

VIRTUAL UNIVERSITY EDUCATION IN SRI LANKA

Karthigesu Kamalabalan ,Kanagasabai Erlilverl, Gitanjali Thiyagalingam, Thamayanthy Sripalan, Thanuja Uruththirakodeeswaran

Department of Computer Science and Engineering, University Of Moratuwa, Sri Lanka
{ kamalan.10,erlilverl.10, anjali.10, thamayanthy.10 & thanuja.10}@cse.mrt.ac.lk

Abstract

In 21st century Sri Lanka has shown rapid but heterogeneous development in the field of Information and Communication Technology. Every people in this country have basic knowledge in ICT. So we have to change our teaching scheme according to technological increase. At the way, Virtual University is the vital part of student learning system. There are so many reasons to form virtual university in Sri Lanka. So here we discuss about virtual university in Sri Lanka, why we need, what are the problems we faced to form a virtual university, How to overcome from those problem and briefly describe advantages and disadvantages of virtual university.

Index Terms: Information and Communication Technology (ICT), Sri Lanka, Virtual University, Telecentres, eLearning

I. INTRODUCTION

Sri Lanka is a country in the developing world with a high level of literacy and a well established policy of free education, that has poised itself to gain from the emerging global knowledge based economy. Primary and Secondary schools are free and accessible for all, but far from everyone leaves Secondary school with career opportunities. When it comes to higher education the situation is different and the actual intake to tertiary education was less while the number of students left out of the university system was high in every yearly intake.

So, through this free education less number of students is eligible to go high study. What happen to other students, still we don't know or we don't care about them. So we have to develop or re-correct our education system. At the way virtual university is the vital part to solve this problem even though students are hesitating to study in virtual university. We don't know why? So we are responsible to bring out awareness among students about virtual university.

II. VIRTUAL UNIVERSITIES IN SRI LANKA

Sri Lanka is in initial stage in developing these virtual universities. In Sri Lanka "Vidupiyasa" University of Colombo School of Computing (UCSC) virtual campus and Rajarata Virtual University are now in progress in providing e-learning education using management facilities.

A. "Vidupiyasa" University of Colombo School of Computing (UCSC) Virtual Campus

1. The BIT Program – A Bachelor of Information Technology and eBIT

At the end of the 20th century there was an increasing demand for IT graduates in Sri Lankan industry and still the traditional university system could not increase the intake for IT-programs. To address this, a new tailor made Bachelor of Information Technology (BIT) was designed and started at the University of Colombo in 2000. The new eBIT program was constructed as an external program without any teaching and learning sessions at the University in Colombo. UCSC designed the syllabi and were responsible for the curriculum and content, but for lectures and teaching sessions the students had to visit facilitating places and private teaching institutes [1].

The older BIT curriculum was revised to develop online courses considering user centric collaborative learning pedagogy and constructive alignment. A new Virtual Learning Environment (VLE) based on Moodle LMS was established and customized. This new and localized e-Learning framework was introduced as the "Vidupiyasa" (Interface for Learning and Knowledge). Interactive online learning materials were developed according to international e-Learning standards SCORM covering twenty eight courses of six semesters in the BIT degree [1].

2. NeLC – A National eLearning Centre

An UCSC based e-learning centre was started in 2002, to support the transformation of the current BIT material into interactive e-learning content and facilitate the necessary curriculum development [1]. At that time USCS collaborated with Swedish experts and got Japanese support from JAIKA at the same time as they had a dialogue with Australian universities. The e-Learning Centre of UCSC was established to address the proper integration of ICT in the education process in Sri Lanka. At the beginning, there was no expertise in e-Learning at UCSC and the Swedish aid organization Sida provided assistance through a planning grant.

A LMS was established to provide formative assessments without e-learning content, and training programs were conducted to improve the knowledge of e-Learning practices. These activities initiated research and development (R&D)

interest about e-Learning among faculty members. Later this has been extended to establish the virtual campus of UCSC called "Vidupiyasa" to deliver ICT education through an online environment/Internet (<http://vle.bit.lk>). Vidupiyasa is a framework which integrates various learning and assessment environments with the idea of serving as a centre for e-Learning all over the Sri Lankan island.

B. Rajarata Virtual University

As a beginning of Virtual university in Sri Lanka Rajarata University has started its virtual university called "Rajarata Virtual University". It has few courses available to follow online. For example Computer science and technology (ICT, CS), Applied Sciences, Master business of administration, Management studies, Post graduate Diploma in Management, English, Social Sciences and Agriculture. There are some students who followed these courses and their results are also available in VU website. Rajarata VU website is used like Moodle as most of the physical universities are using. In the website it-self has all the details such as course details, outlines and lectures. So the student wish to follow a course can search through it and according to his/her wish can follow a course or courses.

C. DEMP – The Distance Education Modernization Project

The DEMP project later became a white elephant and out of the planned 100 e-learning centers with fast internet access only 26 were completed. With new funding from the Asian Development Bank the 26 DEMP access centers were restarted and renamed as NODE centers. According to the Ministry of Higher Education the NODE initiative should be the new National Online Distance Education Service of Sri Lanka with a target of 150 centers strategically spread all over the island [1].

III. ADVANTAGES AND DISADVANTAGES OF ESTABLISHING VIRTUAL UNIVERSITY IN SRI LANKA

The Sri Lankan education also can be improved with demand-driven-education and education-at-ease by having VUs. The excessive knowledge explosion due to the influence of knowledge based society and economy can be managed by VUs. VU will be the solution to the available problems faced by the students such as physical distance, long time to reach physical university, cultural and economical reasons and it delivers more courses to the students who like to start or continue their higher studies but they cannot attend a university due to the above mentioned reasons and some of them are employees, employers, foreign students, the people don't have enough time at the day time and the

undergraduates. But still there is a problem with the VUs because the person who follows a course in VU has to have access to internet and the media-rich learning. But those facilities cannot be got by every person in Sri Lanka because still there are some people who do not have computers and internet facilities at their home.

VUs provide interactive learning with all the other students who are from several areas and share a good social and educational equity, learning-on-demand, widening access to global resources, customization of content, interactively in content and self-pace learning.

The cost of maintenance of virtual universities can be low in case of increasing number of students studying compared with the physical universities. Extending the physical area or space is difficult and need more expenses. If the physical university is taking more and more students in every year in the coming years the space is the major problem. But allowing more and more students to the VU is not much difficult as physical university. But initiating the VU is the difficult thing because at the initial state the lectures, tutors and other technicians should be assigned to the VUs. Maintaining the courses in the VU should be properly maintained and the proper technology and resources should be used to conduct the courses. Finding the proper resources at the beginning is difficult for example getting the lectures into the VU is a problem because the experienced lectures will not be ready to spend their full time on virtual universities since they already have their profession. But the others who have finished their higher studies and unemployed are able to conduct the VUs' courses. But they might not have proper knowledge. But there is another advantage that so many unemployed educated people might get job at the VUs since there are so many arrangements should be done at the beginning of VUs.

The students who are interested in following more than one course will get a good opportunity due to having VUs. VUs will have a proper maintenance and a fixed duration of courses and there is a lesser chance to have interrupts. But the online courses cannot create a realistic, participatory learning environment. It is not the culture in our country and the virtual class room does not have the feeling of physical nearness among the students. It has lack of competitiveness among students. The practical work done has not been a completely resolved problem in VUs. It has both advantages and disadvantages among the students point of view. Some students can manage in any environment but others need the physical feeling to make their studies.

Lack basic living resources and live with an underdeveloped educational infrastructure in an environment of political instability, poverty, lack of social and educational infrastructures, and cultural issues that restrict educational progress in developing countries, the difficulty of accessing them and the digital divide between privileged and deprived groups continues to widen the educational gap, political circumstances, the history of their educational developments, culture, language, religion, gender issues, population size, resources, global economic conditions were not conducive to educational expansion in developing countries, internet, which

remains inaccessible to most individuals in this country, Educational provisions in developing countries were limited due to their governments' failures to recognize and address the issues of access, culture, and the gender gap that affected poorer population groups and rural children and teachers in isolated, under-resourced, and neglected schools, with many unqualified teachers and little access to information, are those least prepared for the change are some of the disadvantages or the problems available in our country compared to the physical universities.

IV. PROBLEMS FACED IN ESTABLISHING VIRTUAL UNIVERSITIES IN SRI LANKA AND SOLUTIONS

Computer literacy is vital for E-Learning. Lack of computer literacy and information illiteracy amongst the learners inhibits its use and it is difficult to address and satisfy all types of learners having a large variation of IQ. This is because learners lack the degree of self-direction and competence required to retrieve accurate information from the ready availability of information rich sources on the web. Therefore, learners face problems in using e-learning.

The term one-to-one computing has lately been frequently used and the main idea of the concept is to equip every student in primary schools with a personal computer. In many countries this has been combined with giving the students Internet access to be able to search for information and to share content. In Sri Lanka there are several implementations of One-to-one computing. In the so called "eVillages" the Intel Class Mate computers are provided in combination with the use of Internet in the Primary school curricula. The computers have been distributed with digital learning objects and Intel has given support for computer maintenance [1].

In the Sri Lankan One Laptop Per Child (OLPC) initiative the focus is not on Internet access or connecting the XO computers to a network. The Sri Lankan Ministry of Education has not followed the recommendations from the OLPC foundation and has chosen their own model where emphasis is on content development in the islands local languages. Thirteen schools have been selected for the first pilot that would be evaluated during 2011. The schools are located all over the island with students from various ethnic groups but all schools are in poor rural areas [1].

Increasing opportunities for higher education has become a challenge for many developing countries. In Sri Lanka, technology mediated distance education is seen as a good option to increase university educational opportunities. Through the Internet, it is possible to make learning materials available 'anytime – anywhere'. Now a day's teaching via lectures is difficult and e-learning is an effective way of delivering lectures.

To get the services from the virtual universities student must have facility to access the internet and knowledge to handle the internet applications. The virtual universities have identified the importance of chat as a tool for supporting

distance education and introduced a "virtual office hour", allowing students to chat with their lecturer.

For moving from Classroom Education to Virtual Education we have to consider the students' background. Some students have sufficient economic background to have own computer or laptop and facilities to access internet. Those students can easily find the concept and they can perform well. Some students don't have basic economic facilities. They have lack of basic living resources, poverty, lack of social and educational infrastructures and cultural issues. Because of this all the students cannot access computers and the internet, which remains inaccessible to most individuals in the country.

To provide access to students who do not have Internet connectivity, a 'National Distance Education Network' was set up. They link Open University of Sri Lanka and other private and public post-secondary institutions. They introduced telecentres to access internet. Providing access through telecentres to communities who lack access to computers and internet is a good way of providing physical access. Libraries, educational institutes' computer laboratories and internet cafes are other ways of providing access to computer and the internet.

Several ICT initiatives have been launched by the Information and Communication Technology Agency of Sri Lanka (ICTA) under the umbrella of eSri Lanka. The main objectives of the eSri Lanka initiative is to "develop the economy of Sri Lanka, reduce poverty and improve the quality of life" [10]. Nenasala is a word of Sinhala origin that means a center for knowledge and Nenasala has been the given brand name for about 600 communities driven Telecentres in rural Sri Lanka. Their overall aim is to bridge the internal digital divide and to promote local commerce and culture.

A Nenasala can be successful without Internet access but if the Internet connection is cut off the rate of visitors will go down and in some rural areas it is hard to find a way to get Internet access to affordable prices. Common services in the telecentres are training in basic computer science and how to use 16 Office packages. It is also common to have courses on digital design and image handling. When telecentres are able to provide these kinds of services in isolated rural areas it is appreciated [1].

Students who don't have facility to access computer or internet have to travel long distance to telecentres. They spend considerable amount of time for travelling. There are no good public transport services to travel to these telecentres. Telecentre fee is included in the course fee. But students have to pay more for travelling. Telecentres are opened only for weekdays. This does not suit the needs of employed students who claimed that these were closed at the weekend when they had free time. Even telecentres are opened in weekend only one or two students have visited. It was not economical to telecentres. Every student has a time slot per week. They cannot use other than the time slot. In telecentres there is only limited number of scanners, printers, etc. Therefore, sometimes students want to wait for a while for getting services from those machines.

Telecentre staffs are expected to support students who face technical difficulties. However, students felt that the telecentre staff lacked knowledge and awareness to be of help. Telecentre computers are equipped with a set of software that has been selected to offer a good service to its users. Students couldn't use softwares other than that were installed. If students want to use any other softwares other than that were installed they have to get permission from the vice chancellor.

Most students complained that the Internet connection was too slow. The lack of reliability in connection has made online quizzes a stressful experience for students as there is no guarantee that the quiz could be submitted at the first attempt.

The ability to retrieve and present the right information at the right time to the right learners requires the principle of relevancy. Current virtual university models, even with the most sophisticated search engines, fail the relevancy tests.

Lack of infrastructure and professional competence, problem with on-line exams and the associated cheating, insufficient telecommunications infrastructure, slow implementation of national policy for the promotion of online education are some of the issues in e-learning. Also presently, it does not provide placements and recruitments.

It is difficult to bring the learning performance gain without the presence of a live faculty during a 2D multimedia presentation. Psychological treatment and instant help rendered by a live faculty after diagnosing the problem and then customizing the instruction to suit the student is absent which reduces the interest of students in e-learning.

The education in Sri Lanka is teacher-centered education. Student-centered education provides opportunities for students to learn by engaging in activities that may involve collaborative work or problem solving or open access to electronic resources. But lack of familiarity with student-centered education affects learners in education to develop information literacy skills. Therefore, they are not capable enough to perform well in e-learning [7].

Asian learners prefer passive learning because their countries represent high power distance (Wang, 2007). Hence, they have reverence for the teacher, texts, and exams and therefore, introducing constructivist e-learning for Asian countries can be problematic. Sri Lanka is also one of the Asian countries and learners may represent similar characteristics. Therefore, it is important to identify how these factors will impact on the use of e-learning in education in Sri Lanka.

According to Hofstede's website of cultural dimensions, the majority of Asian countries are categorized as collectivist. The Sri Lankan education system, especially the school education system, is individualistic focused on individual achievement and competition, but the social culture is collectivist [6]. Therefore, there is an apparent disagreement between Sri Lankan school culture and social culture. However, it is possible these two cultures will be useful to build a better learning environment. Nevertheless, according to the higher education system how these two characteristics bring together in e-learning? It is not clear. Therefore, this needs to be identified.

In the Sri Lankan context, the first language is Sinhala and there are other multicultural communicational groups such as Sri Lanka Tamils, Indian Tamils, Muslims, and Burghers. Native language is one of the barriers to internet use in Sri Lanka. Sri Lanka is a Buddhist country [3].

However, there are Hindu, Islamic, Christian and other religious groups as well. Hence, there is a need to understand how cultural factors that affect the use of e-learning in Sri Lanka. Therefore, for the proposed study, three of Hofstede's dimension of cultures: power distance, individualism and collectivism, and long term orientation can be used to understand contextual factors that impact on the use of e-learning.

Academics are also responsible for the development and implementation of e-learning. However, in Sri Lanka some of the lectures have not any idea about e-learning. Some lectures do not have clear idea about how to evaluate web sites. Many senior academic staff doesn't have the information literacy like many people. The lectures who are expert in ICT, don't know how to apply this for e-teaching. Even Government introduce various e-learning procedures, they don't promote any kind of programs to teach academic staff members to link ICT for lecturing. Therefore, lack of staff awareness about information skills and lack of training opportunities for academics is the barrier for use e-learning [7].

Now school teachers are given training to teach students. By increasing the salary of IT trained students teachers also help virtual university education system. ICT and GIT are compulsory subjects to school students. Make a rule to get the entrance to universities every student must get through the GIT. This will help the students to get the best knowledge.

Another key finding of this study is the lack of partnership between librarian and academics. This is barrier for building valuable e-learning courses. Even Librarians conduct information literacy programs in isolation, these programs are not successful. Even academics have started e-learning programs at the internal level at the universities librarians are still not working collaborate with them due to lot of logistical constraints. Furthermore, due to the lack of understanding about learning technology support, librarians are unable to involve practically in e-learning [7].

By giving awareness and publicity about virtual universities, we can easily establish virtual universities in Sri Lanka and get benefits from it. Virtual university establishment needs consider about in taking more students into VU and providing many online courses as possible. If the virtual university is started in Sri Lanka extending available courses also possible.

The virtual university can be started with the currently available courses and additional courses can be added in the future. Since many of the Sri Lankan students are following foreign courses which are not available in Sri Lanka and sometimes they go to abroad to do some courses based on their personal interest. Due to this the internal sources are going outside because most of the students going to foreign countries do not return. Due to lack of spaces available in existing universities there is a less possibility to introduce

more new courses. But through virtual universities it is possible. And many foreign lecturers and tutors can be joined through the virtual universities to provide a better service to the students. More foreign university online courses can be added to our virtual universities with their permission.

V. CONCLUSION

From the above mentioned factors regarding virtual universities in Sri Lanka, there are more advantages than not having virtual universities. Because Sri Lanka is a developing country as well as the average education level of Sri Lankan students are high and significant amount of students are able to continue their higher education in their educational status point of view but most of them are not continuing their higher education due to lack of space in the available universities. So more universities and courses should be introduced and more students should be in taken. For that from our analysis, introducing new physical universities and introducing new courses in available universities are difficult due to the political and financial level of the government and students. But Virtual universities can be introduced or further developed to solve the current problem.

In Sri Lanka, there are already some virtual universities introduced such as “Vidupiyasa” University of Colombo School of Computing (UCSC) Virtual Campus and Rajarata Virtual University, so they can be improved to introduce more courses and can in take more students. And commonly most of the govern universities and the private institute are using the Moodle system and it can be integrated with virtual university and the students who join to the universities or the private higher studies institution they got familiarity with the Moodle system and the internet accessibility. Nowadays most of the places in Sri Lanka have internet facilities so the telecenters can be installed, the students have internet facilities at their home can access the Virtual University/Universities from their home. So introducing Virtual University is not a big problem in Sri Lanka.

The government is also feasible to create and maintain virtual universities and telecenters with its’ financial level. Even though there are some difficulties in establishing virtual universities in Sri Lanka, but there is a necessary to have a virtual university, because to limit the students who go to abroad for their higher studies. For the current situation Virtual University is the only way to improve the internal educational level of Sri Lanka. So the Virtual Universities should be implemented in a faster gradual manner in Sri Lanka.

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