

**Investigating the Impact of Open Educational Resources (OERs) on Education in Pakistan**



## Investigating the Impact of Open Educational Resources (OERs) on Education in Pakistan

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مركز تحقيق لسانيا

# Outline

- Open Educational Resources
- Project Overview
- Research Problem
- Fullan Theory of Educational Change
- Research Framework
- Sampling Plan
- Pretesting Results
- Current Status

# Open Educational Resources (OERs)

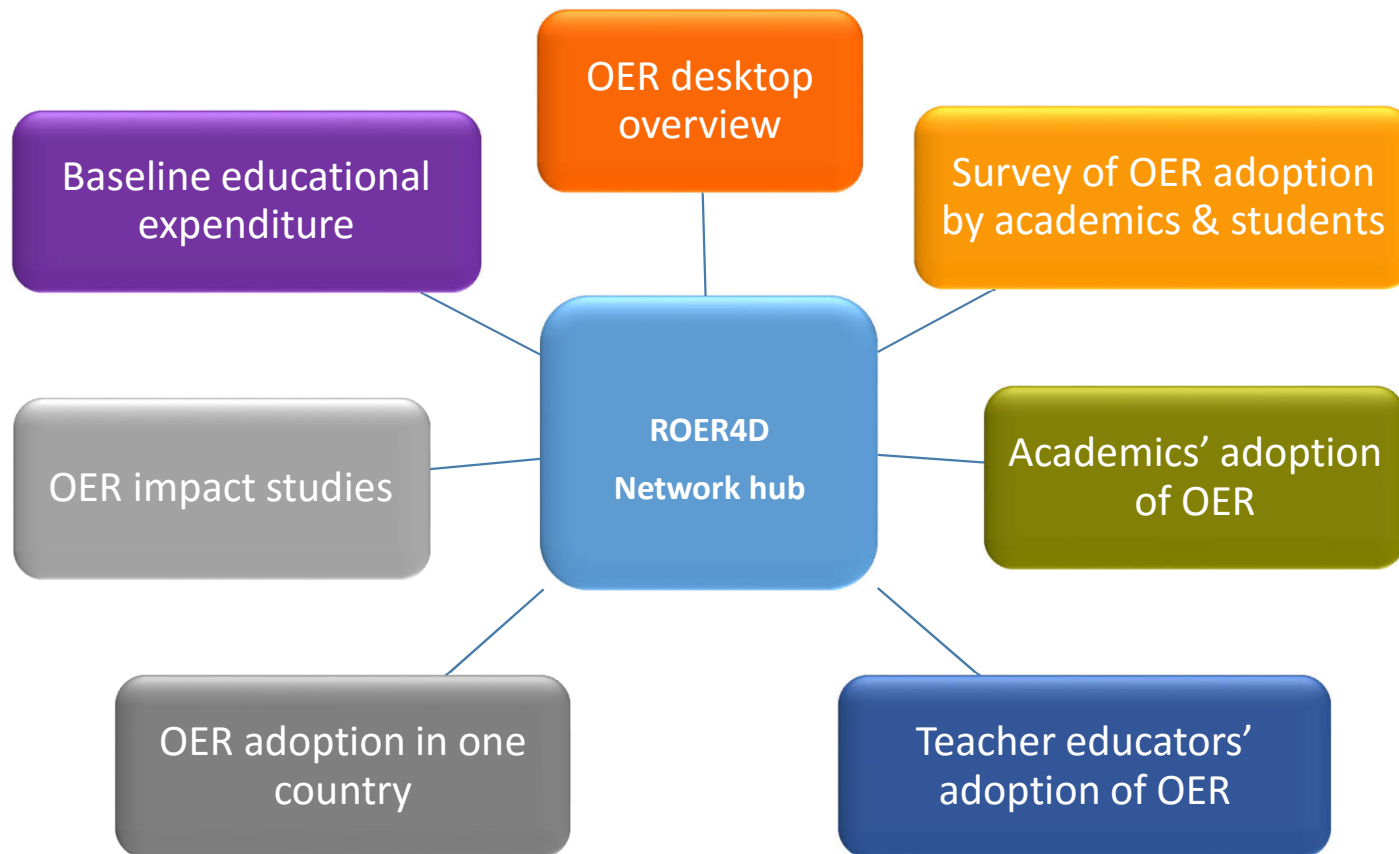
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## Project Overview

This research is part of the Research on Open Educational Resources for Development (ROER4D) program that seeks to understand the adoption and impact of OER across the Global South, in South America, Sub-Saharan Africa and South East Asia.

It is funded by the International Development Research Centre (IDRC) in Canada.

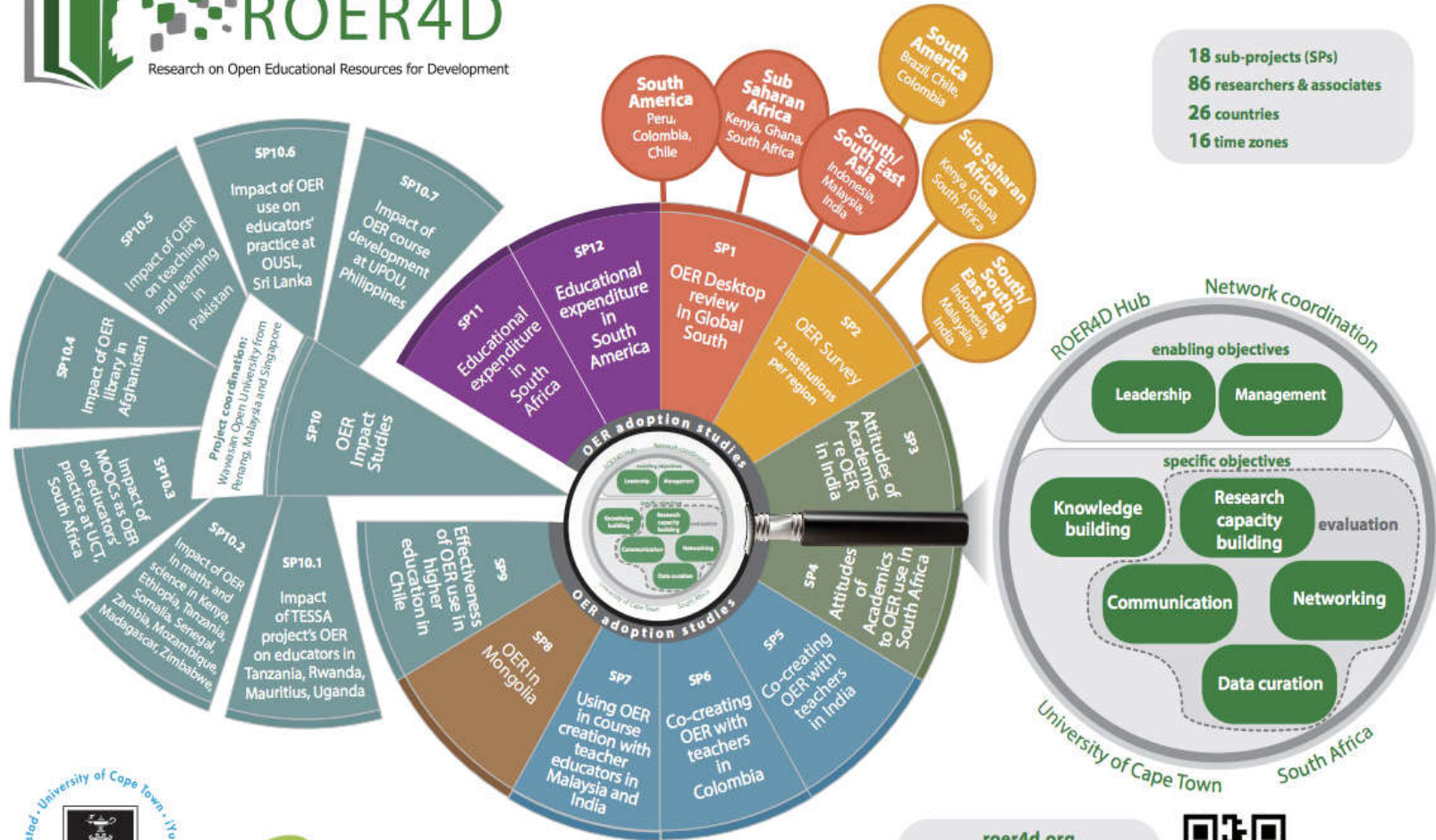
## Overview of ROER4D's 7 Project Clusters





# ROER4D

Research on Open Educational Resources for Development



roer4d.org  
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created by Rondine Carstens and the ROER4D team

# Research on Open Educational Resources for Development in the Global South

## GENERAL OBJECTIVE:

IMPROVE EDUCATIONAL POLICY, PRACTICE and RESEARCH in developing countries by better understanding the use and impact of OER

August 2013 - February 2017

### PROJECT CLUSTERS

- OER Desktop Review
- OER Survey
- Academics' adoption of OER
- Teacher educators' adoption of OER
- OER adoption in one country
- OER impact studies
- Baseline educational expenditure



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## Research Problem

The research focus of this study is to evaluate the impact of OER in Pakistan by investigating its impact on the following:

- Teaching practices.
- Students learning and educational performance.
- Institutional educational policy.



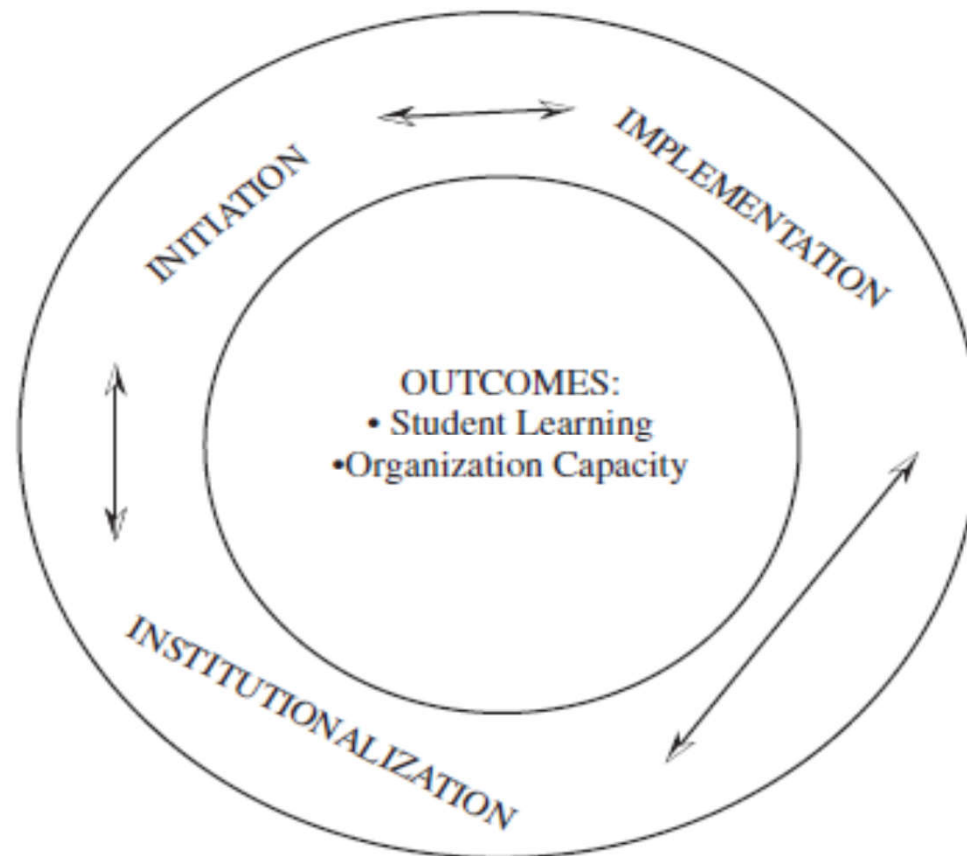
## Scope of Research

Center for Language Engineering (CLE), in collaboration of Virtual University of Pakistan (VUP) conducting the proposed impact study at secondary and tertiary levels.

Center for Language Engineering (CLE), conducting this study at tertiary level. The target population is students and teachers of all public and private universities of Pakistan.

Virtual University of Pakistan (VUP) conducting this study at secondary level, including students and teachers from the public schools of Punjab.

## Fullan Theory of Educational Change



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<b>Initiation</b>	<ul style="list-style-type: none"><li>• Existence and quality of innovations</li><li>• Access to innovations</li><li>• Advocacy from central administration</li><li>• Teacher advocacy</li></ul>
<b>Implementation</b>	<ul style="list-style-type: none"><li>• Need of change</li><li>• Clarity about goals and needs</li><li>• Quality and practicality of the program</li></ul>
<b>Continuation</b>	Continuation is decision about institutionalization of an innovation based on the reaction to the change, which may be negative or positive.
<b>Outcome</b>	Attention to the following perspectives on the change process may support the achievement of a positive or successful change outcome.  Change in thinking, skills, and committed actions

# Research Framework

Phases of Theory of change	Factors Responsible
Initiation	<ul style="list-style-type: none"><li>• Existence of OER</li><li>• Access to OER</li><li>• Advocacy from central Administration</li><li>• Teacher Advocacy</li></ul>
Implementation	<ul style="list-style-type: none"><li>• Need to use of OER.</li><li>• Clarity about goals and needs of OER.</li><li>• Extent of use of OER.</li></ul>
Continuation	<ul style="list-style-type: none"><li>• OER use has embedded into the structure.</li><li>• There are a critical number of administrators and teachers committed to using OER.</li><li>• The use of OER has established procedures for continuing assistance.</li></ul>
Outcome	<ul style="list-style-type: none"><li>• Active initiation and participation in use of OER.</li><li>• Changes in the skills, thinking and actions after using OER.</li></ul>

## Sampling Methodology

The proposed study will use stratified random sampling for the selection of universities from each of the three types of universities mentioned below. Within each university, survey will be conducted for teachers and students belonging to all academic disciplines grouped as:

- Engineering and Technology
- Physical, Social and Management Sciences
- Arts and Humanities.

## Allocation of Universities

Province	Public Universities	Private Universities	N <sub>i</sub>	n <sub>i</sub>
Islamabad	14	4	18	4
Punjab	31	26	57	12
Sindh	21	30	51	11
KPK	22	10	32	7
Balochistan	6	1	7	1
Kashmir	5	1	7	1
<b>Total</b>	<b>99</b>	<b>72</b>	<b>171</b>	<b>36</b>

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There are 171 total HEC recognized Universities. It is proposed that about 36 universities from all over Pakistan will be selected for the study covering about 20% of total universities.

- 5 teachers from Engineering and Technology.
- 5 teachers from Physical, Social and Management Sciences.
- 5 teachers from Arts and Humanities.
- 10 students from Engineering and Technology.
- 10 students from Physical, Social and Management Sciences.
- 10 students from Arts and Humanities.

About 30 students from each university, and 1080 students in all, will be interviewed.

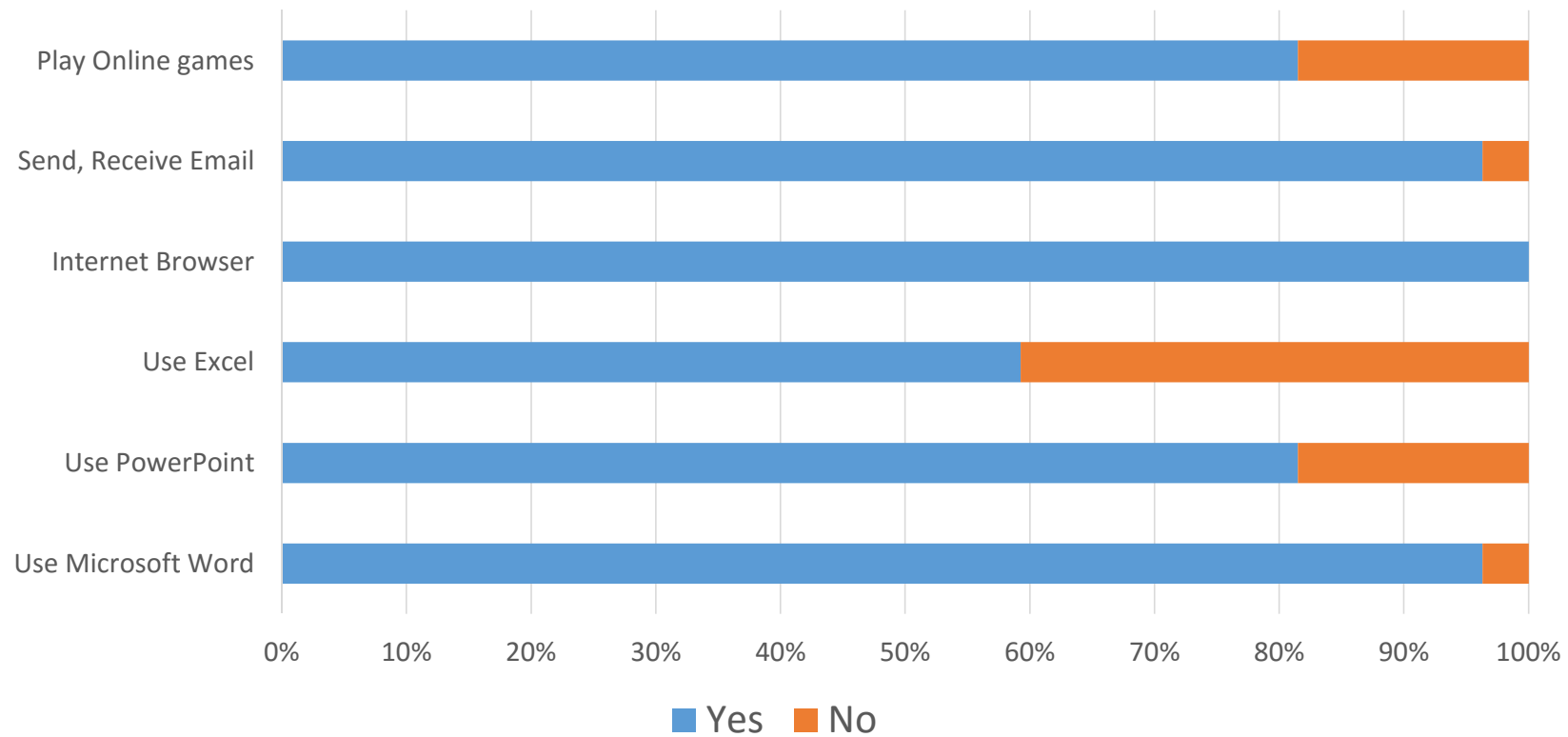
While about 540 teachers will be included in the sample.

## Pretesting Results

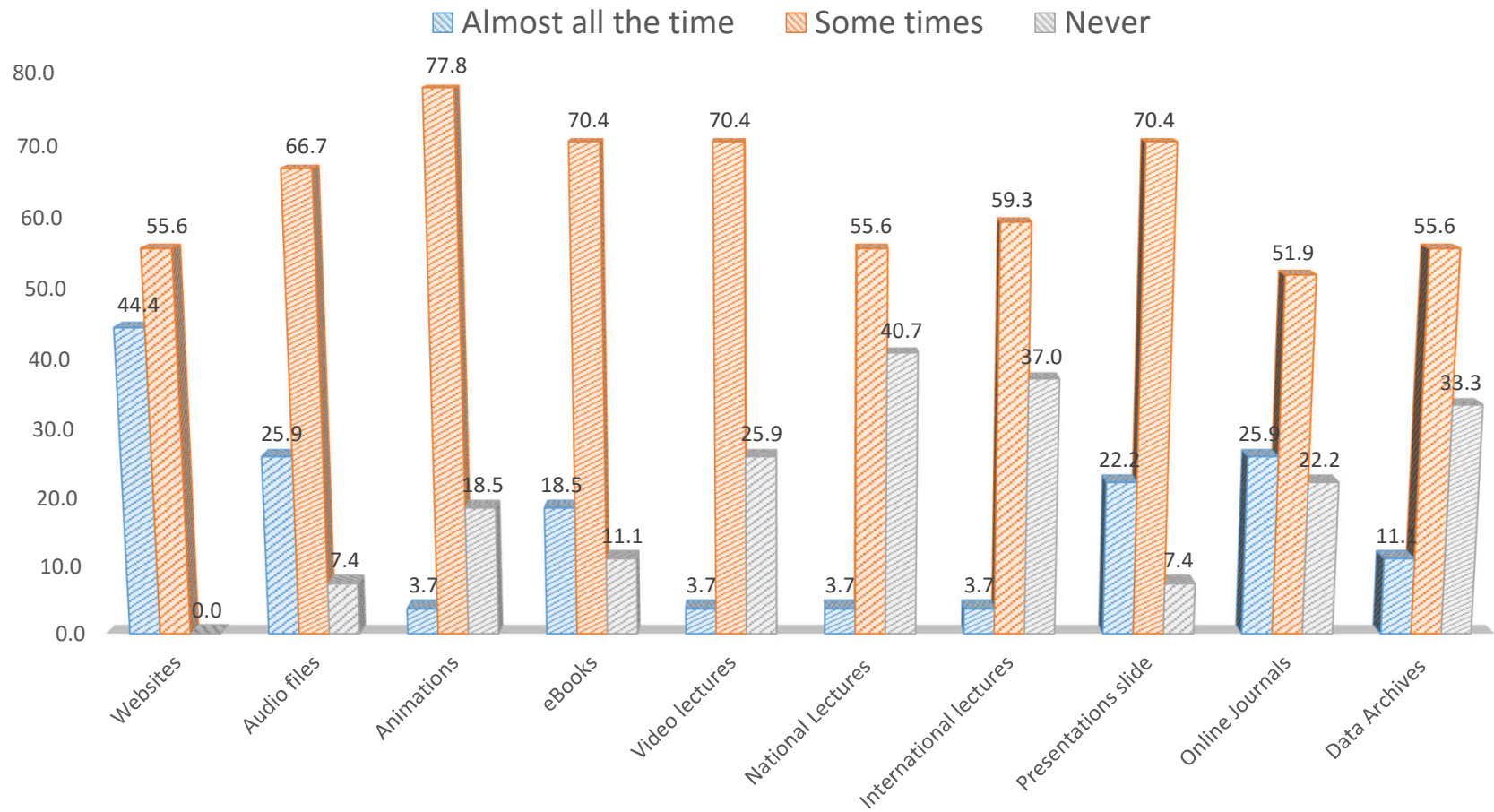
- For pretesting purpose select 27 students from Punjab university.
- Approximately 89% students use online resources.
- According to their viewpoint 96% teachers allows students to use online resources.
- About 77% students get institutional support to use of online resources'.



# Computing Skills



# Usage Pattern of OER



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## Independent sample t test

	Use OER	Mean	S.D	t	p-values
Mental activity	Yes	11.7500	2.11105	2.735*	0.012
	No	7.5000	2.12132		
Making judgment	Yes	3.5833	1.24819	0.645	0.523
	No	3.0000	0.00000		
Expectations and Evaluations	Yes	3.6250	1.05552	0.163	0.872
	No	3.5000	0.70711		
Skill development	Yes	14.9583	2.98517	0.671	0.509
	No	13.5000	2.12132		
Students Faculty interaction	Yes	10.4783	2.44707	0.794	0.435
	No	9.3333	0.57735		
Collaborative Learning	Yes	14.2609	3.01839	2.124*	0.044
	No	10.0000	5.29150		
Enrich educational experience	Yes	11.6250	1.83712	2.559*	0.017
	No	8.3333	4.04145		
Life enrichment	Yes	14.0417	2.67808	1.290	0.209
	No	12.0000	1.00000		
Work enrichment	Yes	9.4583	2.20630	-0.407	0.687
	No	10.0000	1.73205		

# Correlation Analysis

Var.	MA	MJ	EE	SD	SFI	CL	EEE	LE	WE		
MA	1	0.448*	0.301	0.403*	0.559**	0.443*	-0.073	0.653**	0.473*	MA	Mental Activities
MJ		1	0.628**	0.501**	0.399*	0.380	0.044	0.369	0.532**	MJ	Making Judgment
EE			1	0.542**	0.339	0.446*	0.540**	0.454*	0.631**	EE	Expectations and Evaluation
SD				1	0.363	0.498*	0.262	0.581**	0.502**	SD	Skill development
SFI					1	0.714**	0.094	0.570**	0.437*	SFI	Student-Faculty Interaction
CL						1	0.564**	0.520**	0.212	CL	Collaborative learning
EEE							1	0.218	0.088	EEE	Enriching Educational Experience
LE								1	0.362	LE	Life Enrichment
WE									1	WE	Work Enrichment

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- 96% students think online resources to have an impact on their learning.

## Current Status

Task Name	Current Status
Questionnaires for students and teachers	√
Pretesting	√
Sampling Plan for final data collection	√
Data collection	
Analysis and Results Compilation	
Report Writing	

Thank You