

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



11th June – 15th June, 2013

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

Report Prepared by IT for Change

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Figure 1: A participant presenting a resource created by him

“I found this workshop was very useful, appropriate and relevant for teachers and teacher educators. It will help us to collect knowledge from different sources and different angles.” - Mr. Shankarappa Ganji, DIET Belgaum

Exploring the World Wide Web

The workshop was inaugurated by the coordinator of the e-Vidya Academy¹, Smt. Shankamma Dhawalgi, who is also the 'Education Technology' wing faculty member at the Dharwad DIET. She spoke of the need for all DIET and CTE faculty members to become comfortable in using ICTs for their professional development and for supporting teachers as well. She emphasised that this journey was a long one, since there was much to learn, yet it was an enjoyable one. The Dharwad DIET and the e-Vidya academy had provided training on ICT integration into education for hundreds of teachers and teacher educators over the last few two years, which had helped the participants to become more proficient.

The DIET Principal, Sri Gopal also urged all participants to make the best use of the workshop to learn to use the web portal KOER for both accessing as well as creating learning resources. Using email teachers and teacher educators can also keep connected to one another for sharing and peer learning. He shared a news item from Kannada Prabha (a Kannada daily, reported on 10 June 2013), in which the Director DSERT had spoken about KOER and how KOER could bring teachers and teacher educators together for purposes of resource creation and use.

Participants were teacher educators from the DIETs, CTEs and the TTIs in the Belgaum division. The workshop began with an introduction to the Internet and web based resources. The participants accessed websites such as Wikipedia (in English and in Kannada) and tried their hands at Google search. To familiarise participants with the working of a website the basic structure of a website was explained to them. The methods of accessing web resources, downloading files and copying links and text and images on the websites were also covered. The participants were amazed that while the English wikipedia had more than 4.2 million articles, the Kannada wikipedia had just around 15,000 pages. They agreed that as teachers, who work with knowledge construction all the time and are information sources for their children and their communities, they need to play an important role in developing content in Kannada on Wikipedia. They also felt that as a community of learners, they could do this better since they would be able to support one another by both collaborative creation as well as through review processes.

“In the workshop we were able to browse the Internet. We were able to choose content and select relevant information from different sources like, Wikipedia, Khan academy, KOER, Ubuntu etc. and add it to our lessons and when required.” - Ms. Sairabanu Khan, DIET Bijapur

As a continuation to this activity all participants selected 2 topics of personal interest and 2 professional (from the 6th and 9th text books) topics for exploration. They searched for relevant resources using the google search engine and downloaded files and web pages which they found relevant. They were quite excited to find resources in Kannada language on the Internet. explored resources on the web based on it. They copy pasted excerpts they wanted to include, to a text document. They downloaded select images and videos from the websites for their chosen topics.

¹ The department of education has converted the three Microsoft IT Academies at the Bangalore Urban and Dharwad DIETs and the Gulbarga CTE into e-Vidya academies. While the Microsoft academies used to only teach Microsoft products to the participants, the e-Vidya academies teach a variety of public software applications to the participants. A copy of the software is also provided to participants to take to their work places, which is not possible with proprietary software. Both workshops were conducted under the e-Vidya academy



Figure 2: DIET Principal, Dharwad DIET Sri Gopal, addressing participants

Mr. Gurumurthy took a session on the possibilities of ICTs and the specific advantages of using public software. Teachers working within the government system should learn to create resources which they can freely share with others. Therefore it becomes essential for teachers to begin using Free and Open Source Software (FOSS), so that the tools used to create open resources were themselves open and without restrictions on use, sharing and customisation. The principles of OER (Open Educational Resources) were also covered –

the right to re-mix, re-use, revise and re-distribute the resource to make it plentiful and create a resource rich environment for all teachers.

Demonstration of peer-review

At the end of the first day, one of the participants, Smt. Rekha Naik gave a presentation on the topic chosen by her 'Life Processes' (class IX Biology) which was peer reviewed by everyone. She was much appreciated for her work, since she had carefully chosen a variety of resources – text, web links, presentations, videos and animations and put them together in a meaningful manner for her resource. The peer review was also quite participatory and the participants were encouraged to be open and constructive with their comments since peer review was a very important academic process and giving and taking feedback was an essential process in the COP.

Digital identity creation

Participants who did not have email ids before coming to the workshop were assisted in the process of creating an email id, this was their 'digital identity' and hence very important. Their email ids were also added to the google groups karnataka_teachereducators@googlegroups.com which is part of the portal <http://www.teacher-network.in/> created for the purpose of supporting the development of a community of learning amongst teacher educators across the country.

Basic Computer Literacy

On the second day of the workshop teachers continued exploring websites and scouting for resources. The participants were at different levels of computer literacy, some of them were at a very advanced level of learning, while others only had basic computer literacy. Hence, on day 2, they were split into two groups, though this was not planned in the readjusted agenda post the Bangalore workshop, to maximise the learning of all participants. Being a heterogeneous group in terms of computer skills it was essential to ensure both the experts as well as the relative novices learnt the ICT topics most relevant for them.



Figure 3: Advanced users learn to edit wiki and to use googledocs

creating and editing wiki pages on the DIETWIKI and created the basic pages for their own DIETs.

The first group consisted of participants who were advanced users of ICTs. They worked with Mr. Gurumurthy to learn the audio recording and editing software Audacity and the video creating software, Record My Desktop to make audio and video recordings. They also learnt basics of the image editing software GIMP and learnt basic features such as, reducing the resolution of a picture and its size. This group also learnt to use a wiki for

The second group consisted of initial learners of computers and learnt basic Ubuntu, LibreOffice and Kannada Typing. This group was led by Mr. Mahesh and Mr. Shariff and the participants found this session extremely useful to quickly come up the learning curve. Many members of this group decided to purchase a personal laptop to continue their learning post the workshop. They created resources in LibreOffice itself, pasting from text, links and images from websites.

Since this workshop is intended as a starting point to help teachers learn to become part of a community of learning, the design change was to arouse their interest and excitement in the workshop by showing them the possibilities that exist once they begin to use ICTs for their personal as well as professional development.

Educational Applications

Free software applications such as Geogebra (Mathematics), PhET (Science) and Marble/KGeography (Social Science – Geography) were demonstrated to all the participants. These tools can be used by teachers to create digital resources such as lessons, animations, demonstrations, assessment banks etc.

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.

The participants also like to the mind mapping tool, Freemind. They all learnt to use Freemind to create a mind map for the topics selected by them for resource creation. The idea that a digital resource need not be restricted to a powerpoint presentation or a text resource alone was brought home to all participants. There are several digital tools and these can be learnt to create digital resources in various formats including text, image, audio, video apart from formats like mind maps.

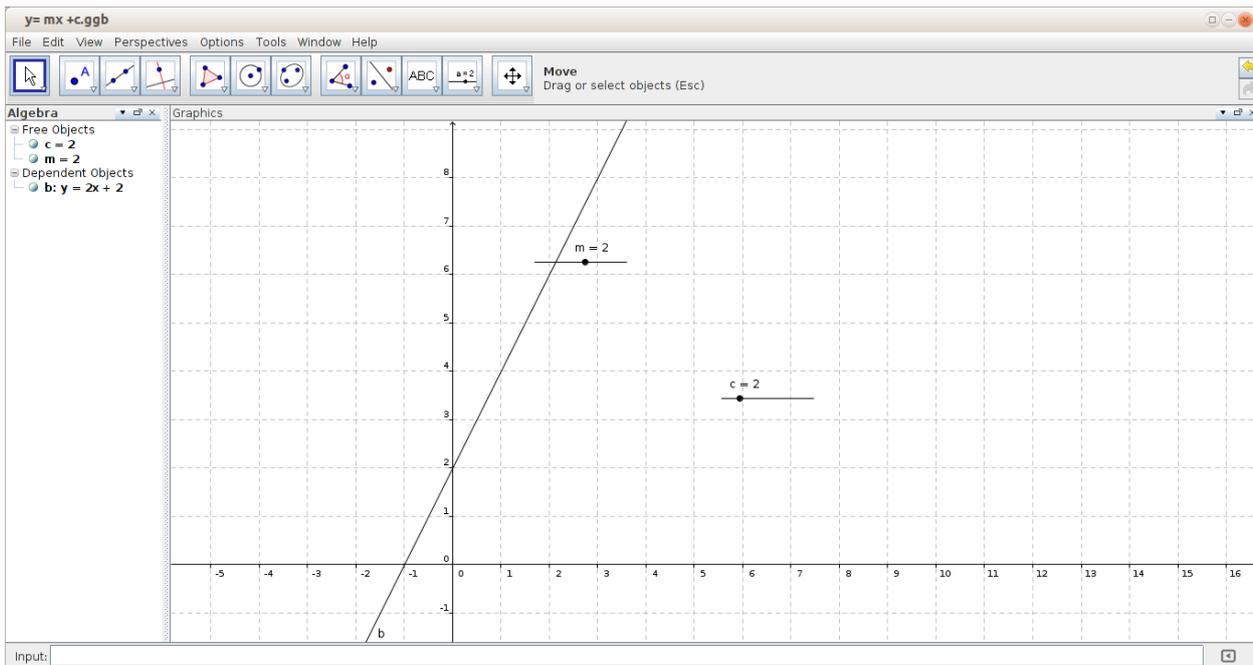


Figure 4: Creating a resource for linear equations, using Geogebra

Resource creation

Ms. Sriranjani discussed the structure of the lesson plan with the participants and demonstrated resource creation by creating a Mathematics resource. 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.



Figure 5: Ms. Sriranjani discussing resource creation with the participants

“The goal of the workshop was to enable the participants to search and use web resources to create relevant resources required by TEs and Teachers. I am now going to work on creating these web resources.” - Ms. Aparna Patil, DIET Dharwad

Karnataka Open Educational Resources (KOER) aims 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

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their subject expertise.

Participants were shown different simulations and how they can be incorporated within lessons. Ways to create their own simulation was also demonstrated. Topics such as downloading images, linking videos, inserting images, website navigation covered before, were useful for teachers in this process of resource creation.

Peer Review

The process of peer review was continued for all participants, 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. The process of on-line feedback would be essential for teachers while sharing resources with their peers.



Figure 6: Seeing a demonstration of public educational software applications

Sharing resources that were still in the process of being finalised, in front of other teachers and receiving feedback on it was an important

component 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.

Ms. Savita Naik from DIET Kumta took a session to explain how teacher educators can use ICTs in their own work sphere. She demonstrated a few educational tools and also resource that she had created during the workshop. She also spoke on her own area of 'Foundation of Education' and how the use of ICTs had deep implications for both the philosophy of education as well as pedagogy of different disciplines. The idea of constructivism as well as CCE (continuous and comprehensive evaluation) were areas which use of ICTs could help teachers to meaningfully explore, learn and practise.

Learning to video-conference

Video conferencing was covered through Skype. The session was taken by Ms. Sriranjani. Mr Gurumurthy connected with the participants over Skype and spoke to them again about the ways ICTs can be used for professional development of teacher educators. Resource creation and connecting to peers are very enjoyable as well as fulfilling processes and the faculty should make full use of all the digital tools and methods they had learnt in the workshop.

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

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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.

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 teachers 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.

The participants enjoyed this session very much. They visited the website and browsed through the pages. They sent emails to the googlegroups and also replied to the mails sent by others. They also attached the resources that they had created and shared these for feedback with the others.

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.

The participants also expressed that a similar training is required to be given to all other faculty members from their DIETs. The workshop had trained one faculty member from each DIET and this could be insufficient to create the minimum levels of capacities in integrating ICTs in their institutions. It was clarified that under the 12 five year plan for TE, all DIETs have prepared training programs for their faculty, and the guidelines provide a budget of 5 lakh rupees for each institution for faculty capacity development. The participants were expected to serve as a role model for their colleagues and also serve as resource persons for capacity building programmes in their institutions. Secondly using the mailing list and the portal, they could be in touch with their co-participants to continue their journey of learning as well.

The mailing list karnataka_teachereducators@googlegroups.com has 188 members and 150 emails have been exchanged on this group amongst teacher educators from various regions in Karnataka.

Workshop faculty: Ms. Sriranjani and Mr. Gurumurthy

Supporting faculty: Mr. Shariff, Mr. Suresh Manvi and Mr. Mahesh

Administration and logistics support: Ms Ashwini and Mr Bellary

Participants: DIET and CTE faculty from Belgaum 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

The Agenda and handout of the workshop is also 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/> (click on the Resources tab / link)