Workshop on
ICT Integration in Teacher Education
to build a

Communities of Practice for Teacher Educators

October 21st – 25th, 2013
at District Institute of Education and Training (DIET),
Bangalore Rural District

Report from IT for Change

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1 COP workshop summary

[IT for Change](#) has been working with teacher educators from CTE[1] and DIETs[2] in Karnataka over the last five years through different programmes. With the support of [CEMCA](#), workshops were organised in the state during June (at Bangalore) and July 2013 (at Dharwad) for faculty from DIETs and CTEs, in which participants learnt to participate in **'Communities of Practice (COP);** a cutting edge teacher professional development model that uses ICTs in different ways to sustain networking and sharing. A second round of workshops was later organised, in Bangalore (October 21-25) and Dharwad (November 11-15) to extend and strengthen the COP. **This note is a report of the Bangalore (October 21-25) workshop.**

The Bangalore COP workshop focused on the use of Information and Communication Technologies (ICTs) for professional development, building basic computer literacy skills, introduction to the use of subject-based educational tools and the adoption of [COP platform for teacher educators](#) and its features including access to [resources](#) and participation in [mailing groups](#). Educational tools such as [Geogebra](#), [Marble](#), [Freemind](#) and [Record My Desktop](#) were demonstrated and practised. Participants practised accessing the Internet for information and their self learning as well as to connect and communicate with each other through emails and email groups for continuous peer learning and support, as well as for networking to build communities of learning. For some, it was a first-time exposure to ICTs and they focused more on learning the basics of using computers and Internet.

Participants also learned about Open Educational Resources (OER); about accessing resources available on-line as OER and practising the OER principles of re-use, revise, re-mix and redistribute on the **[Karnataka Open Educational Resources](#)** (KOER) platform. The community of teacher educators plan to continue to interact through emails and through the wiki platform.

The workshop was held at the Bangalore Rural DIET, which has spacious training halls as well as a well maintained ICT lab. Special thanks to [DSERT](#) for organizing and supporting the workshop, the DIET for providing the venue, CEMCA for supporting the workshop and providing conceptual as well as financial inputs and Tamil Nadu SCERT for deputing participants to the workshop.

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1   College for Teacher Education

2   District Institute of Education and Training

2 Participants Information

Participant information was obtained and recorded through a google doc form at the beginning of the workshop. This information helped the faculty deduce participants' knowledge level about ICTs. Most faculty members deputed by the DIETs, had not attended formal ICT capacity building workshops and some had moderate to low competencies in using ICTs. The participant information helped us to fine-tune the agenda for the workshop, specifically making sessions easy to understand and participate in. Tamil Nadu SCERT and DIET faculty members also participated at the invitation of CEMCA. While they were quite tech-savvy, Ubuntu, wiki and the idea of COP was quite new for them.

3 Introduction to the Information Society

Gurumurthy presented before the participants, how ICTs are significantly impacting all walks of life and how currently the digital revolution is changing both 'production-consumption' models as well as 'communication' models.. That education too would not continue 'as usual', in the light of the changes being brought about by ICTs, was explained. Typically many teachers and teacher educators believe that ICTs should be the preserve of 'technology experts' but real benefits from ICT integration can be realised only when the practitioners understand it and adapt it in meaningful ways. This will also help them address real challenges being faced in their professional work and professional development, rather than see ICTs as a mere stand-alone subject for children to learn. **An important component of such use would be creation and participation of virtual networks of sharing and seeking – the 'Communities Of Practice' (COP) for professionals**. While COPs are useful for all professionals, they are especially relevant to those in education space, since here the main work is teaching-learning and COP is a powerful method for making 'peer-learning, mentoring, continuous and life long learning' eminently possible. Since learning ICTs is like learning a new language, it requires regular and diligent practise and developing capacities in ICTs will assist them in all aspects of their work.

4 Basic Computer Literacy

Since some participants possessed only a basic knowledge of computers, participants were given time for hands-on to feel comfortable with using Ubuntu and email. It took time for participants to learn to navigate a website. However, this skill is crucial to participating in the digital world.

Ranjani took a session on spreadsheet (using LibreOffice) basics and select advanced features such as sort, subtotals, inserting charts, etc. Common formatting tips on Writer (inserting pictures, taking screen shots, formatting a Libre Office document and exporting document to PDF format, peer reviewing documents with insert comments and track changes) were also covered.

5 Introduction of OER and KOER

Ranjani conducted a session on websites, which covered a range of categories such as educational games, e-commerce, travel, news etc. Open Educational Resource sites were also introduced to the participants. The participants were asked to analyse websites based on various criteria such as; what does this website offer, is the registration free or paid etc. Participants practised searching for information and accessing different websites for their information requirements.

Illustration 1: KOER introduction

She introduced the Karnataka Open Educational Resources (KOER) which 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 their own expertise area. The participants were briefly introduced to the idea of wiki editing and content submission - through a form. They also learnt about global and Indian efforts in OER, the vision and way forward for OER and KOER.

6 Mind Mapping

The next session was on mind mapping. Participants understood the meaning of mind mapping and learnt the workings of the 'Freemind' application in order to create mind maps. 'Freemind' is a versatile tool that can also export the mind map to several formats including image, document, web page etc

Participants practised mind mapping by thinking about the topic that they had chosen. They recorded all the

Illustration 2: Facilitating Mindmap in workshop

words that crossed their minds in their notebooks. This helped them in making resources for each selected topic and they prepared mind maps for their topic as part of the resource compilation.

7 Educational Applications

The next session covered educational applications such as [Geogebra](), [Audacity](), [PhET](), [Record My Desktop](), [KGeography](), and [Marble]() etc. Teacher educators were interested in knowing about these applications. A demonstration of these applications was performed by Ranjani and participants made use of these applications for learning as well as creating resources. The session continued with Shariff training participants on different Google features (google search, google maps) and basic computer learning objectives like uploading videos on Youtube, creating digital albums in Picassa, image editing using GIMP etc.

8 Community of Practitioners

The Community of Practitioners (CoP) platform seeks to connect teacher educators for continuous learning and sharing. Participants were taken through [www.teacher-network.in](). Since this batch of teachers was from Karnataka, they connected with other teacher educators from Karnataka over

[karnataka_teachereducators@googlegroups.com]()

which is a part of the COP. The mailing list is accessible from the portal [http://teacher-network.in](). Resources created by teachers are available by clicking on the Resource link on the home page of the [http://teacher-network.in/]() portal.

Post workshop the participants are expected to 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 continue the process of collaborative resource creation. For many teacher educators, the use of ICTs both to connect to others as well as to access resources is a very new idea and hence while they are quite appreciative of the possibilities, to get them to sustain the use will require regular and intensive efforts.
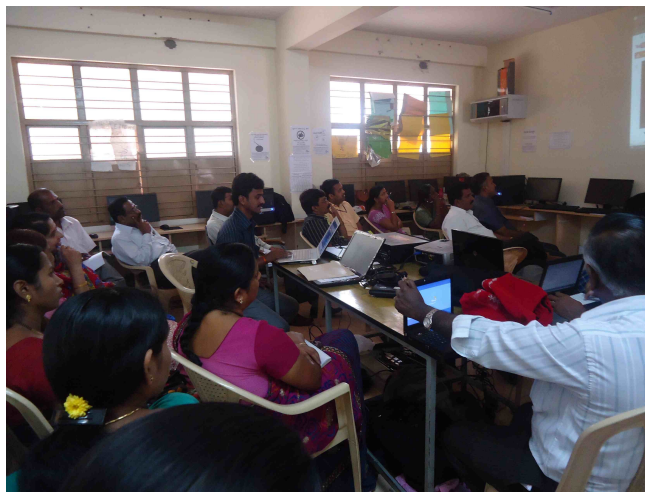
9 Resource creation

Resource creation is an expected 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 physical network consisting of a few people. In this workshop, participants learnt digital methods to create, access and share 'digital' resources.

Ranjani discussed with the group, the structure of the model lesson to be created. After the consensus for a common structure was arrived at, the participants began working on their resources to build personal resource digital libraries for their subject topics; downloading images, documents and combining resources to create a document. The group discussed that digital processes are much more dynamic and that there cannot be a 'final' resource since anyone is free to provide inputs that can (or cannot) be added to the final resource which may have already been uploaded on the web portal. Though the resource, even initially, would need to be of a minimum quality in terms of being error free, , it was discussed that possibilities for further improvement would always be there.

Participants made a curriculum analysis to determine methods of transacting - what do I need to teach, what do I need to know and how do I teach, what resources are needed for subject transaction etc. On basis of this they identified appropriate resources to build the digital resource library for their subject topic.

10   Peer Review

Venkatesh facilitated the sharing and review of resources by the teams. Participants presented their work. Feedback was given by others on the basis of innovation, coverage of the topic and assessment activities. A second round of feedback was done through the email groups. Review (digital) methods such as, inserting comments, track changes etc. were used to give feedback to peers. Sharing feedback on the work of a peer can be a powerful incentive and method to build the COP and hence this was emphasized during the workshop.

11   Other South Indian State Participants

Participants from the state of Tamil Nadu (2 from SCERT and 1 from DIET) attended the workshop as well. While
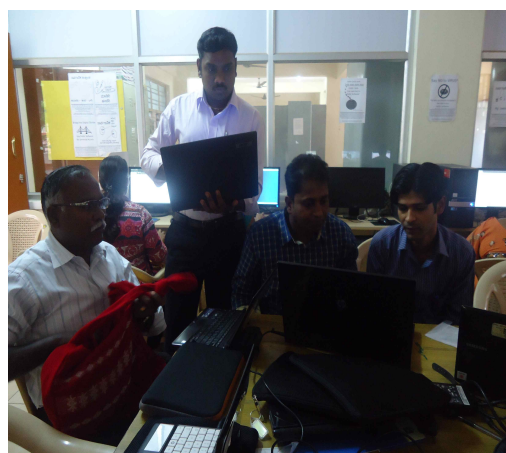
they were tech savvy, the use of Free and Open Source software, Open Education Resources and virtual communities were new concepts for them. They participated in the discussions and were keen to adopt a programme similar to the COP in Tamil Nadu as well. At their request, ITfC has provided a proposal to SCERT for conducting workshops and providing post workshop support to create a Mathematics COP in the state.

12   Participants Feedback

A total of 28 Diet and CTE faculty members from Bangalore and Mysore division and 3 participants from SCERT Tamil Nadu attended the workshop. At the end of the fifth day they were requested to give feedback by filling in the participant response forms.

The purpose of this feedback was to:

1. Provide participants with the opportunity to reflect and comment on their workshop experiences and learnings;

2. Provide ITfC with participants' assessment of the workshop to help better understand their expectations, requirements, as well as programme shortcomings and problems etc.which could serve as basis for improvement in further workshops.

Overall, the workshop evoked positive feedback from most participants. They were happy to learn sophisticated use of ICTs for networking and peer learning as well as for accessing and sharing digital learning resources.

12.1   Workshop agenda

 The Bangalore COP workshop focused on the use of Information and Communication Technologies (ICTs) for professional development, building basic computer literacy skills, introduction to the use of subject-based educational tools and the adoption of [COP platform for teacher educators](#). The participants rated the overall workshop as highly effective. 80% felt the five day programme duration was adequate and 15% felt that it was short and wanted some more time. 5% felt it was too long.

Participans expressed their satisfaction with the programme covering topics such as mind mapping, GIMP (image editing), Screenshot (capturing screen images), Picassa (photo uploading), OpenShot

(video editing). They felt these could be used in their day to day living apart from teaching. Ubuntu custom distribution was appreciated for providing hundreds of bundled tools, which could be learnt by participants and were very useful for teachers. Specifically, the training on mind-map, screenshot and open shot video editing were felt to be useful in creating resource materials as well. There was a demand for more resources access in Kannada.

12.2   Regarding the COP, including KOER and teacher networking

The workshop attendees appreciated the concept of COP and expressed their happiness to be part of the learning platform. They found sessions on learning toolls/utilities like mind-map, screen shot and open shot video editing useful in creating resource materials and sharing it over the COP. The COP itself, as a platform where teachers can share their views, exchange ideas (better pedagogies and methods of transactions for CCE implmentation), develop skills, build professionalism, was felt to be useful for subject teachers as well. It would enhance the creativity in teachers. Teachers could find different activities, methods and approaches of teaching concepts and like minded, resourceful teachers could be connected.

12.3   Feedback from Tamil Nadu participants

The Tamil Nadu team of three members were very satisfied with the training.While they were quite tech savvy, they were not familiar with the Ubuntu FOSS platform and all the FOSS tools in different subjects.

"We will use these ICT tools like Geogebra to enable teachers to support the learning of children, these open source resource will help to ensure teacher professional development. The virtual platforms are a beautiful compilation of teachers experiences making use of technology. We request ITfC to conduct a similar workshop in Tamil Nadu as well."- J. Imbaraju, Asst.Prof. SCERT Channai. Tamilnadu.

They were very keen to have a similar programme in Tamil Nadu as well. Based on their request and discussions, ITfC has submitted a proposal for a Mathematics Teachers and Teacher Educaors forum to SCERT Tamil Nadu.

Illustration 3: ITfC team with the Tamil Nadu participants
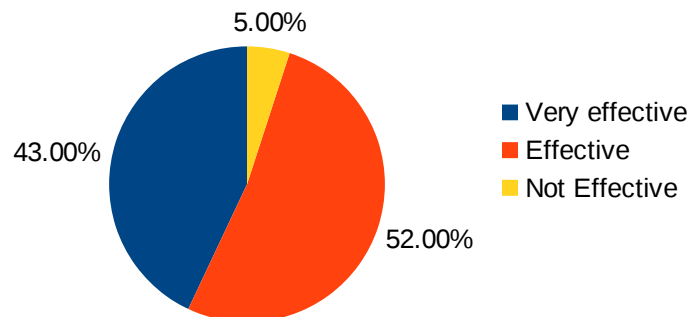
12.4   Questions related to the effectiveness of programme

* Logical sequencing of the workshop:
  Very good .... 85%   Good 15%

* Trainer's knowledge of subject matter:
  Very effective ....43%   Effective 52%   Not Effective 5%

* Trainer's organisation and presentation skills :
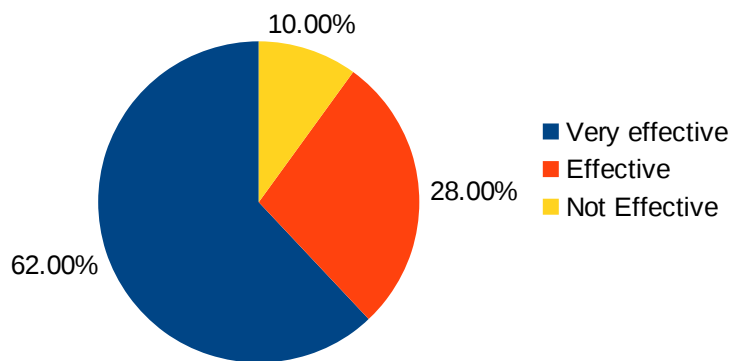   Very effective ....38%   Effective 57%   Not Effective 5%

* Style and delivery of trainers very effective:
    Very effective ....38%   Effective 57%   Not Effective 5%

* Responsiveness to participants :
    Very effective ....62%   Effective 28%   Not Effective 10%

* Creating appropriate learning environment :
    Very effective ....48%   Effective 38%   Not Effective 14%

* Usefulness of the workshop in understanding the use of internet for learning, basic ICT literacy :
48 % of them felt that it was very helpful for them to know accessing resources from alternate sources like internet other than the textbooks and library. 42% felt is was useful and 10% felt it was not very useful.
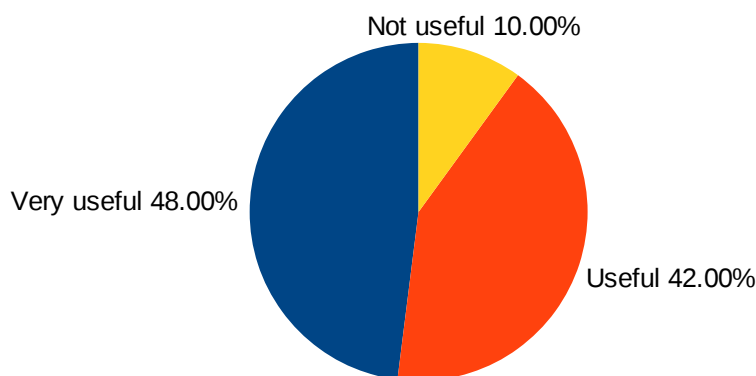
12.5   Concerns expressed

1. Participants also provided feedback for further improvement, some (9 participants) felt that the time for hands-on practice needed to be increased.

2. One participant also shared that the project facility was weak at times which affected easy grasping[3].

3. A third concern was expressed by one participant regarding greater focus being needed on Kannada language in the workshop transaction[4].

4. Residential facilities were not available at the workshop venue (Bangalore Rural DIET) and participants had to travel to SCERT which was 6 kilometers away and few participants felt this took away time which they could have spent on practice.

12.6   Specific feedback

Some participant-feedback[5] about the workshop learnings are provided below

1. " *In these days we all depend on ICT for all work, so as teacher educators we should update ourselves in the use of ICTs. We have to facilitate maximum teaching innovations from teachers so for that we need these ICT educational tools. KOER part will help us to update ourselves with lots of Resource and the COP will help us share and network with one another. I intend to work on creating a COP for Urdu teachers and teacher educators in Karnataka" - Shabana Anjum , Lecturer DIET Shimoga*.

2. *This training is very useful for teacher educators and teachers. One can learn latest techniques to develop profession ally - Lokesha R.N, DIET Ramanagara*

13 List of DIET and CTE participants

Sl No	NAME	Institution Name -	Email ID -
1	B.N.VIJAYALAKSHMI	DIET CHIKBALLAPURA	bnvijayalakshmi1959@gmail.com
2	BHAGEEBAI.D.R	DIET CHIKAMANGALORE	Bhagyalaxmidr@gmail.com
3	BHARATHI.M.S.	DIET MANDYA	bharathigowda.ms@gmail.com
4	D.M.RAJALAKSHMI	BANGALORE RURAL DIET	rajalakshmimahesh@gmail.com
5	SURESH AHAHANYA.S	DIET HASSAN	ahahanyasuresh@gmail.com
6	THARAMANI T S	DIET TUMKUR	diettara@gmail.com
7	DEVARAJ A R	DIET MYSORE	iamdevarajar@gmail.com
8	GIRIJAMMA H N	BANGALORE RURAL DIET	girijaveeresh@gmail.com
9	H.P.SWAMYDIET	DIET CHITRADURGA	swamydietchitradurga@gmail.com

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3   The projector was provided by the DIET and was an old one, it was replaced during the programme.

4   The transaction was bilingual and other participants were comfortable with both English and Kananda

5   Language edited, since for most English is not a language of comfort.

10	HARISHA H G	DIET CHIKKABALLAPUR	harishahg@gmail.com
11	J.INBARAJ	SCERT CHENNAI	inbarajdtert@gmail.com
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25	SHABANA ANJUM	DIET SHIMOGA	shabanashujath74@gmail.com
26	SHOBHA G.N.	DIET TUMKUR	shodhakurgod@gmail.com
27	SHOBHA.S.M	DIET CHIKKABALLAPUR	shobharmuni@gmail.com
28	SREEKANTESH	DIET MYSORE	sreekanteshdiet@gmail.com
29	SURENDRANATH.S	DIET CHIKKAMAGALORE	surendranathheragatta

14 ITfC Resource Persons

No	Name
1	Gurumurthy Kasinathan
2	Ranjani Ranganathan
3	Venkatesh S
4	Shariff Mulla
5	Seema Kouser

15   Agenda of Workshop

Day 1			
Topic	**Time**	**Structure**	**Objectives/ Outcomes**
Inauguration and introduction	10.00 – 10.30	Discussion	Introduction to the workshop. Review from last workshop and what is proposed in this workshop. Participant Expectations
Internet, COP and OER	10.30 – 12.00	Discussion	The rise of the internet – why it is important? What is COP and why is it important for TE. What are OERs? Global and Indian efforts in COP and OER? Vision and way forward for COP.
Mind mapping	12.00 – 1.00	Demonstration and Hands-On	How to use mind maps to document / discuss/ plan?
Lunch Break	1.00 – 2.00		
KOER structure and walk through	2.00 – 3.30	Presentation and discussion	How resources are organized on KOER? How to access, review and contribute? Identify one area/ topic that they want to work on from the various KOER portals
Google Advanced Features; Searching on the Internet	3.30 – 5.30	Demonstration and Hands-On	Google Features and accessing the internet
Home-work			Participant information, email ID, photographs. Added to respective subject group and also added to karnakateachereducators@googlegroups.com
Day 2			
Content analysis and identification of appropriate resources	9.00 – 10.00	Demonstration and Hands-On	Curriculum analysis to determine methods of transacting - what do I need to teach, what do I need to know and how do I teach it. Determine what resources are needed
Content analysis and identification	10.00 – 11.00	Hands-on	For the given topic, completion of the resource map

of appropriate resources			
ICTs for learning	11.00 – 12.00	Hands-on	Building a digital resource library for any area of interest. Downloading resources, documents and combining resources to create a document. Assess the suitability of the resources for transaction of a given topic
ICTs for learning	11.00 – 12.00	Hands-on	Building a digital resource library for any area of interest. Downloading resources, documents and combining resources to create a document. Assess the suitability of the resources for transaction of a given topic
ICTs for learning	12.00 – 1.00	Hands-on	Building a digital resource library for any area of interest Downloading resources, documents and combining resources to create a document
Lunch Break	1.00 – 2.00		
Educational Tools, useful web sites	2.00 – 4.00	Hands-on	Geogebra, PhET and Marble. Demonstrating educational tools and interesting websites
Continuation of the work and practice	4.00 – 5.30	Hands-on	Building a digital resource library for any area of interest Downloading resources, documents and combining resources to create a document.
Day 3			
Formatting text documents	9.00 – 10.00	Hands-on	Inserting multiple resources and formatting
Spreadsheets Practice	10.00 – 1.00	Hands-on	Using spreadsheets for data analysis, representation
Lunch Break	1.00 – 2.00		
Continuation of the work and practice	2:00 – 4.00	Hands-on	Building a digital resource library for any area of interest Downloading resources, documents and combining resources to create a document.
Emailing practice	4.00 – 5.30	Hands-on	Accessed resources must be shared with each other on email and using the forum. Subject line, attachment, CC, reply, reply all and signature. Checking and removing spam
Day 4			
Completion of	9.00 –		Preliminary sharing and review by group on resources. Resources wil be reviewed by an identified

resource library and review	1.00		reviewer and the reviewer should present
Lunch Break	1.00 – 2.00		
Image Editing	2.00 - 4.00	Hands-on	Image editing using GIMP
Uploading videos on youtube; pictures on	4:00 – 5:30	Hands-on	Uploading videos on Youtube
Day 5			
Completion of resource library and review	9.00 – 11.00		Preliminary sharing and review by group on resources. Resources wil be reviewed by an identified reviewer and the reviewer should present
Contributing to KOER	11.00 – 1.00	Hands-on	Completion of the materials they have compiled - add/ modify/ translate and submit their suggestions to koer@karnatakaeducation.org.in
Lunch Break	1.00 – 2.00		
COP and KOER going forward	2.00 – 3.00	Presentation and discussion	COP and KOER directions
Feedback of workshop	3.00 – 3.30	Hands-on	Feedback for workshop
Closing and administrative processes	3.30 – 4.30		

Agenda, handouts, workshop photos and participants information is on http://karnatakaeducation.org.in/KOER/index.php/DIET-CTE_Web_Based_Workshop_October21-25