

Workshop on
ICT Integration in Teacher Education
to build a
Communities of Practice for Teacher Educators



3rd June – 7th June, 2013

at District Institute of Education and Training (DIET), Bangalore

Report Prepared by IT for Change, Bangalore

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Inauguration



Figure 1: From left to right: Smt. Dakshayani, SADPI, DSERT, Smt. Lalitha Chandrashekar, Deputy Director, DSERT, Smt. T.N. Gayathri Devi, DIET Urban Principal and Dr. Sanjaya Mishra, Director, CEMCA

The workshop was inaugurated by Sri H.S. Ramarao, Director DSERT (Department of State Education Research and Training) in the presence of Smt. Lalitha Chandrashekar, Deputy Director, DSERT (Education Technology), Smt. T.N. Gayathri Devi, Principal, Bangalore Urban DIET and Dr. Sanjaya Mishra, Director, CEMCA.



Figure 2: Smt. Lalitha Chandrashekar, Deputy Director, DSERT and Dr. Sanjaya Mishra, Director, CEMCA

Sri H.S. Ramarao spoke about the revisions to curriculum, syllabus and text books and how the new curricula made higher demands of teachers, in terms of a constructivist approach to transaction and a CCE (continuous and comprehensive evaluation) approach to assessment. Teachers require a resource rich environment to be able to prepare themselves and meet diverse learner contexts and needs. Since the print material provision would not be adequate for the increased demands, it has become necessary for teachers and teacher educators to tap the digital learning resources available as well as

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use ICTs for connecting to one another for continuous peer learning and support. He felt that the workshop would build the capacities of teacher educators for collaborative creation of such resources through the Karnataka Open Educational Resources (KOER) as well as for networking to build communities of learning.

CEMCA Director, Dr. Sanjaya Mishra spoke about the Community of Learning as an important method for connecting teachers to one another for peer support and mentoring. He also emphasised the role of OER in creating a high quality resource rich learning environment for teachers and students. CEMCA and its mother organization, COL (Commonwealth of Learning) have supported the creation and sharing of OER in different areas of education.

Exploring ICTs and Internet



Figure 3: Participants accessing computers

The first session of the workshop started with exploring the possibilities of ICTs and ways in which the DIET and CTE faculty can use it in their professional as well as personal life. Gurumurthy K, Director of IT for Change stressed that learning ICTs is like learning a new language, and this new capacity would assist them in all aspects of their work. Teachers who were apprehensive about the use of ICTs or were not so regular users took small steps to catch-up with the activities. Almost all activities at the

workshop required them to use computers in some way to increase level of comfort with computers.

Since the aim of the workshop was to enable teachers to create resources for textbook material they were encouraged to browse the Internet. Ms. Sriranjani took a session where different websites which covered a range of categories such as; educational games, e-commerce, travel, news and Open Educational Resources were introduced to the participants. The participants were asked to analyse websites based on various criteria such as; what does this website have to offer, is the

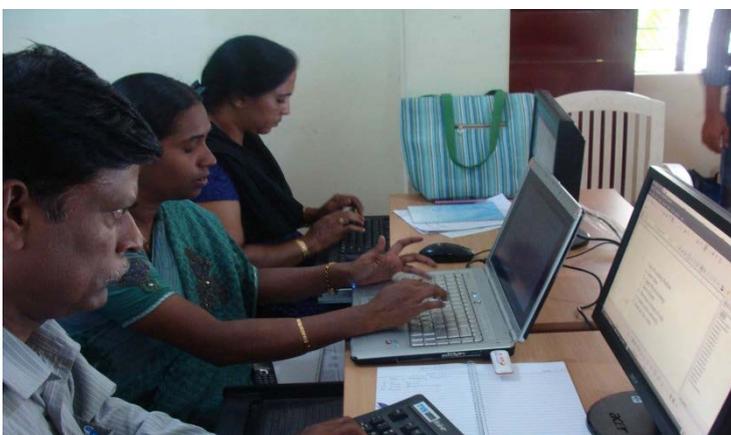


Figure 4: Participants creating digital resources for class 6th and 9th textbooks

registration free or paid etc.



Figure 5: Ms. Sriranjani helping a Mathematics faculty insert formulae in his lesson plan

Faculty spent a lot of time browsing through these websites and searching for relevant information. Learning how to navigate a website is important for people who are new to the digital world. The Internet can offer teachers a plethora of good and reliable resources. However, it is important that processes such as crediting somebody else's work or providing proper links to downloaded resources are followed.

Basic Computer Literacy

The participants were at different levels of computer literacy. Even though the workshop was planned assuming that the participants would have medium to high levels of computer literacy there were participants who did not had low computer literacy skills. This led to a slight re-arrangement as some topics which were not originally planned were added to the agenda.

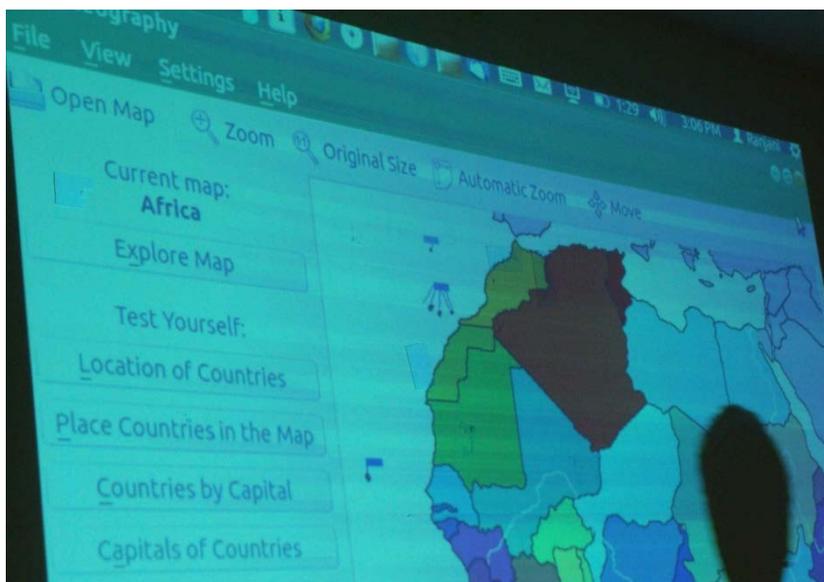


Figure 6: Demonstrating K Geography - a geography tool

Participants spent time getting comfortable with using Ubuntu and email. It took time for participants to learn to navigate a website. However, this skill is crucial to getting the right resource.

Ms. Sriranjani took a session on spreadsheet (using LibreOffice) basics - sorting, subtotals, inserting charts, etc. There was also a session on some commonly needed formatting tips on writer (inserting pictures, taking screen shots, formatting Libre Office

and exporting mind map as image, as writer, peer reviewing documents with insert comments and track changes).

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“All the schools have computers now. Teacher educators can sensitise teachers and help them through Internet/TE group.” - Ms. Suma B.K., DIET Urban Bangalore

Video conferencing and chatting was covered by Mr. Rakesh through G-Talk. This session ran longer than the time allotted to it as the participants found it very interesting and useful. As part of basic computer literacy training and support, the technology resource persons supported the participants individually before and after sessions throughout the duration of the workshop.

The advantage of G-Talk (google talk) over skype is that the former can be accessed using a gmail id which most people have, while for skype an additional id needs to be created. Also G-Talk allows multi-video conferencing which is a paid service under Skype.

It is important to note that G-Talk and Skype are both freeware and not free software. In the latter case, the users have full right to copy, modify and share without any restrictions. In the former case, the rights are retained by the company and users are allowed to use without any payment. However such a use is also subject to the permission of the provider company. Other than the google based products (gmail, google search and g-talk), all other applications taught in the workshop were all free software products.

Educational Applications

The next session covered educational applications such as Geogebra, Audacity, PhET, Record My Desktop, KGeography, and Marble, among others. Teacher educators were interested in knowing about these applications. Demonstration of these applications was done by Ms. Sriranjani and Ms. Neeru.

Since these applications are freely available in 'Kalpavriksha', the custom distribution of UBUNTU, the participants would be able to make use of these applications for learning as well as creating resources.

Resource creation

In his welcome address on the first day of the workshop the Director, DSERT expressed his concern over unavailability of resources for teachers in the classroom. He urged the group of teacher educators present at the workshop to act like mentors for the teachers and help them by creating relevant resources. Resource creation is part of everyday work for teacher educators. Various processes such as peer-review, editing, widespread reach etc. are not possible when resources are created in a closed network of a few people. Hence, the main challenge was to create 'digital' resources. The participants were shown the wiki site for Karnataka teachers - Karnataka Open Educational Resources (KOER), which will contain resources that teachers and teacher educators will both access and create.

“This was a step to make the higher ups realise that complete resources for textbooks can never be built with the help of few subject teachers or experts. Thousands of resources on every topic exists on the Internet & we should be able to browse and choose the best, acknowledge it and edit as per requirement.” -- Ms. Almas P., Reader, CTE Mangalore

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The aim of Karnataka Open Educational Resources (KOER) is to connect teacher educators with teachers over the Internet and make the process of resource creation dynamic. For this purpose the participants chose a topic each from class 6th or 9th textbook based on their subject expertise. The participants were briefly introduced to the idea of wiki editing and we discussed two possibilities of content submission - through a form and contributing to the wiki directly.

Ms. Sriranjani discussed with the group about the structure of this model lesson which was the structure of the resource to be created. After a consensus was achieved for a common structure the teachers began working on their resources.



Figure 7: Workshop faculty assisting participants in creating resources

Topics such as downloading images, linking videos, inserting images, website navigation covered before, were useful for teachers in this process of resource creation. There was some anxiety amongst teachers about the 'finality' of their resource. It was discussed with the group that since the digital process is much more dynamic there cannot be a 'final' resource since anyone is free to provide inputs and they can (or cannot) be added to the final resource which may have already been uploaded on the web portal. Though the resource would be of a basic quality in terms of being error free etc. the possibilities for further improvement would always be there.

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This idea was communicated further through the process of peer-review explained in the next section.

Peer Review

A process of peer review was initiated and teachers presented their work. Teachers used various on-line material in their model lessons. Some teachers provided hyper linked material. Feedback was given by other teachers on the basis of innovation, coverage of the topic and providing assessment activities.

Participants iterated their work post receiving feedback. The next round of feedback was done



Figure 8: Two participants presenting their resource creation as part of the peer review process

through email groups. Teachers shared their resources over googlegroups. Review methods such as, inserting

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comments, track changes etc. were used to give feedback to peers.

The process of on-line feedback would be essential for teachers while sharing resources with their peers.

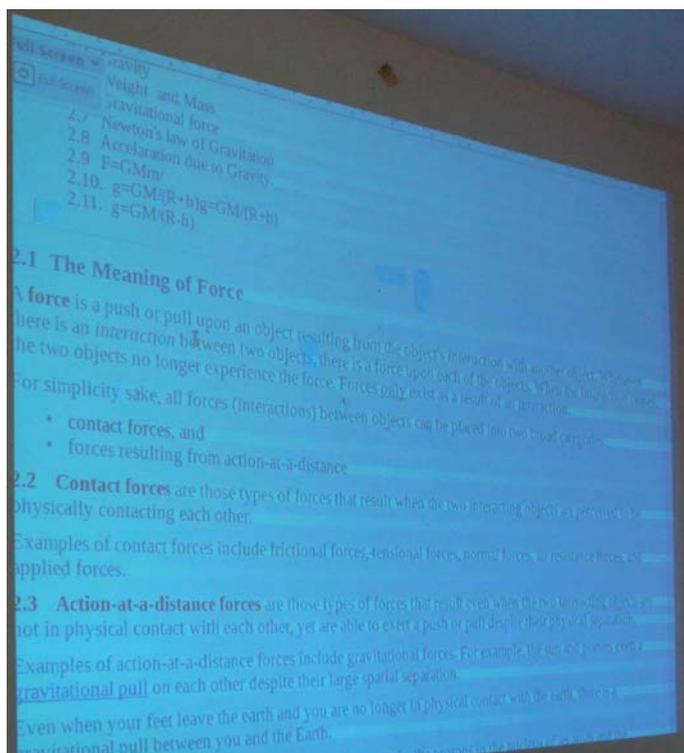


Figure 9: Resource created by faculty on 'Force'

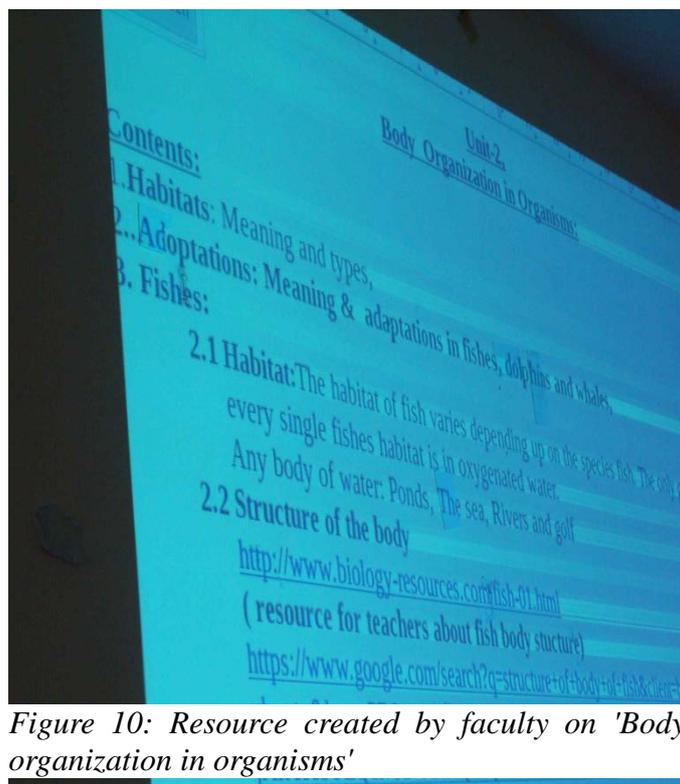


Figure 10: Resource created by faculty on 'Body organization in organisms'

Sharing resources that were still in the process of being finalised, in front of other teachers and receiving feedback on it was able to generate the spirit of peer-reviewed resource creation. When resource creation would move to KOER it would be essential to re-work lesson plans and modules. Thus the spirit of collaborative work and peer review was demonstrated through this feedback session.

Community of Practitioners

The Community of Practitioners (CoP) platform seeks to connect teacher educators. Participants were taken through www.teacher-network.in. Since this batch of teacher were from Karnataka they connected with other teacher educators from Karnataka over karnataka_teachereducators@googlegroups.com. The mailing list is accessible from the portal <http://teacher-network.in/>. Resources created by teachers are available by clicking on the Resources link on the home page of the <http://teacher-network.in/> portal.

“Every teacher educator should be a part of this community and take responsibility to develop this community.” - Ms. Bharathi, DIET, Mandya

Post the workshop the participants will share their views and resources over googlegroups and will be expected to participate in discussions. KOER ids for each DIET have also been created to enable teachers to share resources directly on KOER and initiate the process of collaborative resource creation.

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Workshop faculty: Ms. Sriranjani and Mr. Gurumurthy

Supporting faculty: Ms. Neeru, Mr. Rakesh and Ms. Seema

Participants: 23 DIET and CTE faculty from Bangalore and Mysore divisions

Agenda and handout of the workshop is available on http://karnatakaeducation.org.in/KOER/en/index.php/Teacher_Education_Events_DIET_COP_Workshop_June2013 which can be accessed from <http://teacher-network.in/> (Resources link)

Participants: DIET and CTE faculty from Bangalore and Mysore Division

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Agenda of Workshop

Day 1			
Topic	Time	Structure	Objectives/ Outcomes
Inauguration and introduction	10.00 -11.30	Discussion	Introduction to the workshop.
Context Setting	11:30 – 1:00	Discussion	Understanding the agenda ; Use of ICTs in personal and professional life; How does ICT impact us; The idea of a community for learning - Why? ; For TE restructuring plan, Ded curriculum, revised Class 6 and 9 textbooks; ICTs help in connecting and sharing
Lunch Break	1.00 – 2.00		
Mind mapping tools for learning sharing	2.00 – 3.30	Demonstration and Hands-On	Building a mind map to explore a given idea or to brainstorm
ICTs for accessing information	4.00 – 5.00	Demonstration and Hands-On	More possibilities for learn; multiple resources and multiple ways of getting information ; Personal enrichment; professional learning ; Internet gives us possibilities not there before ; Skills needed for information access – bookmarking websites
Home-work			Participant information, email ID, photographs. Configuring the thunderbird
Day 2			
ICTs for accessing information	9.00 – 11.00	Demonstration and Hands-On	Downloading images, videos, (video downloader add-ons). Accessing downloaded files
Handling the ICT environment	11.00-1.00	Demonstration and Hands-On	Ubuntu overview – folders, moving files, bookmarks on folders, Kannada typing and iBus set-up. Practice typing in Kannada
Lunch Break	1.00 – 2.00		
ICTs for communicating with each other	2.00 – 5.00	Hands-on	Emailing skills and tips, Emailing is a new way to contact, Way to send information and work , Rules (grammar) of email, Email groups allow to contact with more people; Mail folders
Home-work/ Hand-outs on Day 3		Content familiarization for resource creation	Hand-outs/ soft copies of D.Ed curriculum and Class 6 and 9 textbooks – familiarization with content
Day 3			
Resource creation and review	9.00 -10.00	Brainstorming and discussion	With the new syllabus, how do you think resources can be created. What are the needs? How do they want to go about it? Develop pointers for resource creation work and hand-out textbook copies
Introduction to Karnataka Open	10.00 -11.00	Demonstration	What are OERs? ; Access, review and create resources ; Revise Reuse Remix ; The

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Educational Resources			principle of OERs relevant to TPD ; KOER for teaching resources. Contribution. STF cascade. The KOER webpage with content and resources shared/ developed
Resource creation and review	11.30 – 1.00	Individual/ Group Work to work with the new textbooks and D.Ed curriculum	Content analysis in terms of (1) What do we need to teach? (2) What areas of focus? (3) What do resources do we need; Multiple resources can be accessed; extend the textbook; Compilation and documentation of resources ; Mind mapping as a way of structuring the resources and content
Lunch Break	1.00 – 2.00		
Resource creation and review	2.00 – 5.00	Individual/ Group Work to work with the new textbooks and D.Ed curriculum	Resources to be accessed, evaluated and compiled
Day 4			
Demonstration of educational tools	9.00 – 11.00	Demonstration	Allow for some practice time
Sharing and review by peer group	11.00 – 1.00	Presentation and discussion	Preliminary sharing and review by group on resources
Lunch Break	1.00 – 2.00		
Demonstration of video making	2.00 – 2.30	Demonstration	Allow for some practice time
Resource creation and review	2.30 – 4.00	Individual/ Group Work to work with the new textbooks and D.Ed curriculum	Resources to be accessed, evaluated and compiled; share with Karnataka Teacher Educators groups
Basic Writer formatting and combining images	4:00 – 5:30	Hands-on	Editing in a text document, inserting images, cropping and taking screenshots etc. Exporting mind map as a text, as an image. Editing and track changes
Day 5			
Review of materials through email	9.00 -10.00	Hands-on	
Presentation of the teacher portal	10.00 - 10.30	Demonstration	
Resource creation and review	10.30 – 12.00	Individual/ Group Work to work with the new textbooks and D.Ed curriculum	

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Spreadsheet Basics	12.00 – 1.00	Demonstration	
Lunch Break	1.00 – 2.00		
Video conferencing using Gtalk, Skype	2.00 – 2.30	Hands-on	Audio and video conferencing.
Submitting content and editing on wiki	2.30 – 3.00		
Way forward	3.00 – 4.00	Presentation and discussion	Contributing to the wiki – next steps. Training in DIETs; Mentoring the block and district level cascade for KOER/ STF

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