, students can access them from anywhere and at anytime as long as they are connected to the Internet. In addition, eLearning becomes more affordable than traditional class as the study fee is usually lower and the additional costs, such as transportation and accommodation, are hardly needed.

Typical target of eLearning participants are workers and students who want to pursue further study overseas or who live in remote areas. Workers are usually busy during the day and are not having flexibility in time but they need more education and training to advance their careers. Students, who are willing to study in overseas, or they, who live in remote area, could reduce their transportation and accommodation cost during their study. eLearning also means no geographical boundaries. As long as someone has access to the Internet, he or she could join any eLearning providers.

## 2. eLearning Technology

The Internet, web servers, web sites, emails, and newsgroup are common applications and technologies which are used in eLearning. The Internet provides the infrastructure of massively joined inter networks.

Web server is the hardware and software that is responsible for accepting request from clients through HTTP (Hyper Text Transport Protocols: a communication protocols to transfer the information via web) and providing contents to them, such as HTML (Hyper Text Mark up Language: a means describing the structure of text-based information in a document) and linked objects (images, videos or audios).

Website is a collection of documents, images, videos and/or videos that hosted in a web server and accessible via the Internet, mobile phones and local networks.

Email is an equivalence of mails/letters in an electronic form. It is quite an older technology, but it is regarded as the most frequently used communication tool.

Newsgroup is usually regarded as a discussion group. A subject will usually have minimum one newsgroup for discussing anything related to that particular subject. Sometimes, a subject has two newsgroups. One is for general discussions while the other one is used for assignments enquiries.

Web servers and website can be used as the center or the portal of eLearning. Becomes the center or portal of eLearning means that materials, announcements, tutorial questions till assignments are stored here.

On the other hand, emails and newsgroup are used as the communication

means. The common applications of emails and newsgroup are asking questions to the instructor, communicating or having discussion with fellow students, and hand in assignments.

## 3. Obstacles of eLearning

Most of the current eLearning models are passive. The eLearning providers just supply the learning materials, tutorials and assignments on their website. Hence, student must actively acquire materials from the website.

Some of the eLearning providers have tutorial classes held on some places on scheduled time. These classes are usually in form of tutorial classes, to help student with the learning materials. Some people argue that this model has made eLearning lose its advantages in regard to the flexible time as not all students could attend those tutorial classes.

Although emails and newsgroup are provided as the communication tools, not all students can make use of them. Some of students even do not have time to just read the messages on their email or newsgroup. It also happened with the discussion.

One of the advantages of eLearning, which is the flexibility of time and place could make the eLearning becomes worst. The lack of scheduled study time in eLearning is really a sword with two eyes. On one side, students have flexibility to study on their own scheduled time. However, on the other side, for students with less responsibility and commitments, the flexible time could lead to delaying his or her studies, homeworks and/or assignments. Especially, for students, who works full-time. Their jobs are usually made as an excuse for not having enough time to study.

eLearning demands huge responsibility and commitments from its students to follow the discipline in study time and has ability to be self-learner. Self-learners mean student who undertakes eLearning should have capabilities to study the materials on their own scheduled time by themselves. Students without responsibility and commitment definitely will fail in their studies.

#### **4. Introducing Virtual Class**

As a matter of fact, the need of huge responsibility and commitments can be assisted by providing classroom environment. In conventional classroom, interaction between instructors and students and class discussion can be found. Face-to-face teaching method can make students learn the material in a certain time and discuss the difficulty they encountered with the instructors or fellow students. It is a better environment than current eLearning model could provide. However, it does not mean that eLearning could not be used as a learning model. The advancing technology could assist eLearning to reach its potential.

With the development of technology, eLearning can also provide the learning environment virtually. Students still need to attend virtual classes scheduled periodically like the conventional class. By attending virtual class, student can have similar interaction and discussion like in conventional classroom. Should students cannot attend the virtual classes, they can still access the scripts and recorded session they missed. Therefore, students could be forced to study periodically.

#### **5. Technology for Virtual Class**

The core technology of eLearning is the Internet. While in some countries, the Internet connection is affordable and has a high speed connection, the Internet in other

countries, especially in third-world countries, is still slow and expensive. However, the Internet is needed to deliver virtual classes.

#### **5.1 Broadband Internet Technology**

In the countries, which have good infrastructure and high speed Internet connection, a virtual class could be developed easily. They can build an environment which looks like an ordinary class by using 3D virtual tools. This 3D virtual class will be used as replacement. Virtual classes can be held for one semester long, similar to the conventional class. Like a 3D game, students can create their own characters in the virtual class to represent themselves. These characters can be used to interact between them or to the instructors. So they will feel a class environment as an ordinary class.

Lecturers can also develop an environment where it could be not only chairs and desks. Demo and simulation will help students learn much faster than just reading text books and listening to the lecturers' explanation.

In addition, virtual classes can be offered on online based society gaming, such as SecondLife. eLearning provider could offer some virtual classes in SecondLife world either regularly on just for some occasions. They can hire or buy some lands then create an environment suitable for the classes held on the SecondLife. Students can join the SecondLife and visit their scheduled classes. They can build avatar, the character in the SecondLife, to represent their characters.

In addition, an online based game environment can help some students in interacts with their lecturers or friends. Students become more confident, comfortable and they are shy no more as

they do not see their counterparts in real.

## 5.2 Dial-up Internet Technology

While broadband Internet could offer many possibilities, not only delivering high quality audio and audio, it can also be used in online games. On the other hand, Dial-up Internet could not be used to deliver Rich Internet Application. Limited and slow bandwidth becomes the obstacles and limiting the kind of materials to be delivered. However, virtual classes can still be built. In here, virtual classes do not to be meant as a real class, the virtual class meant to be an environment created in a scheduled time held periodically.

One of the possible Internet technologies that can be used is chat room. eLearning provider can provide a chat server to facilitate virtual class. Apart from providing their own chat server, eLearning provider can use many free services such as Internet Relay Chat (IRC) and messengers such as one provided by Yahoo! Inc. Yahoo! Messenger can also be used as it has a Conference facilities.

Public facilities are not normally used as people can join the session without registering to a course, and thus, they can waive the school fee.

Similar to virtual classes held on SecondLife, students should attend some chat sessions on scheduled time. While other materials are stored on the website, students need to create some ID, usually their email addresses, to represent themselves in the chat room. Everything is quite similar but the animations are limited. In the chat room, mostly everything is done by typing or may be some low quality audio.

## 6. Conclusion

In conclusion, providing virtual class could help eLearning students to be successful. However, we must agree that their commitments are still the most important. Virtual class is just one thing that could be used in reminding their commitments to their study. The technologies are already available both in Broadband and Narrowband Internet. An eLearning provider just needs to be creative in delivering virtual classes to add more value into it, not just replacing the conventional classrooms.

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