

# Example of policy proposal for improving education in rural peru research paper

[Sociology](#), [Population](#)



(Instructor Name)

## 2. 0 Background

Peru is located in the northern part of South America, on the West Coast. It lies between the Equator and the Tropic of Capricorn, and has a largely equatorial and temperate climate combined with desert regions<sup>1</sup> (Bradt and Jarvis, 2002). The country is surrounded by Ecuador and Colombia in the North, Brazil and Bolivia in the East, and Chile in the South on the landward sides, while the Pacific Ocean takes up the Western border of the country. The country is divided into three main geographical regions, the Amazon Rainforest in the interior, the Highlands and the Coast.

[Figure 1 here]

The Coast: The coast comprises of fertile valleys interspersed with desert land on the western coast. Due to the highlands, the rainfall is largely restricted to the eastern part of the country where the amazon rainforest exists. Only a network of small rivers brings water to the Western coast, thereby making this region a mix of desert and fertile valleys. The main part of the population of the country (over 50 per cent) stays in this region<sup>2</sup> (Burr, 2014), connected by roads and railways. Agriculture, fishing and mining are the main activities in this region. This region makes up around 11 per cent of the geographical territory<sup>3</sup> (Gill, 2009).

The Highlands: The Highlands comprise of the Andes range of mountains and stretch from the north to the south of the country, stretching into Chile and beyond for the length of the South American continent. The Highlands comprise of 30 per cent of the geographical area

1 Bradt, H and Jarvis K (2002) Peru and Bolivia, Bradt Travel Guide, US.

2 Burr, R (2014) Peru, Encyclopedia Britannica, online at <http://www.britannica.com/EBchecked/topic/453147/Peru> last viewed 2 Dec 2014

3 Gill, N (2009) Peru's Southern Coast, Hunter Publishing, Inc.

and are home to a little more than a third (36 per cent) of the population. The northern Andes are shorter and more humid, while the central Andes comprise of the tallest peaks, including the tallest peak Huascarán at 6768 meters. The southern Andes are flatter and comprise of a series of high plateaus.

Amazon Rainforest: This region takes up almost 60 per cent of the geographical land that makes up Chile and is densely forested (Peru Travel, 2014). The region is well fed by tropical rain showers and has the largest natural reserves of minerals as well as forestry. The region is economically exploited for timber, copper, silver and gold, besides forest products.

Overall, this region is the most backward and has only about 12 per cent of the population living here.

Demographics: The country has a population of approximately 31 million in 2013 (World Population Review, 2014). Based on this figure the population density of the country is just 24 per square kilometer, with the Rainforest and highlands having even lower density, since most of the population is concentrated in the coastal region. Lima the capital has 25 per cent of the population, with over 7.6 million people (Index mundi, 2014). As a result most of the industries are also concentrated in this region. The rest of the country is under-developed with accessibility restricted by the mountains and rainforest. Ecological concerns have also restricted the commercial exploitation of the rainforest region, and it remains sparsely populated as a

result. The population is a mix of ethnicities due to the Spanish invasions and

4 Peru Travel (2014) Peru's Geography and Climate, available online at <http://www.peru.travel/about-peru/location-geography-and-climate.aspx> last viewed on 2 December 2014

5 World Population Review (2014) Peru population 2014, available online at <http://worldpopulationreview.com/countries/peru-population/> last viewed on 2 December 2014

6 Index mundi (2014) Peru literacy Rate, available online at <http://www.indexmundi.com/facts/peru/literacy-rate> last viewed on 2 December 2014  
influx of Asians, Africans and other ethnicities from other parts of the world7 (Infoplease, 2014). Nearly 90 per cent of the population is Catholic, another outcome of the Spanish invasion.

### 3. 0 Promoting Education among Peruvians

Literacy levels among Peruvians are relatively high with the country showing an overall literacy level of 89.6 per cent<sup>8</sup> (CIA, 2014). However, literacy levels in Peru are indicated by the percentage of population over the age of 15 years who can read and write. This covers almost 70 per cent of the population and the remaining 30 per cent are below the age of 15 years. The majority of the population is educated in missionary schools run by the churches<sup>9</sup> (D'Andrea, 2007). This is the reason why the literacy levels are high. However, the quality of education in the country is another matter. The high percentage of students in the age below 15 indicates an increasingly young population. The country's educational resources for higher studies are largely concentrated on the coast and mostly around the capital city of Lima.

This creates a problem for the populations living in the interiors, mainly in the highlands and the Amazon rainforest region. Providing high quality education for them is not possible as the population is scattered across a very large area with low density and poor connectivity.

At the same time, due to political turmoil, the country has not seen significant stability. In the last five years, the country has begun to stabilize with a focus on growing industries for manufacturing and processing. Peru has one of the largest fishing industries in the world, and

7 Infoplease (2014) Peru, available online at <http://www.infoplease.com/country/peru.html?pageno=1> last viewed on 2 December 2014

8 CIA (2014) The World Factbook, available online at <https://www.cia.gov/library/publications/the-world-factbook/fields/2103.html> last viewed on 2

December 2014

9 D'Andrea, M (2007) Peru: Inequality of Education for Indigenous Groups, the Neglected Class, Ontario Institute for Studies in Education of the University of Toronto (OISE/UT).

a focus on growing the food processing industry in fisheries will add more value to the economy. Similarly, qualified employees required to supervise the mining and timber operations are largely brought in from outside, due to the lack of trained manpower in the country. Therefore, it is essential that for coming generations of Peruvians a national policy of higher education, mainly in technical skills and tradecraft is put in place. This will ensure that the manpower required to manage the mining, production, processing and lumbering operations is generated from among educated citizens of the country. This will not only make the business operations cheaper for the

companies, it will also provide a greater level of employment to more Peruvians. Therefore, the objective for the education sector should be to admit and train at least 50 per cent of the school pass-outs for technical and other higher education forms. Doing this will ensure that the economic development being undertaken in the country provides its rewards to the local population in the form of better employment opportunities, an opportunity to work in professional roles and create a well-qualified workforce that can raise the living standards of the country. Another advantage will be to increase the per capita income of the country and spread it geographically across more regions, instead of concentrating it around the capital city.

## **Proposed Option for Development**

The Christian missionary schools have a significant reach and presence in the country. Their presence has ensured a healthy literacy rate of almost 90 per cent, higher than most better –developed countries like India and China (World Bank, 2007). Therefore, these missionary schools are also the best means to provide further education to the students residing in the rural and semi-rural regions of the country. However, due to population scarcity, it may not be feasible to set up technical training schools in all the schools across the country. Logistics

10 World Bank (2007) Toward High-quality Education in Peru, World Bank Country Study.

and transportation facilities within the highland and Amazon rainforest region are also very poor. Finding suitably trained instructors across so many locations is also not feasible.

## Description

Therefore, the only possible solution lies in setting up training centers in specific regions, with one for every approximately 100 sq. km. of area. Each center can be located in the largest Catholic missionary school of the region. These locations can be equipped with a satellite feed, which is like a television signal beamed from a satellite to provide educational content. Conducting weekly classes in these centers will require only a satellite dish, server and projector to be installed in each of these locations. This will overcome the problem of remote connectivity and lack of internet speed in the remote regions. The dish, server and projector can be powered by the use of small solar panels that will store energy for use (Thinvent, 2014). Since the entire country lies in the Equatorial region, sunlight is available in plenty as a power source and the cost of the equipment can be borne by the Government.

Setting up a hundred such centers across the country, each with an average of 200 students per center will create 20, 000 students who can be taught by a central team of teachers located in Lima, the capital. The local priests who are teachers in the schools can assist the students in communicating their queries through telephone lines or by email, which can be answered in a couple of days. This will ensure that the students can also get their queries answered and continue to learn and take interest in the program. Subjects taught can include mathematics, physics, chemistry and practical subjects such as accounting.

[Figure 2]

11 Thinvent (2014) Solar Computing, available online at <http://www.thinvent.in/solar/> last viewed on 2 December 2014

## **Constraints**

The program is designed to cover a large geographical area using satellites, instead of land based connections or expensive internet connectivity which will require thousands of kilometers of optic fiber cable (OFC) which is not feasible for remote populations. The cost of setting up the center is the only initial cost and requires only maintenance. The equipment consists of a solar power generator, batteries, a satellite dish, computer and projector. When the system is not in use, the solar power generator can continue to recharge the batteries and ensure sufficient power is available. The initial cost of each set of equipment is \$2000-3000 with a life of five years, which the Government will have to provide for. This works out to \$300, 000 for 100 centers, at a cost of \$60, 000 per year. Each center can turn out 200 trained students per year, and the cost of equipment will therefore be \$300 per student per year, or \$25 a month. The government will have to make this investment in order to see a successful implementation of the program. Possibly the program could be sponsored or subsidized by corporate sponsors who are major employers of manpower in the country, as the program brings them the benefit of having trained manpower available in the country as compared to the cost of importing trained labor from elsewhere.

The only constraint in the entire program is the weather. At times of bad weather, the signal can break down, leading to disruptions of the sessions.



However, by knowing the periods of bad weather, classes can be given a holiday at that time, so that the teaching during the rest of the year can continue without interruption. Setting up the equipment initially after identifying the locations and promoting the program to the local populations can be done with assistance from the churches, which would be happy to assist in the development efforts of the country's population. The churches can also help in the admission and administrative processes of the program, in return for the costs of the staff being reimbursed. Since the churches also run the schools, it is easy for them to identify and select students for the programs on the basis of merit. Co-operation of the churches is therefore vital for the program to be a success.

## **Opportunity**

The program represents a significant opportunity to cover the entire geographical regions of the country with a single program. The program can then also be used for various other communication initiatives such as adult education, health, telemedicine, etc. the program provides a unique opportunity to reach a significant portion of the country's population presently cut off from the developed regions due to geographical constraints. With the satellite remote training program, the Government will be able to reach even remote locations with information on Government schemes that can benefit the local populations, which they may not be aware. The program also creates a channel for the people to communicate with the Government on local level issues and gives them access to the Government departments in Lima which may be geographically far away and therefore

inaccessible due to transportation and logistical constraints. A single program will provide connectivity of the capital and the Government with all three regions thereby enabling it to reach the majority of the population. The training program will also encourage more youth to complete their education in order to avail of the training opportunity offered, and this will help develop a young trained and literate working population that can drive economic progress across the country<sup>12</sup> (Castro, Yamada and Arias, 2011).

## **Conclusion**

Peru has a good literacy rate, better than most countries. However, the problem lies in

<sup>12</sup> Castro, JF, Yamada, G and Arias, O (2011) Higher Education Decisions in Peru: On the Role of Financial Constraints, Skills, and Family Background, Centro de Investigación de la Universidad del Pacífico.

meeting the further education needs of a population that is scattered in one of the most sparsely populated regions and is poorly connected by roads and railways. The twin geographical constraints of mountains and amazon forest prevent the easy connectivity with the population, nearly half of which lives in these geographical conditions. By setting up training centers in the major regional church schools, connected through satellites, a central program can be set up to train the growing youth of the country, to participate in the increasing number of development opportunities. This will raise the overall development level in the country and give the population access to better paying jobs and living conditions as well as improve the development of the regions outside the capital.

## **Bibliography**

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Encyclopedia Britannica is one of the world's most trusted and extensive sources of information on any subject.

- Gill, N (2009) Peru's Southern Coast, Hunter Publishing, Inc.

- Peru Travel (2014) Peru's Geography and Climate, available online at <http://www.peru.travel/about-peru/location-geography-and-climate.aspx> last viewed on 2 December 2014

This is an online site providing information about the country and its various features.

- World Population Review (2014) Peru population 2014, available online at <http://worldpopulationreview.com/countries/peru-population/> last viewed on 2 December 2014

This site catalogues the various demographic profiles of the countries across the world.

- Castro, JF, Yamada, G and Arias, O (2011) Higher Education Decisions in Peru: On the Role of Financial Constraints, Skills, and Family Background, Centro de Investigación de la Universidad del Pacífico.

The paper outlines the condition of education in Peru and the various constraints that prevent the development of better education facilities

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among the people of Peru.

- Index mundi (2014) Peru literacy Rate, available online at <http://www.indexmundi.com/facts/peru/literacy-rate> last viewed on 2 December 2014

This is an online site providing all kinds of general information about countries.

- Infoplease (2014) Peru, available online at <http://www.infoplease.com/country/peru.html?pageno=1> last viewed on 2 December 2014

This page outlines key information about Peru including geography, politics, etc.

- CIA (2014) The World Factbook, available online at <https://www.cia.gov/library/publications/the-world-factbook/fields/2103.html> last viewed on 2 December 2014

The Central Intelligence agency is USA's intelligence gathering agency and the site shares various pieces of information about the country available in the public domain.

- D'Andrea, M (2007) Peru: Inequality of Education for Indigenous Groups, the Neglected Class, Ontario Institute for Studies in Education of the University of Toronto (OISE/UT).

This paper talks about the inequality of education opportunities available to the various indigenous groups in Peru which live in remote areas of the country.

- World Bank (2007) Toward High-quality Education in Peru, World Bank Country Study.

The study by the World Bank outlines the need for higher education facilities across the country.

- Thinvent (2014) Solar Computing, available online at <http://www.thinvent.in/solar/> last viewed on 2 December 2014

Thinvent is a company that provides a solar powered computing solution for rural classroom connectivity. The webpage given here explains how the solution works.

Figure 1: Geographical Map of Peru

(Source: Peru Travel, 2014)

Figure 2: How Remote Satellite Teaching works

(Source: Dusane Infotech)