



2016 India Study Tour

Keio University, faculty of business and commerce, Kazushige
Shimpo laboratory 09/05/2016~09/11/2016



2016 India Study Tour Report

Keio University, faculty of business and commerce,

Kazushige Shimpo laboratory¹²³

01/11/2017

Contents

1Laboratory Web site: <http://www.fbc.keio.ac.jp/~shimpo/>

2Facebook page: <http://www.facebook.com/shimpolab>

3Student Web site: <http://shimpo-lab.sakura.ne.jp/student/>

Chapter 1: Working environment

1-1 GRAVIS

1-2 House environment

1-3 Visit HEDCON office

Chapter 2: India Water Problems and Sanitation Issues

2-1 Current Situation

2-2 GRAVIS

Chapter 3: Education in India

3-1 Why is education necessary?

3-2 Public school

3-3 Government school

3-4 GRAVIS school

3-5 Training center

References

Chapter1 Working environment

Kana Kobori, Daisuke Satomi, Yukihiro Numata, Koji Nohara

1. GRAVIS

On the 3rd and 4th day of our study tour, we visited Jodhpur in the Rajasthan state, which is famous for its marble and sandstone. There we got the chance to see some activities of GRAVIS (Gramin Vikas Vigyan Samiti), an NGO mainly working in Thar desert. We toured sandstone mine, mine worker's house, school for their children, hospital run by GRAVIS and so on, getting brief explanation from an officer of GRAVIS, Rajendra Kumar, for the current situation and problems GRAVIS is working on.

On the 4th day, we visited GRAVIS office, heard details about their works, and had a discussion about their activities with the officer. Their work is divided into 6 parts as below.

1. Water Security
2. Health Care
3. Agriculture & Animal Husbandry
4. Education
5. Research & Advocacy
6. Community Development

They put special effort on 3 parts: 1.water security, 2.health care, and 4.education.

In the following report, we are going to address labor environment, water

problem specific to desert district, current state of education in rural area in Rajasthan as well as whole India, and GRAVIS's activities to solve these issues.



Photo1.1⁴ Discussion at the GRAVIS office (left), September 7th, 2016



Photo1.2 Rajendra Kumar (right), September 7th, 2016

Mineworker at Rajasthan

Rajasthan state has several thousands of mine, famous for the production of marble and sandstone. These productions are exported to all over the world and used for the construction of tomb as well as house. Therefore, in this state, mineworker is a common occupation with up to 500 thousand people (population of Rajasthan is 56.5 million). Not only men, also women and children are working at mine. Next is farmer, but during

⁴All photos by members of Shimpo laboratory

drought and monsoon season, they also work at mine to earn a living. Gains from mining is a main source of earnings for many people in Rajasthan, however, payment is very little and the labor environment is very severe. According to one survey, they work up to 12 hours a day and get only 50-90 rupee.



Photo1.3 mine at Tinwari and mineworker (left), November 25th, 2016

Photo1.4 mine (right), September 7th, 2016

Problems surrounding mineworker

Mineworkers have less power than owner of the mine, who have political connections, great wealth and huge power. In addition to the low payment, mineworkers are facing number of difficult problems, such as few or no access to latrine, clean water, and health care. A main disease they are likely to get is silicosis, which is one of the lung trouble with no complete cure. The cause of this disease is too much dust produced by mining process with long year labor, which include Silica (SiO_2). This makes mineworkers

suffer from breathing trouble and fever, and increase the chance of tuberculosis.



Photo1.5 discussion with mineworker (left)



Photo1.6 space for mineworkers (right), September 7th, 2016

Work by GRAVIS

GRAVIS is tackling the issues surrounding mineworkers. They educate mineworkers about their rights and health problems like silicosis, and often advocate their rights. In addition, they hand out mask to workers to prevent them from taking in toxic dust. Mineworkers, however, don't understand the effect and necessity of masks, so this program don't have big effect on their health. But why GRAVIS has to deal with this issues, not employers? This is due to the current labor situation, oversupply. In other words, employers can get another labor force very easily when worker become incapacity to work because of disease or other reason.

Moreover, GRAVIS manages general hospitals but lack doctors and

medical facilities. We visited a hospital, and saw eye clinic, gynecology and obstetrics and so on. There we found pictures of patient and dedicated doctors who asked us about current hospital situation in Japan, but equipment are much poorer compare to those in Japan. I thought that it is difficult to offer sufficient care in that environment. Besides hospitals, GRAVIS manages schools for mineworkers' children. These schools are also suffering from the shortage of teachers, equipment, and textbooks. Another problem is that parents are unwilling to send children to school because they can be working force.

GRAVIS is working to solve many social problems, but they have to overcome lots of difficulties to carry on their projects successfully.



Photo1.7 GRAVIS Hospital (upper left), September 7th, 2016

Photo1.8 GRAVIS School (upper right), September 7th, 2016

Photo1.9 children at school (below), September 7th, 2016

1.2 House environment



Photo2.1 house, September 7th, 2016

Then we went to house where mine workers live. This area is countryside, as you can see from the above picture, women wore Indian traditional clothes “sari”. We entered into a house. I was so surprised that gas stove was installed.



Photo2.2 gas in the house, September 7th, 2016

1.3 Visit HEDCON office

HEDCON

We visited office of HEDCON (The Health Environment and Development Consortium) 5th day of India study tour in 9/9, Jaipur. HEDCON is non-governmental organization which began to work in October 1998. HEDCON's act is based on Gandhian ethics and they consult other NGOs and propel projects for policymakers to help poor classes acquire right. Their main activity is

- to manage water in desert area such as Rajasthan.
- to tackle problems of mineworker.



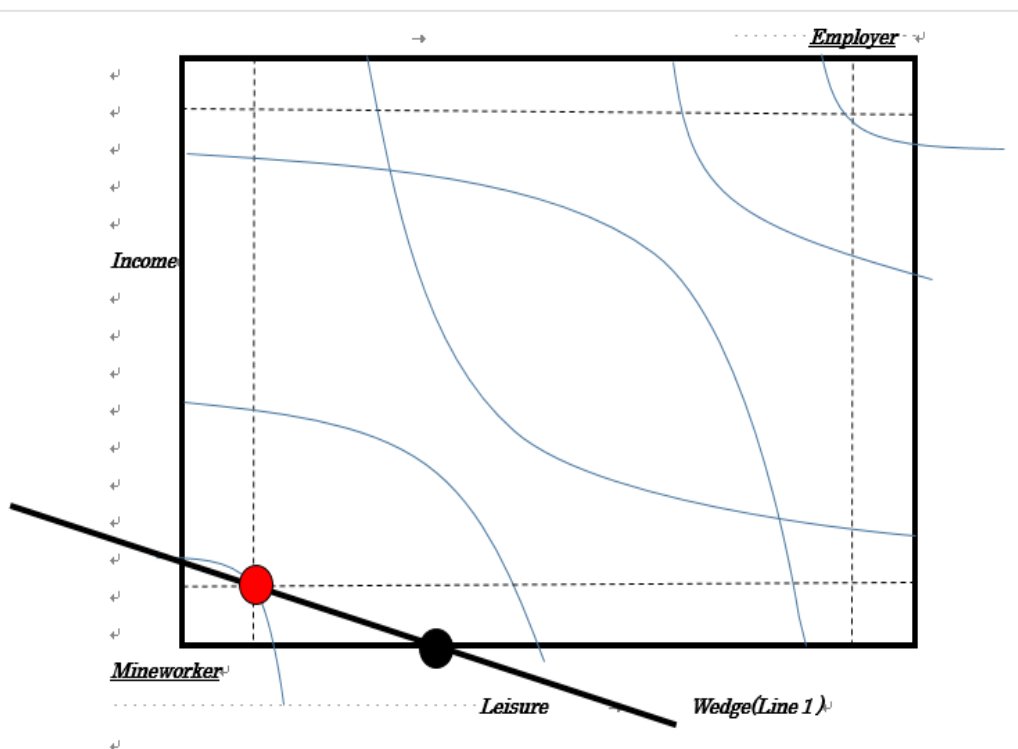
Photo3.1 HEDCON office, September 8th, 2016

We discuss these problems with Mr. Mahitosh, an officer of HEDCON. He said mineworker are forced to work in very bad labor environment. In addition, their employers in Rajasthan are usually men of power and they hire gangs to subjugate mineworkers. So mineworkers cannot complain and many of them do not have range of choices. To sum up, there is big difference of bargaining positions between mineworkers and employers. (Figure 1)

(Figure 1) Bargaining position

This figure consists of indifference curves of mineworker and employer

(Edgeworth box), vertical axis shows income and lateral axis shows leisure. At first, mineworkers are in black point in figure1 because workers are in weak position but in this condition they cannot live. So employers hire workers in minimum necessary condition of living at same wedge (Line1) in this figure (red point of figure1). In developed countries, workers are protected by social welfare program but in Rajasthan, position of mineworker is too weak so they have no choice but working in such a bad condition, Therefore, this problem happens. Projects to help these workers are needed.



Moreover, we carried on “Cloth to India” project to support mineworkers with HEADCON in connection with this problem. When we visit their office, we are suggested a project to collect secondhand clothes to send mineworker who don’t have decent clothes enough. We created a flyer, distributing them

around our university campus, and collected clothes during school festival in November, 2016. We send 60 men's clothing, 97 women's clothing and 300 children's clothing.



Photo3.2 Collected clothes, November 25th, 2016

Photo3.3 Packed clothes, November 25th, 2016

Chapter2 India Water Problems and Sanitation Issues

Yurika Shibagaki, Kosuke Nomoto, Takumi Hayama, Yoichiro Matsumoto

In this chapter, we write about water situation and hygiene circumstances, especially toilet circumstances in India. Both water problems and sanitation problems are very serious problems for human because they directly affect health. Furthermore, it is said that they are very serious situation in India. On our tour, We visited several NGOs and learned a lot about water situation and toilet circumstances.

1. Current Situation

Current situation of water problem

It is said that India is one of the countries with the most water problem in the world. According to World Bank, water cause 21% of infectious diseases occurring in India, and the number of deaths due to diarrhea caused by unsanitary water intake amounts to about 600,000 a year. In addition, according to the United Nations, the country's sewage treatment capacity is

only 10%, the rest is being flown directly to rivers and others.

For example, Agra which we visited on the seventh day is especially called the worst water environment in India. The Yamuna River, where waste flows down from the capital of Delhi and the neighboring Haryana State Industrial Park, is one of the dirtiest rivers in the world and its water quality data of Agra's tap water, whose main water source is the Yamuna River, is not a number suitable for drinking water. Also, a large amount of chlorine is used for purification, and the possibility of producing many dangerous substances such as trihalomethane, which is a carcinogenic substance, has been pointed out. Furthermore, all the water administration, such as the water supply network that carries water, the technology to purify, collection of water fee and so on, are all poor and dangerous not to drink even local people.

However, it is the current situation that measures against water pollution have not progressed due to the state-based operations, budget shortage, etc. For this reason, water whose quality has deteriorated continues to be used for daily use water and drinking water.

Current situation of sanitation problem

Next, as a current state of sanitation problems in India, the population that can access the toilet may be 50% or less. This background includes social wisdom that accepts and recommends outdoor excretion, lack of inexpensive products that are easy to obtain even for poor people, and the

existence of impermanent people called scavengers who processed living by processing out what was excreted outdated from ancient times. However, the custom of outdoor excretion leads to development inhibition and malnutrition as well as infection, so it must be improved.

Based on the current situation

Safe water and lack of proper hygiene practices have a great impact, including health. For example, when it comes to the possibility of infectious diseases such as diarrhea, tropical diseases, it becomes an economic problem because it can't work enough if it becomes sick. Also, women and children have to spend a long time drawing water, but the long way of drawing water often involves danger, and for that time the child can't go to school and women can't work. In other words, it also leads to educational problems and empowerment of women. Thus, water and sanitary environment are the basis for achieving other development goals, and it is urgent to solve water problems and hygiene problems in India.

2.2 GRAVIS

Water Activity

In the Tar Desert, there is a rainfall of about 200 mm per monsoon, which lasts only 9 to 12 days. (From rainy season from June to September) So many families in Rajasthan State are in short of water and depend on rainwater or water stored in tanks. Quick access to safe water greatly

contributes to empowerment of women. Women and children spend six to eight hours a day in order to secure water, which is why young girls often can't go to school.

GRAVIS is an NGO that tries to empower people living in the Tar Desert and the community and aim for sustainable development. It is responsible for promoting safety, promoting education, improving health, empowering women, and defending workers. As stated earlier, strengthening the security of water in desert areas with extremely little precipitation is directly linked to the quality of life and the improvement of the status of women. It is working on making and setting NAADIS, BERIS, TAANKAS in relation to water.

NARDIS

NAADI is the oldest rainwater harvesting method in Rajasthan State, its storage technology. 259 are installed in India, and 789,140 families benefit from it. The average village NAADIS can supply water to several households for up to one year. Since silt (clastic material) damages the structure, the village struggles to hold.

BERIS

BERI is the prevention of outflow of groundwater brought by the monsoon, and it is a well to save water. 583 are installed in India and 2,910 families benefit from it. Supplies water to multiple homes and can hold about

100,000 to 200,000 liters of water. Mineral deposits in the soil are used to purify the stored water.

TAANKA

TAANKA is a cylindrical storage tank. Currently 6,392 TAANKA are installed in Rajasthan province and 19176 families benefit from it. It can store 20,000 liters of water and 5 or 6 people can store one-years' worth of water. Rainwater stored in TAANKA is gathered in an inclined catchment area. As a device applied to TAANKA, a filter is installed inside so that insects and grass do not get inside. When it rains, the surrounding weeds have been removed so that the water efficiently accumulates in TAANKA. In order to prevent foreign matter from flowing into TAANKA during the monsoon flood, the fences made of net and wood are spread all over.

Photo2.1 TAANKA, September7th, 2016(left)

Photo2.2 TAANKA's Net, Spetember7th, 2016(right)



Water Reservoir

There is also a place to store rain water for animals living in the Tar Desert, where basically human use is prohibited. If it becomes empty, transport the water of the pond and refill it. It is built in the topography that can collect rain water efficiently by using the inclination, and in case using this water, penalties are decided to reduce fines and distribution.

When a violation is discovered for the second time, social ostracism called will be taken, and in order to recover from that state, heavy penalty for preparing meals for all households (80 households) in the village is decided. However, because some people are still in violation, there is a need for new regulations and incentives not to violate in order to avoid using the water in the irrigation pond.



Photo2.3 The pond for animals, September 7th, 2016



Photo2.4 The pond for animals, September 5th, 2016



2.3 Slab International

On September 5th 2016, we visit the Slab International. This is a non-governmental organization (NGO) we visited for the first time in our tour. The organization has taken an action to free “manual-scavenger”. They are untouchables and dip excrement from toilet in India.

This NGO has a museum,” the Sulabh International Museum of Toilets”. We can study history of development and design of a toilet from their exhibits. In addition, we can also study the models of the sulabh technology

In the museum

Some details about the development of toilet system in the world are on display, for example, the photograph of the toilet remaining from 2,500 B.C. Besides, the museum is also exhibiting some interesting toilets in the world and some ultra-modern electronic toilets from Japan.

Some Japanese toilets have one of the most advanced toilet technology.



Photo2.5 The museum of toilet, Spetember5th, 2016

Outside the museum

This NGO is trying to spread toilets that don't need dipping up by hand. So, they have developed the toilet technology. Outside the museum, some models of the Sulabh based two-pit-pour-flush composting toilets are exhibited.



Photo2.6 The models of the Sulabh toilet, Spetember5th, 2016

The electricity in the facility is generated by biogas. The biogas is used to cook a meal, to turn lights and so on. This biogas system is installed by themselves.

In addition, they have a system for regenerating water from excrements.

Outside of the NGO building, there is a water ATM. This provides water to neighborhood. This is because that the water is clean and cheap.



Photo2.7 The water ATM, Spetember5th, 2016

Chapter3 Education in India

Emina Shiroki, Nozomi Shozuguchi, Kamiyama Aoi, Momo Hirata

The right of children to free and compulsory education act was passed in August 2009 and brought into force on April 1, 2010. In fact, a small proportion of elite government schools have excellent infrastructure, trained teachers, low student-teacher ratios and very high tuition fees. On the other hand, schools around both rural area and slum have poor infrastructure, untrained teacher and low tuition fees. We learned that there are many problems of education in India. With these matters in our mind, we visited India. In this chapter, we mention our experiences about schools.

1. Why is education necessary?

Before talking about the education in India, we would like to indicate the reasons why education is necessary. There are several reasons why education is important in developing countries. Especially, the main reason is that education will help relieve the disparity in class and gender. Getting appropriate education helps improve the quality of life, say, we can get economical success, complain about political requirement, and solve the problem about human rights, and so on.

Economic development and education

Nowadays, many people have become conscious of the necessity of education in India. But the education in India has not kept pace with other countries. Actually, the literacy rate and attendance rate is still low level, especially in rural area. This is because, during the economic development, the government has disregard education and has not put enough budgets in education, on the other hands, in other countries in East Asia including Japan, governments regard education as important and work out their strategies to remark that point.

The current situation of education in India

To solve the several problem of education, The Right of Children to Free and Compulsory Education Act, which intends improvement of the quality of education and extension of educational facilities, came into force. But still there are many problems, say, the high absence rate of students and teachers, the deficiency of facilities and equipment, and quality of education.

2. Public school

In India, some specialists say the improvement of education should be carried out by mainly public school, which is because government schools have many problems. But the Indian economist, Amartya Sen suggests in his book, *An Uncertain Glory*, to struggle with the problems which

government schools have, we shouldn't rely on the public schools about the improvement of education.

In our study tour, we visited the Sulabh Public School, which is operated by Sulabh International, the NGO working for the removal of untouchability and social discrimination against scavengers. This school was established in 1992 for the children of scavengers along with other children. Now, about 60 percent of students are untouchable and study with other children. In this school, students can receive high quality education in English. They can get not only basic education but also the practical skills, like typing and sewing and the knowledge of sanitation and hygiene.

3. Government School



Photo3.1(left) Government School in New Delhi, September 6, 2016



Photo3.2(right) The condition of classroom, September 6, 2016

We visited some government and private schools, Day 2 in the morning, we visited a government school in New Delhi. In the first impression, I think that the government school is bigger than I thought because we

studied bad equipment in Japan. For example, Indian school is not equipped with toilet, wall and roof etc. Probably, we visited the other school which government operates in India. The government school is made of concrete walls and have a large school playground. Students waved their hands to us, had smiles and welcomed. In the school, there are many classrooms. Classrooms were equipped with a blackboard, desks and chairs. There are panels on the wall to use the number and English training. Students wore the school uniform. I think that this school was similar to Japanese schools about equipment.

We divided 4 groups and exchanged each own culture like origami, number, songs, dances and cleaning etc. When we were primary school student, we cleaned our classroom everyday so it's habit. However, we studied that it's not habit to clean classroom by myself in India. So we demonstrated how to clean. Probably, they don't become to clean themselves everyday but we hope that they learn about the importance of cleaning one day.



Photo3.3 Cleaning, September 6, 2016

4. GRAVIS School

At September 7th, after visiting mining place, we also visited the school that GRAVIS runs in the Thar Desert.

One of the main work of GRAVIS is education. “GRAVIS currently runs 49 primary schools in the Thar Desert. Nowadays, 94 schools have been set up by GRAVIS and many of them are now run by village communities independently. These schools are often located in the areas of villages where government school don't exist, and some provide midday meals for students. Once these schools are well established, GRAVIS hands over the administration to the local Village Development Committee or the state schoolsystem.”⁵

⁵GRAVIS HP(<http://www.gravis.org.in/index.php/our-work/education>, Last access date is January 9, 2017)



Photo4.1 GRAVIS school, September 7th, 2016

GRAVIS's staff, Mr.Ragendra Kumar explained about outreach programs of GRAVIS to us. Some parents want their children to work (specifically pick up pebbles to earn a little income), help their housework. Because of this, it's difficult for their children to go to school. So GRAVIS staffs visit these parents and discuss their children's option.

Then a teacher of this school and he also explained about this school that we visited. This school is same as primary school (grades one through five). There are two teachers and students attending class in spare moments of their work. The subjects are Hindi, English, Mathematics, Drawing and Environment. In the class "Environment", not only importance of water but also importance of awareness was taught. For example, the awareness is that using masks are useful to prevent pulmonary diseases. Finally, the teacher showed us the classroom and the children saw us off.



Photo4.2 The teacher of this school (left), Mr.Ragendra Kumar (center), Professor Shimpo(right), September 7th, 2016



Photo4.3 students and a teacher of this school, September 7th, 2016

Photo4.4 students and a teacher of this school, September 7th, 2016



5. Training center

GRAVIS training center

We visited GRAVIS training center .In here, we saw school timetable of GRAVIS school and, girls hostel. About school timetable, I was surprised at tightly timetable. Students take many classes from morning till night. GRAVIS has recently built a new girls hostel in one of its center where the girls will stay to receive middle and high school education. The center can accommodate up to 16 girls. Girls live at GRAVIS center and participate in many activities.



क्र.सं.	समय	विषय
01	8:00 AM से 8:15 AM तक	आवृत्त (विद्यार्थी)
02	8:15 से 8:45 AM तक	आवृत्त (विद्यार्थी)
03	8:45 से 9:15 AM तक	भूख, जायता, विचार, मन
04	9:15 से 9:45 AM तक	अभ्यास प्रश्नोत्तर
05	9:45 से 10:15 AM तक	विद्यार्थी
06	10:15 से 10:45 AM तक	विद्यार्थी
07	10:45 से 11:15 AM तक	आवृत्त, श्रुति, कवि
08	11:15 से 11:45 AM तक	अभ्यास
09	11:45 से 12:15 PM तक	विद्यार्थी, प्रश्नोत्तर, कवि
10	12:15 से 12:45 PM तक	विद्यार्थी
11	12:45 से 1:15 PM तक	आवृत्त, अभ्यास
12	1:15 से 1:45 PM तक	अभ्यास, विद्यार्थी

Photo 5.1, 5.2 Computer room(left) and School timetable(right), September 7, 2016

A vocational training center

(Women's problem in India and the role of vocational training center)

In Regions where education is not well-trained. Marriage is often decided by parents. After marriage, most women live with their husband's parents' house. The women's activity is largely restricted. Also, after marriage, some women who cannot be economically independent suffered from damage such as domestic violence and killing. Vocational training centers support women's independence by offering women educational opportunities, and aim to prevent crime.

Alternating current

We greeted about twenty students. First of all, we deepened our exchanges by arm wrestling and pushing sumo. From Japanese students, Awa Odori, Soranbusi and Japanese songs were performed, and Indian students also gave presentations of ethnic dances and songs, and it got

really exciting. Finally, the question and answer between the students was done. When we asked them about their future dreams, there were many people who answered as teachers. I felt that there is a desire to study because they could not receive enough and not want the future children to be in the same circumstances.

Photo5.3, 5.4 Pushing sumo(left) and ethnic dance in India(right),
September 7, 2016

References



Jagdish Bhagwati, Arvind Panagariya 『 Why Growth Matters: How Economic Growth in India Reduced Poverty and the Lessons for Other Developing Countries』2013, PublicAffairs

GRAVIS HP, <http://www.gravis.org.in/index.php/our-work/education>, Last access date is January 11th, 2017

「インドで「水の危機」深刻化 国民生活に多大な影響

,「Sankei Biz

2013.4.9 06:55, Last access date is January 11th, 2017

<http://www.sankeibiz.jp/macro/news/130409/mcb1304090656019-n1.htm>