

**Report of the
Workshop on
The Use of ICT for innovative mechanisms
for content development and delivery**

28th to 31st October, 2013

organised by
NCIDE



**National Centre for Innovation in Distance Education
Indira Gandhi National Open University**

Report of the Workshop on “The use of ICT for innovative mechanisms for content development and delivery (28-31 October, 2013)

Report prepared by: Dr. Moumita Das

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Summary

Keeping with the objectives of NCIDE for capacity building, a workshop was organized at NCIDE from 28th to 31st October to acquaint the faculty with the latest developments in ICT tools and techniques and empower them to create innovative interactive multimedia packages and audiobooks. Out of 12 faculty members invited, 6 attended. A total of **15 *prototype audio books*** and **7 *Interactive multimedia (IMM) packages*** were developed. The audiobooks and interactive multimedia were bilingual, both in English and Hindi. In addition to the voice recording by the faculty themselves to create the audiobook prototypes, an open source software was also used by the NCIDE team to create an audiobook prototype. The content of the audiobook prototypes and the Interactive multimedia could be used as Reusable Learning Objects for elearning as and when required.

Introduction

One of the roles of NCIDE is to promote innovations in distance education. As such the NCIDE is also to act as a facilitator for identifying and developing innovative mechanisms for delivery of content by the faculty of IGNOU.

It is evident from the earlier workshops on PowerPoint held at NCIDE that the IGNOU faculty is aware of the great visual impact of PowerPoint presentations on the learners. It was strongly felt that a well-prepared, technologically enhanced PowerPoint presentation with sound instructional design would hugely improve the quality of the presentation, make it more interesting to the learners, and facilitate their learning process. The presentations would include the elements of audio and video, wherever required, in addition to animations. With the repaid updation of the ICT tools, it is imperative for the IGNOU faculty to be abreast with the latest developments.

In furtherance of this, NCIDE organized a four day “**Workshop on the use of ICT for innovative mechanisms for content development and delivery**” from 28th to 31st October to acquaint and empower the IGNOU faculty with the latest ICT tools. Seven participants from 6 schools of IGNOU attended the workshop (List of participants at Annexure-I).

Objectives

The main objectives of this workshop were:

- To acquaint the IGNOU faculty with some of the latest ICT tools for developing audiobooks and interactive multimedia.
- To impart hands-on training to the IGNOU faculty to develop skills in using some of the latest ICT tools for developing audiobooks and interactive multimedia.
- To employ the skills thus developed by the IGNOU faculty to prepare prototype content, in the workshop, using the ICT tools.
- To empower the IGNOU faculty to eventually develop their own courses and programmes innovatively, using the ICT tools.

Methodology

The workshop in its approach was highly participatory and skill oriented. The sessions were taken up by the internal experts (Annexure-II) on the availability and current use of latest ICT tools for teaching-learning. The experts provided hands-on training that involved some selected ICT tools. These ICT tools were provided to the trainees on their laptops in advance, and they were required to develop content of their own disciplines using the ICT tools.

An evaluation of the workshop revealed that it was a very successful and meaningful exercise as is evident from the following:

Results of Evaluation

1. *Designation/Position of Participants.*

The participants of the workshop comprised 6 Assistant Professors (Annexure-I).

2. *Spread of Participants (Schools/Divisions etc).*

The participants were drawn from 6 schools of IGNOU.

3. *Receipt of advance information from the centre about the workshop programme.*

All the participants said that they received information in advance about the workshop and all of them responded to the Centre.

4. *Usefulness of training for immediate job requirements.*

Almost all the participants said the training was useful to them immediately with 3 participants saying it will be very useful.

5. *Extent to which participants benefited from interaction with the fellow participants in the workshop.*

Most of participants said they were considerably benefited from the Workshop.

6. *Satisfaction with resource persons.*

All the participants responded that they were satisfied with the resource persons.

7. *Which part of the workshop was found most useful?*

The participants found preparing the audio programme as the most useful followed by Hands on training of the Interactive multimedia package.

8. *Which part of the workshop did you find least helpful?*

One participant said that the information about moviemaker was least helpful as it needed more training.

9. *Overall impression of the workshop.*

All the participants had a very good impression from the workshop with 1 participant saying it was excellent and 5 participants saying it was very good.

10. *Other comments/suggestions given by the participants.*

- a. This workshop had solved its purpose. The knowledge gained in the workshop regarding development of interactive multimedia will help me in future for developing interactive tutorials for the learners which will supplement the print material. I hope and request for arranging these types of workshop again and again in regular intervals of time.
- b. We need to follow up the lessons learnt in the workshop.
- c. Very satisfactory and is really required for faculty development.
 - i. We should able to spend dedicated time during workshop rather than shuttling between the school and the workshop. At the university level some decision can be taken.
 - ii. In future one to one professional technical help can be provided to faculty for IMM. If possible script proof readers can be provided.
 - iii. NCIDE should be provided software and hardware for future trainings and audio recording facilities.
- d.
 - i. Not possible to work on the continuously for 4 days.
 - ii. There should be a separate workshop for IMM ppt. I still feel there is too much to learn and I haven't grasped it all.
 - iii. One more training of an IMM is PowerPoint required.
- e. This is a very good training especially for IGNOU faculty more no of training programmes.

Outcome of the workshop

It is expected that in this workshop several creative audiobooks and interactive multimedia content will be generated. These prototypes could be scaled up for e-learning use by the University. The following product prototypes have been developed:

- I. ***Prototypes of Audiobooks*** for all learners, including the visually challenged.
- II. ***Innovative Interactive Multimedia content*** for e-learning.
- III. ***Reusable learning objects*** (RLOs) of audio, e-text, and multimedia formats will be produced for multiple uses.

1A. Prototypes of Audiobook by the Participants

The participants prepared a total of 13 audio modules in the workshop. These may be considered as prototypes of audiobooks. The topics were varied and the duration ranged from 2 minutes to 20 minutes approximately. Additionally, one audio prototype was prepared by the resource person Dr. Sutapa Bose, and another by the NCIDE team comprising Madhav, Neelam and Pawan, using an open source text to speech converting software called Yakitome.com. The details of each audio module are presented below:

1. Types of Heart Failure

- i. Course Name: Common Cardiovascular
- ii. Unit Name: Heart Failure
- iii. Prepared by: Dr. Biplab Jamatia

- iv. Summary: There are various type of heart failure (HF) observed in clinical practice. They include left sided HF, RF sided HF, systolic HF, Diastolic HF, Acute HF, Cronic HF, etc. This audio programme is far PGDCC students for understand the various type of HF. It can he sent to students via e-mail. It can he used for multimedia. It can be a part of an audio book.

Status: Complete and available

2. Classifications of Heart Failure

- i. Course Name: Common Cardiovascular Disorders – (MCC003)
- ii. Unit Name: Heart Failure
- iii. Prepared by: Dr. Biplab Jamatia
- iv. Summary: Heart Failure has been classified by New York Heart Association into class I, class II, class III, class IV category depending on the clinical symptoms. This audio programme is for PGDCC students to understand the classification of Heart Failure. This audio programme can be sent via email to all students. It can used in multimedia or can be part of an audio book.

Status: Complete and available

3. Classifications of Heart Failure

- i. Course Name: Common Cardiovascular Disease I (MCC001)
- ii. Unit Name: Heart Failure
- iii. Prepared by: Dr. Biplab Jamatia
- iv. Summary: Heart Failure is a clinical syndrome where heart fails to pump oxygenated blood for our body. This audio programme is PGDCC students. This audio programme is a small audio clip with description of definition of Heart Failure size of the audio file is 3MB, which can be sent via email to all students. It can also be used for multimedia.

4. Reproductive and Child Health Programme I

- i. Course Name: Community Health Nursing
- ii. Unit Name: Maternal and Child Health Programme
- iii. Prepared by: Neerja Sood
- iv. Summary: Audiobook highlighted the resived strategy of reproductive maternal newborn child and adolescent strategy by MOHFW, GOI emphasizing on strategies and initiatives to achieve goals under 12th FYP to achieve MDG4 and 5 by 2017. This audio module will be useful for existing students to review the latest initiatives and strategies and implement in area of work. This can be a supplementary material as course is not updated since 2005 and no supplementary material is provided. This audio module can be used during academic counseling or teleconference session. Short courses can be started and small packages can be included to provide to the students.

Status: Complete and available

5. Reproductive and Child Health Programme II

- i. Course Name: Community Health Nursing
- ii. Unit Name: Maternal and Child Health Programme
- iii. Prepared by: Neerja Sood
- iv. Summary: Story of Nutan – woman died after PPH as she was not able avail services. This audio module will be useful for existing students to review the latest initiatives and strategies and implement in area of work. This can be a supplementary material as course

is not updated since 2005 and no supplementary material is provided. This audio module can be used during academic counseling or teleconference session. Short courses can be started and small packages can be included to provide to the students.

Status: Complete and available

6. Reproductive and Child Health Programme III

- i. Course Name: Community Health Nursing
- ii. Unit Name: Maternal and Child Health Programme
- iii. Prepared by: Neerja Sood
- iv. Summary: This audio module highlighted the story of Pushpa who delivered her first child in hospital and was discharged but complained of bleeding. Again she was admitted in hospital with the help of ASHA and received emergency obstetric care. Highlighting the causes why she came for hospital treatment at district hospital and why and how life could be saved. This audio module will be useful for existing students to review the latest initiatives and strategies and implement in area of work. This can be a supplementary material as course is not updated since 2005 and no supplementary material is provided. This audio module can be used during academic counseling or teleconference session. Short courses can be started and small packages can be included to provide to the students.

Status: Complete and available

7. Reproductive and Child Health Programme IV

- i. Course Name: Community Health Nursing
- ii. Unit Name: Maternal and Child Health Programme
- iii. Prepared by: Neerja Sood
- iv. Summary: Highlighted one case of maternal death review conducted in Muradpur in Guna district by UNICEF. This highlighted the various causes of maternal death (like medical and non-medical causes) in India as given by a relative of women after her death. This audio module will be useful for existing students to review the latest initiatives and strategies and implement in area of work. This can be a supplementary material as course is not updated since 2005 and no supplementary material is provided. This audio module can be used during academic counseling or teleconference session. Short courses can be started and small packages can be included to provide to the students.

Status: Complete and available

8. Concepts and Process of Community Health Nursing

- i. Course Name: Community Health Nursing
- ii. Unit Name: Introduction to Community Health Nursing
- iii. Prepared by: Neerja Sood
- iv. Summary: Audiobook emphasized on reviewing the basic concepts related to community health nursing; meaning of terms like community, community health, community health nursing; explained community identification and community diagnosis and steps of CH nursing process including C-IP. Students can listen to audiobook and understand the basic concepts which will be beneficial for them to apply during practical sessions and field work. Audiobook can be a reference for them to review.

Status: Complete and available

9. Conscious Communication

- i. Course Name: Community & Presentation Skill
- ii. Unit Name: Handling Interviews
- iii. Prepared by: Dr. Shikha Rai
- iv. Summary: This programme explains the necessary guidelines required to handle conscious communication to enhance employability skills like interviews and group discussion. This audio module may be offered as a module to all learners who go out to get jobs at the end of their course. It may be offered as a non-credit programme or module in collaboration with the placement cell.
Status: Complete and available

10. Jalvigyan (Hydrologic Cycle)

- i. Course Name: Elements of Hydrology
- ii. Unit Name: Introduction to Hydrology
- iii. Prepared by: Dr. Mukesh Kumar
- iv. Summary: Complete description of Hydrologic cycle. How water is evaporated from ocean, Rainfall and runoff occurrence. It may be used for IRC. This product is in Hindi.
Status: Complete and available

11. Natural Justice

- i. Course Name:
- ii. Unit Name: Natural Justice
- iii. Prepared by: Anand Gupta
- iv. Summary: The purpose is to make the content more understandable. It can be sent to the learners.
Status: Complete and available

12. Error

- i) Course Name: Numerical & Statistical Computing CS-71 (MCSE004)
- ii) Unit Name: Error Analysis
- iii) Prepared by: Sudhansh Sharma
- iv) Summary: Differentiate between numerical & statistical concepts; context of errors. The purpose of this audio module is to enable the listener to understand the relevance of the subject i.e. numerical and statistical techniques in computer science. This audio module can be re-used in both programmes i.e. BCA & MCA.
Status: Complete and available

13. Need of Studying Discrete Mathematics in Computers

- i. Course Name: MCS.013
- ii. Unit Name: Discrete Mathematics
- iii. Prepared by: Sudhansh Sharma
- iv. Summary: Through this audio book the student will learn about the requirement of studying mathematics in computer science. The purpose of this audio module is to enable the listener to understand the need of discrete mathematics. This audio module can be re-used in BCA & MCA programmes, and also in the programmes where discrete mathematics is taught along with computer subject.
Status: Complete and available

14. Overview of Internet

- i. Course Name: Networking
- ii. Unit Name: Internet
- iii. Prepared by: Urshla Kant, SOVET
- iv. Summary: This covers the overview of Internet, a network of networks where lot of information exists and is meant to be utilized by you. It has a number of advantages. This audio module is to be supplemented with the print material for better understanding. It can be re-used in teleconferencing, web conferencing or as an e-mail attachment or it can be sent in CD form to the learners.

Status: Incomplete due to technical reasons

15. Themes from various units comprising MES 034 & also MES 032

- i. Course Name: Designing Courseware (MES-034) Communication & Information Technology (MES-032)
- ii. Unit Name: Themes from various units comprising MES 034 & also MES 032
- iii. Prepared by: Sutapa Bose
- iv. Summary: The various steps that lead to the conceptualization, design and development of courseware for the audio and video media, have been described. The purpose is for supplementing the print medium (SLM) developed for the courses. It can be reused for media courseware development.

Status: Complete and available

IB. Prototype audio book by NCIDE

The NCIDE has used an open source software “Yakitome” to develop an audiobook. This software converts text to speech. A 40 minute audiobook on the topic “Foundations of Open Learning and Distance Education” has been prepared as a prototype.

Status: Complete and available

II. Interactive Multimedia Package using PowerPoint.

A total of 6 IMM packages were developed by the faculty. The details are described below.

1. Overview of Internet

- i. Course Name: Networking
- ii. Unit Name: Internet
- iii. Prepared by: Urshla Kant, SOVET
- iv. Summary: This interactive multimedia is an effort towards answering some of the fundamental queries about an Internet, a network of networks where lot of information exists and is meant to be utilized by you. We have tried to give an overview of evolution, advantages and services of Internet.
- v. Elements used: Audio, Microsoft PowerPoint, Video.
- vi. Purpose: To be supplemented to the print material for better understanding of the subject.
- vii. Reusability: It can be used in web conferencing, tele-conferencing or as an e-mail attachment or it can be sent in CD form to the learners to supplement the print material.

Status: Complete and available

2. Numerical & Statistical Computing

- i. Course Name: Numerical & Statistical Computing (MCSE 004/CS71)
- ii. Unit Name: Error
- iii. Prepared by: Sudhansh Sharma
- iv. Summary: Understanding the relevance of numerical & Statistical computing in computer science, in context of errors.
- v. Elements used: Text; Audio; Video; Quiz
- vi. Purpose: To Let the learner understand the requirement of studying numerical & statistical computing in computer science, in context of errors.
- vii. Reusability can be reused in courser of BCA & MCA.
Status: Complete and available

3. Definition of Heart Failure.

- i. Course Name: Common Cardiovascular Disorder 1 (MCC 001)
- ii. Unit Name: Heart Failure
- iii. Prepared by: Dr. Biplab Jamatia
- iv. Summary: Heart Failure is a clinical syndrome where heart fails to pump oxygenated blood for our baby.
- v. Elements used: PowerPoint has used as platform video, audio & graphics has been used in this multimedia.
- vi. Purpose: This multimedia is for PHDCC students founders ant the definition of Heart Failure.
- vii. Reusability: It can be sent via e-mail. It can he past at you tube or used in line TC
Status: Complete and available

4. Maternal and Child Health Mortality in India

- i. Course Name: Community Health Nursing
- ii. Unit Name: Maternal and Child Health Programmes
- iii. Prepared by: Neerja Sood
- iv. Summary: IMM highlighted the situation and causes of maternal and child mortality or deaths in India. One case study of women-story of Pushpa and maternal death review brief explained the above concepts. This will help students to relate to life situation with theory.
- v. Elements used: Text, picture, Audio, Stories-Audio, Quiz.
- vi. Purpose: Provide latest concepts to the existing students as programme/course not revised and programme (MCH) strategies changed overtime from 2005 to 2013. This can be tested fore-learning and modified for future use.
- vii. Reusability: This can be used in all related programmes as this is a basic topic covered in various other courses. Can be used or telecast during teleconference session. Can be inbuilt with revised material.
Status: Complete and available

5. Presentation Skills

- i. Course Name: Communication & Presentation Skills
- ii. Unit Name: Conscious Communication
- iii. Prepared by: Dr. Shikha Rai

- iv. Summary: This product gives a checklist and necessary guidelines to handle presentation skills which is essential component of communication written the organization as well as with external audience of an organization.
 - v. Elements used: Base-PowerPoint. Interactive Multimedia – Video, Still Pictures, Audio, Interaction, Text.
 - vi. Purpose: May be offered as a module to all learners who go out to get jobs at the end of their course.
 - vii. Reusability: May be offered as a non-credit programme or module in collaboration with the placement cell.
- Status: Complete and available*

6. Jalvigyan (Hydrology Cycle)

- i. Course Name: Elements of Hydrology
 - ii. Unit Name: Introduction to Hydrology
 - iii. Prepared by: Dr. Mukesh Kumar
 - iv. Summary: Complete description of Hydrologic Cycle. Definitions of Hydrology components of Hydrologic Cycles are discussed. This is prepared in Hindi.
 - v. Elements used: Text, Animation, Audio, etc.
 - vi. Purpose: It may be used during teleconferencing.
- Status: Complete and available*

7. Constitutional Value

- i. Course Name: DIPP
 - ii. Unit Name: Constitutional Value
 - iii. Prepared by: Anand Gupta
 - iv. Elements used: Sound, Audio.
 - v. Purpose: To make the material more interactive.
 - vi. Reusability: It can be sent to the learners.
- Status: This IMM was planned but was not completed.*

8. Topic: Selecting the Medium of Teaching

- i. Course Name: MES 032 (PGDET)
 - ii. Unit Name: Selection of Technology
 - iii. Prepared by: Sutapa Bose
 - iv. Summary: Selection of audio/video medium depends on many factors but the pedagogic consideration is most important and this has been underscored.
 - v. Purpose: For supplementing SLM (print) developed for MES-032
 - vi. Reusability: For using audio & video media for teaching in ODL & face to face manner in school and other educational institutions.
- Status: The ppt was completed but not converted to flash. It is available*

List of Participants

- A. School of Vocational Education and Training
 - 1. Ms. Urshla Kant, Assistant Professor

- B. School of Health Sciences
 - 1. Dr. Biplab Jamatia, Assistant Professor
 - 2. Ms. Neerja Sood, Assistant Professor

- C. School of Computer and Information Sciences
 - 1. Dr. Sudhansh Sharma, Assistant Professor

- D. School of Journalism and New Media Studies
 - 1. Dr. Shikha Rai, Assistant Professor

- E. School of Agriculture
 - 1. Er. Mukesh Kumar, Assistant Professor

- F. School of Law
 - 1. Sh. Anand Gupta, Assistant Professor

List of IGNOU Resource Persons with Topic

S. No.	Name	Topic
1.	Dr. Sutapa Bose	Pedagogical Review of Recorded audio
2.	Ms. G. Mythili	Introduction to Audio & Open Source Video Editing Tools
3.	Dr. Jyotsna Dikshit	Using PPT as a IMM teaching-learning tool
4.	Dr. Moumita Das	Audiobooks