# Telagana Repository of Open Educational Resources (TROER) - Technology Mediated Teacher Education Progaramme

# 1. Brief description of the innovation

The Department of School Education has created State Specific Repository of educational resources. The repository is named as Telangana Repository of Open Educational Resources (TROER). The objectives of creating TROER are;

- To store, preserve and provide access to a variety of digital resources to the students and teachers.
- To develop connected teacher forums in all the subject areas for professional exchange and for reflective practice through e-mail groups and attached to TROER.
- To facilitate the teachers to create and share contextual teaching and learning resources.
- To upload all the textbooks, teacher handbooks, children literature etc. and provide access to all.
- To upload the digital videos which are concept specific developed by the SIET to make use by the teachers in online mode.

# 2. Problem that the innovation aims to solve

a) The teachers professional development is being attempted year after year through recurring training programmes with teacher hand books. There is no alternative sources of continuous professional development by way of accessing resources and to develop connected subject groups to share professional ideas and pose problems for clarification through e-mail groups. Much digital content is available on teaching learning practices, in the World Wide Web which need to be made access to the teachers by giving links to TROER. Therefore a whole range of teaching resources now made available with establishing a e platform i.e. TROER. All the subject forums are connected through e-mail groups and attached to TROER.

b) This initiative will address the problem of non availability of educational material to the teachers and students by way of making access of all the relevant digital content developed and selected by expert team of teachers and teacher educators.

### 3. Key features

- a) The TROER is using the powerful FOSS Media Wiki platform to support collaborative OER creation by teachers.
- b) The expert teachers and teacher educators are creating resources under all curricular and other areas. An expert resource group have been developed as editorial team to edit the digital content developed by the teachers before uploading it into TROER.
- c) The development and maintenance of TROER will be in collaboration of Department of IT and Electronics Government of Telangana where the department provided adequate cloud space and SWAN facility for uploading the digital content.
- d) The meta data for the digital resources is being developed and uploaded with resources.
- e) The CIET of NCERT, IT for Change are providing necessary support to undertaking technology mediated learning.
- f) The TROER will provide continuous support to the teachers for their professional development and for improved classroom processes.
- g) The TROER is the first state OER repository developed on the lines of NROER. All resources in the TROER will have metadata as per NROER for easy access by teachers
- h) The ICT Curriculum for the secondary schools and teacher hand books have been uploaded in the TROER.

# TROER includes:

- Digital resources
- Reference books
- National level content with state curriculum Textbooks
- Teachers source books and Handbooks
- Question papers/ testing material

# FORUMS

To share the content

- Subject forums
- Teacher forums
- ➢ E mail groups
- Social media groups

### 4. Impacts or benefits

The TROER Platform with a scale of teaching resources will support for continuous teacher professional development. All the new textbooks and teacher hand books developed under DPEP, SSA and RMSA, SCERT are being uploaded and helpful for the teachers to improve their teaching practice. The printing of the module for teacher training is not necessary and same are being upgraded in the TROER for teachers use. A lot of Resource Books for Teachers will be shared for the benefit of teachers and students. The curriculum, syllabus, academic standards, learning indicators in terms of expected outcomes in the TROER platform will be helpful for the parents and develop their awareness to take proper care of their children.

### Future action plan

- Development of digital material for primary and secondary schools in English, Telugu and Urdu medium.
- Development of audio material in languages.

- Orientations and trainings on;
- Digital lessons
- ICT curriculum
- Digitization of Text books and other resources
- Development of an App for all the issues related to the content.
- To introduce Massive Open Online Courses(MOOC's)

# 5. Sustainability and scaling up

Updation, improvement of resources and uploading into TROER is a regular phenomenon. This is just started and lot of work is before us to develop TROER with more digital resources and link to popular websites in different subject areas along with professional forums across the globe.

### Images of TROER Pages (Screen Shots of TROER Home Page and subject wise pages)

M Court cases	- Cases which 🗙 🕐 CASE NUMBER 🛛 🗙 🖉 CAUSE LIST 🛛 🗙 🗸 🕐 Open Educational Resources					
$\leftrightarrow$ $\times$ $\bigcirc$	) 119.226.159.19/OER/index.php/Main_Page	२ ☆ :				
Set \$wgLogo fo the URU path to your rown logo image	Man page Discusion	Log in A Read View Source View Instary (2007) (2007) (2007) (2007)				
	Welcome to Telangana Open Educat	ional Resources				
TROER in other languages Okorto TROER Core Ideas Curliculum Pedapopy Assessment ICT Book ICT student textbook	This is an OER repository for resource creation of the Nachers, by the Machers and turne Nachers of Nanagana. This is an initiative of the Department of Dance Education, DEE, to create a resource repository of <u>Open Educational Resources</u> (OER) for Nachers to make available curricular resources as well as support continuous professional development through partopatory resource creation. It is is invitated that tabelenes and Nacher Contractions in Distormant, Professional Resources (OER) for Nachers to make available curricular resources has can enhance the educational development through partopatory resource creation. It is enviced that tabelenes and Nacher Contractions in Distormant, Professional development through partopatory resource creation. The core principles of TROER are partopation, contracultations, availability of open educational resources and supporting that come professional development through partopatory resources will not be educational outcomes. The resources have been deviceded for primary, elementary and Lecondary levels, partop Machers professional development through partopatory in the National Curricular Tramework, and as per the Teangana State Curricular Pranework. These resources will include pedagogic approaches and classroom practices that will build towards the meta-honoregies of the partopatory and the outpart and are manifered to the primerine Nationals.					
ICT teacher handbook Explore an application	Telangana ICT@ School programme					
Subject Portals Art and cultural education English	retarguarta no regional programma de la seconda de la seco	ICT Textbook and Handbook				
Health and Physical Education Hindi ICT Education Mathematics	TROER is an important component of this program, all digital resources relevant and required for leachers and students will be made available on TROER, consisting of accessed resources (inits), existing resources and oreated resources. Read more Teacher trainible workshops	The ICT syllabuls is developed with the following components: A textbook for students, that introduces ICT sells and applications in a project based way, integrated with the offerentischool subjects. The core compensiones and assilts will be based on National ICT curriculum and the Tetangana state subjectivat books and academic standards.				
Physical Ocience Biological Ocience Social Ocience Value education and	1. Science STF SRP workshop April 2017 2. Mathematics STF SRP workshop April 2017 TROEKT workscience creation workshops	The core competences and sums an e base of national LT controlutin and the reangant state subject bit books and addemic bandards. A handbook for addenters and teachers and teacher educators to help them implement the syllabus as well as support their own knowledge and learning of the ICT applications based on the NCERT ICT curriculum. Read more				
Communities Bublect Teacher	1.TROER workshop Pehrung 2017 2.TROER workshop Pehrung 2017					
Porúms Partneis	Teacher Education					
Help TROER wiki help	Teacher education refers to the policies and procedures designed to equip prospective teachers with the knowledge, attludes, behaviors and skills they require to perform their tasks effectively in the classroom, school and wider community.	Gender and inclusive education				
How to participate Teacher without login Editor		How to participate				
Tools and reports Resource categories Frequent reports	Pre-Primary Education	You can participate in TROER either by directly editing the content, if you have login oredentails. If you do not have login access you can submit your resources using the Controlute button on the leftpanel.				
Special pages Upload file	Calegory: Portal					
Printexport Create a book Download as PDF Printable version	Restormers en et en 22 Ant 2017, (E-11) Al somer en en parte a autor unter ne Saster Common Altibuschisteren.					
Did not find what you are		▲ (1) 2267201 → (1) 2267201 4/26/2017				

Court cases - Cases	s which 🗙 🗸 🗋 CASE NUMBER 🛛 🗙 🗸	CAUSE LIST × English - Open Education ×		
$\leftrightarrow$ $\rightarrow$ C $\bigcirc$ 119	.226.159.19/OER/index.php/English			९ 🕁 🗄
path to your own logo image.	English			
ູ TROER in other languages ອະນາຍ TROER	If you wish to contribute to Telangana Repos	itory Open Educational Resources, Click here₽		
Core ideas		Welcome to the English langua	age portal	
ICT Book     Subject Portals     Art and cultural	This is a page for English teaching learning			
education English Health and Physical				
Education Hindi ICT Education	History of English	English language teaching	English curriculum and syllabus	
Mathematics Physical Science Biological Science Social Science Value education and life skills Communities Help	A page with information on the English language Dummy text Dummy text Dummy text Dummy text Dummy text	Nature of language Nature of child;How do children learn language Learning mother tongue versus learning foreign language/second language Theories of language learning Language policies in India	Vision Why teach English Objectives of teaching English Objectives of teaching English	
<ul> <li>How to participate</li> <li>Tools and reports</li> </ul>		Discourses and learning indicators	Textbooks English	
Print/export Did not find what you are looking for? Contribute Want to ask any questions? Ask Would like to provide any	Pedagogy of English English as second language How children learn Teaching learning strategies Approaches	Nature of language Nature of child:How do children learn language Learning mother tongue versus learning foreign language/second language Theories of language learning Language policies in India	Philosophy of the textbooks Themes/Lessons Academic standards and learning indicators Themes Unit structure	
feedback?	English language resources	Teacher professional development English	Assessments in English	
<ul> <li>(3)</li> <li>(3)</li> <li>(4)</li> <li>(4)</li></ul>			туров от доосоотноти	▲ (1)) 2:27 PM 4/26/2017

$\rightarrow$ :	< (i) 119.226.159	9.19/OER/index.	ohp/Mathematics	
<b>[</b> ]	Page Decusion			Read View source View biology
	Mathematics			
ther	Mathematics is the queen of sciences.			
оын				
				Welcome to the Mathematics home page
	This page has resources for mathematics			
2			Curriculum and syllabus	
			viskas	
	History	Nature and philosophy	ofly beach multismedics obscillens	
	Inder melhensikters	Nature of Mathematics	aciadamic standarda	
	Global Mathematicians Misselmes in methamatics	Philosophy of Mathematics	saming indicators	
	CONTRACTOR DE CONTRACTOR DE		NOF	
			SOF Position Paper	
ilian Ca				
ance -		Areas		
Serios Cie	Pedagogy	Nambar systems		
kan	Introduction	Algebra	Textbooks	
•	How children learn mellormatics	Data handing	Philosophy of text books	
dwr.	Teaching learning strategies	Introduction to managasitan	unit situatione	
	Approaches Nature of Child Isoming Process	Introduction to sets	Importance of Lypes of Exercises NCENT & other publications	
IMp	Melherselital lengange	Trigonomitry	(7st to 10th classes TM/EM/UM)	
icipate	Problem solving, Reasoning and logic	Protochilly Progressions		
that		Co-ordinate Geometry		
	Resources	Assessments		
orta	Vibra	Nature of CCL	Teacher professional development and forums	
	leacter hand books and other mobiles	Papase of CCE	Pleasarch papers and articles	
aafa a	IFOR	Tools of CCE	state return level training	
	Jaine .	Formative accessorment-looks	NGON	
ak .	Other Links Science magazines	Summative assessment Blue print	Inselfers	
POF Rat	Science magazines Science counters	Dias print Teal ferror	intellectual and subject forums	
(33 MPR				
	Innovations	Budents' work		
	from the field from schools and exceller	projecta, projecta, projecta, projecta, activitas	Mathematicians	
	organising field trips - organising field trips		chronological listing of discoveries and investions	
shi any	ottikra	solution		
	Mathematica			
	1. Halory			
	2. Nature and philosophy			
	<ol> <li>Carricularn and syllabas (vision, why</li> <li>Fact backs</li> </ol>	lasch malhemalics, objectives, acad	mic standards, learning indicators)	
	5. Psclagogy - How children learn, Tee 6. Areau/ Thermes (scarsbar system, a			
		dens' ferminy, one restriction a	an reference th	
	7. Assessment			

Court cases -	Cases which 🗙 🗸 🕒 CASE NUME	BER 🛛 🗙 🖉 CAUSE LIST	× > Physical Science - Open E ×		Leptel – D X
$\leftrightarrow$ $\times$ (i)	) 119.226.159.19/OER/index.ph	np/Physical_Science			९ ☆ :
image.	Physical Science				
TROER in other languages			welcome to Physical Science he	me page	
deuro TROER	High Stati Science     Welcome to Physical Science home page       Interpage is for resources for physical Science     Welcome to Physical Science home page       Interpage is for resources for physical Science     Welcome to Physical Science home page       Interpage is for resources for physical Science     Welcome to Physical Science home page       Interpage is for resources for physical Science     Welcome to Physical Science Curriculum and syllabus       Interpage is for resources for physical Science     Welcome to Physical Science Curriculum and syllabus       Interpage is for resources for physical Science     Welcome to Physical Science       Interpage is for resources for physical Science     Welcome to Physical Science       Interpage is for resources for physical Science     Welcome to Physical Science       Interpage is for resources     Name and philosophy of science     Welcome to Physical Science       Interpage is for resources     Name and philosophy of science     Welcome to Physical Science       Interpage is for resources     Termes in Physical Science     Welcome Page       Interpage is and Standard     Melcome Page     Photosphy       Interpage is and Standard     Melcome Page     Photosphy       Interpage is and Standard     Melcome Page     Welcome Page       Interpage is and Standard     Melcome Page     Welcome Page       Interpage is and Standard     Melcome Page     Welcome Page				
Curriculum Pedagogy					
Assessment CT Book ICT student textbook			Physical Science Curriculum and syllabus		
ICT teacher handbook Explore an application		Nature and philosophy of science			
bjeot Portals Art and cultural education English Heath and Physical Education Hindi ICT Education	world science development science time line Important discoveries and inventions	Aims of teaching science How science is taught	academic standards learning indicators NCF DCF		
Mathematics Physical Ocience Biological Ocience		Themes in Physical Science			
Docial Ocience Value education and life skills					
ommunities Bulgett Teacher Forums Pathers					
TROER wiki help	Resources		Teacher professional development and forums Science		
Recher without login Editor Moderator Dis and reports Resource categories Prequent reports Special pages Upload file Infexport Create a book	videos teacher hand books and other modules nnoer siet O'her Links Science magazines Science jopurnals	Assessments in Science philosophy of CCE formable assessment-bools summable assessment blue print setitems	Research papers and articles state national level training emmans NGOs Baohers intelleobail and subject brums		
Download as PDF Printable version	Innovations	Students' work in Physical Science			
t find what you are a for? ribute ting for 119.226.1	from the field from schools and society ornanision field time - ornanision field time 159.19	projects, projects, projects, activities	Scientists and inventions chronological listing of discoveries and inventions		
🧿 🔘	<i>(</i> )		0		▲ (1) 2:29 PM ▲ (1) 4/26/2017

$\rightarrow$ × 0	119.226.159.19/OER/index.ph	p/Biological_Science			ର 🕁
t SwgLogo the URU th to your awn logo image	Page Discussion Biological Science			Red Verificante Verification (See	Log   Search   C
in other	Diological Science		Walassas to th	e Biological Science home page	
troer	This has resources for biological science		Welcome to a	e prorožinau anietine nome balle	
culum gogy issment					
ssment k tudent textbook			Curriculum and syllabus		
acher handbook re an ation	History	Nature and philosophy	vision why teach blology		
Portais nd cultural stion sh h and Physical ation iducation ematics	Indian science world science development science time line Important discoveries	Nature and Scope Alms of leaching science How science is taught	objectives academic standards Harming Indicators NCP CCP position papers		
cal Science pical Science		Themes	Textbooks		
I Ocience education and fils ties ct Teacher d trs	Pedagogy How children learn Teaching learning strategies and approaches	Food world of living organisms what with living being are build Natural resources	philosophy unit structure Importance of sub titles state, central, other publications 6th to 10th classes TM/EM/UM		
R wiki help	Resources	Assessment	Teacher professional development and forums		
ertiolpate her without login e wator d reports wint reports ient reports lai pages	videos feacher hand books and other modules nroer siet MANA TV websiles	philosophy of CCE formative assessment-bols summative assessment-blue print testitems indicators	ardos state national level faining seminars social organisations NGOs intellectual and subject forums		
a file ort	Innovations	Students' work			
e a book load as PDF ible version what you are	from the field from schools and society organizing field trips	projects, activities inspire	Scientists and inventions chronological listing of discoveries and inventions Biologish-their success stories		
				· (1)	2:30 F