MECLE
Mobile Enabled Collaborative Learning Environment

Background

Back in the year 2006 we developed a prototype of website of NCIDE with a feature of interactive chat using Wireless Mark-up Language. Gradually, by 2007-08 Mobile learning had been considered as an innovation in online learning with mobility as a key feature. The proliferation of mobile devices and wireless technologies around the globe brought massive opportunities for delivering personalised, ubiquitous, pervasive, and flexible e-learning, to all anytime, anywhere. This attracted us to innovate and experiment a large variety of mobile applications, in different types of teaching and learning set up in the ODL system.

In the year 2007 NCIDE in collaboration with SOHS was working on providing interactive multimedia rich material online through MOODLE for the IMNCI component of PGDMCH programme. As NCIDE promotes and develops innovative learning solutions for open and distance learning system on issues related to access, quality and equity and also focuses on development of ICT enabled solutions for effective and learner friendly instructional system including e-learning, multimedia learning, mobile learning and other web based learning. As an experimentation, it was decided to enable the learners to access learning materials through their hand held devices and a prototype of mobile enabled collaborative learning environment was developed using MLE-Moodle – the Mobile Learning module of Moodle. Development of mobile enabled collaborative learning environment as an idea was quiet interesting and innovative during the time 2008-2009.

Need of the Innovation

Learning wherever, whenever and whatever one wants to learn, through alternative channels supplement and augment learning in an ODL environment. As the PGDMCH programme is a medical science programme which included field trips and project work implementing, a mobile enabled learning environment was almost essential where learners could fill forms of case studies, upload images and videos related to the symptoms and signs of disease in children under five years of age, discuss live case studies through written reports in a forum, and create learning scenarios which are location based integrated with GPS, etc.

Description of the Innovation

The Mobile enabled collaborative learning environment is integrating with the online learning system developed by us for learners who need to access their course content through mobile internet or collaborate with their peers through asynchronous mode in the form of discussion boards and synchronously through chat forums any time anywhere. They can also access quiz and evaluate themselves on handheld devices. The mobile enabled collaborative learning environment basically includes User login, Course navigation, Multi Language support. Activities in a course can be mobile enabled by the course creator so that they are available to be used on students' mobile phones.

Some screenshots of MECLE, accessing our virtual platform using the web-browser on the phone are shown in Figure 1 :
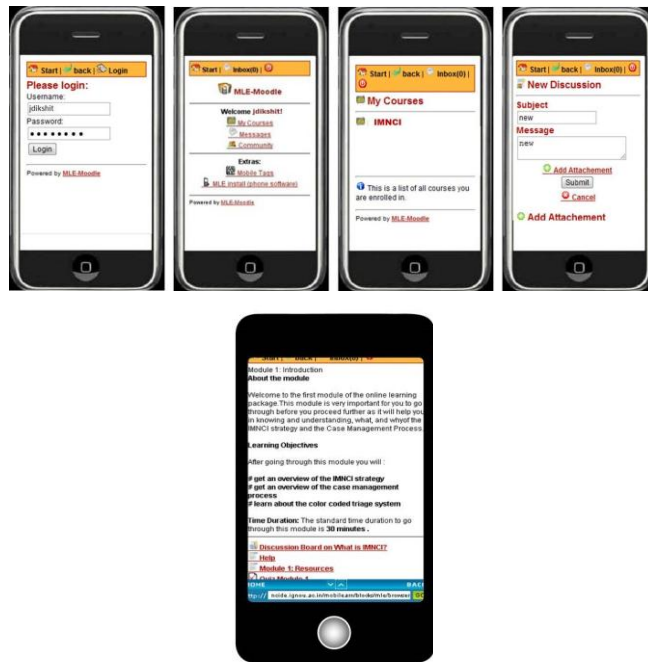
Figure 1 : Some Screenshots of MECLE, Accessing our Virtual Platform using the Web-browser on the Phone

Innovative Features

Through the mobile enabled collaborative learning environment itself is an unique way of using mobile devices for collaborative learning, it has several innovative features as mentioned below :

- Content available on the server can be directly accessed through web browser by the user on a different set of interfaces (which have been built exclusively for mobiles).

- It has intuitive interface and easy navigation.

- Minimal learning curve in another innovative feature of this innovation.

- It gives direct access to verity of Moodle resources on the mobile phone like texts, HTML-texts, images, video, audio, and links, etc.

- Mobile Learning objects in the mobile enabled collaborative learning environment provide an opportunity to store content on the phone of the learners which enabled them learn even if they do not have network connection.

- Through the collaborative learning environment learners can send messages. The Moodle messaging to their mentors and peers without using SMS services on their phone. Learners can also send pictures and videos attached to a message.

- The collaborative learning environment also had multiple choice and true-false questions with automated marking system.

- The MECLE also enabled the learners to submit an assignment or view the correction via the mobile phone. The assignments can be uploaded in the form of audio/video/images files or plain text.

- The forums are accessible through the mobile client. You can read and create/edit discussions and replies. You are able to attach self made pictures, videos or audio recordings to your discussions and forum posts which you can instantly record with your phone or you can choose from the file system.

Achievements

The idea of developing a mobile application for education way back in 2008 in itself was a new idea. The idea was converted into a workable prototype in-house by the faculty using open source tools. The innovation was showcased in a national conference organized by Digital India, in 2008. This experiment performed by NCIDE in 2008 led to the development of a gamut of mobile applications which are discussed in this publication.

Applications and Uses of Innovation

This application was developed pre HTML 5 era and thus had a potential to access the MECLE both online and offline. This application could be applied to all eLearning programmes using MOODLE as a learning management system.

Way Forward

With the cost-effectiveness and accessibility features of mobile phones and availability of the 4G/5G networks, the pedagogy, methodology and technology of the prototype developed can be scaled up to provide such facilities for other eLearning packages.

Coordinator and Innovator

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