

Development of E-Learning Community in Asian Pacific Countries

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Abstract

In South Asian countries, the number of students who want to pursue university level education is relatively high. Unfortunately, the facilities, the other material resources and the human resources of those universities are not enough for accepting the increasing number of students in regular programs of the universities. Therefore, some universities have introduced E-learning method and provide courses by this method. Information and Communication Technologies (ICT) are rapidly developing in recent years. The new technologies introduce possibilities of improving E-learning methods. With the aid of the new techniques, we must improve the quality of E-learning. The Knowledge Integration Servers System for E-Learning (KISSEL) is a knowledge sharing platform for E-learning. This system bridges teachers' communities in Asian Pacific countries and produces an international teachers' community for E-learning. The advantage of this system is that the contents are to be produced in cooperation with teachers in Asian Pacific countries. Nowadays, there are so many social networking services on the Internet and open source projects are getting popular in the world. Open content sites such as Wikipedia also attract many users all over the world. Users and contributors to an open content site naturally produce a community on the Internet through their activities. Therefore, the management of open content is closely related to the management of the society. This paper is concerned with the management of KISSEL web site and the followings are described: (1) aim of KISSEL web site, (2) policy of the content management, (3) policy of the user management, and (4) policy of the security management. These are discussed on the basis of the open source and open content strategies. It is concluded that the KISSEL is a new type of social networking system which bridges domestic activities and international activities of teachers.

Introduction

In recent years, there are quick industrial developments in South Asian countries. The production of high quality workers is indispensable for the industrial development. The number of applicants for higher education is increasing in South Asian countries. However, these countries have common problems in higher education, i.e. (1) numbers of students are quickly growing but the facilities of education are limited, and so the schools and universities are overcrowded, (2) there are not enough number of trained teachers and professors, (3) buildings, facilities and other infrastructures are not enough for higher education, and (4) high quality teaching materials are not available.

The World Wide Web has introduced many radical changes in the field of education. It has enabled an infinite number of people to access an infinitely a large body of updated knowledge at the same time. It also offers answers to issues such as the accommodation of growing numbers of students, provision of infrastructure facilities and learning materials to them, overcrowding of schools, maintenance of buildings and other infrastructure facilities, shortage of trained teachers, and demands for higher standards. Despite all such benefits, there are a sizable number of students and teachers, particularly in humanities and social sciences who are not yet ready to welcome the E-learning technology. Our main objective is to identify the reasons for the hesitation of the students and teachers in countries in the South Asian region to accept E-Learning and make recommendations to implement web based learning in the South Asian Region successfully. In order to solve such problems, our research group introduced Knowledge Integrated Server System for E-Learning (KISSEL) in 2007.

Knowledge Integrated Server System for E-Learning (KISSEL) is enhancing the way instructors teach and students' learning. Professors can distribute a wide variety of course materials electronically, communicate and collaborate with their students, post assignments, prepare electronic quizzes, schedule their lessons all from their desks using the KISSEL system.

The KISSEL is an online courseware management system developed by the research group of the Ibaraki University, Japan, designed to cater to Asian Pacific countries specially for teachers' community. It comprises of a purely web-based set of tools and resources that are used by teachers to supplement the classroom experience. It provides the tools, resources and techniques essential for peer interaction as well as student-instructor communication and independent learning.

Through KISSEL, students are empowered to embark on active, independent learning. They are now able to adopt a learner centered approach to learning. They can also access course information, submit assignments and even do research on the subject matter, all within the virtual space provided through KISSEL. They can also enjoy the peer-to-peer type of learning and interactions. Online quizzes also help them to assess their own progress in learning.

What is E-learning?

Electronic learning (or E-learning) is a type of education where the medium of instruction is computer technology. In some instances, no in-person interaction takes place. *E-learning* is used interchangeably in a wide variety of contexts. In companies, it refers to the strategies that use the company network to deliver training courses to employees. Lately in most universities, E-learning is used to define a specific mode to attend a course or programmes of study where the students rarely, if ever, attend face-to-face on-campus access to educational facilities, because they study online.

Why do we need E-learning?

Web based training and its newer and more general synonymous term E-learning are two of today's buzz-words in the academic and business worlds. Decision-makers associate with them new ways of learning that are more cost efficient than traditional learning strategies and which allow students to better control the process of learning because they can decide when, where and how fast to learn.

Summary of E-learning status of South Asian Countries

ICT has become an important enabler to facilitate open education and distance learning at broader communities. E-learning ensures access to information about education, training and lifelong learning through the use of multimedia technologies. The recent growing trend of E-learning is mostly benefiting the developed countries due to some predominant facilities like infrastructure, technology, relevant content and responsive learner community. The beauty of E-learning is anyone can avail himself of the service i.e. learning/teaching aid from anywhere, as there is no geographic barrier among the learners. So, a global participation can be ensured through the system. The Internet has made the process much easier and comfortable. The E-learning scenario in developing countries is still a new era for the learner communities. Due to reverse economic and social conditions of developed countries, countries in South Asian region like Bangladesh, India, Sri Lanka, Pakistan, and Nepal could not yet establish a reliable E-learning system or education systems which used ICT facilities very effectively for teaching and learning process. The acceptance of such learning facilities is not yet accredited or even accepted by the local authorities in most of the countries. Few initiatives like very few universities or institutes, in addition to the international organizations like COL, is trying to create the E-learning program as a widely accepted tool for learning for wide varieties of community. Simultaneously, the local communities of developing countries can obtain the E-learning facilities from their existing locations. But the majority of the local communities are out of the facility. There are a few major issues like national strategy, connectivity, accreditation, acceptability, quality of the learning materials, and relevant contents that have to be considered for any E-learning program for South Asian countries. Simultaneously, setting priority of the learning systems, developing countries like Bangladesh, India, and Sri Lanka are based on traditional learning mechanism and the market for E-learning has not yet become an important agenda for the government to address. Another critical concern raised on the E-learning activities is the cost perspective. Learners of the developing countries have financial constraints to participate in the program which is costly for them and they have limited scopes to get the learning facilities as it

relates to high tech equipment, in many cases. So, for the developing countries we need to reframe the E-learning mechanism to reach the communities.

Usages of local languages are very crucial when implementing E-learning courses in this region and teachers and students communities welcome their native languages with multi media type course contents. However, limited knowledge of teachers on how to produce very attractive multimedia type course contents together with using their native language is a major problem of this region. It is mainly due to the lack of ICT knowledge of teachers community of these countries.

A broadband internet facility has not been 100% established in these countries yet. Internet downloading time is also another big issue to implement E-learning courses in these countries.

Development of E-learning User communities by Installing Cooperative Servers

The excellence of E-learning comes from the existence of new software that gives teachers or trainers the power to design incredibly effective learning tools and friendly learning environments that can engulf the learners to whatever that they are learning. If we encourage the installation of cooperative servers into some selected universities or high schools in South Asian countries that can work as a platform of sharing new software or teaching techniques, we can develop a powerful network of minds in these region. KISSEL project reports a recent effort in Asian Pacific Region to develop an E-learning user community over the Internet.

Why do we need to implement such system?

There is no question that the internet is one of the finest discoveries of the 20th century. People from all over the world can now be connected together in only less than a minute or so. There are many ways and ideas that the internet has come to fulfill our needs by getting involved with our daily life routine. For example, shopping is now possible to be done over the internet. News of the day is now available on the internet daily. Students can get help on their studies thanks to the

existence of education web sites over the internet. Surely there is more than what have been mentioned. But our aims to encourage school teachers in South Asian countries to set up communities among themselves and to share the knowledge of E-learning of different people. E-learning has not yet been fully introduced to the South Asian people. But the majority of teachers in those countries believe that the introduction of E-learning method into schools contributes in realizing a better education system in their countries. Most of the teachers use a presentation tool and the power point in their lectures. But their main reason for using power point is that they can easily display attractive images including animations and video clips. Their lectures are not always conducted by using power point, but it's more likely a mixture of the electronic and traditional presentations.

The number of schools in South Asian countries is relatively large when we consider its size and distribution. Most of the students have been enrolled for proper education. In recent years, all governments in this region are investing in the telecommunication infrastructure in order to improve access quality in all sectors, especially in the education and training sector. The goal is to use ICT to improve administrative efficiency and to give citizens the experience and skills required to join global workforces. All the governments are keen to develop new ICT programs and have taken necessary action to manage the extensive infrastructure, including optical fiber cable, satellite and mobile services. In such ways, the ICT infrastructure in those countries is fast developing. When we consider Sri Lanka, a small number of tertiary students and a few teachers have access to computers and the Internet at their homes, although the number of homes having computers is still rather limited. Many schools have recently received telephone lines, and Internet access. Each school has in an average of 5 to 10 computers. It should be shared by all the students of that school. One of the school net work project is funded in part by World Bank and ADB (Asian Development Bank) has created new conditions for further development of E-learning in Sri Lankan schools, focusing on schools in the rural areas and has introduced computers and internet access to these schools. The government and the people in this region are keen on the application of ICT method for education. However, there are some problems in introducing E-learning methods into the school system. They are (1) the high cost of hardware and software,

(2) no collaboration or no proper networking between the school teachers, (3) the limited knowledge of teachers on how to create E-learning teaching materials, (4) the limited amount of training provided for teachers to learn the computer related programs, (5) the lack of infrastructure for accessing in some parts in the rural areas. There are some efforts to solve the above mentioned problems. Recently, some countries are now inviting ICT experts from Japan, Australia and USA to conduct training in order to improve teachers' knowledge on the use of computers to create easy learning materials. In some schools, small groups of teachers are now trying to integrate E-learning methods as a part of their teaching methods. This study proposes one method to solve the above mentioned problems which often occur when introducing E-learning methods into the school system. The idea is to set up such a server, which works as a web portal, where teachers can have the opportunity to have their own network among themselves. The point is that the server works as a platform not only for exchanging their idea but also for sharing their modern techniques and useful teaching materials for E-learning. The server provides most teachers with equal opportunity to learn how to create E-learning materials for teaching and how to develop their teaching skills by using E-learning techniques.

Oea has partly been realized in March 2007 when the first server was installed in Ibaraki University and the second server in the National University of Samoa. The third server was installed in Sri Lanka in July, 2008. Some similar servers are to be installed in Vietnam, Bangladesh and Fiji by the end of March, 2010. These servers are expected to collaborate with one another and produce a systematic web portal of the teachers' communities for E-learning. We call these servers as Knowledge Integration Server Systems for E-learning (KISSEL). The activities of members of teachers' communities that can be carried out on the platform, KISSEL are the following.

- (1) Development of E-learning centers for a specific field of science.
- (2) Establishment of libraries of E-learning contents.
- (3) Development of open source software for E-learning.
- (4) Production of libraries of open source software

- (5) Providing an online course of ICT minimums for E-learning.
- (6) Exchanging of ideas and questions for E-learning and related techniques.
- (7) Recording of questions and answers for E-learning and production of FAQ

It should be noted that these activities on the KISSEL of different teachers' communities are carried out in a synchronized manner. There are two parts in each of the KISSEL servers, i.e. the international part and the local part. One member of a teachers' community has an account on one KISSEL servers in the country. So, he/she can access only one server of KISSEL on which he/she has the account. For example, when he/she has developed a new teaching material and likes to open it globally to all members of teachers' communities, he/she will upload to the internal part of his/her server. The international parts of the all KISSEL servers are mirroring each other. Once the international part of one server is updated, the update is reflected to all of the servers by the mirroring mechanism.

Conclusion

ICT is rapidly developing in recent years and we must make the best use of it to improve our education system by means of E-learning and one or two people cannot manage these rapidly developing ICT techniques. That is why, we proposed the web portal, KISSEL for teachers who are interested in E-learning. It provides a platform where a number of teachers can exchange their ideas, techniques, software and contents for E-learning. That is a new kind of social network in the world and our target is to develop an international community of E-learning. If teachers became members of KISSEL, they can easily learn how to produce E-learning contents and can improve their teaching skills. The benefits of having these E-learning user communities and the servers are summarized as follows.

- ✧ Teachers will now have the chance to share their knowledge with other members of the teachers' communities.
- ✧ The server is now available for carrying out international cooperative studies of E-learning sciences.
- ✧ Teacher's communities within different countries can set up a network

between themselves and further the sharing of the knowledge between them.

✧ This idea will strengthen the use of E-learning into the classrooms.

The KISSEL is a kind of open source program to build and set-up communities. The number of KISSEL servers is limited nowadays and the contents accumulated on the servers are not enough at present. It is hoped that we can further develop the KISSEL by Authors.

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