

## CEMCA

**Detailed report on**  
**“Finalisation workshop - Telangana ICT Text and Hand book”**  
**organised by Telangana Department of School Education,**  
**at IASE, Hyderabad from 21 - 25 November 2016**



Report from [IT for Change](#)

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## **Background**

Integrating Information and Communication Technologies (ICT) in teacher education (TE) is a priority for [Commonwealth Educational Media Centre for Asia](#) (CEMCA). CEMCA organized a [consultative meeting held in RIE Mysuru](#), for South Indian SCERTs, for collaboration on programs on ICT in Education, specifically OER creation. Pursuant to this meeting, the Telangana Department of School Education (DSE) has signed a MOU with [CEMCA](#) to support the creation of ICT student textbook and teacher / teacher educator handbook, for its [ICT@Schools](#) program.

In line with this MOU, DSE organised a “[consultative workshop](#)” on 16<sup>th</sup> and 17<sup>th</sup> September at SIET Telangana, in which the framework, scope and approach for ICT student textbook and teacher / teacher educator hand book was approved.

Based on these consultations, IT for Change prepared a draft of the text book and hand book. Subsequently, a core group of the DSE reviewed ICT student textbook and teacher / teacher educator hand book, in the “[review workshop](#)” organised from October 17-21 at Osmania University, Hyderabad.

Telangana will have 2 student text books, one for classes 6-8 and second for classes 9-10. The deliverable for the current project is the first text book and teacher / teacher educator hand book. To finalise these books, a workshop was organized by DSE in November from 21<sup>st</sup> to 25<sup>th</sup> November, at the Institute of Advanced Studies in Education, Osmania University. [IT for Change](#), the implementation partner of CEMCA, for this project, facilitated the workshop. This document is a report of the [finalisation workshop](#).

## **Workshop aims**

The [finalisation workshop](#) had the following aims:

1. Core group to review and finalize the student text book and teacher handbook and recommend the final versions for approval to the DSE
2. To orient a core group of teachers and text book editors who can lead the implementation of the new ICT syllabus in the state, including text book / hand book implementation
3. To develop a training plan for teachers across Telangana, for the implementation of the text book
4. To discuss OER processes and form a state level group for leading OER creation, OER review and curation and OER publishing

## **Methodology**

The workshop reviewed the student text book and teacher handbook, covering the following documents / resources prepared by IT for Change

1. An approach note describing the text book development processes and the plan for school level implementation.
2. Draft student text book and teacher handbook for Book 1 (covering classes 6-8), incorporating comments received in the [review workshop](#).

3. A metadata document for recording the metadata for the digital resources already available with DSE
4. Process note for the OER adoption processes in the state, through a Mediawiki platform

## **Workshop processes**

1. The workshop was participatory with a mix of theory, discussions and hands-on work.
2. A group of 2-3 teachers from each of the subjects – Mathematics, Science, Social Science, Languages – were part of the workshop.
3. This group of teachers, along with the core text book team members jointly reviewed the student text book and teacher handbook in small groups. The participants also worked on the lab available in the venue, to review and revise the student text book and teacher handbook.
4. Some sessions were plenary sessions, in which all core group members reviewed the work done in the small groups and by IT for Change team

## **Getting started**

Prof. Upender Reddy, DSE welcomed the participants and shared DSE expectations from the workshop. Mr. Gurusurthy Kasinathan, IT for Change, introduced participants to the aims, agenda and expected outcomes from the workshop.

## **Text book and hand book presentation**

Subsequently, Ranjani, IT for Change presented the ICT text book and hand book resources which was made available on the [OER wiki](#) on the [Teacher Network](#) website. The student text book and teacher handbook had been revised by ITfC team, based on the feedback and comments received from the core group and from Prof Rajaram Sharma, Joint Director CIET, during [review workshop](#).

The participants formed four sub groups, each looking at one part of the text book / hand book.

1. Four groups to be formed under the leadership of each core team member
  - i. Overall organization of book and nature of ICT – Ramesh sir, Vinod sir and Syed Matheen Ahmed sir
  - ii. Data processing – Rajendra sir, Srinivas sir, Ramesh sir and Vijayasathy sir
  - iii. Graphics and AV – Venkat sir, Prabhakar sir, Ashok Reddy sir, Rathangapani sir and Laxminatham sir
  - iv. Teacher handbook - Vinayak sir, Jani Reddy sir, Suresh Kumar Mishra sir and Vinod sir
2. Subject tools to be taken up on day 3
  - i. Geogebra, Rajendra sir and Srinivas sir and Ramesh sir and Vijayasathy sir
  - ii. Marble, - Rathangapani sir
  - iii. K geography – Rathangapani sir

iv. Kanangram – Ramesh sir and Ashok Reddy sir

In small groups, the members reviewed the chapters, considering the following aspects:

1. Flow of the textbook appropriateness for students
2. Review of the activities given
3. Suggest additional student activities and teacher handbook addition
4. Check for language and consistency in presentation

Way forward for extending the ICT curriculum/ vocational curriculum – Upender Sir along with other core group members.



## Review of the text book and hand book

The review process suggested by Ranjani for the groups was presented, this is provided in the table below:

Group	Component	Review scope
1	Overall Scope	<ol style="list-style-type: none"><li>1. Review the learning expectations from the textbook</li><li>2. Map the learning expectations, strands and levels of the book to the National ICT curriculum</li></ol>

		<ol style="list-style-type: none"> <li>3. Review the suitability of the syllabus to the attainment of learning outcomes for the curricular areas</li> <li>4. Plan on school implementation, teacher training and content</li> </ol>
2	Data representation and processing	<ol style="list-style-type: none"> <li>1. Review the learning levels, objectives of each level and compare to the National ICT curriculum</li> <li>2. Review the activities and gradation of activities; make subject wise connection as well as refine the teacher transaction notes</li> </ol> <ol style="list-style-type: none"> <li>1. Develop a set of 4-6 activities for each level which can be added</li> <li>2. Suggestions for FA</li> </ol>
3	Graphics and Audio visual communication	<ol style="list-style-type: none"> <li>1. Review the learning levels, objectives of each level and compare to the National ICT curriculum</li> <li>2. Review the activities and gradation of activities; make subject wise connection as well as refine the teacher transaction notes</li> <li>3. Develop a set of 4-6 activities for each level which can be added</li> <li>4. Suggestions for FA</li> </ol>
4	Reviewing educational applications	<ol style="list-style-type: none"> <li>1. Review the objectives of the topic, in view of the TPACK framework</li> <li>2. Review / add the activities</li> <li>3. Suggestions for FA</li> </ol>

## Discussions on Telangana Repository of Open Educational Resources (TROER)

The ITfC team made a presentation on TSROER focusing on principles of TSROER design, possible features of the TSROER and OER creation, review and upload processes. The small groups discussed these OER ideas and suggested changes / gave feedback. The core group also discussed the possibilities for designing and implementing the TROER. The core group felt that the OER Licensing should also be extended to all the text books being produced by SCERT, before uploading on TROER. Currently, the license for these text books is the traditional ‘all rights reserved’. There is an important opportunity here to convert all the department curricular resources to OER. ITfC will follow-up with DSE on this aspect and provide support required for this conversion.

### Resources shared

The ICT text book and hand book is provided on-line on the [TOER](#) wiki. An off-line copy (PDF format and ODT format) was also created by the ITfC team and provided.

Click [Workshop photos](#) for the photos from the workshop.

**Resources created during workshop – indicative period allocation**

Indicative allocation of the 90 periods each year for transacting the ICT Text book, this was prepared by IT for Change team during the workshop for review by the core group.

<b>Overview</b>	<b>Reading</b>	<b>Blocks</b>	<b>Teacher Demo periods</b>	<b>Student activity periods</b>
Introduction	Reading			
What is the nature of ICT	Reading			
Science, Technology and Society	Reading			
Ethics of technology	Reading			
Data representation and processing	Reading			
Communication with graphics	Reading			
Audio visual communication	Reading			
Educational applications for learning your subjects				
<b>Level 1</b>				
What is the nature of ICT level 1	Reading			
How is a computer different from a fridge		1	1	2
What all can a computer do		3	3	6
Data representation and processing level 1	Reading			
Data can tell stories	Reading	2	2	4
How to make data meaningful		3	3	6
A concept map of my data		3	2	4
Making a text document		3	3	6
Communication with graphics level 1	Reading			
Photo and image essays		3	3	6
Tell a story		3	2	4
Educational applications				
Help build your vocabulary with Kanagram		6	5	10
Explore maths with Geogebra Level 1		3	3	6
Level-wise total periods		30	27	54
<b>Level 2</b>				
What is the nature of ICT level 2	Reading			
When did it all begin		1	1	2
The human story behind the computer		0	0	0
Data representation and processing level 2				
Columns and rows!		3	3	6

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Numbers and patterns		3	3	6
Text document with data analysis		3	3	6
Communication with graphics level 2				
Stories come alive with pictures		3	3	6
Songs come alive with pictures		3	3	6
Audio visual communication level 1				
Audio story telling		3	3	6
Words and sounds to tell a story		3	3	6
Make an audio book		2	2	4
Educational applications				
Explore maths with Geogebra Level 2		5	5	10
Your desktop atlas with KGeography		2	2	4
Level-wise total periods		30	30	60
<b>Level 3</b>				
What is the nature of ICT level 3	Reading			
The machine is using us		1	1	2
The global digital library		2	2	4
I have a new address		2	2	4
Data representation and processing level 3				
Spreadsheet for data analysis		3	3	6
Multi page text document		2	2	4
Communication with graphics level 3				
Making comic strips		3	3	6
Making posters		3	3	6
Audio visual communication level 2				
Make a read aloud audio visual book		2	2	4
Make the pictures sing		2	2	4
I am a movie maker		2	2	4
Educational applications				
Explore maths with Geogebra Level 3		4	4	8
The globe on your table with Marble		2	2	4
Explore science learning with simulations		2	2	4
Concluding remarks	Reading			
Level-wise total periods		30	30	60
Questions & Answers				



### **Resources created during workshop – mailing lists of teachers and teacher educators for different subjects**

During the workshop, mailing lists were created for different subject groups, the aim is to enroll all teachers of a subject onto a mailing list so that the teachers can share resources (OER), provide feedback and comments to revise the resources, which would include the student text book and teacher handbook. For each list, two members from the core group were identified to serve as facilitators. The list is provided below:

No	Subject	Group	Name	Manager1	Manager2
1	Telugu	<a href="mailto:tstelugu@googlegroups.com">tstelugu@googlegroups.com</a>	Vinayak sir	<a href="mailto:suvarnavinayak@gmail.com">suvarnavinayak@gmail.com</a>	<a href="mailto:lankamp1998@gmail.com">lankamp1998@gmail.com</a>
2	Hindi	<a href="mailto:tshindistf@googlegroups.com">tshindistf@googlegroups.com</a>	Matheen Sir	<a href="mailto:smascerthindi@gmail.com">smascerthindi@gmail.com</a>	<a href="mailto:rajeevhindi@gmail.com">rajeevhindi@gmail.com</a>
3	English	<a href="mailto:tsenglishstf@googlegroups.com">tsenglishstf@googlegroups.com</a>	Jani Reddy sir		
4	Maths	<a href="mailto:Tsmathsstf@googlegroups.com">Tsmathsstf@googlegroups.com</a>	Rajendra Reddy sir	<a href="mailto:rajenderkv@gmail.com">rajenderkv@gmail.com</a>	<a href="mailto:dschahel@gmail.com">dschahel@gmail.com</a>
5	Physical Science	<a href="mailto:tspstf@googlegroups.com">tspstf@googlegroups.com</a>	Venkat Reddy sir	<a href="mailto:yanala1963@gmail.com">yanala1963@gmail.com</a>	<a href="mailto:totobudugu@yahoo.com">totobudugu@yahoo.com</a>
6	Biological Science	<a href="mailto:tbsstf@googlegroups.com">tbsstf@googlegroups.com</a>	Madhusudan sir	<a href="mailto:edmadhu@gmail.com">edmadhu@gmail.com</a>	<a href="mailto:tajbabu1983@gmail.com">tajbabu1983@gmail.com</a>
7	Social Science	<a href="mailto:tssocialstf@googlegroups.com">tssocialstf@googlegroups.com</a>	Rathangapani sir	<a href="mailto:rathangapanip@gmail.com">rathangapanip@gmail.com</a>	<a href="mailto:bejarapuvinod@gmail.com">bejarapuvinod@gmail.com</a>

### **Workshop outcomes**

The following were the workshop outcomes:

1. Review and approval of the teacher handbook for the ICT program implementation
2. Review and approval of the student text book for the ICT program implementation
3. Shared understanding of OER creation-review-feedback-upload processes
4. Development of a plan for the teacher training and orientation for the student text book and teacher handbook

### **Action items and way forward**

The last session was on action items and way forward. The core group formed, consisting of the workshop participants, adopted the student text book and teacher handbook and the final changes and revisions will be made to these by December 5<sup>th</sup>.

	Items	Requirements/ date	Nov	Dec	Jan	Feb
A	ICT curriculum development					

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	- Textbook development		X			
	- Handbook development	December 5	X			
	translation	December 15		X		
	printing initial copies	December 21		X		
<b>B</b>	<b>Teacher training at state level</b>	State lab	X			
	Teacher training at district level	District lab	X	X		
<b>C</b>	<b>School Lab Readiness</b>	1000 school		X	X	
<b>D</b>	<b>Piloting text book in schools</b>				X	X
<b>E</b>	<b>OER creation</b>					
	Creation of metadata for resources			X		
	TROER setup and maintenance			X		
	upload of resources with metadata on TROER				X	X

This time-line was discussed with the Commissioner of School Education and formally shared with him.

## Annexures

### Annexure A – Participants

The members who participated on all days of the workshop is provided in the table below. Apart from these members, there were other teachers who participated selectively in the workshop, their names are not provided here.

No	Name	Contact Number	Sex	E-mail IDs	Organization
1	Dr. Rajendar Reddy	7331175626	M	<a href="mailto:rajenderkkv@gmail.com">rajenderkkv@gmail.com</a>	Nalgonda – Maths 1 – 10 coordinator. NCF, SCF, core group member S.A Maths UPS Thimmiryala, Yadadri (DIS)
2	Dr. Ramesh Rao	9948545758	M	<a href="mailto:rameshraok@gmail.com">rameshraok@gmail.com</a>	Text book writer for English-language Karimnagar S.A (English) & SRG, GHS Sapthagiri Colony, Karimnagar
3	Dr. Rathangapani Reddy	9705806581	M	<a href="mailto:rathangapanip@gmail.com">rathangapanip@gmail.com</a>	Social Studies core group member S.A Social Coordinator & SRG, ZPHS Polkampalli, Mahabub Nagar (DIS)
4	Dr. Sharada	9347289113	F	<a href="mailto:sharadasoma81@gmail.com">sharadasoma81@gmail.com</a>	SCERT ET, Mathematics
5	Dr. Upender Reddy	9849909227	M	<a href="mailto:nupender@gmail.com">nupender@gmail.com</a>	Consultant, DSE
6	M Rama Brahmam		M	<a href="mailto:mramabrahmam@gmail.com">mramabrahmam@gmail.com</a>	Lecturer, IASE - Physical Science
7	Mr. B Ashok Reddy	9293942634	M		S.A (English) & SRG, ZPHS Battuguda, Yadadri (DIS)
8	Mr. Bandari Ramesh		M		ZPPSS Venkatapur (K), Zaffargadh (Mdl)
9	Mr. Bijjarapu Vinod Kumar		M		S.A (Social) SRG, ZPHS, Gagillapur, Bejjanki Mandal, Siddipet (DIS)
10	Mr. C. Umarani		F		G.B.P.S. Lalagunda No.2 Hydrabad
11	Mr. Jani Reddy		M		Lecturer, Diet, Vikarabad

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12	Mr. Jeripothula Srinivasalu		M		MPUPS Thallavellamla, Chityal, Nalgonda (DIS)
13	Mr. K Rangaraju	9000765988	M		S.A (Telugu and SRG), ZPHS Rajendar nagar Shamshabad Ranga Reddy (DIS)
14	Mr. KKV. Rayalu		M		Lecturer, IASE, Hyderabad - Maths
15	Mr. Laxmi Narayana		M		SA, ZPHS, Girls High School , Mutkur, Nizamabad
16	Mr. Mateen Ahmed		M		S.A (Hindi), Coordinator & SRG, ZPHS, Chivvemla, Suryapet (DIS)
17	Mr. S. Vinayak	9618676215	M	<a href="mailto:suvarnavinayak@gmail.com">suvarnavinayak@gmail.com</a>	Telugu, Hindi, Urdu text book writer + Social Studies – HM Karimnagar (Academic standards, CCE, SCF, DEd). NCF 2005 Systemic reforms group LFL H.M & Telugu & SRG, PS Kannala, Manrthani Mandal, Karimnagar (DIS)
18	Mr. Vijaya Sarathi		M		SA, ZPHS, Marrampally, Nizamabad (DIS)
19	Mr. Y Venkat Reddy	9441252663	M	<a href="mailto:yanala1963@gmail.com">yanala1963@gmail.com</a>	Text book writer for PHYSICS S.A & Physics Coordinator & SRG, ZPHS Chivvemla, Suryapet (DIS)
			M		
20	Gurumurthy Kasinathan	9845437730	M	<a href="mailto:guru@itforchange.net">guru@itforchange.net</a>	ITfC
21	Ranjani Ranganathan	9916092994	F	<a href="mailto:ranjani@itforchange.net">ranjani@itforchange.net</a>	ITfC

**Annexure B – Planned workshop agenda**

Day 1 – Session 1	<ol style="list-style-type: none"> <li>1. Introduction to the workshop</li> <li>2. Presentation of the final draft of the text book and handbook – digital and print version</li> </ol>
Day 1 – Session 2	<ol style="list-style-type: none"> <li>3. Participants in small groups to review the digital version of the text book, try out the activities (as applicable) and practice the various applications</li> <li>4. Participants to share their experiences and feedback in a plenary</li> </ol>
Day 2 – Session 1	<ol style="list-style-type: none"> <li>5. Participants in small groups to review the digital version of the text book, try out the activities (as applicable) and practice the various applications</li> </ol>
Day 2 – Session 2	<ol style="list-style-type: none"> <li>6. Participants to share their experiences and feedback in a plenary – collation of all feedback; this will be compiled and presented back to the team again for approval on Day 4</li> <li>7. Overview of the OER process and road map - 1               <ol style="list-style-type: none"> <li>i. Features of a participatory model of resource creation</li> <li>ii. Introduction to how a Media wiki platform works</li> </ol> </li> </ol>
Day 3 – Session 1	<ol style="list-style-type: none"> <li>8. Brief demonstration of how to create resources using the Media wiki portal; participants to create resources and practice</li> </ol>
Day 3 – Session 2	<ol style="list-style-type: none"> <li>9. Overview of the OER process and road map – 2               <ol style="list-style-type: none"> <li>i. Review of the metadata compiled for the TSROER and understanding how it maps to the NROER</li> </ol> </li> </ol>
Day 4 – Session 1	<ol style="list-style-type: none"> <li>10. Presentation of the text book after incorporating feedback items</li> <li>11. Teachers to practice in small groups</li> </ol>
Day 4 – Session 2	<ol style="list-style-type: none"> <li>12. Approval of the text book and advice on further processes to take it to production</li> <li>13. Overview of the OER process and road map – 3               <ol style="list-style-type: none"> <li>i. Discussion on processes</li> </ol> </li> </ol>
Day 5 – Session 1	<ol style="list-style-type: none"> <li>14. Presentation of the teacher training and orientation plan               <ol style="list-style-type: none"> <li>i. An orientation on the text book for MRP already trained in various technology tools</li> <li>ii. Design and approach for district training</li> </ol> </li> <li>15. Draft way forward of OER processes</li> </ol>