SUSTAINABLE PARTNERSHIPS
FOR
TRANSFORMATIVE TEACHING

RDTC
REGIONAL INSTITUTE OF EDUCATION
(A Constituent Unit of National Council of Educational Research and Training, New Delhi)
Shyamla Hills, Bhopal, India

DR. N.C. OJHA
• National Council for Educational Research and Training (NCERT), New Delhi

• It is the apex body in school education in the country, functioning under the Ministry of Human Resource and Development (MHRD), Govt. of India

• It has Five Regional Institute of Education (RIE) established at Ajmer, Bhopal, Bhubaneswar, Mysore and Shillong

• All the constituents units are engaged in Pre-service as well as In-service Teacher Education Programmes

• It has Four Demonstration Multi-Purpose Schools (DMS) having the classes from ECCE to XII. It acts as a laboratory for innovative practices in teaching-learning where experiments are conducted.
Regional Institute of Education (RIE)
Programmes/Activities

- In-service Teacher Education Programmes
  - Training of faculties of DIET, IASE, CTE and teachers/Key Resource Persons (KRPs)

- Pre-service Teacher Education Programmes (About 600 students have been enrolled for these pre-service programmes)
  - B.A.B.Ed. (Four-year Integrated Course)
  - B.Sc.B.Ed (Four-year Integrated Course)
  - B.Ed. (Two-year)
  - M.Ed. (Two-year)
  - M.Sc.Ed (Six year integrated course)
  - Diploma Course in Guidance and Counselling (One year): On-line as well as face-to-face

- In addition to these courses, the faculty members guide Ph.D. scholars in different disciplines
  - M.Ed. (3 years Integrated Course-Upcoming)
Initiatives for ICT in Education by RIEs

• In-service Training
  – ICT in Education: A Trainer’s Manual (45 modules)
  – E-learning and E-content Training Programmes
  – E-learning - Certificate Programmes
    • Programme Evaluation
    • Research Methodology
    • School Librarianship
  – COL-CIET, NCERT – MOOC on OER

• Pre-service Training
  – ICT in Education Curriculum
  – NROER-RIE e-content development
  – Blended Learning experiences using Moodle
  – Social Networking as an OER Platform

• Collaboration and Consultancy Services
  – Collaboration with Commonwealth and the states
  – Research and Programme Evaluation of states
  – Training of Teacher Educators of states
  – Inter RIE Collaboration
Pre-service Training

1. ICT in Education – Pre-service Curriculum
2. NROER-RIE e-content development
3. Blended Learning experiences using Moodle
4. Social Networking as an OER Platform
ICT in Education – Pre-service Curriculum

• Two semester Course for both undergraduate and post graduate programmes covering
  • basics, e-content, e-learning, authoring tools, ICT and pedagogy, Web 2.0 tools, ICT for assessment and administration
  • Hands-on sessions
  • Pedagogical integration – TPACK
  • ICT -based lessons in internship
  • Subject specific ICT Tools
  • Emphasis is on FOSS Tools
NROER and E-content Development

• Establishment of Studio with all the modern cameras, systems, production and post-production equipments
• Five smart digital rooms with video conference
• Involvement of trainees in e-content creation/development
• Involvement of Our School Teachers in e-content creation/development - Each RIE has its own Demonstration Schools - pre-primary to Senior Secondary
• From standard VI – XII in all subjects
Blended Learning Experiences using LMS Moodle

- Institutional e-learning platform to provide support to the learners
- Blended learning experience to the trainees, teachers, and teacher educators
- This helped them in
  - sharing the syllabus based e-content they have created,
  - taking the quiz,
  - involving in discussion through forums,
  - developing content collaboratively through Moodle wiki,
  - developing glossary of important concepts, and
  - engaging themselves in reflections through blog.
- This has provided them with collaborative learning experiences
Use of Social Media at RIE

– FB for sharing resource under CC License
  • Created using FOSS Tools
  • Sharing of Source file for adapting
  • Examples are in the following slides

– FB Groups for collaboration and sharing
  • Flora and Fauna of RIEs and NCERT Campus
  • Technology for Teachers

– Some Examples Follows
Open Educational Resource (OER)

Creative Commons (CC) license
- Attribution (CC:BY)
- Attribution Non Commercial (CC:BY:NC)
- Attribution ShareAlike (CC:BY:NC:SA)
- Attribution Non Commercial ShareAlike (CC:BY:NC:SA)

Desirability
- Dependant on Sources
  - OER Commons
  - OCW
  - Connexions
  - Open Learn
  - OrangeGroove
  - Merlot

Accessibility
- OCW Consortium
- NROER

Openness
- Level-1:
- Level-2:
- Level-3:
- Level-4:

Remix
- Revise
- Redistribute

Desirable
- Available from
  - Merlot
  - OCW
  - Connexions
  - Open Learn
  - OrangeGroove

Creativity
- Text
- Presentation
- Audio
- Images
- Video
- Graphics

Software Tools
- Through
  - Media Streaming
  - Video
  - Images
  - Audio
  - Graphics

Accessed
- through
  - CC search
  - OCW
  - NROER
  - Open Learn
  - OrangeGroove

Authorized
- can be
  - many
  - like
  - such as
  - for instance

Through
- in the
  - such as
  - for instance

Legally
- can be
  - many
  - like
  - such as
  - for instance

Used
- in the
  - such as
  - for instance

Revised
- into
  - such as
  - for instance

Remixed
- into
  - such as
  - for instance

Redistributed
- into
  - such as
  - for instance

Presentation
- Text
- Video
- Images
- Audio
- Graphics

Experiments
- Text
- Book
- Unit Plans
- Courses
- Articles
- YouTube Filter
- Google Advanced Search

Through
- for instance
  - such as

Types
- Multimedia
  - Games
  - Podcasts
  - Test Items
  - Text
  - Book
  - Unit Plans
  - Courses
  - Articles
  - YouTube Filter
  - Google Advanced Search

THROUGH
- in the
  - such as
  - for instance

Authors
- Text
- Presentation
- Software Tools

Authors
- Text
- Presentation
- Software Tools

Sharing
- can be
  - many
  - like
  - such as
  - for instance

Sharing
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  - many
  - like
  - such as
  - for instance

Sharing
- can be
  - many
  - like
  - such as
  - for instance
• 48 Shares, 105 likes, 15 source file requests within a week
Lines and Angles

Sum of measure of two angles is 180°

Sum of measure of two angles is 90°

Adjacent Angles

Pair of angles

Common vertex

Non-common sides on either side of the common arm

Adjacent angles whose are equal

Linear Pair

Point of intersection

A point in common

Distinct points

Intersecting Lines

Transversal

Non-parallel lines

Pairs of Lines

Complementary Angles

Supplementary Angles

Related Angles

Complementary angles in which are pair of angles

Complementary angles in which are pair of angles

A line

Parallel Lines

Interior angles

Alternate exterior angles

Alternate interior angles

Corresponding angles

Interior angles on the same side of transversal which are supplementary

When two lines intersect

Pair of alternate interior angles

Pair of corresponding angles

If equal then lines have to be parallel

Forms equal then the lines have to be parallel

Forms which are formed

Equal

Vertically opposite angles

When two lines intersect

Forms which are formed

Forms which are formed

Intersect two or more lines

Forms which are formed

CC-BY-SA:M.U.Pally
Most bamboos flower only once every 30 to 130 years depending on the species. Homy bamboo forests in south - Wayand wildlife sanctuary, Bandipur National Park, Mudumalai National Park and Nagarhole National Park - belong to the species Bambusa Bambo blooms only once in 35-50 years. This species like most other species exhibit Gregarious flowering - when all populations of this species of bamboo flowers all at once. The mass flowering stresses the bamboo to such an extent that it will die. The entire bamboo population in these region flowered and dead in the last couple of years (2011-13) and this also has triggered forest fire in the region. I was fortunate to photograph the bamboo seeds at various stages during my recent visit to this area in 2012-13. Tribals traditionally believes that bamboo flowering is the sign of an impending famine. Some say that each of the bamboo grove of trees can produce 50-100 kg of seeds. Bamboo seed (Mulayari in Malayalam) is an important part of the diet of tribal communities in this region. The seeds can replace rice and can be used to make many of Kerala delicacies like payasam, unniyappam, uppumavu and puttu.
ACTIVITIES AND THE UTILISATION OF UNESCO RESOURCES
# Dissemination of Resources

<table>
<thead>
<tr>
<th>Distributed CD Event/Training/Workshop/Conference, etc.</th>
<th>CD 1</th>
<th>CD 2</th>
<th>CD 3</th>
<th>CD 4</th>
<th>CD 5</th>
<th>CD 6</th>
<th>CD 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution of Resources to Individual during training/workshop/conferences, etc</td>
<td>42</td>
<td>42</td>
<td>42</td>
<td>42</td>
<td>42</td>
<td>42</td>
<td>42</td>
</tr>
</tbody>
</table>

Number of distributed UNESCO Resources (Estimated Total numbers)
RESOURCE UTILIZATION

A. Utilization of resources in Pre-service Programmes

✓ Google Group
✓ Blog writing activity
✓ Training of students on the whiteboard
✓ Drop box activity students
✓ EXE tool activity
✓ In Blabberize activity
✓ I-Speech
✓ Creating account in Wikipaedia/wikieducator/wikispaces and adding/editing content
✓ Creating account in teachertube/slideshare and sharing your video/PPT
✓ Developing electronic portfolio
✓ Developing electronic assessment portfolio
✓ Developing script for the e-content in an educational topic
✓ Developing multi-media e-content in an educational topic
✓ Developing lesson plan for internship programme integrating ICT in different topics
✓ Pedagogy-technology integration
Blog Writing Activity
Interactive-WhiteBoard
Dropbox works the way you do

Get to all your files from anywhere, on any device, and share them with anyone.
eXeTool

In addition to these components, every computer provides the basic components to work together efficiently. For example, every computer requires a box that encloses data from one of the computer to another.
Blabberize
I-Speech
ICT and Education

- ICT to enhance teaching and learning environments.
- ICT enables self-paced learning through various tools such as assignment, computer etc as a result of this the teaching learning enterprise has become more productive and meaningful.
- ICT helps facilitate the transaction between producers and users by keeping the students updated and enhancing teachers capacity and ability fostering a live contact between the teacher and the student through e-mail, chalk session, e-learning, web-based learning including internet, intranet, extranet, , TV audio-video aids, CD-ROM.
- Edusat technology has become very powerful media for interactive participation of experts and learners and it reaches the unreachable.
- Emerging learning Technology (ELT) of bogging, Integrated Learning Â Modules, a pod cast, Wikis, Enhancement of Browsers, e-learning, M-learning, U-learning have started making rapid strides in teaching learning processes.
# Utilization of Resources in In-service Programmes

<table>
<thead>
<tr>
<th>Types of the Programme</th>
<th>Participants</th>
<th>Level</th>
<th>No.</th>
<th>Collaborating Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td>Teachers/Teacher Educators</td>
<td>Elementary and Secondary</td>
<td>14</td>
<td>CEMCA (COL), SCERTs</td>
</tr>
<tr>
<td>Workshops</td>
<td>Teachers/Teacher Educators</td>
<td>Elementary and Secondary</td>
<td>10</td>
<td>CEMCA (COL), SCERTs</td>
</tr>
<tr>
<td>National Seminar</td>
<td>Teachers/Teacher Educators/Practitioners/ Research Scholars</td>
<td>Elementary and Secondary</td>
<td>01</td>
<td></td>
</tr>
<tr>
<td>(Reflective Practices in Technology Pedagogy Integration)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>
Utilization of Resources in In-service Programmes

➢ Workshops

• Development of e-content Modules in Science at Secondary Level using Web 2.0 Tools (13th - 17th September 2014)
• Workshop on Development of ICT-based CCE Package using Alternative Techniques of Evaluation (17th – 20th, September, 2014)
• Workshop on the Development of ICT Integrated Instructional Material using FOSS for teaching Science to secondary school students (Phase-I) (15th – 18th, Oct., 2014)
• Workshop on ICT-Pedagogy Integration for the Teacher Educators of Madhya Pradesh: In collaboration with the Commonwealth Media Centre Asia, New Delhi (15-17 November 2014)
• Development of E-content modules in science at Secondary level using FOSS’s web 2.0 tools (17-21 November 2014)
Utilization of Resources in In-service Programmes

- Workshop on Development of ICT-based CCE Package for Elementary Level using Alternative Techniques of Assessment (8th - 12th Dec 2014)
- Development of ICT based CCE package using Alternative techniques of evaluation for Elementary level (7th – 9th Feb. 2015)
Development of e-content Modules in Science at Secondary Level using Web 2.0 Tools
Workshop On Development Of ICT-Based CCE Package for Elementary Level using Alternative Techniques of Assessment
Training

- Training of principals and teachers of minority educational institutions on integration of Web 2.0 technologies in teaching and learning (10-14, November, 2014)
- Orientation of the RIE faculties on web 2.0 technologies (one day)
- Orientation of RIE faculties on content, pedagogy and technology integration (one day)
- Training of Principals & Teachers of Minority Educational Institution on Integration of Web 2.0 Technology in Teaching & Learning (8th Feb – 12th Feb, 2015)
- Training of KRP’s on ICT integrated teaching learning material in Gujarati (28th July- 1st Aug., 2015)
- Training Programme on Integrating ICT in English Language teaching for KRP’s in Eklavya and Kasturba Gandhi (24th -28th Aug., 2015)
Training

- Training of Librarians of Western Region of Open Library Automation software (KOHA) (14\textsuperscript{th} - 18\textsuperscript{th} Sept. 2015)
- Training programme on Practical skills using ICT Enabled Virtual Laboratories (28\textsuperscript{th} Sept. – 2\textsuperscript{nd} Oct. 2015)
- Training of teacher educators of Western region on techniques of use of Digital and Virtual laboratories (12\textsuperscript{th} and 13\textsuperscript{th} Nov. 2015)
- Training of teacher educators of western region on techniques of use of Digital and Virtual laboratories (16\textsuperscript{th} – 20\textsuperscript{th} Nov. 2015)
- Training of teacher educators of western region on techniques of use of Digital and Virtual laboratories (30 Nov. - 4\textsuperscript{th} Dec. 2015)
- Training programme on Practical skills using ICT Enabled virtual laboratories (24\textsuperscript{th} -28\textsuperscript{th} Dec. 2015).
- Training Programme for RIE Faculty and Technical Staff on Audio-Video Production including E-content Development (8\textsuperscript{th} – 12\textsuperscript{th} March, 2016)
Principals and Teachers of Minority Educational Institutions on Integration of Web 2.0 Technologies in Teaching and Learning
Workshop on ICT Integrated Teacher Education for DIET Teacher Educators of Madhya Pradesh
15-17 November 2014
Organised by
Regional Institute of Education, NCERT, Bhopal
In Collaboration with
Commonwealth Education Media Centre of Asia, New Delhi
Feed-back of the Programmes

- Your overall reaction on this workshop
- Workshop met my expectations
- The duration of the workshop was...
- Logical sequence of the workshop
- Overall organization arrangements
- Number of trainers involved
- Kindly rate in general the effectiveness of...
- Sufficient of the training material supplied
- To what extent the workshop was helpful in...
- Mix of theory and practical in the workshop
- Did you have sufficient time for skil/l practice
- Value of workshop to immediate/future work

Series 1
Column1
Column2
Feed back and Evaluation

The activities conducted for both the in-service and the pre-service programmes evaluated by the institution
• The participants very keen to learn the ICT skills
• Increase the duration of the workshop and more sessions for the practice
• Extension of the lab and the web facilities
• The WI-FI facilities to all the students and the faculties of the institute including the participants of the in-service programmes
• In case of first-time users, difficult to handle, but after one session smooth handling
• More time was for the practice when demanded
• The follow-up of the each training programme
• As per the suggestions of the participants and the need analysis, undertaking other programmes on ICT integrated learning, this year.
Activities Ahead

• Capacity Building of Teacher educators of Western Region on ICT Integrated Teaching-Learning (In Collaboration with COL)
• Development of Manual for using Mobile as a Learning Aid
• Development of e-content for e-Pathshala
• Development of e-content for epg-Pathshala
• Research: Impact of e-content modules in science at Secondary level using FOSS and web 2.0 tools
Capacity Building of Teacher educators of Western Region on ICT Integrated Teaching-Learning (In Collaboration with COL)

- Collaborating Agency: CEMCA, COL
- Participants: Teacher Educators of CTEs and DIETs
- Phases:
  - **Phase I**: Workshop on Content Selection and Module development
  - **Phase II**: Workshop on Content Development
  - **Phase III**: Final Workshop on Content Development
  - **Phase IV(A)**: Training of Participants (10-days)
  - **Phase IV(B)**: Training of Participants (10-days)
  - **Phase V**: Feedback, Monitoring and Certification
Observations and Suggestions Requested ........
THANKS