

Country Name	Project for Construction of Educational Facilities in the Municipalities of Potosí and Sucre
Plurinational State of Bolivia	

### I. Project Outline

Background	The Government of Bolivia has promoted the educational reform since 1994, and the net enrollment rate of primary education was increased to 92.7% in 2006. However, the quality issue still remained, as the primary education dropout rate and repetition rate in 2006 were 5.7% and 6.0%, respectively. Major obstacles for improving the quality of education were shortage of educational facilities and their decrepit conditions. For example, as ad-hoc countermeasures, many former hotels or residential buildings were used as classrooms. Many students were obliged to study at educational facilities in too decrepit or dangerous conditions. Also, many students could not enter the schools where they wished because of the insufficient space to accommodate with. Especially in central urban areas, the classrooms were overcrowded because of the shortage of classrooms. Considering these circumstances, the project for construction of educational facilities was requested for the purpose of improving the educational environment.				
Objectives of the Project	To improve the learning environment in 15 sites in the Municipality of Potosí and 15 sites in the Municipality of Sucre, by constructing classrooms and toilets and procuring school furniture.				
Outputs of the Project <sup>1</sup>	<ol style="list-style-type: none"> <li>1. Project Site: Municipality of Potosí (Department of Potosí) and Municipality of Sucre (Department of Chuquisaca)</li> <li>2. Japanese side: Construction of classrooms (368) and toilets (216) and procurement of school furniture</li> <li>3. Bolivian side: Securement of land, removal of existing sites and obstacles, ground leveling, exemption of taxes for the contract, Installation and connection of electricity, connection of water pipes, etc.</li> </ol>				
Ex-Ante Evaluation	2007	E/N Date	March 10, 2008	Completion Date	August 17, 2010
Project Cost	E/N Grant: 969 million yen, Actual Grant Amount: 969 million yen				
Implementing Agency	Municipality of Potosí, Municipality of Sucre				
Contracted Agencies	Agent: Japan International Cooperation System Local Consultant: CITER Ltda Local Contractors: MATERSA, R&P, Consorcio BARRIOS CONCISE, EMOB S.R.L., V.I.B Asociados, RECEBO Asociados				

### II. Result of the Evaluation

1 Relevance
<p>This project has been highly consistent with Bolivian development policy at the time of both ex-ante and ex-post evaluation. "High quality education by prioritizing equal opportunities" was one of the national policies and strategies in the National Development Plan 2006-2010, and the investment in the education sector for quality education has been prioritized in the municipal levels (Municipal Development Plan of Potosí (2009-2013) and Municipal Development Plan of Sucre (2010-2014)) The project has been in line with Bolivian development needs for improvement of the educational quality and construction of school facilities. Also, the project was consistent with Japan's ODA policy at the time of ex-ante evaluation. Priority areas in the assistance for Bolivia included the education sector for the country's social development (ODA Data Book for Bolivia 2008).</p> <p>Therefore, relevance of this project is high.</p>
2 Effectiveness/Impact
<p>This project has achieved its objective of "improving the learning environment in 15 sites in the Municipality of Potosí and 15 sites in the Municipality of Sucre," by utilizing most of the constructed classrooms and toilets and procured school furniture. However, the blackboards are not being utilized in 10 sites in Potosí as the chalk powder sometimes triggers health problems such as eye irritation and aspiration difficulties. With regard to this, the Municipal Government of Potosí has decided to replace the blackboards with acrylic whiteboards<sup>2</sup>. In three sites in Sucre, toilets have not been used due to the lack of enough pressured water caused by the increasing population around the school sites, and due to the lack of a septic tank in the remote area where schools are located.</p> <p>The number of the available classrooms increased in the target sites in both Municipalities from 2007 to 2013. However, the number of the constructed classrooms which are used for the intended purpose did not reach the target figure in both Municipalities. In both Potosí and Sucre, among the constructed classrooms, 22 and two classrooms, respectively, are not used as classrooms for children at the time of ex-post evaluation. These classrooms are mainly used as the principal's room, teachers' room or storeroom because the enrollment is not sufficient to organize classes and there are not enough office environments<sup>3</sup>. Even though the total number of the classrooms has increased, it was not revealed whether this could have</p>

<sup>1</sup> The project is implemented by the Grant Aid for Community Empowerment scheme.

<sup>2</sup> In all sites of Sucre the whiteboards have been procured from the beginning of project.

<sup>3</sup> In 2011, 41 classrooms were not used in Potosí and lack of teachers was reported as the main reason. (Source; JICA internal documents)

contributed to the increase of the enrollment, as the accurate data before the project (2007) was not available<sup>4,5</sup>. However, it is confirmed that the enrollment increased from 2010 (the project completion year) to 2013.

The construction of classrooms intended to decrease the density in the classroom, but it has not decreased as expected in several schools. Most of the schools accommodate less than 40 students per classroom as regulated<sup>6</sup>, but there are a few cases with more than 50 students per classroom<sup>7</sup>. The tendency of enrollment concentration in urban schools remains the same, regardless the issue of the regulations by the Ministry of Education which aim to promote the enrollment in the area of residence<sup>8</sup>.

As qualitative effects of the project, first, the teaching-learning environment has been improved because of the larger space and better daylighting and ventilation, according to the principals of the visited sites. A school principal commented that the large space with two blackboards help the teachers' efficient teaching. Second, they also that the hygiene condition has improved in most sites, while in some sites more toilets are needed as the number of the toilets are not sufficient for students, which resulted in the difficulty of the cleaning.

As for the impacts, first, students and their parents have been motivated for attending the school. Some interviewed students responded that the learning environment has become more comfortable and secured, compared to the dark and narrow classrooms where they used to receive classes. There are a few parents who used to send their children to the schools in the central area, but the parents are now encouraged to register their children in the schools with new classrooms in their local area. Second, it is considered that the project has contributed to the decrease of the dropout and repetition rate in the primary and secondary schools both in Potosí and Sucre, by the improved teaching-learning conditions, according to some school principals and officers of the Department Office of Education. No negative impact on the natural environment has been observed. There was land acquisition from a governmental office (Mining Corporation of Bolivia), but no problem was raised. There was no resettlement, either.

Therefore, effectiveness/impact of this project is high.

#### Quantitative Effects

Indicator		Target value	Actual value			
		2010 (target year)	2007 (before the project)	2010 (target year)	2011	2013 (ex-post evaluation)
Number of "usable classrooms" in the target 15 sites in Potosí	Existing classrooms	77	77	N.A.	N.A.	89
	Constructed classrooms	214	0	N.A.	214	214
	Total	291	77	N.A.	N.A.	303
Number of "classrooms being used" in the target 15 sites in Potosí	Existing classrooms	77	77	N.A.	N.A.	88
	Constructed classrooms	214	0	N.A.	173	192
	Total	291	77	N.A.	N.A.	280
Number of "usable classrooms" in the target 15 sites in Sucre	Existing classrooms	120	120	N.A.	N.A.	138
	Constructed classrooms	154	0	N.A.	154	154
	Total	274	120	N.A.	N.A.	292
Number of "classrooms being used" in the target 15 sites in Sucre	Existing classrooms	120	120	N.A.	N.A.	138
	Constructed classrooms	154	0	N.A.	154	152
	Total	274	120	N.A.	N.A.	290

(Source) Based on the interview and observation in the target schools.

#### 3 Efficiency

Although the project cost was within the plan (ratio against the plan: 100%), the project period exceeded the plan (ratio against the plan: 116%), because the construction work was delayed due to the bad access to one of the sites in the rainy season. Another factor is that the contractors' arrangements such as the payment of workers, acquisition of materials, and equipment rental were delayed since the execution of project obligation of the municipalities (i.e. tax exemption measures) was delayed. The outputs of the project were produced as planned. Therefore, efficiency of this project is fair.

#### 4 Sustainability

The constructed classrooms and procured furniture have been operated and maintained by each school and the Municipal Government of Potosí and Sucre. Under the New Education Law (2010 promulgated), active involvement of the parents' committee in school management is encouraged, such as participating in planning and monitoring and school activities, assisting the school in making requests to the municipal government or the education office, etc. For facility cleaning, a janitor is hired at all schools in Potosí and Sucre. At the time of the ex-ante evaluation, it was expected that 182 teachers and 8 would be newly appointed in Potosí and Sucre, respectively, but actually 87 and 15 were hired by the time of ex-post evaluation. Due to the shortage in teachers in Potosí, classrooms constructed by the project are not used in two schools. Also, employment of the principal and other staff for three newly established schools were planned, but the secretary is vacant in two schools and so is

<sup>4</sup> The enrollment in 2007 was overestimated, as the schools used to report the enrollment more than actual to obtain more school resources and items in the ex-administration (source: District Education Office of Sucre).

<sup>5</sup> According to the District Education Office of Potosí, the low registration in one school is attributed to the low population growth in the area, so that the annual increase in enrollment is less than planned.

<sup>6</sup> The project expected to accommodate 36 students in one classroom according to the Outline Design Study Report for the Project (March 2008), but the maximum number of the students in one classroom has been decided as 40 for primary and secondary schools according to the Ministry of Education (Ministry Resolution 001/2014).

<sup>7</sup> The number of the students in one classroom varies. In Potosí, the minimum is 25 and the maximum is 50, and in Sucre the fewest is 7 and the most is 57.

<sup>8</sup> The factors of enrollment concentration in urban schools is considered as the following; (i) the flow of population from rural to urban areas increased, (ii) the good reputation of urban schools (e.g. proud tradition, good facility and so on)

the guard in all schools, because of the financial constraints of the Department Office of Education. However, the tasks of the secretary and guard are covered by the principals and janitors, so no problem is observed at the time of ex-post evaluation<sup>9</sup>.

With regard to the technical aspect for facility operation and maintenance (O&M), when the schools or the parents' committee cannot cope with physical problems of the facility, they report to the Municipal Government, which provides the school with the operational expenses and technical support. The municipal technical officer explains the schools about the appropriate use of the school facility and furniture. As an interesting example, the Municipality of Sucre organized a contest in which the schools competed on the better cleaning and maintenance.

In the financial aspect, both Municipal Government of Potosí and Sucre increased their budget and expenditure for operating expenses and investment in the education sector (Budget: Potosí: 18,405 thousand Bs. in 2006 to 20,724 thousand Bs. in 2013, Sucre: 25,485 thousand Bs. in 2006 to 37,019 thousand Bs. in 2013). As the expenses for O&M are budgeted based on the application from the school committees, the budget is sufficient both in Potosí and Sucre. Besides, the municipal government has a budget for the maintenance of school infrastructure, from which expenses such as repainting of steel fittings can be paid out. However, the budget for recruiting teachers is not sufficient in Potosí, and some schools tentatively hire teachers with their own budget, which is from parents' compensation<sup>10</sup>.

So as to the current status of O&M, the school facility is daily swept and weekly wet-mopped by the janitor. The larger-scale cleaning for walls, floors, glasses, etc. is conducted once or twice per year, by the students together with the teachers and parents. Among the problems identified in the inspection conducted by the contractor of the project in 2011, just a few problems (e.g. crack in the ceiling and floor, loss of the door knob and stoppers, disappearance of the chair plate and laminated surface of the table) are observed in 15 sites. Most of the problems were caused by the inappropriate use of the students of the secondary schools. Some schools have a difficulty in purchasing spare parts including toilet tank covers and floor tiles. For future maintenance plan for repainting walls/ceiling and steel fittings, which is expected in five and 10 years after the construction, the Municipal Governments will make the plan with assured budget after they receive the application from the schools.

Some problems were observed in the institutional aspect, financial aspect and the current status of O&M; however no problem has been observed in the technical aspect. Therefore, sustainability of this project effect is fair.

#### 5 Summary of the Evaluation

This project has achieved its objective of "improving the learning environment in 15 sites in the Municipality of Potosí and 15 sites in the Municipality of Sucre." The number of "usable" classrooms increased, but not all of the classrooms are being used because of the shortage of teachers. The project also aimed to decrease the density in the classroom in urban central schools, but the over-registration in these schools remains the same. On the other hand, the constructed facility and procured furniture improved the teaching-learning environment. The decrease of the dropout and repetition is considered as an impact of the project. No negative impact has been reported. Regarding the efficiency, the project period exceeded the plan, although the cost was within the plan. As for the sustainability, there are slight problems in the institutional aspect and financial aspect (Potosí) and the current status of O&M (Potosí and Sucre).

In light of the above, this project is evaluated to be satisfactory.

### III. Recommendations & Lessons Learned

Recommendations to implementing agency:

To the Municipal Government of Potosí and Sucre:

- It is recommended to include construction of the principal's room, storehouse and janitor's lodging in the investment plan, as some schools are using those classrooms constructed by the project for these purpose as of the time of ex-post evaluation while they are faced with increasing enrollment.
- It is crucial to execute the works required for enabling the toilets, such as pumping from another water supply and building the septic tank so that the students could use them and enjoy the sanitary environment.
- It is necessary to organize an activity which encourages the students of the secondary level on the appropriate use of the school facility, so that the classrooms and furniture could not be deteriorated easily.

To the Department Office of Education of Potosí:

- Some constructed classrooms are not utilized due to the shortage of teachers. It is recommended to increase the teachers in Potosí, so that sufficient classrooms could be organized to give more learning opportunities for the students with the use of constructed classrooms and equipment. This will also result in the appropriate number of the students in one classroom.

To the Ministry of Education

- It is important that the Ministry of Education may consider expanding the budget for employment of new teachers mainly in schools in the city of Potosí, considering the lack of use of classrooms due to lack of teachers

Lessons learned for JICA:

- The period of this project exceeded because of the bad access to one of the sites in Sucre in the rainy season. Also, there was a difficulty in hiring a company to build sewer pipes in a rural area. One of the characteristics of Grant Aid for Community Empowerment is to implement the project to utilize the local contractors thus reducing the project costs. However, in applying this scheme, JICA should carefully consider not only economic efficiency but also whether local contractors exist who can provide the requested services with proven technical expertise and experience working in rural areas. This scheme must be applied to the countries where it is considered that the implementation of the project using local contractors is appropriate.

<sup>9</sup> According to the Department Education Office of Chuquisaca, the Article 33 of the Rules of Administration and Operation of Schools of the Preprimary, Primary and Secondary defines the responsibilities of the janitor as safekeeping of the school facilities and materials, leading and supporting of the cleaning work of the person in charge.

<sup>10</sup> In the academic year 2015, the Department Office of Education of Potosí provides teaching posts of the fifth category with financial resources from the Direct Tax on Hydrocarbons of the Department Government of Potosí as the department's policy, until the posts are assigned by the Ministry of Education.



(A constructed classroom with two blackboards)



(A large school playground)