

# Multiple Media Enable Computer Literacy Programmes

## Background

As a part of the North East Educational Development activity, the Computer Literacy Programme (CLP) was launched from November 1, 2002 in most of the states of North East. This was launched through select Study Centres of IGNOU and Community Information Centres (CICs) of Ministry of Communications and Information Technology spread across the region on pilot basis. As a collaborative initiative, IGNOU had signed an MOU with Ministry of Communications and Information Technology on March 31, 2003 for the utilization of the Community Information Centres of North East established by the Ministry. Through its pilot launch of CLP training, IGNOU could train considerable number of candidates in different states of North East. The print material of the Computer Literacy Programme in English was specially designed and prepared.

The programme was of one-month duration covering the basics of computer operations and applications (WINDOWS and; MS-OFFICE). The course was spread over five blocks along with one lab manual. A certificate of participation was awarded by IGNOU to the successful participants.

This innovation is related to the development of multiple media enabled CLP. Apart from the printed training material the other media components that were expected to be integrated in the CLP were interactive multimedia CDs and web support through virtual lab platform developed by NCIDE (See Figure 1). This activity was a joint collaboration of National Centre for Innovation in Distance Education (NCIDE) and erstwhile Education Development of North Eastern Region Unit (EDNERU).



Figure 1 : Homepage of Multimedia Rich Lessons

## Need of the Innovation

Need was felt to upgrade the CLP to Multiple Media Enabled CLP so as to do value addition to practical component of distance Science learners and to make it cost-effective, and to provide an omnipresent facility.

This was possible, if we could develop an interactive multimedia rich content for various components of CLP. In this context, it was also decided that apart from the face-to-face session and hands-on-practical, the CLP should be offered through interactive multimedia CDs with multimedia animation and simulation and provide web based support through our virtual lab platform.

## Description of the Innovation

New ICTs have become major resources for teaching and learning in education. In particular, interactive multimedia platforms help the learners to develop insight of the subject and to collect information, which may not be immediately available otherwise. The interactive multimedia instructional tools provide an interactive, individualized, self-placed, flexible and motivating learning environment. Web technology simultaneously enriches learning opportunities like simulation technique with multimedia using latest computer software. This enabled National Centre for Innovation in Distance Education (NCIDE) to facilitate Education Development of North Eastern Region Unit (EDNERU) in the value addition of the computer literacy programme (CLP) to upgrade it into a 21st century programme to be presented in a blended mode. The existing Computer Literacy Programme was upgraded into multiple media enabled format, which include both interactive CD and online delivery of the CLP through a virtual lab platform. The multimedia instructional tools provided an interactive, individualized, self-placed, flexible and motivating learning environment. Similarly, Web technology simultaneously enriches learning opportunities like simulation technique with multimedia using latest computer software. It envisions helping the students to develop insight of the subject and to collect information, which may not be immediately available otherwise. The revolution in internet technology and the boom of e-learning and virtual environments have enabled a number of web-based software systems to provide hands on virtual training to the trainees.

To begin with NCIDE and erstwhile EDNERU conducted a quick survey of demographic trends, gender wise state population, literacy rate, IT infrastructure, commonly used hardware and software in the states of NER through EDUSAT based audio-video conferencing for the programme in the year 2007. This enabled NCIDE and erstwhile EDNERU to identify employable computer skills for the North East region, which facilitated in the design and development of the multiple media enabled CLP. According to the quick survey, it was felt that the level of CLP was good enough for the prospective learners hailing in the North East Region. Thus, it was decided to provide the following components to the innovative multiple media enabled CLP :

- a. **IMMR Lessons** : This component consisted of interactive multimedia rich course content with animations and demonstration, which significantly value add the learning process and make learning enjoyable. The multimedia rich course material enabled the learners to understand difficult concepts easily in a self-paced, flexible learning environment.
- b. **IMMR Ms-Office Simulation** : This component enabled the learners to actually practice the various Ms-Office packages like Word, PowerPoint, etc. through simulations.
- c. **Glossary** : The glossary is an alphabetized collection of computer related terms with their meanings. This helped the learner to understand other computer terms while going through the course material. (See Figure 2)
- d. **Resources** : This component consisted of various resources like Free Open Source Software (FOSS), useful OERs, articles etc. which would be distributed to the learners on CD-ROM. (See Figure 2)
- e. **Quiz-bank** : This component consisted of multiple choice, true false, drag-drop and simulation based questions to help the learner evaluate himself/herself. (See Figure 2)



**Figure 2 : Screenshot of Resources, Glossary and Quizbank**

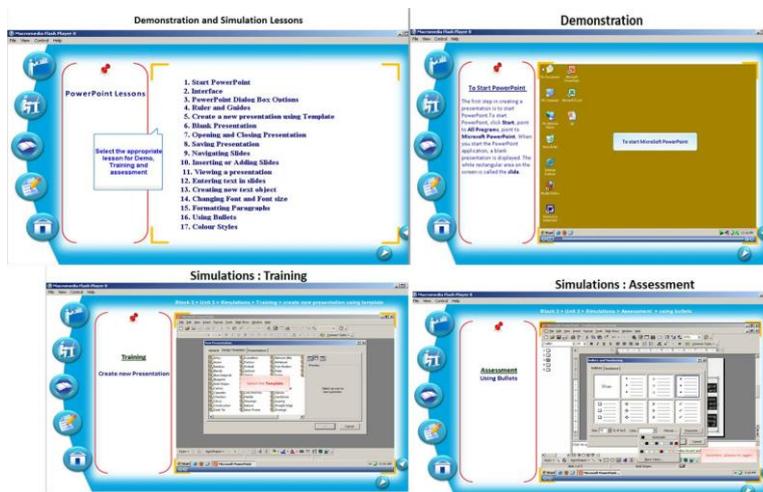
It was also decided that web based training will use any combination of existing course material in print format (soft copy), IMMR content, audio, video, or external data banks (website references) to present a course of instruction. This is very useful as information and knowledge is available just when it is required. The multiple media enabled CLP was delivered in two ways offline interaction where the content and simulations could be delivered to the learners through interactive multimedia CDs, and web support through the virtual lab platform of NCIDE.

## Innovative Features

Some of the innovative features of the multiple media enabled CLP are given below :

- Content was designed keeping learning outcome in view.
- Focused more on live demonstrations of the software packages and hands on simulations to make the topic interesting and attractive to the learners.
- Bridging the gap between Office 2000 package and latest office version (at that time) by presenting the content of later versions in brief overviews to make the learner up to date.
- Based upon the strong pedagogy behind designing the content, the office packages were completely animated and simulated. (See Figure 3)
- The Package developed was platform independent and could be viewed on Windows/Mac/Linux platforms.
- Users could practice office 2000 simulations even if they did not have the required software installed on their PCs/Laptops.
- The learners could interact both online through the Virtual Lab Portal and offline through CDs.

- The Virtual Lab Portal was capable of managing remote learners.
- The learners could also use the platform for uploading and downloading of assignments.
- In order to make learning engaging we had developed hands on practice sessions followed by assessments.



**Figure 3 : Screenshots of Animations and Simulations of the Office Package**

## Achievements

The concept of developing interactive multimedia with simulations was new and innovative product itself. Linking the interactive demonstrations, simulations and content with the virtual lab management system was first of its kind in the ODL system in India during that time.

## Applications and Uses of the Innovation

The interactive multiple media enabled CLP was used by the learners of IGNOU who had taken admission in CLP. In spite of the challenges and barriers as mentioned above the team was able to develop and deploy the same in virtual lab platform. The product was tested by experts who highly appreciated the effort made.

## Way Forward

The package, though, is of beginner level but it can also be used as a training tool in basics of computers, and MS-Office in the rural and backward areas. Though initially developed for the learners from the states of the North East Region of India, the programme has utility of a national dimension. The availability of rich information sources in digital formats has impacted the world of learning. To fully utilize the rich information resources our citizens must be computer literate to be successful in the continuous process of learning and relearning.

## Coordinators and Innovators

**Dr. Jyotsana Dikshit**

**Dr. Jayashree Kurup**, Former Deputy Director, EDNERU, IGNOU, New Delhi

**Email :** [jdikshit@ignou.ac.in](mailto:jdikshit@ignou.ac.in), [jkurup@ignou.ac.in](mailto:jkurup@ignou.ac.in)

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