

SMS Integration with Online Learning

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eLearning in Maldives is in its infancy and has not received wider acceptance throughout the country due to a number of barriers. However, with the unique geography of Maldives eLearning can be used widely and extensively used. Learning Management Systems have been implemented in a number of educational institutions in the country. However, these systems were not able to reach wider audience in the rural islands of the country. It is of utmost importance that any educational system in Maldives should reach all the different island communities. One of the major reasons for limited access is the lack of accessible Internet services in the rural communities. However, mobile network has reached all the inhabited islands in Maldives. Recent statistics shows that amongst the two mobile providers the number of mobile phone registration is twice the population. Hence, the use of mobile network to reach the island communities can be an effective mode of communication for Online learning. This paper looks at a project designed to integrate mobile SMS into Online learning. The project has two major components. One component allows the lecturers to send their posts to students as SMS messages. The second component allows the students to SMS their replies to a dedicated mobile number.

Background

Small island nations, especially developing countries, encounter a number of limitations in providing services to the people due their size. These services include education, health, communications and many other public services. These island nations consist of very small islands with a very low population density in most islands. The low population density in the islands limits the infrastructure developments mainly due to the lack of the economies of scale. For example, building a secondary school in an island with a population of less than 500 people does not provide economies of scale but rather makes it economically a wastage of resources. An island this size would not have adequate number of students per teacher, and particularly in developing countries the public expenditure budget is so much deflated that this cannot be considered an alternative. Distance education is seen as an appealing alternative to traditional face-to-face education in these countries as it can provide education from a central location without having to spend a lot in developing infrastructure in several islands. Although it is easier to achieve economies of scale through distance mode delivery of education this alternative also poses a lot of barriers, which need to be addressed prior to establishing a distance mode education system.

Maldives is a prime example of small island nations facing a number of barriers due to their size and economic status. Since it is not economically feasible to build a secondary school and high school in each of the islands one of the ways to achieve economies of scale is to have regional centres where the students travel on a daily basis to get their education.

However, the absence of regular ferries between the islands in Maldives makes it impossible for students to travel to the regional centre on a daily basis if the centre is not situated in their own island. For this alternative to work, Maldives needs to invest heavily on establishing regular ferry services between the islands in addition to the human resources development and other infrastructure development costs. Alternatively boarding houses can be established in the islands where the regional schools are located and students can reside in these houses during the school term which again requires huge financial investments. This leads to the alternative of reaching the students wherever they are through distance mode.

Distance Education in Maldives

Distance education has been used in Maldives to provide non-formal education since 1987. One of the programmes that have been successfully conducted and ongoing is teaching English language for adults, which is named Distance Education English Course. The programme was initially targeted to upgrade the English of the atoll teachers. The course was developed by the Non-formal Education Centre who was also responsible for record-keeping, setting examinations, marking, and distributing materials to the regional centres. Teleconferencing between the head teacher in the atoll and the headquarters occurs every week to clarify queries of the students. A second distance education programme that was developed and carried out in Maldives between 1989 and 1993 was Condensed Education Programme. It was informally named "second chance". As the name suggests, this programme was designed to give a second chance education for out-of-school children and youth. Other non-assessed personal development programmes are continuously conducted through various government departments as informative distance education programmes. These programmes are targeted to general public via radio and television.

Distance Education within the formal education system was introduced with the inauguration of Centre for Open Learning under Maldives College of Higher Education in 1999. This centre has the mandate to run all the distance education courses conducted through various faculties of the college. The centre currently runs four programmes: Diploma in Teaching Dhivehi Language, Diploma in Early Childhood Education, Advanced Certificate in Human Resource Management and English for Further Studies. Since its inception the centre has been advocating for improved quality distance education in the Maldives.

eLearning Introduced at COL

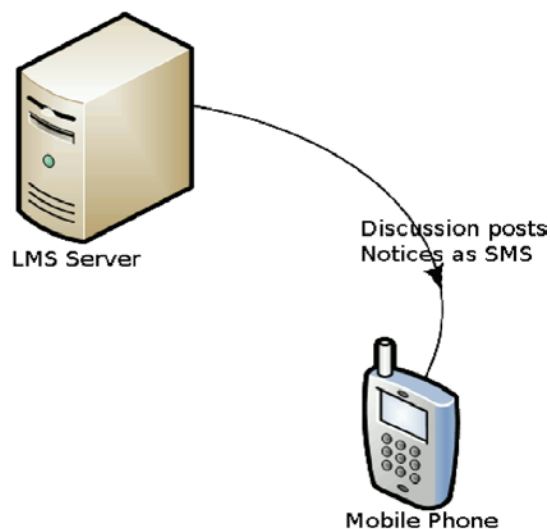
During 2007 the centre started a project to implement eLearning at the Maldives College of Higher Education. Under this initiative the centre advocated the use of technology to deliver materials to the students in the islands within the country. As a result a Learning Management System was introduced and successfully implemented by the end of the year 2007. The use of the learning management system began during 2008 and students from different faculties of Maldives College of Higher Education started using the system. Initially the system was introduced to students as a blended delivery system for face to face students. Initially the system was introduced to face to face students so that any issues

relating to the system can be rectified with ease. Currently a total of 115 different courses are offered through the system with a total enrolment of 1895 students.

Once it was successfully implemented informal discussions with the students and surveys were carried out to find out the difficulties in using the system. The discussions lead to the conclusion that most students in the islands do not have access to the Internet which limits access to the learning management system. Since most of the students at the Centre for Open Learning are from the islands it is of utmost importance that we reach the students through the system. One of the major barriers that the centre faces is to send general messages as well as discussion messages regarding the content. One of the major reasons for limited access is the lack of accessible Internet services in the rural communities. However, mobile network has reached all the inhabited islands in Maldives. Recent statistics shows that amongst the two mobile providers the number of mobile phone registration is twice the population. Hence, the use of mobile network to reach the island communities can be an effective mode of communication for Online learning.

SMS Integration

A project was initiated by the Centre for Open Learning to integrate SMS into Online Learning. The project was carried out from January 2010 to April 2010. The project has two major components. One component allows the lecturer to post their discussion in an Online environment (Learning Management System). Once the message is posted on to a forum it is relayed to the students' mobile phone using a specially designed tool. Hence, the students will receive forum posts, announcements, etc into their mobile phones even if they do not have access to Internet. The second component allows the students to SMS their replies to a dedicated mobile number. Once the SMS is received a specially designed tool convert the SMS message and delivers it to the respective lecturer's email as an email message. Once again the students are using their mobile to communicate to the lecturers. This aim of this



project was to widen the reach in the islands as more and more people are using mobile phone in the country.

In May 2010 the pilot testing of the project was conducted with 3 students participating in the testing. The students were registered in to a course and any discussions that were posted in the discussion forums were relayed to the students' mobile phone. In addition, students were given a specific mobile number to send their queries as well as their replies. A number of queries were received and there were redirected to the lecturer's emails. The students found that this system was extremely helpful and one of the most helpful aspects that was identified by the students is the ability for the students to receive special notices on their mobile phones. The students found this feature very helpful as it reduces the students having to call the centre with the queries.

Way Forward

Once the pilot testing is completed the full implementation has started and it is envisaged that all the students of Maldives College of Higher Education will be able to use the benefits of this system by the first semester of 2011. Another study will be conducted in the middle of 2011 to identify any issues relating to this project.