

SP5 - COLLABORATIVE CO-CREATION OF OER BY TEACHER EDUCATORS AND TEACHERS IN INDIA: A PARTICIPATORY ACTION RESEARCH STUDY

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*IDRC Grant/ Subvention du CRDI: 107311-001-Research into Open Educational Resources for
Development*

ROER4D

- SP5 - Collaborative co-creation of OER by teacher educators and teachers in India:
A participatory action research study
 - Gurumurthy Kasinathan, IT for Change
 - Banff, Calgary, April 2015

The research aims to study

“whether and how,

*a bottom-up approach, where participants collaboratively and actively
co-create contextual resources*

('embedded' within a 'community of learning'),

can support effective OER models”.

Important URLs for project

STF (LPLC) mailing lists -

http://karnatakaeducation.org.in/KOER/en/index.php/See_old_STF_mails

KOER English wiki portal - <http://karnatakaeducation.org.in/KOER/en/index.php>

KOER Kannada wiki portal - <http://karnatakaeducation.org.in/KOER>

Photos from workshops, schools -

<https://plus.google.com/photos/112402509869329495346/albums>

IT and education

The education system largely teaches as if computers did not exist

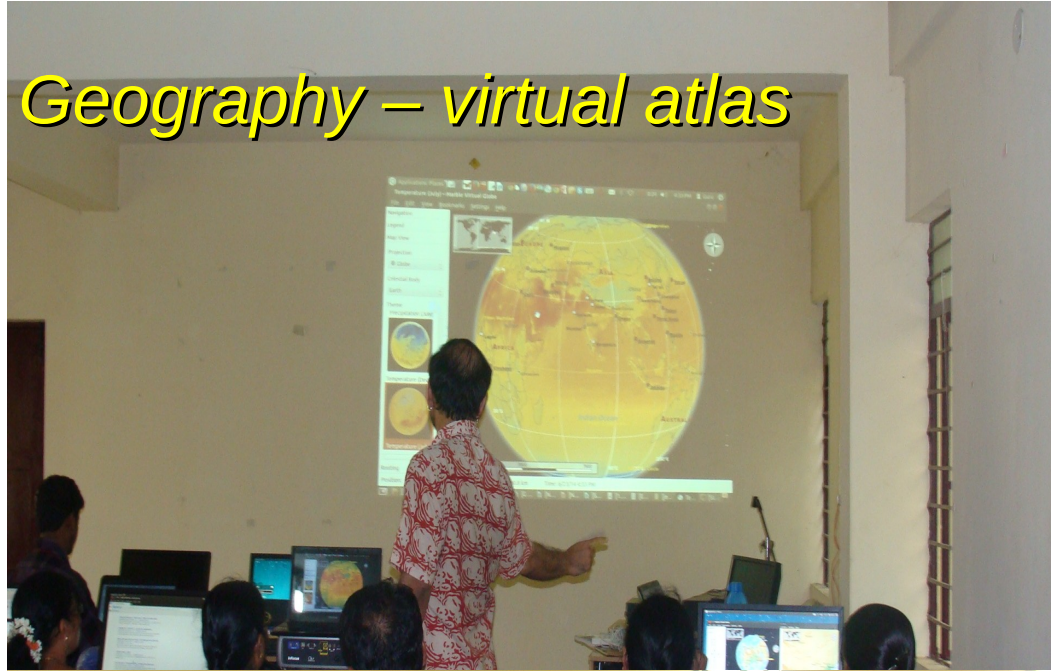
Computer labs provided to all Government High Schools but not used – teachers do not find them relevant



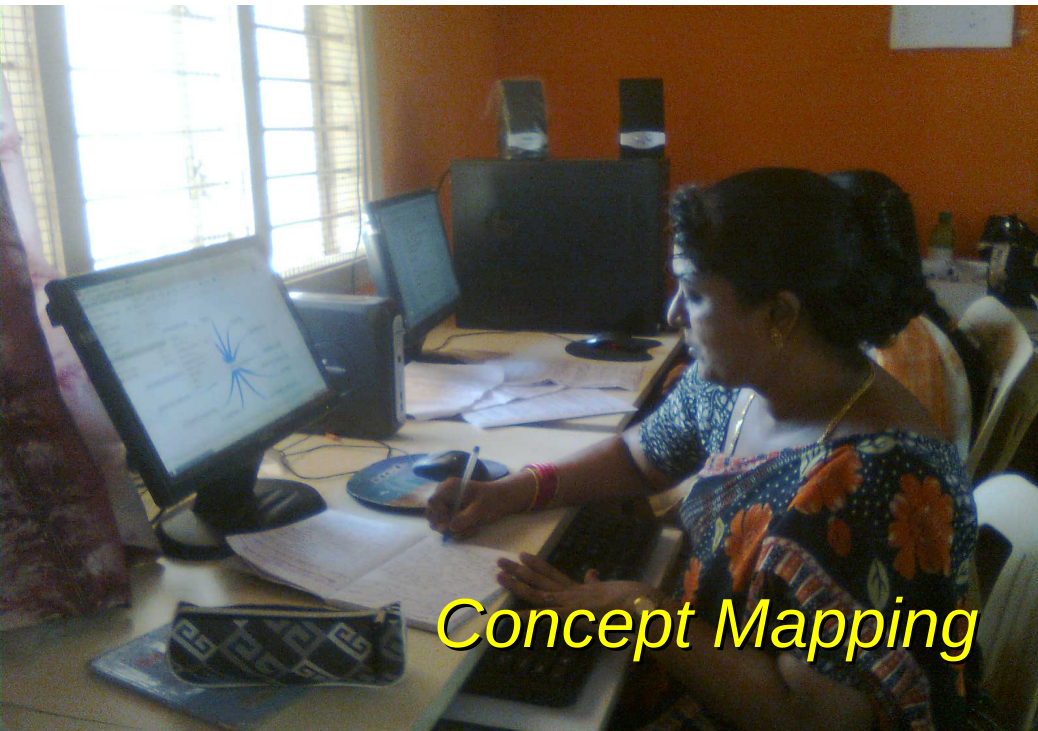
Teachers learn specialised educational software applications (open source)

Turtle (Visual Programming)

Geography – virtual atlas



Science (simulations)



Concept Mapping

Physics with Stellarium

Moon

Magnitude: **-11.61**
Absolute Magnitude: 32.85
RA/DE (J2000): 5h8m35.3s/+22° 19'37.3"
RA/DE (of date): 5h9m18s/+22°20'31.3"
Hour angle/DE: 19h20m29s/+22°20'31.3"
Az/Alt: +75°14'05"/+26° 5'03"
Distance: 0.00263754AU
Apparent diameter: +0° 30'16.5"



Earth, Kolkata, 12m FOV 0.569° 17.9 FPS 2011-12-10 18:50

Marble Virtual Globe

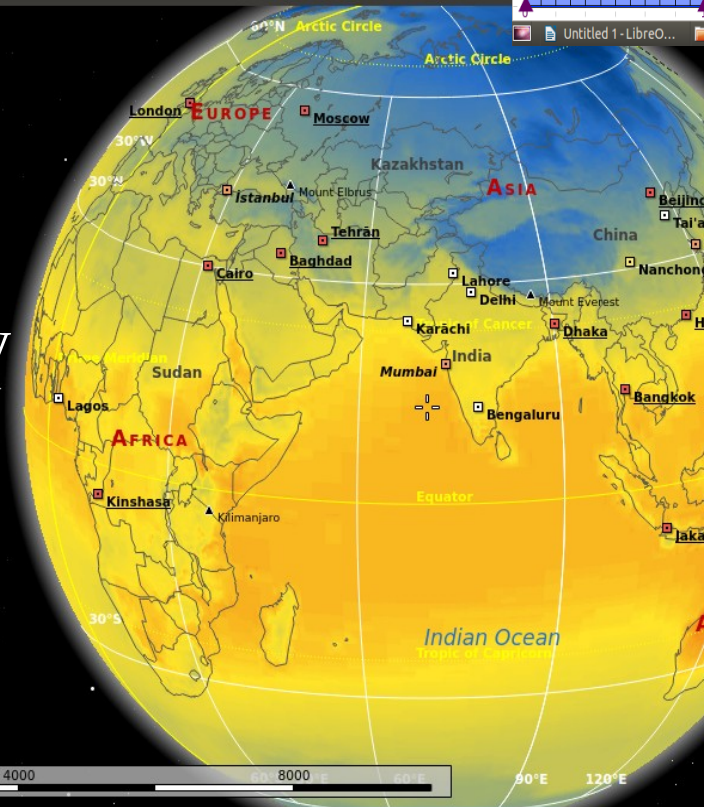
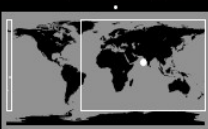
File Edit View Bookmarks Settings Help

Navigation

Search

- 'Ain Abid
- 'Ain Arnat
- 'Ain Benian
- 'Ain Bessem
- 'Ain Deheb

Geography with Marble



Position: 70° 06' 51.1"E, 8° 14' 16.3"S Altitude: 5,300.8 km Time: 3/1/14 5:16 PM

Fraction Addition.ggb

File Edit View Perspectives Options Tools Window Help

3/4 = 3/4 numerator1 = 3 denominator1 = 4

2/3 = 2/3 numerator2 = 2 denominator2 = 3

3/4 + 2/3 = 17/12 = 1 5/12

Teachers create resources using open source educational applications

Maths with Geogebra

Calcium (20) - 'Kalzium'

Data Overview

Atom Model

Isotopes

Miscellaneous

Spectrum

Extra Information

Atom Model

Kalzium-Chemistry

[Ar] 4s²

ads Untitled 1 ... COP - A ne... DSERT - ST... 'Kalzium'

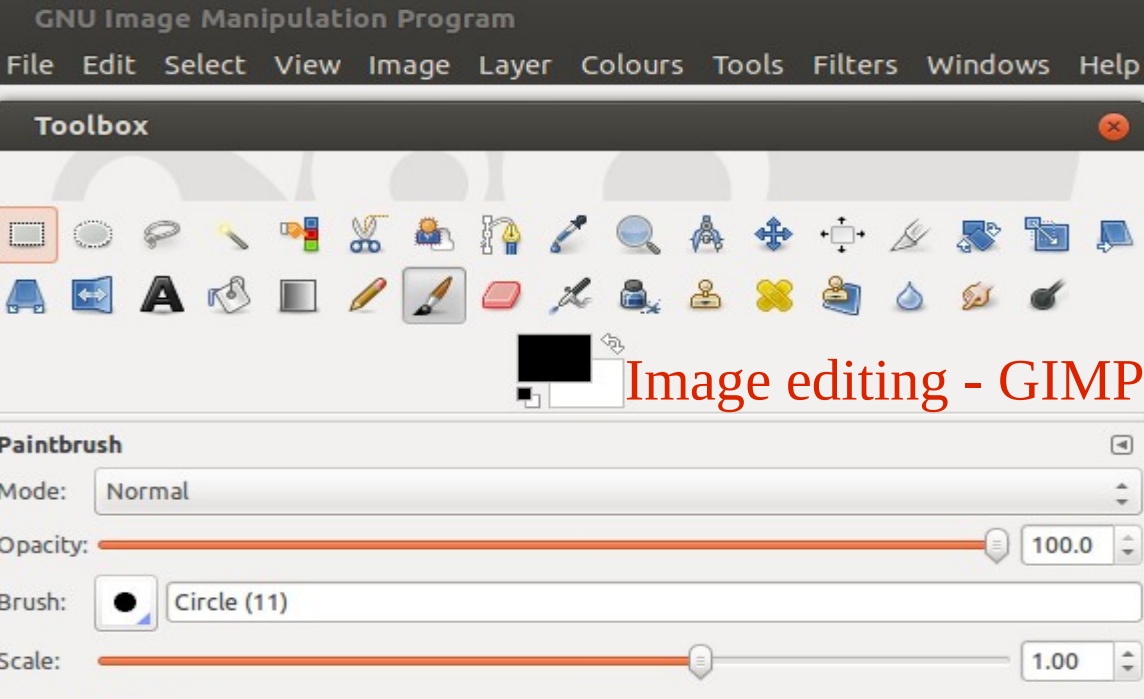
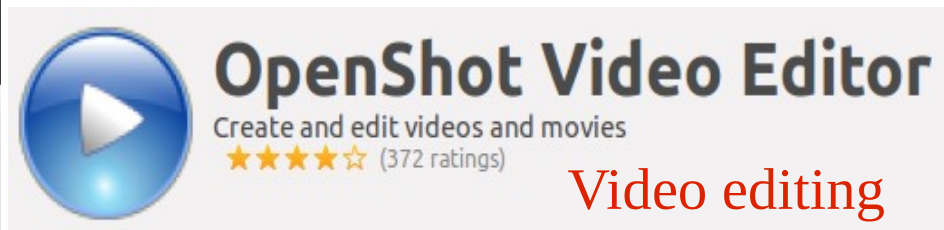
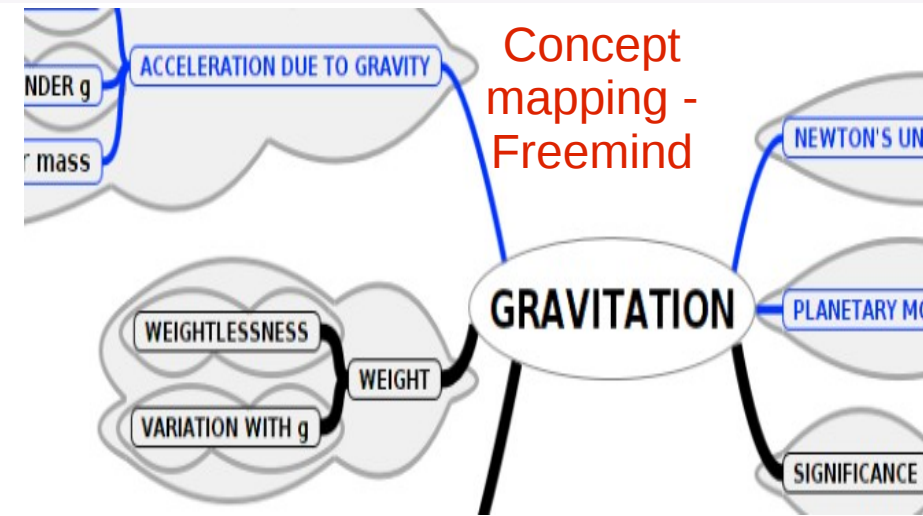


Image editing - GIMP

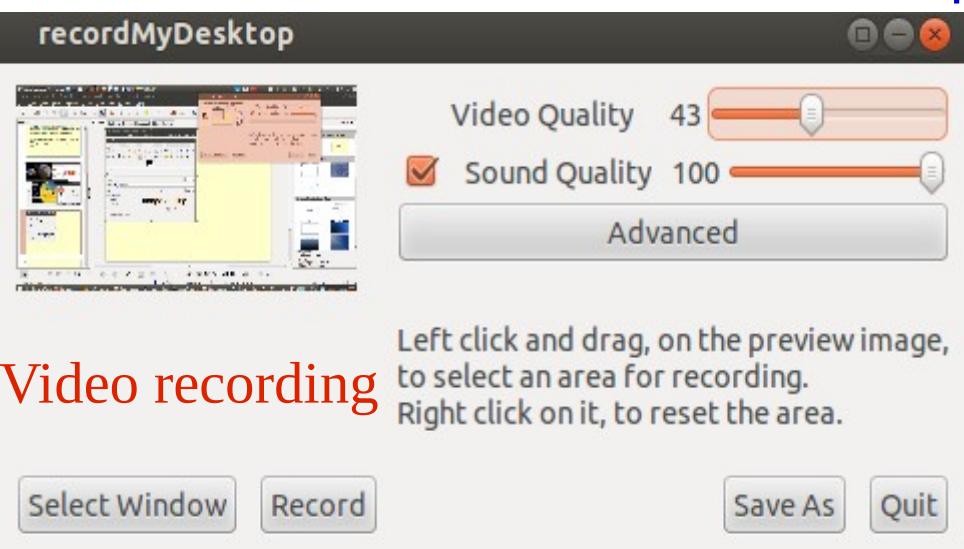
Teachers learn a variety of free and open source authoring tools – text, image, audio, animation, mind maps, video



Free



Concept mapping - Freemind



Video recording

Left click and drag, on the preview image, to select an area for recording. Right click on it, to reset the area.



audio editing - audacity

- 15000 Teachers trained to participate in “Subject Teachers Forums” for sharing experiences and seeking ideas and resources

sheela bhat (in Maths & Science STF) - Google Groups Search - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Using computers t... x GHS Dommaluru - Sc... x Presentation to cogni... x KOER Mathematics 2... x sheela bhat (in ... x +

https://groups.google.com/forum/#!searchin/mathssciencestf/sheela\$20bhat

government schools india

Most Visited Getting Started Karnataka Open Ed... Inbox (343) - evidy...

Google sheela bhat

+Gurumurthy 6

Groups

NEW TOPIC

My groups Home Starred Favorites Recently viewed HTFKARNATAKA Maths & Science STF VTCBed1314 SocialScience STF EnglishSTF Recent searches Recently posted to Privacy - Terms of Service

☆ Results for **sheela bhat** in Maths & Science STF [Search all groups](#)

Teachers network through subject specific google groups

[Re: \[ms-stf '23115'\] Activity on fractions for 8th std.](#)
On Sun, Jan 25, 2015 at 5:31 PM, **Sheela Bhat** <she...@gmail.com> wrote: Thank you sir. On Jan 25, 2015 3:50 PM, "Gurumurthy Kasinathan" <itfc.ed. Jan 25 by Nagin Nagi - 5 posts by 4 authors - 30 views

[Re: \[ms-stf '17785'\] Trigonometry and co ordinate geometry- chapters confirmation.](#)
On 16-Nov-2014 8:06 pm, "**Sheela Bhat**" <she...@gmail.com> wrote: In deleted list entire trigonometry and Co - ordinate geometry is not deleted. 11/16/14 by tejaytej - 6 posts by 5 authors - 20 views

[Re: \[ms-stf '14229'\] Solve d problem ex.11.2, 3rd question.](#)
On Aug 27, 2014 10:09 PM, "**Sheela Bhat**" <she...@gmail.com> wrote: > >> This is the answer to 11.2 3rd question (kannada medium) >> On 26 Aug 2014 08:03, ... 8/28/14 by mdvswamy - 6 posts by 5 authors - 30 views

[Re: \[ms-stf '17558'\] hi my dear teachers n facilitators i want some solutions.](#)
On Nov 12, 2014 6:35 PM, "**Sheela Bhat**" <she...@gmail.com> wrote: Solution to exercise 3.7, 9th problem. On Nov 11, 2014 10:24 AM, "jayarag84" <Jaya. 11/12/14 by mnmahi48 - 4 posts by 4 authors - 8 views

LEARNING ^ v Highlight All Match Case 1 of 2 matches

- **Subject Teacher Forum program (STF)**

- 'Subject Teacher Forum', a state-wide teacher education program, consisting of mailing groups in **Mathematics, Science, Social Science, Kannada and English** and on **School Leadership**
- Teachers share ideas, experiences and resources; mentor and seek help of peers, explore new areas of learning, network with teacher educators and state functionaries on the forums
- 15,000 teachers from 6,000 schools across the state, part of the groups
- 60,000 + emails shared, 80% are on academic issues
- **Globally, the largest community of learners from one school system**

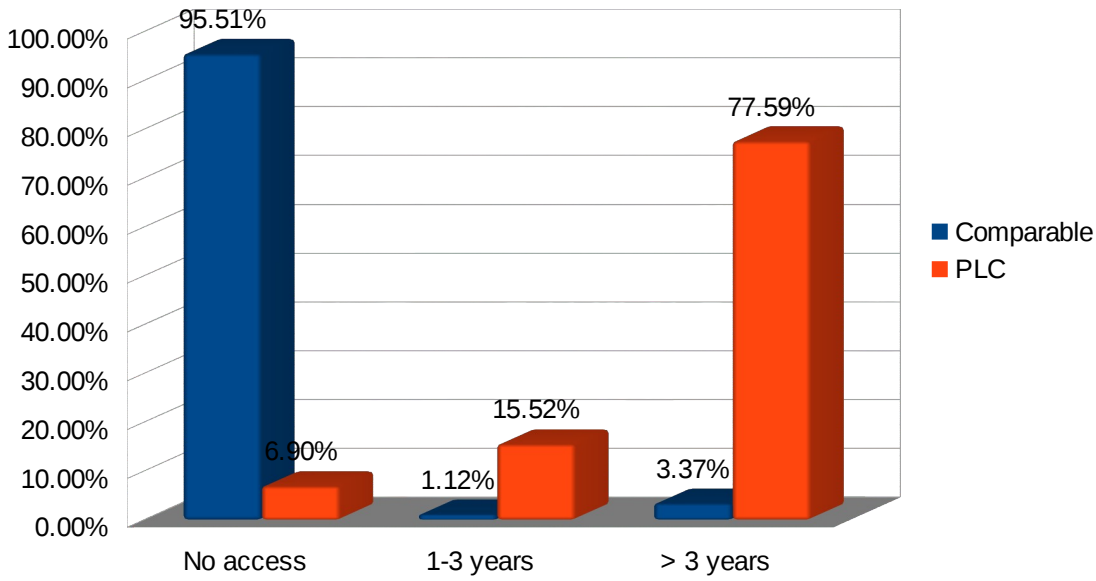
Do you have access to the internet?	Yes				No		Total	
	1-3 years		>3 years					
	Number	%	Number	%	Number	%	Number	%
Comparative Group	1	1.12	3	3.37	85	95.51	89	100.00%
LPLC Group	9	15.52	45	77.59	4	6.90	58	100.00%

Do you use the internet to meet your learning needs?	Yes				No		Total	
	1-3 years		> 3 years					
	Number	%	Number	%	Number	%	Number	%
Comparative Group	0	0	2	3.08	63	96.92	65	100.00%
LPLC Group	12	24.49	30	61.22	7	14.29	49	100.00%

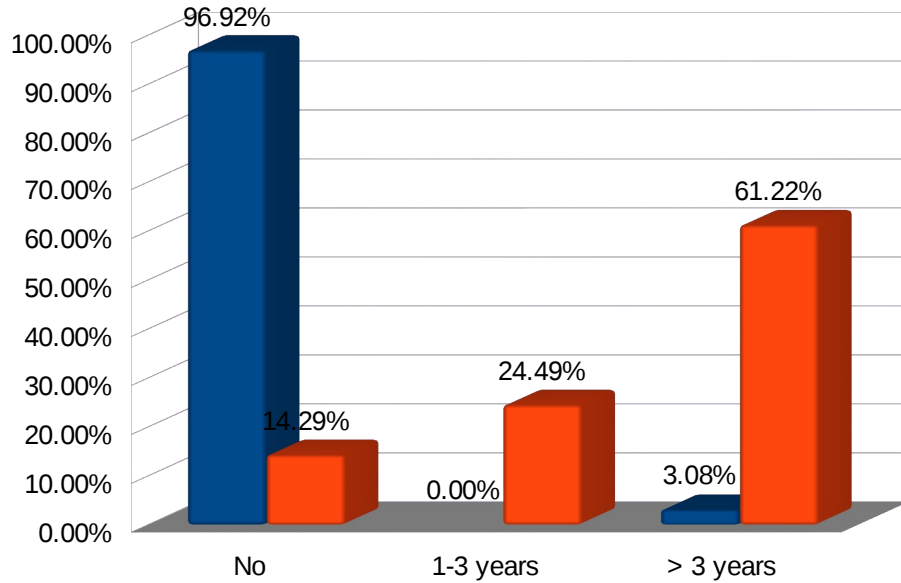
Do you use computers to fulfill your learning needs?	Yes				No		Total	
	1-3 years		> 3 years					
	Number	%	Number	%	Number	%	Number	%
Comparative Group	0	0	1	1.59	62	98.41	63	100.00%
LPLC Group	11	22	34	68	5	10	50	100.00%

	Comparative	LPLC	Total Result
Using resources other than text book	25.71	86.57	49.42
Not using any resource other than text book	74.29	13.43	50.58
Total Result	105	67	172

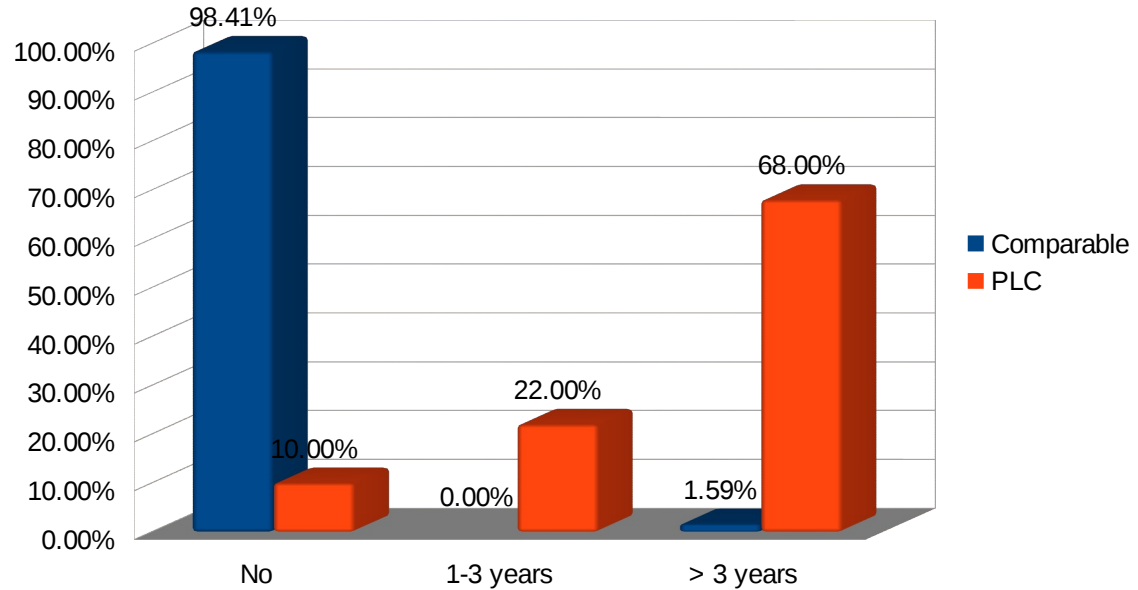
Access to internet



Internet for learning needs



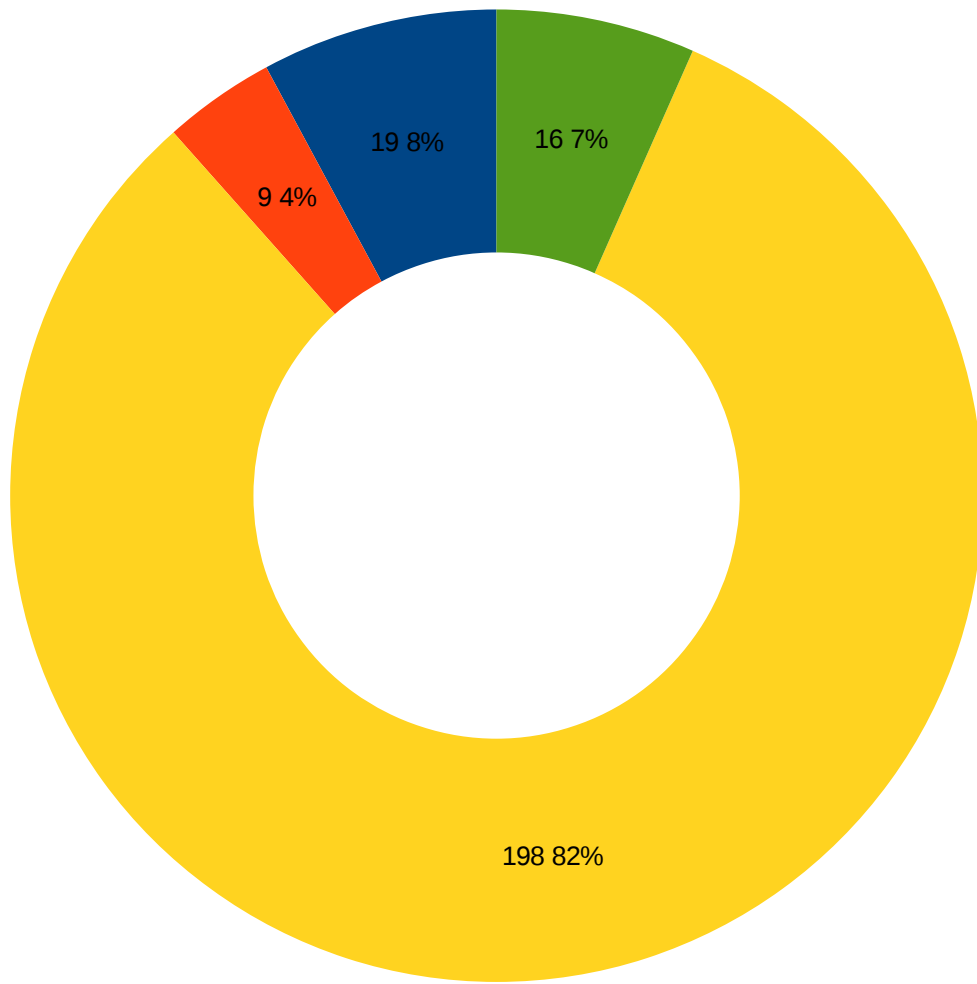
Use of computer for learning needs



Kind of email	Number	Percent
Asking for help/ seek information	61	17.1
Responding to question	47	13.2
Sharing ideas	17	4.8
Sharing resources – Accessed	41	11.5
Sharing resources – Created	65	18.2
Sharing resources – Revised	4	1.1
Feedback on resources	23	6.4
Sharing resources – departmental	13	3.6
Mails that deal with materials	271	72.3
Others	52	27.7
Total	323	100

Table – Format of resources

Text formats	Number of mails
PDF	15
PPT/PPTX	7
DOC, DOCX	6
ODT	4
XLS, XLSX	4
DOC, PDF	2
EML, PDF	2
PMD	1
XLS, XLSX, FLV	1
ODS	1
Image	
JPG	15
GIF	2
PNG	2
EML, JPG	1
Video	
FLV	3
MPEG4	2
WMV	1
JPG, DOC, PDF	1
Facebook video	1
Geogebra files	
GGB	20
GGB,E ML	2
<u>Mindmaps</u>	
MM	1



- Explicit non-OERs
- Implicit non-OERs
- Implicit OERs
- Explicit OERs

Table - Awareness of OERs

Explicit non-OERs	19	7.8%
Implicit non-OERs	9	3.7%
Implicit OERs	198	81.8%
Explicit OERs	16	6.6%
Total	242	100%