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## Plan Overview

*A Data Management Plan created using DMPonline*

**Title:** OER differentiation in Global South

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**Template:** IDRC - Open Research Data Initiative

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### Project abstract:

The study's survey compares respondents' OER use against a variety of demographic, contextual and pedagogical variables to understand which factors seem to have the greatest influence on whether, instructors/students from HEI in the Global South, have used OER. The data were collected through SurveyMonkey server during the 2015-2017 period. The 26-question survey addressed the following themes: personal demographics, infrastructure access, institutional environment, instructor attitudes, and open licensing. This study is based on a quantitative research survey taken in nine countries (Brazil, Chile, Colombia; Ghana, Kenya, South Africa; India, Indonesia, Malaysia). To reduce the threats to validity in the instrument design, a strategy was adopted based on previous studies by Burton and Mazerolle (2011) and Messick (1989) to define the constructs, develop and assess the questions, and pilot the survey.

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# OER differentiation in Global South

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## Project and author details

### Please enter your project title.

OER use in the Global South: A baseline survey of higher education students

### Project description.

The research aims at providing baseline data regarding the use of Open Educational Resources (OER) by higher education instructors in the Global South (South America, Sub-Saharan Africa, and South and Southeast Asia). The objective is to understand how such activity (or inactivity) is differentiated across continental regions and associated countries. It addresses two main questions: what proportion of students in the Global South have used OER, and which variables may account for different OER usage rates between respondents? This is done by examining which variables – such as gender, age, technological access, and digital proficiency – seem to influence OER use rates, thereby allowing the authors to gauge which are the most important for students in their respective contexts.

This study is based on a quantitative research survey taken by 4784 randomly selected students at 28 higher education institutions in nine countries (Brazil, Chile, Colombia; Ghana, Kenya, South Africa; India, Indonesia, Malaysia). The 26-question survey addressed the following themes: personal demographics, infrastructure access, students attitudes and open licensing. Survey responses were correlated for analysis with respondents' answers to the key question of the survey: whether they had ever used OER or not.

For these respondents in the Global South, OER use is predicated upon students enjoying a certain minimum level of access to information and communication technologies infrastructure – especially hardware (computers, mobile devices, etc.) and internet connectivity (broadband, Wi-Fi, etc.) – which, once achieved, can be described as an enabling factor for OER engagement, but not a motivating factor.

In addition, increased internet speeds, lower internet costs and greater diversity of technical devices do not seem to lead to ever-increasing OER use rates.

Similarly, while OER-related policies would likely be a crucial factor in OER creation, they did not seem to be important regarding OER use. The students, as a potential OER users, from the relatively lesser-developed countries may find greater utility in OER because it serves to overcome some of the pressing educational challenges associated with their nations' contexts' lower economic development.

## Author and co-author details

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## Data description

### Describe the datasets you will submit.

**File type:** csv

**Contents:** answers of the 26-question survey applied to the students, according to the following table.

**Size:** 11,2 MB

Region	Country	Number of institutions	Number of respondents
South America	Brazil	2	287
South America	Chile	3	293
South America	Colombia	1	170
Sub-Saharan Africa	Ghana	4	817
Sub-Saharan Africa	Kenya	4	798
Sub-Saharan Africa	South Africa	4	621
South and Southeast	India	2	437
South and Southeast	Indonesia	4	645
South and Southeast	Malaysia	4	716
Total		28	4784

### File description

The file is organized according the following sequence.

(Question with \* mark is mandatory)

1.

ELECTRONIC CONSENT: Please select your choice below. Clicking on the "Agree" button below indicates that: you have read the above information you voluntarily agree to participate you are at least 16 years of age you understand that your responses will be used for research purposes and that your anonymity will be preserved If you do not wish to participate in the research study, please decline participation by clicking on the "Decline" button.

Agree / Decline

\*2. The name of your educational institution (one answer only)

**Dimension 1:** Individual characteristics

The name of the Education Institutions in the sample of the survey

### Possible values

Catholic Institute of Business and Technology

Claretiano

Disted college

Gauhati University

Great Lakes University

Instituto de Estudios Bancarios Guillermo Subercaseaux

Jomokenyatta University of Agriculture & Technology

KDU college

Kwame Nkurumah University of Science And Tech.

Maseno University

Tangaza University College

The University of Cape Town

The University of Ghana  
Unisa  
Universidad de Tarapacá  
Universidad Nacional de Colombia  
Universidad Santo Tomás  
Universitas Terbuka  
University of Cape Coast  
University of Delhi  
University of Malaya  
University of Mercu Buana  
University of Nasional  
University of Pancasila  
University of Pretoria  
University of São Paulo (USP)  
Wawasan Open University

\*3. Your country (one answer only)

**Possible Values:**

Brazil  
Chile  
Colombia  
Ghana  
India  
Indonesia  
Kenya  
Malaysia  
South Africa

\*4. Gender

**Possible values**

Male/Female/Other

5. Age

**Possible values**

0-100

\*6. Your digital proficiency (one answer only)

**Possible answers:**

Basic Digital Literacy - I can use some common applications effectively

Intermediate Digital Competence - I can use a range of applications effectively

Advanced Digital Expertise - I can use specific applications and tools, over and above levels commonly required

\*7. Where do you access the Internet? (Tick all that apply)

**Possible answers:**

I don't access internet

Family member or friend's home

Home

Internet cafe (cyber cafe / Lan house / internet shop)

Public library

School / university / workplace

Wi-fi hotspot (cafe, restaurant, shopping mall)

Other (please specify)

\*8. What device/s do you use to connect to the Internet? (Tick all that apply)

**Possible answers:**

I don't access internet

Desktop computer

Mobile phone  
Laptop computer  
Tablet  
Other (please specify)

\*9. To what extent are you satisfied with the Internet connection where you most frequently access it?

Please answer all rows

Cost (**Possible answers:** Very dissatisfied, Dissatisfied, Unsure, Satisfied, Very satisfied, N/A)

Speed (**Possible answers:** Very dissatisfied, Dissatisfied, Unsure, Satisfied, Very satisfied, N/A)

Stability (**Possible answers:** Very dissatisfied, Dissatisfied, Unsure, Satisfied, Very satisfied, N/A)

\*10. Which language do you feel most comfortable with academic reading ? (one answer only)

**Possible answers:**

Bahasa Melayu  
English  
Hindi  
Portuguese  
Spanish  
Other (please specify)

\*11. Which language do you feel most comfortable with academic writing? (one answer only)

**Possible answers:**

Bahasa Melayu  
English  
Hindi  
Portuguese  
Spanish  
Other (please specify)

\*12. When watching educational videos that are not in your first language, you prefer \* those videos to be: (one answer only)

**Possible answers:**

Dubbed (audio translation to my first language)  
Subtitled in my first language  
Subtitled in the original language  
In original language, unchanged

\*13. English proficiency (one answer only)

competent in English to take a course presented in English only

**Possible answers:** Strongly disagree, Disagree, Neutral, Agree, Strongly agree

\*14. Primary area in which you study. (Tick any that apply)

**Possible answers:**

Applied Science, Technology,  
Engineering  
Arts  
Computing & Information Science  
Economics, Business &  
Management, Accounting  
Education Studies  
Health & Social Care  
History & Geography  
Languages & Linguistics  
Literature  
Mathematics  
Medicine  
Physical Education  
Psychology and Philosophy

Religious Studies  
Science  
Social Science  
Special Education  
Other (please specify)

**Dimension 2:** Educational Resources

\*15. Below there are examples of Educational Resources. For each resource listed below, tick all that apply to you. Please answer all rows

**Possible answers:** Created my own, Use others' "as is" (copy), Modified/edited or combined others', Shared my own or modified versions with others (distribute), Never created, used, modified or shared

Word Document or equivalent  
Powerpoint or equivalent  
Excel spreadsheet or equivalent  
PDF  
Images  
Audio  
Videos  
e-Books  
Lecture notes  
Quizzes  
Tutorials  
Textbooks  
Whole courses  
Massive Open Online  
Courses (MOOCs)  
Data sets

\*16. Please indicate the activities that you undertake if you USE educational resources. (\* Tick all that apply)

**Possible answers:**

Copy the content and use it unaltered  
Transform the content by adding an interpretation, reflection or practice  
Change the content or add locally relevant information, examples and scenarios  
Convert the content from one form to another  
Summarise the essential ideas  
Reuse the content for different purposes than originally intended  
Implement changes to update the resource  
Translate the content from one language to another  
Change the order or sequence of the materials  
Integrate the content with other content in order to develop a module or new unit  
Combine the content with new media  
Other or not applicable (please specify)

\*17. Please indicate the activities that you undertake if you CREATE educational resources. (Tick all that apply)

**Possible answers:**

Check accuracy of content  
Check grammar & spelling  
Remove contextual information (e.g. dates)  
Improve appearance  
Add references and acknowledgements  
Change file format to one that can be edited  
Use licenses to express the rights others have to my educational resources  
Keep a copy on my personal computer

Share new content on a public platform (e.g. SlideShare, institutional repository)]  
Other or not applicable (please specify)

\*18. Have you used any licenses to express the rights others have to use materials you have created/edited/modified/combined? (Tick all that apply)

**Possible answers:**

No  
Yes: copyright  
Yes: GNU GPL  
Yes: Creative Commons  
Yes: other "open content license"  
Other (please specify)

\*19. How do you usually share with others (distribute) Educational Resources that you have copied, created, edited/modified, or combined? (Tick all that apply)

**Possible answers:**

Never shared educational resources  
Personal email  
Personal websites or blogs  
Departmental websites  
Institutional learning management systems  
Institutional repositories  
Country or regional repositories (e.g. OER Africa)  
Image / video sharing services (e.g. Flickr, SlideShare, YouTube)  
Cloud-based storage (e.g. Google Drive, Dropbox, OneDrive)  
Other (please specify)

\*20. Please indicate how important are the following factors as potential motivators for you to use/reuse Educational Resources. Please answer all rows.

**Possible answers:**

Bringing down costs for course development for the institution  
Bringing down costs for students  
Following normal practice in my discipline  
Enhancing my reputation amongst my peers  
Helping other educators/students  
Knowing that other educators/students may use my materials, improves the quality of my materials  
New factors (please specify)

\*21. To what extent do the following barriers influence your use/reuse of Educational Resources ?  
Please answer all rows

**Possible answers:** Not at all, Slightly, Somewhat, Very, Extremely, Don't know/ Not applicable

Lack of access to the internet  
Lack of hardware  
Lack of interest  
Lack of knowledge about alternative intellectual property systems (e.g. Creative Commons)  
Lack of support  
Lack of skills  
I worry about the quality  
Lack of software  
Lack of time  
Lack of training  
No compensation for use/reuse of the resource  
No reward system for devoting time and energy  
New factors (please specify)

**Dimension 4:** OER - Perceived outcomes

**DEFINITION:**

Open educational resources (OER) are teaching, learning, and research materials that are available in the public domain or have an open license that allows their free use and/or adaptation by others.

OER are provided by several institutions for example, MIT Open Courseware, Open University's OpenLearn, the National Repository of Open Educational Resources in India, OER Africa, and RIVED in Brazil. Examples of OER include full courses, course materials, modules, textbooks, audios, videos, tests, software, and some massive open online courses (MOOCs).

\*22. Have you ever used OER that are available in the public domain or has an open license (e.g. Creative Commons) that allows it to be used and/or adapted by others?

**Possible answers:**

Yes

No

I don't know if the resource I have used is in the public domain or has an open license (e.g. Creative Commons) that allows it to be used and/or adapted by others.

**The remaining questions should be answered in case of yes in question 22.**

**Dimension 4: OER - Perceived outcomes (Students)**

\*23. Perceived usefulness - The extent you believe that OER may enhance learning outcomes. Please answer all rows

**Possible answers:** Strongly disagree, Disagree, Neither agree or Disagree, Agree, Strongly agree

OER improves my learning outcomes

OER is very useful to me

OER helps me accomplish my learning effectively

OER addresses my needs

\*24. Playfulness - The extent to which you may enjoy OER. (Please answer all rows)

**Possible answers:** Strongly disagree, Disagree, Neither agree or Disagree, Agree, Strongly agree

I feel OER helps me improve my creativity

I feel OER helps me improve my imagination by obtaining information

I feel I can have with OER, a variety of experiences without any interference

I feel OER is fun regardless of usage purpose

\*25. Intention to use - The extent to which you may intend to use OER. (Please answer all rows)

**Possible answers:** Strongly disagree, Disagree, Neither agree or Disagree, Agree, Strongly agree

I prefer OER to traditional learning

I am willing to participate in other OER opportunities

OER should be implemented in several courses

I will recommend OER to other learners

\*26. Perceived ease of use - The extent to which you may believe that OER will be easy to use. (Please answer all rows)

**Possible answers:** Strongly disagree, Disagree, Neither agree or Disagree, Agree, Strongly agree

OER study methods are easy to understand

OER is easy to use

**Describe how the data was collected.**

**Sample selection and procedure**

The target respondents for the survey were students at HEIs from the three major regions that are



referred to collectively as comprising the Global South: South America, Sub-Saharan Africa, and South and Southeast Asia.

Within each region, selection efforts focused on three countries, identified through a convenience sampling method based on areas where other studies in the Research on Open Educational Resources for Development (ROER4D) project were being undertaken, and where collaborators who could help administer the survey were most easily found.

The following countries, grouped by region, were chosen:

- South America: Brazil, Chile and Colombia;
- Sub-Saharan Africa: Ghana, Kenya and South Africa;
- Southeast Asia: India, Indonesia and Malaysia.

Within these countries, the collaborators – called local coordinators (LCs) – were recruited based on their access to HEIs that were potential research sites. Often, they were members of staff at those institutions, or scholars who were able to petition and gain permission from an institution to conduct surveys there.

In each of the nine countries, the HEIs were identified and targeted for participation in the study. With the help of the LCs, institutions were selected that, collectively, would possess most of the characteristics making up the national higher education landscape, based on variables such as rural/urban, large/small, residential/distance, public/private, and so forth. This was done so that the survey would adequately represent the diverse and complex national education systems under study. In most cases, this was achieved at a satisfactory level.

The initial proposal for the study called for the participation of 36 HEIs across the nine countries, but we were unable to gather data at eight of those HEIs due to data restrictions enforced by the institutions that were approached. (This was also the case at alternative institutions which were selected as second choices.) Ultimately, because of time constraints, the selection and solicitation process could not go on indefinitely, which resulted in a sample of 28 institutions, as follows.

### **HEIs participating in the study**

**Region:** South America

**Country:** Brazil

**HEI:**

Claretiano – Centro Universitário, Batatais  
Universidade de São Paulo

**Country:** Chile

**HEI:**

Universidad de Chile  
Universidad Santo Tomás  
Universidad de Tarapacá

**Country:** Colombia

**HEI:**

Universidad Nacional de Colombia

**Region:** Sub-Saharan Africa

**Country:** Kenya

**HEI:**

Great Lakes University  
Jomo Kenyatta University of Agriculture and Technology  
Maseno University  
Tangaza University College

**Country:** Ghana

**HEI:**

Catholic Institute of Business and Technology  
Kwame Nkrumah University of Science and Technology  
University of Cape Coast  
University of Ghana

**Country:** South Africa

**HEI:**

University of Cape Town  
University of Fort Hare  
University of Pretoria  
University of South Africa South

**Region:** Southeast Asia

**Country:** India

**HEI:**

Gauhati University  
University of Delhi

**Country:**Indonesia

**HEI:**

Universitas Mercu Buana  
Universitas Nasional  
Universitas Pancasila  
Universitas Terbuka

**Country:**Malaysia

**HEI:**

Disted College  
Kolej Damansara Utama  
University of Malaya  
Wawasan Open University

### **Random sampling**

To identify the most representative group of respondents possible at each research site, a random sampling method was used to eliminate potential selection biases by giving all individuals an equal chance to participate.

The process required a series of steps to be completed at each institution, which generally proceeded in the following fashion:

1. The LC obtains a list of all courses being taught at the institution during the appropriate semester.
2. The GC and the statistician randomly select 30 courses from those lists at each institution using the Excel VBA function, order them in a hierarchical sequence, then share the results with the LCs.
3. The LCs approach the instructors of the courses, starting with the first course on the list and proceeding in numerical order to: (1) ascertain whether that course has more than 30 students enrolled and, if so, (2) ask the instructor whether they would then be willing to participate in the survey, along with some of their students. Randomly selected courses that did not have 30 students were deselected and the LC went to the next one on the list. This process continued until 10 instructors of courses with 30 or more students agreed to participate in the survey.

### **What is the value of your data to the research community?**

The dataset provides a variety of demographic, contextual and pedagogical variables in order to understand which factors seem to have the greatest influence on whether, students from HEI in the

Global South, have used OER for the 2015-2017 period. The 26-question survey addressed the following themes: personal demographics, infrastructure access, institutional environment, instructor attitudes, and open licensing.

The dataset was finished on 2016 and provides some unique characteristics like the following:

- We have the same questionnaire applied over nine countries around the world that have big cultural differences;
- We have information regarding 15 types of educational resources and not generic ones that are very common in the current literature. Since most articles do not provide information regarding the kind of resources, results are not comparable. Education resources are potential OER;
- We provide information about the different levels of openness of education resources for each respondent;
- We have information about the students that are the current creators/user of OER,
- We have a big data sample;
- We provide information to be used in the widely used in the Technology Acceptance Model (TAM);
- Information about barriers and motivators that influence use/re-use of Education Resources;
- A large variety of demographic, contextual and pedagogical variables.

We believe the dataset add value for several studies and government policies plans, for instance:

- For analysing strategies for distance learning policies
- For motivating OER repositories creation
- For comparison among the countries regarding the mentioned variables
- For replying the survey and provide tendencies on OER

In fact, the dataset can be used by researchers as well as by government.

### **What documentation and metadata will accompany the data? Please consider the use of metadata standards when explaining your data.**

I will provide the CSV file with all the data collected and the questionnaire (survey questions).

The metadata standard depends upon the repository. We are prepared to provide metadata according to Dublin Core. The intended repository uses DataCite Metadata Schema.

The XML Metadata description for Dublin Core

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
>
```

```
xmlns:dc="http://purl.org/dc/elements/1.1/">
```

```
<dc:title>OER students sample</dc:title>
```

```
<dc:creator>José Dutra de Oliveira Neto</dc:creator>
```

```
<dc:subject>OER research answers</dc:subject>
```

```
<dc:description>Answers about 26-questions survey regarding 9 countries (Brazil, Colombia, Chile, Ghana, Kenya, South Africa, Indonesia, Malaysia, and India) and 28 HEIs.</dc:description>
```

```
<dc:contributor>Ildeberto Aparecido Rodello</dc:contributor>
```

```
<dc:date>2015-2017</dc:date>
```

```
<dc:type>Text</dc:type>
```

```
<dc:format>CSV</dc:format>
```

```
<dc:language>English</dc:language>
```

```
<dc:rights>Attribution 4.0 International (CC BY 4.0)</dc:rights>
```

## Ethical and Legal issues

### **Are there any ethical issues that will complicate the publication of the data? If so, what provisions have been made regarding the sharing of research results?**

- In terms of the Memorandum of Grant Conditions for the ROER4D project (Grant no. 107311-001), Professor de Oliveira Neto (along with co-authors) holds the copyright to all outputs arising from the work conducted in ROER4D sub-project 2 (including data), and has the legal right to publish or distribute these data publicly on condition that (from Letter of Support attached - IDRC grant number: #107311-001 and 107311-002 - Start date of project funding: 01 Jul 2014 End date of project funding: 27 Feb 2017):
  - The identity of individuals from whom information was obtained in the course of the sub-project 2 research process is kept strictly confidential. In other words, no un-processed data which has not been de-identified will be transferred to any other parties.
  - Outputs arising from the research process are released under a Creative Commons Attribution (CC BY) license.
  - The IDRC is acknowledged on all outputs arising from the research process with the statement: "This work was carried out with the aid of a grant from the International Development Research Centre, Ottawa, Canada."

### **Is there an obligation to re-submit your project to an ethical review to assess whether the data from the project can be shared?**

The HEIs that required the project submission to ethical review, was approved. Most of them did not require ethical review.

Although we have an email from several respondents in the SurveyMonkey server, the excel files from the original data do not have personally identifiable information that may identify the respondents.

### **Are there any issues regarding Intellectual Property Rights (e.g., copyright, database rights etc.) associated with your data? How will the data be licenced?**

No issues regarding intellectual rights.

License: Attribution 4.0 International (CC BY 4.0)

## Data sharing/openness

### **How will you provide access to the data? We strongly recommend depositing it in a public repository. If this is your plan, please name the intended repository. Please suggest several repositories you feel are relevant, and explain your logic behind the choice.**

As mentioned, the research is about OER in the Global South in nine countries: Brazil, Colombia, Chile, Ghana, Kenya, South Africa, Indonesia, Malaysia, and India. We will make available:

- the survey questions: set of 26 questions applied to the students. It will allow other applications by other researchers in other countries.

- the dataset with the respective answers (total of 4784 answers). It will allow the data analysis and future comparisons.

Among the repositories listed by the <http://re3data.org> website concerning the keyword "education", we believe the following repository appropriate.

Repository: DZHW - Research Data Centre for Higher Education Research and Science Studies

URL: <https://fdz.dzhw.eu/en/>

Reasons for the choice:

- 1) Provides open access;
- 2) Uses DOI;
- 3) Allows both dataset and survey questions storage;
- 4) Uses DCC Metadata standard scheme.