

Lao People's Democratic Republic

FY2016 Ex-Post Evaluation of Japanese Grant Aid Project

The Project for the Improvement of School Environments in Champasack and Savannakhet
Provinces

External Evaluator : Yudai NISHIYAMA, INTEM Consulting Inc.

0. Summary

The objective of this project was to improve the quality of primary and lower secondary education in Champasack province and Savannakhet province in the southern region by constructing facilities and providing equipment for 91 primary and lower secondary schools and improving school environment.

At the time of the ex-post evaluation, securing access to high quality primary education and lower secondary education in the two southern provinces continues to be a priority issue. The project is consistent with development policy. In the two target provinces there is still a high need to support the rebuilding of school buildings. Since this project is consistent with Japan's ODA policy at the time of planning as well, the relevance of this project is high.

Although the cost of this project was within the plan, the project period exceeded the plan. So, the efficiency is considered fair.

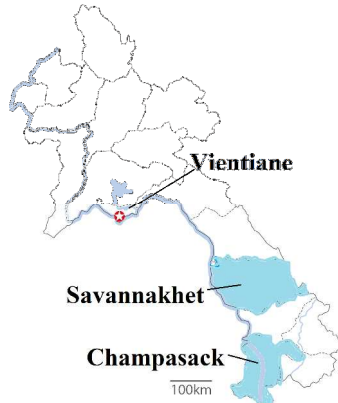
In this project, some problems remain in terms of the achievement rate of the actual against the target in the indicator of "The number of students who can study in a decent learning environment" which is one of the quantitative effect indicators. But other quantitative and qualitative effects indicators are generally high.

Regarding the impact, the indicators were set according to quantitative effects and qualitative effects in which the planned effect was observed such as with an improvement of the net enrollment rate of the target schools and with increased awareness of students' sanitation needs due to the improvement of the toilets. Also, another observed impact included students' willingness to attend school, improving motivation for teachers' teaching and girls' willingness for schooling. Therefore, the project's effectiveness and impact are considered high.

The executing agencies and communities of this project have the necessary operational and maintenance techniques to maintain the effectiveness of this project. On the other hand, some problems have been found in the community-level operation and maintenance system. Thus, sustainability is viewed as fair.

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

1. Project Description



Project Locations



Phonethong primary school
built under this project
(Champasack, Phonethong)

1.1 Background

“The Sixth National Socio-Economic Development Plan (NSEDP: 2006-2010)” of Lao PDR adopts the goal of “the qualitative and quantitative improvement of human resources through educational reform” in the educational sector, which ranks as one of the top priority sectors. In particular, dissemination and improvement of basic education is a prerequisite for sustainable economic growth and poverty reduction in the future, positioned as a priority for promoting human resource development to support fundamental solution of poverty and national development. As a result of these efforts, the primary Net Enrollment Rate¹(hereinafter referred to as “NER”)improved from 82.5% in 2002 to 92.7% in 2008.

However, the southern region close to the Cambodian-Vietnamese border positioned as the CLV (Cambodia, Laos, and Viet Nam) Development Triangle Area still had a high poverty rate² compared to the Lao nationwide average. In addition it was supported that Provincial Education and Sports Service (hereinafter referred to as “PESS”) confirmed the needs through District Education and Sports Bureau (hereinafter referred to as “DESB”) and was planning to develop a reinforced concrete school, Champasack and Savannakhet provinces located in the southern region were still afflicted with a severe shortage of school buildings and classrooms. Even though there were school buildings, many of them were dilapidated and/or temporary ones requiring urgent rebuilding. Overall, the education environment was quite poor in the provinces³. In 2005 there was still a bad situation, with about 20% of villages without primary schools. Furthermore in Laos as the lower secondary education had been extended from 3-years to 4-years since FY2009/10, additional classrooms were needed in lower secondary

¹ NER= (corresponding education level school enrollment population ÷ relevant education level population) × 100

² Source: Final report on Lao PDR poverty profile survey (2010) p.8

³ Source: outline design survey report P.3-1

schools urgently due to the lack of classrooms in lower secondary schools. Against this background, the Government of Lao PDR has requested the Government of Japan to provide grant aid for the construction of facilities and provision of equipment for the primary and lower secondary schools in Champasack province and Savannakhet province, to further improve the school environment in the southern region.

1.2 Project Outline

The objective of this project is to improve the quality of education in primary and lower secondary education in Champasack province and Savannakhet province in the southern region by constructing facilities and providing equipment for 91 primary and lower secondary schools and improving school environment in these two provinces.

G/A Grant Amount / Actual Grant Amount		1,018 million yen / 1,018 million yen
Exchange of Notes Date		June 2010/June 2010
Executing Agency		Ministry of Education and Sports ⁴ , Department of Planning
Project Completion Date		January ,2013
Contracted Agencies	Main Contractor(s)	Construction : Kampouang Construction Co., Ltd., Vannavong Construction Co., Ltd., ST Construction Co., Ltd, Khounmixay and Khounkham Joint-Venture Co., Ltd, Samphamith Construction Co., Ltd, Douangphachanh Construction Co., Ltd, Phounethavy Construction Co., Ltd, Khampasong Construction Co., Ltd and Khonexay Construction Company, Sisaketh Construction Building, Road-Bridge and Irrigation Co., Ltd, Sengthong Construction Co., Ltd and Vieng Xay Construction Co., Ltd. Joint-Venture, Sompamith Construction CO., Ltd Equipment : Somlith Furniture Factory, Konseng Furniture, Phetochalern Furniture, Heuang Furniture Factory, Lao Charoensin Co., Ltd, Central Sign Trading

⁴ At the time of project implementation, it was called as "Ministry of Education(MOE)" reorganized in 2011.

	Main Consultant	Mohri, Architect & Associates, INC.
	Procurement Agent	Japan International Cooperation System (JICS)
	Outline Design	July 2009 - March 2010
	Related Projects	<p>【Technical Cooperation】 Supporting Community Initiatives for Primary Education Development in the Southern Provinces (2007-2011) Project for Supporting Community Initiative for Education Development (Phase 2) (2012-2016) Project for Improving In-service Teacher Training for Science and Mathematics Education (2010-2013)</p> <p>【Grant Aid】 The Project for the Improvement of School Environment in Three Southern Provinces (2009)</p>

2. Outline of the Evaluation Study

2.1 External Evaluator

Yudai NISHIYAMA, INTEM Consulting Inc.

2.2 Duration of Evaluation Study

This ex-post evaluation study was conducted with the following schedule.

Duration of the Study: July, 2016 - December, 2017

Duration of the Field Study: November 1, 2016 - November 30, 2016

March 1, 2017 - March 10, 2017

2.3 Constraints during the Evaluation study

Although attempts were made to collect the education statistics data on the target schools necessary for an analysis of impact (NER and NIR(Net Intake Rate)), no reliable data could be obtained from DESB partly. The analysis for achievement of impact evaluation was therefore carried out using data for the target district partly as complementary information.

3. Results of the Evaluation (Overall Rating: B⁵)

3.1 Relevance (Rating : ③⁶)

3.1.1 Consistency with the Development Plan of Laos

“The Sixth National Socioeconomic Development Plan (NSED: 2006-2010)” of Lao

⁵ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁶ ③: High, ②: Fair, ①: Low

PDR adopts the goal of “the qualitative and quantitative improvement of human resources through educational reform” in the educational sector, which ranks as one of the top priority sectors. Also in 2009 the Ministry of Education (MOE) set Education Sector Development Framework (ESDF, 2009-2015) as comprehensive education programs. The ESDF guaranteed the equal access of educational services as one of its strategies. The development of educational facilities targeting the provision of multi-grade classrooms in the villages that could not provide 5 year primary education and the provision of the secondary education classrooms was one of its means. At the 8th NSEDP (2016-2020) at the time of the ex-post evaluation, the education sector continues to be a priority area, and efforts to expand opportunities for access to high-quality education are continuously conducted. Construction and refurbishment of educational facilities are cited as one means for that. The 8th Education Sector Development Plan (hereinafter referred to as "ESDP") (2016-2020) also put the education sector as one of the top priorities to get out of the least developed countries by 2020.

As mentioned above, Laos development policy had not changed at the time of planning and ex-post evaluation, and the development policy of Laos is consistent with this project.

3.1.2 Consistency with the Development Needs of Laos

At the time of the ex-ante evaluation of this project, in Champasack province and Savannakhet province the number of school buildings and classrooms were significantly insufficient due to the increased primary school enrollment ratio, and overcrowded classrooms made it difficult to continue learning. As of 2009, existing school buildings themselves were also in need of rebuilding because 50% to 60% of the schools in the area were obsolete with wooden temporary school buildings or semi-permanent school buildings and the learning environment was poor.

As of the ex-post evaluation, as a result of confirming the current state of the existing classrooms in FY2015 at PESS, 16.7% in Champasack province and 16.9% in Savannakhet province are temporary school buildings or wooden semi-permanent school buildings. It was confirmed that the learning environment continued to be poor. Regarding the number of overcrowded classes, 10.3% of primary schools and 10.7% of lower secondary schools in Champasack and 8.1% of primary schools and 24.3% in lower secondary schools in Savannakhet province were still conducting lessons in overcrowded classes.

Regarding the enrollment rate of primary school at the time of planning, the national average, and the averages for Champasack province and Savannakhet province in 2008 were 92.7%, 93.5%, 85.0% respectively. The enrollment rate of lower secondary school was 62.7%, 55.2%, 48.3% respectively. As a result of interviews with the MoES, the enrollment rate of primary school in 2015 at the time of ex-post evaluation was 98.4% as a nationwide average, 98.4% in

Champasack province, 99.1% in Savannakhet province, and the enrollment rate in lower secondary school in 2014 was 78.1 %, 63.7%, 61.7% respectively. The school environment and access has been improved due to the steady increase in the number of schools, and the enrollment rate has increased.

From the above, there is no difference in consistency with the development needs from planning through to ex-post evaluation; development needs continue to be high.

3.1.3 Consistency with Japan's ODA Policy

In the Lao Country Assistance Program created in 2009, enhancement of basic education is aimed at promoting poverty reduction, achieving the Millennium Development Goals (MDGs), from the perspective of "human security" out of the three priority issues. Along with that, JICA regards enhancement of basic education as one of six priority areas. Therefore, this project was consistent with Japan's aid policy at the time of planning.

Therefore, this project has been highly relevant to the Lao's development plans and development needs, as well as Japan's ODA policy. Therefore, its relevance is high.

3.2 Efficiency (Rating: ②)

3.2.1 Project Outputs

The output from the Japanese side for this project was the development of educational facilities (classrooms, teacher's rooms, science rooms, toilets) and the procurement of educational equipment (furniture). The output from Laos side was to secure land, dismantling and removal of existing facilities and obstacles, construction work, etc.

Table 1 outlines the output of this project. Regarding the output from the Japanese side, the number of target schools increased by 4 and the number of classrooms increased by 21 after the project. This is because residual funds occurred because of contractor bidding. Among the schools that were subject to planning preparation during the survey but were not subject to implementation due to budgetary reasons, additional inputs were made to four high-priority schools.

Table 1 Planned / Actual number of educational facility

	Number of schools	Number of classrooms	Number of teacher's room	Number of warehouses	Number of science rooms	Number of toilet
Champasack Province						
Primary	35/35	171/171	31/31	34/34	-	30/30
Lower Secondary	15/17	83/93	8/8	14/14	1/1	12/12
Subtotal	50/52	254/264	39/39	48/48	1/1	42/42
Savannakhet Province						
Primary	26/28	92/103	22/22	26/26	-	16/16
Lower Secondary	15/15	60/60	6/6	14/14	1/1	8/8
Subtotal	41/43	152/163	28/28	40/40	1/1	24/24
2 Provinces Total						
Primary	61/63	263/274	53/53	60/60	-	46/46
Lower Secondary	30/32	143/153	14/14	28/28	2/2	20/20
Subtotal	91/95	406/427	67/67	88/88	2/2	66/66

Source: Information provided by MoES

Note: Shaded areas are numbers where changes (increases) were made in planned and actual results

In addition, we confirmed as a result of interviews with the MoES that the quantities of items such as blackboards, desks, chairs and storage shelves that were delivered were more than what was planned for. In addition to the initial plan, as described above, residual funds occurred. Thus additional 11 classrooms of primary school and 10 classrooms of lower secondary school are developed as well as the its school equipment.

Regarding the output from Laos side, as a result of interviewing MoES to see if the input was implemented as planned, there was a response that the output was carried out as planned. At the time of the school visit by the evaluator, it was checked that the items to be borne and inputs by Laos side were implemented by visual confirmation of the site⁷.

3.2.2 Project Inputs

3.2.2.1 Project Cost

At the time of planning, the project cost was 1,018 million yen, and the actual result was 1,018 million yen, which was as planned. The details of the project costs borne by Laos were not obtained.

3.2.2.2 Project Period

⁷ The items to be borne by Laos side such as dismantling of existing facilities and obstacles, external construction work, connection of electricity, securing of water supply etc. were visually checked on the site by evaluator.

The project period was 22 months⁸ in the plan, whereas the actual result was 32 months, exceeding the plan (145% compared to the plan). The reasons for the difference in the project period are: 1) construction of additional schools due to the generation of surplus (output increase), 2) delay in the procedures concerning the construction at additional schools, 3) delay in delivering equipment to additional schools due to the generation of remaining money. The extension procedure itself was in accordance with the formal procedure, which was an extension of the inevitable construction period to use the remaining money. Even if surplus money had not been generated, the plan was exceeded by 123%⁹ of the planned duration in implementation. And the actual result of only residual money was 156%¹⁰, exceeding the plan. So, efficiency declined.

From the above, the project cost was within the plan but the project period exceeded the plan, so the efficiency is fair.

3.3 Effectiveness¹¹ (Rating: ③)

Regarding the effectiveness, to confirm the improvement situation of the school environment at the target schools which is the objective of this project, following indicators of quantitative effects¹² were confirmed and evaluated at the ex-ante evaluation; 1) Number of the decent classrooms 2) Number of students in decent classrooms. At the time of this ex-post evaluation, in addition to these, following indicators were set 3) Number of schools conducting overcrowded classes and 2-shift classes 4) Number of schools with newly provided toilet and actually used¹³ 5) Number of schools with newly provided teacher's room and actually used 6) Number of schools with newly provided science room and actually used, as additional indicators and evaluated. Furthermore, as an indicator of the qualitative effects 1) Student's satisfaction towards the school facility, was used and evaluated.

3.3.1 Quantitative Effects(Operation and Effect indicators)

The level of achievement¹⁴ of the quantitative effectiveness of this project is as follows.

⁸ Including two months from the signing date of Exchange of Note (E/N) to the starting date of procurement agency contract in 20 months of implementation as described in the project ex-ante planning sheet

⁹ 123% = 27 months / 22 months (including E/N)

¹⁰ 156% = 14 months / 9 months

¹¹ It is rated by taking impact on the judgment of effectiveness.

¹² At the time of ex-ante evaluation, "The educational environment improves by establishing a facility with appropriate educational environment" was set as a qualitative effect. But it's not effect caused by establishing a facility with an appropriate educational environment. Thus, this indicator is not included in the ex-post evaluation.

¹³ In the ex-ante evaluation, the construction of the toilet was set as an indicator. But because it is the output level, we will evaluate whether it was constructed and is currently used properly. The target of the evaluation is 39 schools with newly constructed toilet in this project.

¹⁴ The survey was conducted and analyzed from telephone survey and school visit to all schools covered by the project (52 schools in Champasack and 43 schools in Savannakhet, 95 schools in total).

Table 2 Comparison between target and actual of operation and effect indicators

	Baseline	Target	Actual					Achievement Level (2016)	
	2009	2015	2012	2013	2014	2015	2016		
	Planned Year	3 years After completion	Completion Year	1 Year After Completion	2 Years After Completion	3 Years After Completion	4 Years After Completion	Actual /Target	
Number of decent classrooms ¹⁵	Primary 106	Primary 380	Primary 266/380	Primary 277/380	Primary 282/380	Primary 301/380	Primary 296/380	Primary 77.9 %	
	L/S ¹⁶ 107	L/S 260	L/S 217/260	L/S 203/260	L/S 199/260	L/S 199/260	L/S 219/260	L/S 74.7 %	
Number of schools with overcrowded classrooms ¹⁷ or 2 shift classrooms	NA	Primary 0 L/S 0	Overcrowded	Overcrowded	Overcrowded	Overcrowded	Overcrowded	Overcrowded	Overcrowded
			Primary 34/63	Primary 29/63	Primary 29/63	Primary 28/63	Primary 29 /63	Primary 54.0 %	
			L/S 17/32	L/S 16/32	L/S 18/32	L/S 17/32	L/S 17 /32	L/S 46.9 %	
			2 shift	2 shift	2 shift	2 shift	2 shift	2 shift	
			Primary 0 /63	Primary 0 /63	Primary 0 /63	Primary 0 /63	Primary 0 /63	Primary 100 %	
L/S 0 /32	L/S 0 /32	L/S 0 /32	L/S 0 /32	L/S 0 /32	L/S 100 %				
Of the constructed 427 classrooms, number of used classrooms	N/A	N/A	N/A	N/A	N/A	N/A	Primary 256 /274 L/S 153 /153	Primary 93.4 % L/S 100%	
Number of schools with newly provided toilet and actually used	Primary 0/46	Primary 46/46	Primary 46/46	Primary 46/46	Primary 46/46	Primary 46/46	Primary 43/46	Primary 93.5 %	
	L/S 0/20	L/S 20/20	L/S 20/20	L/S 20/20	L/S 20/20	L/S 20/20	L/S 19/20	L/S 95.0 %	

¹⁵ The indicator in the ex-ante evaluation of this project is "a classroom in a decent environment" and it is the same as the number of students with decent environment when multiplied by the number of students per class given in the Laos educational quality standard . Therefore, this indicator is the target number set based on the Laos educational quality standards. Therefore, in this ex-post evaluation, the "decent environment" is defined as "the number of classrooms in a decent environment" and "the number of classrooms within 32 students per a classroom in primary school and 40 students per a classroom in lower secondary school classrooms of Laos educational quality standard and evaluated.

¹⁶ Lower Secondary

¹⁷ Based on the project ex-ante evaluation sheet, 33 students or more per a classroom in the primary school and 41 students or more/ classroom in lower secondary school is calculated as overcrowded class.

Number of schools with newly provided teacher's room and actually used	Primary 0/53 L/S 0/14	Primary 53 L/S 14	Primary 53/53 L/S 14/14	Primary 53/53 L/S 14/14	Primary 53/53 L/S 14/14	Primary 53/53 L/S 14/14	Primary 53/53 L/S 14/14	Primary 100 % L/S 100 %
Number of schools with newly provided science room and actually used	L/S 0/2	L/S 0/2	L/S 0/2	L/S 0/2	L/S 0/2	L/S 0/2	L/S 0/2	L/S 0 %

Source: Provided by JICA(Baseline/ Target), and executing agencies(Actual)

Note: L/S (Lower secondary school)

With respect to the number of decent classrooms in the target schools, 296 classrooms for all 358 classrooms of the primary school and 219 classrooms for all 293 classes of the lower secondary were in a good condition in 2016, 4 years after project completion. In addition, 77.9% of the classrooms of targeted primary schools and 74.7% of the classrooms of targeted lower secondary schools achieved the standard of having a good environment. Thus the indicator has been achieved as the score approximately reached the target.

Both primary and lower secondary schools conducting overcrowded classes or 2 shift classes at the target schools are 0 and indicators have been achieved. Regarding the number of schools conducting overcrowded classes, 29 schools (54%) for 63 primary schools and 17 schools (53.1%) for 32 lower secondary schools. The average number of students per class in primary classrooms where overcrowded classes are being conducted is 45 people / classroom¹⁸, and the average class size of all classrooms is 25 people / classroom¹⁹. Meanwhile, the average class size of overcrowded classes for lower secondary is 44 students / classroom²⁰. And the average number of one classroom in all classrooms is 35 students / classroom²¹. As a result of analyzing the number of students per classroom with the frequency distribution, as shown in Fig. 1, the number of classrooms (red line in the figure) which is conducting overcrowded classes with primary and lower secondary students has not exceeded the standard largely.

Of the 427 classrooms constructed in this project, there were 18 unused classrooms in total.

¹⁸ There are 2,775 total students in the classroom where overcrowded classes are held and 62 total overcrowded classrooms. Therefore, the average number of students per overcrowded classes is 45 students.

¹⁹ The target school has 8,890 total students and has 358 classrooms. Average number of students per classroom is 25.

²⁰ There are 3,268 total students in the classroom where overcrowded classes are held and 74 total overcrowded classrooms. Therefore, the average number of students per overcrowded classes is 44 students.

²¹ The target school has 10,211 total students and has 293 classrooms. Average number of students per classroom is 35.

The main reasons for the classroom not being used are as follows with the results of the interview from the principal of each school; 1) a shortage of teachers 2) decrease in the number of students since planning

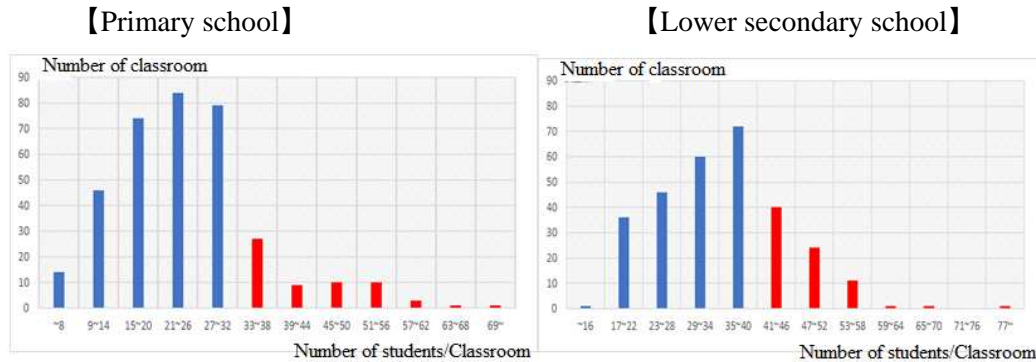


Figure 1 Frequency distribution of the number of students per classroom in primary and lower secondary school

Source: Information provided by school

In this project, toilets were newly provided and actually used at 43 (93.5%) for 46 primary schools and 19 (95.0%) for 20 lower secondary schools at the target schools. So the indicator has already been achieved. Teachers' staffrooms were provided and actually used at 53 primary schools and 14 lower secondary schools at target schools in this project. Indicators have been achieved since all target schools are provided and used as planned.

The science laboratory was newly developed at the 2 lower secondary model schools in this project. At the time of planning, it was expected that the lesson implementation in line with regular curriculum and the improvement of educational quality would be promoted by the development of science laboratories. However, neither of the two science laboratories are used as a science laboratory, one is used as an ICT classroom²², and the other one is used as an ordinary classroom. It is because the budget of the experimental equipment cannot be prepared by the school side and DESB. In addition to that, the priority of ICT classes is superior to the science classes for both schools and DESB.

²² The computer was installed with the support of other donors. There was concern that there would be a shortage of teachers who could manage the experimental equipment or teach experiments. The science room was installed at the time of planning as a room that can be used as a science room in the future.

Table 3 Comparison of target and actual number of effectiveness indicator

	Base line	Target	Actual					Achievement Level (2016)
	2009	2015	2012	2013	2014	2015	2016	
	Planned Year	3 Years After Completion	Completion Year	1 Year After Completion	2 Years After Completion	3 Years After Completion	4 Years After Completion	Actual /Target
Number of students in decent classrooms (Upper: Number of students in decent classrooms / Lower: Total number of students)	7,672	22,496 ²³	Primary 5,824 /10,004 L/S 6,007 /9,729 Total 11,831 /19,733	Primary 6,104 /9,518 L/S 5,487 /9,637 Total 11,591 /19,155	Primary 5,995 /9,173 L/S 5,822 /10,241 Total 11,817 /19,414	Primary 6,321 /9,154 L/S 6,069 /10,571 Total 12,390 /19,725	Primary 6,114 /8,890 L/S 6,943 /10,211 Total 13,057 /19,101	58.0 %

Source: Provided by JICA(Baseline and target are), and executing agency (Actual)

Note: L/S (Lower secondary school)

For the number of students in decent classrooms, the actual number at 4 years after completion is 13,057 (6,114 in primary school and 6,943 in lower secondary school) for 14,152 of the target. So the achievement level is 58.0% (13,057 / 22,496). At the project completion in 2010, a target number of 22,496 students was set. But as most recently as 2016 the actual number of students was 19,101. The fact that the total number of students has not increased as expected is one of the factors that reduced the achievement. The population of Lao PDR nationwide increased steadily from 1985 to 1995 at an annual rate of 2.47%, and from 1995 to 2005 at an annual rate of 2.08% which is more than 2% or more. However, from 2005 to 2015, the population growth rate declined at an annual rate of 1.45%. It is pointed out that the population is draining to the neighboring country, especially Thailand for economic reasons. Moreover, it is worth pointing out that the population of Champasack province has undergone a

²³ The number of students at baseline is 7,672. The number of student's capacity of classrooms and science rooms constructed in this project is 14,152 (261 classrooms in primary school × 32 students + 143 classrooms in lower secondary school × 40 students + 2 classes in science room × 40 students = 8,352 + 5,720 + 80). The number of students of the classrooms added with residual money is 752 (11 classes in primary school × 32 students + 10 classes in lower secondary school × 40 students). However, since the science room is not a classroom used always, and since it is a double count with ordinary classrooms, 80 students (2 classrooms × 40 students) are subtracted from the total and 22,496 students (7,672 + 14,152 + 752 - 80 = 21,744) was re-set and used as the target of effectiveness indicator.

1.3% decrease and that of Savannakhet province a 1.6% increase. In addition, the two provinces have advanced the concentration of population in the center of the province²⁴.

3.3.2 Qualitative Effects(Other effects)

(1) Student’s satisfaction²⁵ towards school facilities has improved

Construction of classrooms and procurement of classroom furniture has led to an improvement of the satisfaction level of the students about the school facilities. We conducted a beneficiary survey²⁶ and measured the "satisfaction level of the students on classroom". Satisfactory results for all items of classroom size, ventilation / temperature, floor and walls, educational furniture (chair, desk) were high as 4 or more out of 5. In addition, the results of the survey on the 5th graders who experienced the situation before and after the the project also showed an improvement of satisfaction. Before the project the results showed that all items were less than 4, while after the project it showed that all items were more than 4.

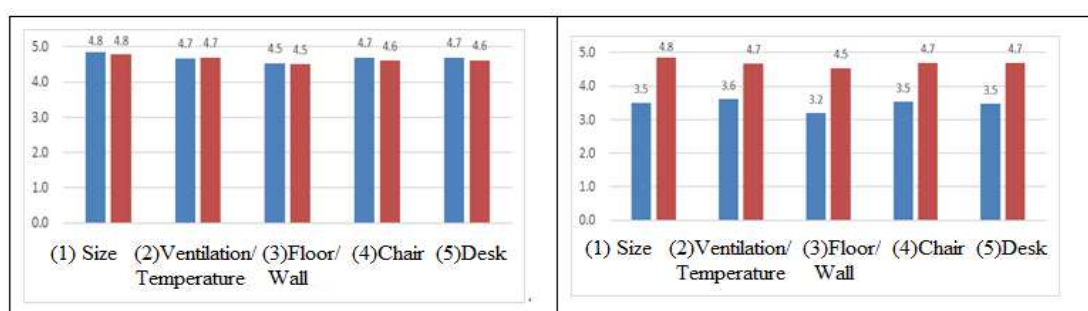


Figure 2 Satisfaction level of students' classroom (left) and 5th grader students' satisfaction level, who experience the situation before and after the project.

Source: Beneficiary survey

3.4 Impacts

This project was expected to contribute to improving of the quality of education in the two southern provinces through the improvement of the school facilities. The enrollment rate, which is the most commonly used to evaluate how the improvement of education quality has impacted

²⁴ Lao Statistic Bureau (2015) Result of population and housing census (National Census), p.11, p.21~30

²⁵ The degree of satisfaction was surveyed in five stages of "very agree", "I think so", "Fair", "do not agree", "not at all".

²⁶ Beneficiary survey was conducted on sites visited by evaluators in Champasack and Savannakhet provinces. The questionnaire survey was entrusted to a local consultant. Total sample number of students is 240 (130 in primary schools, and 110 in lower secondary schools.). Total sample number of teachers is 113 (59 in primary schools, 54 in lower secondary schools). 3 classes were randomly selected at each school. After that student samples were randomly selected from student’s list considering the ratio of male and female. Teachers were randomly selected from teacher’s list. The ratio of students' samples in primary school is 65 for boys and 65 for girls, in lower secondary school 55 in boys and 55 in girls.

on education access, was set as an indicator for this evaluation survey. The following indicators were set as quantitative effects for this ex-post evaluation and evaluated; 1) Net enrollment rate of the target school, 2) Net intake rate of the target school, 3) Enrollment rate of girls in the schools in which toilets were developed. In addition, as indicators of qualitative effects the following indicators were set for this ex-post evaluation and evaluated; 1) With the provision of science rooms the lesson accordance with official curriculum of lower secondary education has been promoted 2) With the provision of toilet, students' awareness of hygiene has been improved, 3) With the improvement of school facilities the community in target schools has been better motivated for school education

3.4.1 Intended Impacts

(1) Quantitative effect

1) Improvement of the net enrollment rate of target schools

Regarding the net enrollment rate, which is an indicator of "access to education", when comparing the previous year of implementing project and the year of completing project both primary and lower secondary schools in all districts except Pakse²⁷ in Champasack province have increased or remain the same as shown in Fig3. Both primary and lower secondary schools in Savannakhet province have slightly increased or remain the same as shown in Fig5. From the above results²⁸, some impact on educational access is recognized. In an interview survey with the principal and the community, the following opinions were obtained; "As the learning environment was improved, the children became more active for schooling.", "The financial burden of the parents involved in the repair was reduced since the school was newly renovated. As a result, child was able to continue to attend school." It can be seen that this project contributed to some extent in improving the enrollment rate.

²⁷ One of five target schools in Pakse district is in a small village with about 30 students. The low enrollment rate of this school is a factor that lowers the average of Pakse district.

²⁸ For those schools where some reliable data could not be obtained, we analyzed using the statistical data of the target district level supplementary.

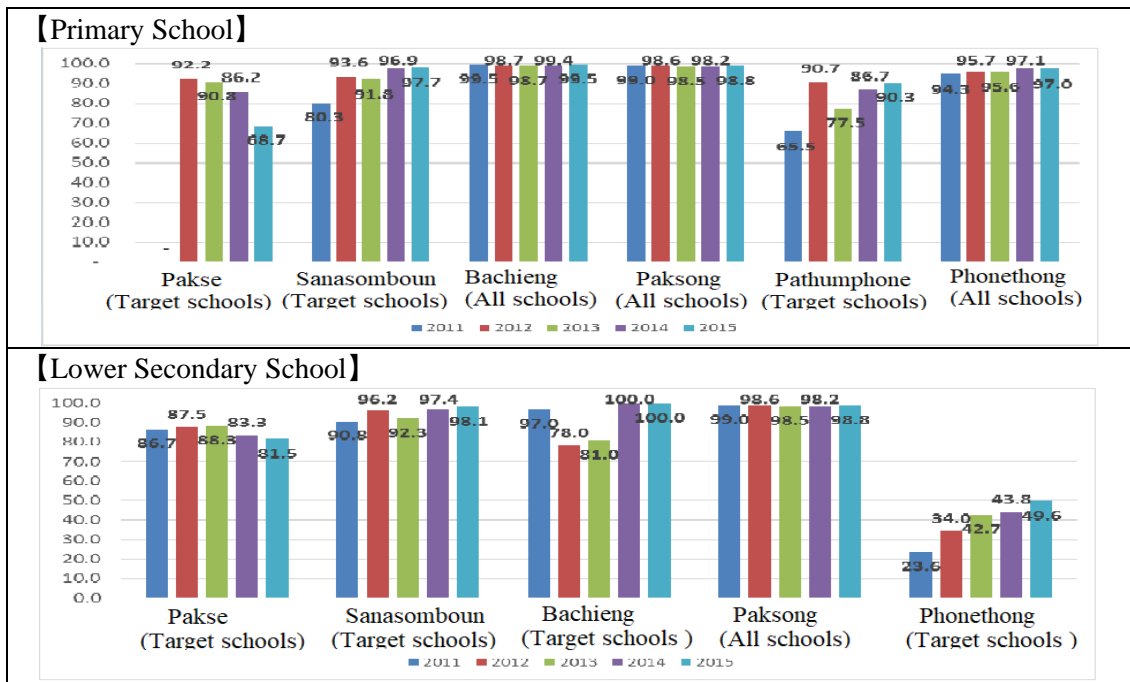


Figure 3 Net enrollment rate (NER) of primary and lower secondary schools in Champasack province

Source: Data provided by DESB

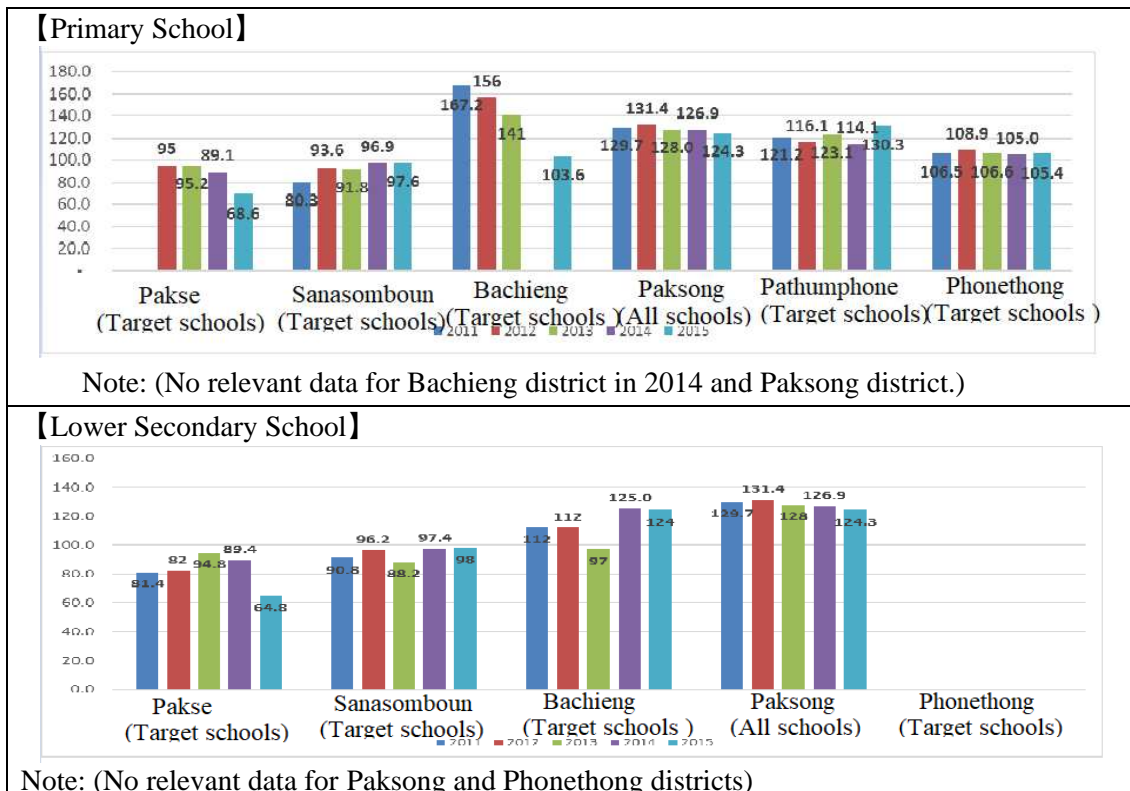


Figure 4 Gross enrollment rate (GER) of primary and lower secondary schools in Champasack province

Source: Data provided by DESB

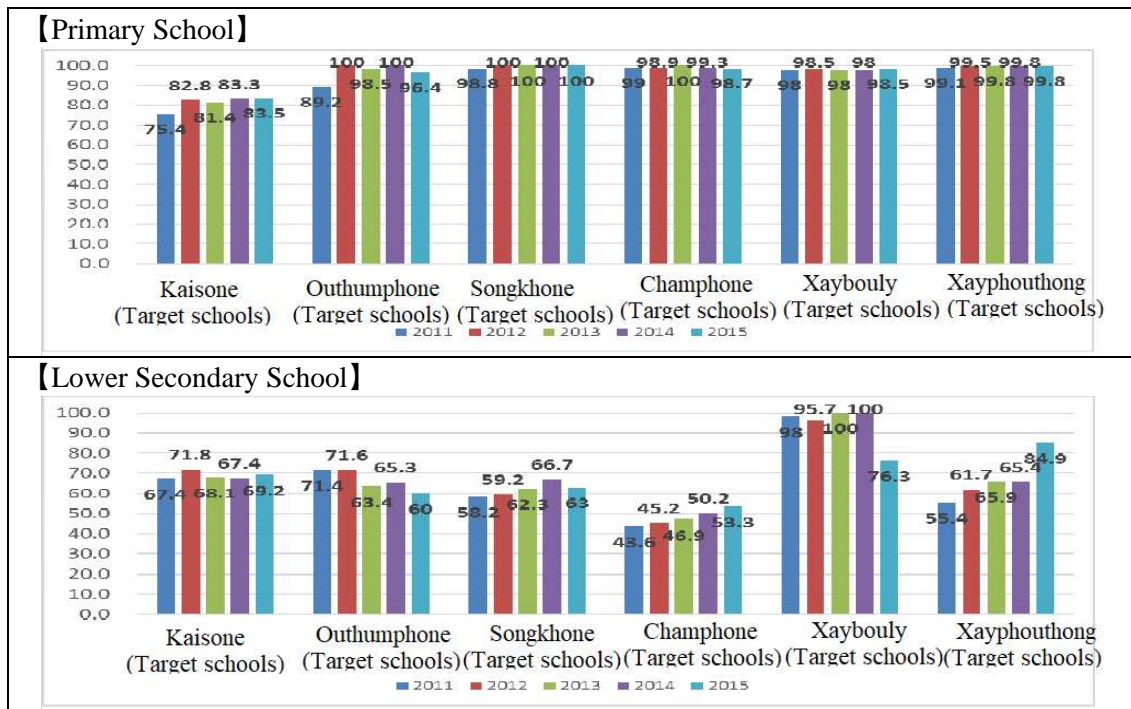
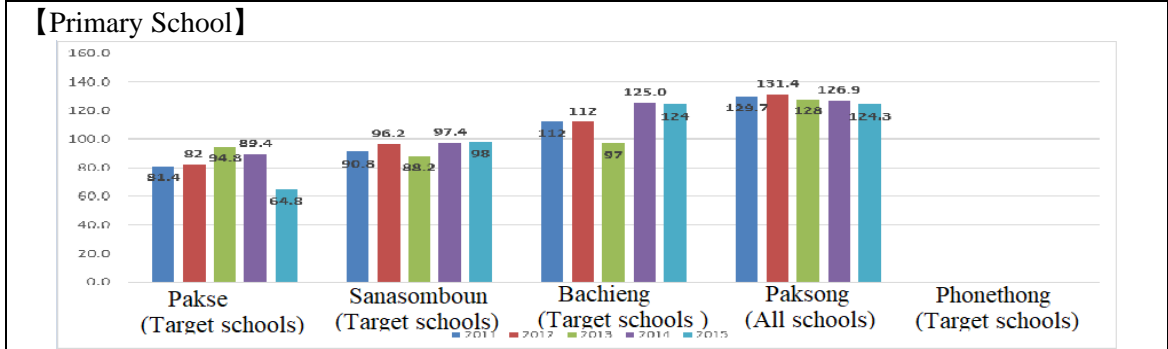


Figure 5 Net enrollment rate (NER) of primary and lower Secondarysecondary schools in Savannakhet province

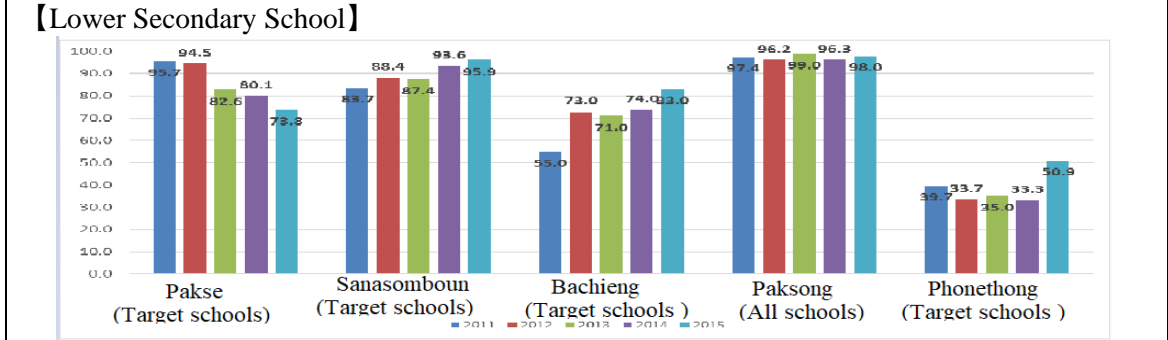
Source: Data provided by DESB

2) Improvement of the net intake rate of the target schools

The net intake rate of both primary and lower secondary schools in all districts in Champasack province have increased or remain the same except Pakse. In Savannakhet the net intake rate of primary schools is the same and its lower secondary has improved except for Kaisone district although there are variations in each district. As for the net intake rate as well as the net enrollment rate, opinions from the community were positive, as one parent put it "My feeling that I want to let my children enroll has strengthened as the learning environment are well developed". This project contributed to some extent to the improvement of the net intake rate.



Note: (No relevant data for Bachieng, Paksong and Phonethong districts.)



Note: (No relevant data for Phonethong.)

Figure 6 Net intake rate (NIR) of primary and lower secondary schools in Champasack province

Source: Data provided by DESB

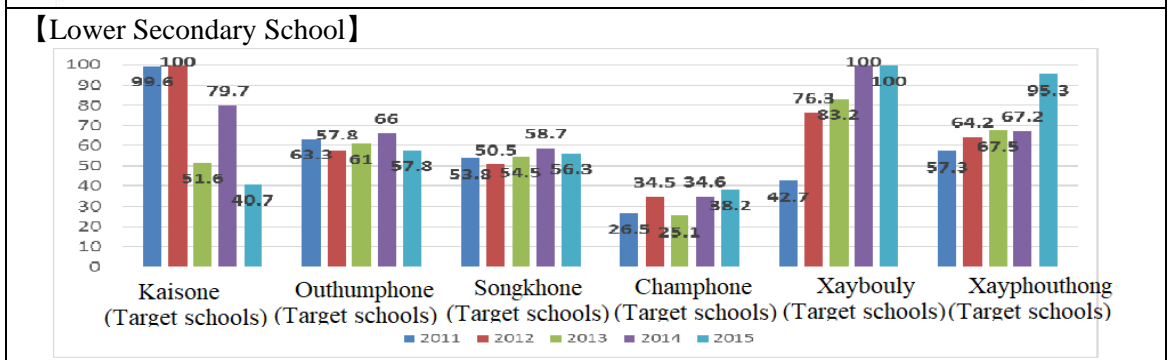
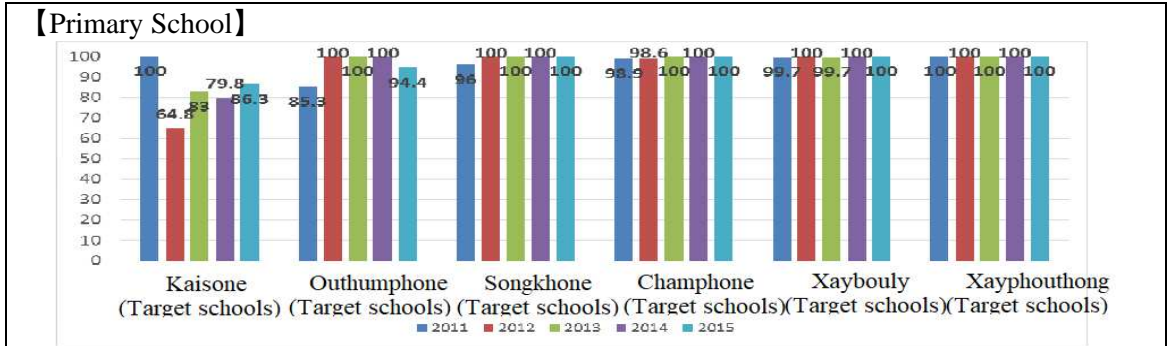


Figure 7 Net intake rate (NIR) of primary and lower secondary schools in Savannakhet province

Source: Data provided by DESB

The proportion of the target schools to the number of schools in the district is as follows.

Table 4 Percentage of target schools to the number of all schools in the district

Province	District	Primary school			Lower secondary school		
		Target	All schools	Coverage	Target	All schools	Coverage
Champasack	Pakse	6	36	16.7%	4	9	44.4%
	Sanasomboun	7	82	8.5%	4	9	44.4%
	Bachiang	7	66	10.6%	1	5	20.0%
	Paksong	5	87	5.7%	3	10	30.0%
	Pathumphone	3	87	3.4%	5	6	83.3%
	Phonethong	9	80	11.3%	0	11	0.0%
	ALL	37	761	4.9%	17	77	22.1%
Savannakhet	Kaison	6	60	10.0%	4	17	23.5%
	Outhumphone	6	72	8.3%	2	9	22.2%
	Songkhone	3	112	2.7%	3	12	25.0%
	Champhone	5	122	4.1%	2	17	11.8%
	Xayboully	5	72	6.9%	3	10	30.0%
	Xayphouthong	1	49	2.0%	1	5	20.0%
	ALL	26	1172	2.2%	15	130	11.5%

Source: Data provided by PESS

(2) Qualitative effects

1) With the provision of science rooms the lesson accordance with official curriculum of lower secondary education has been promoted

Since the science laboratory was not used as planned, there was no impact effect of promoting the implementation of classes in line with the official curriculum of secondary school education.

As already stated in effectiveness, one of the 2 science laboratories has been used as ICT classroom and another one was being used as a regular classroom. As a result of hearing from the National Education and Research Institute of the Ministry of Education and Sports, ICT has become increasingly necessary recently for acquiring computer skills. 21 schools out of 867 public lower secondary schools (2.4%), 132 schools out of 635 public integrated lower and higher secondary schools (20.8%) have ICT rooms and 2 hours of ICT lessons are conducted in lower secondary school each week.

2) With the provision of toilet, students' awareness of hygiene has been improved

It was confirmed that students' awareness of hygiene was improved by improving the toilets. We conducted a beneficiary survey on the change in awareness of students' sanitation concerning 82 teachers (41 primary teachers and 40 lower secondary school teachers). In the

5-stage evaluation²⁹, it scored 5.0 for primary schools and 4.9 for lower secondary schools school³⁰. Comments were positive, such as " Toilet is clean and comfortable for use,," "Students wash hands before meals, and became conscious of hygiene" were obtained from the teachers.

3) With the improvement of school facilities the community in target schools has been better motivated for school education

This project was responsible for a positive impact that has led to an improvement of the community's participation in school education. A beneficiary survey was conducted with 113 teachers (primary school 59 , lower secondary school 54 teachers) of visited schools to evaluate if that community's participation in school education had changed or not after the project. The results show that primary schools had a score of 4.6 and lower secondary school had a score of 4.8 out of 5. In addition, as a result of interviewing principal and the Village Education Development Committee (hereinafter referred to as "VEDC³¹") at 24 visited schools³², monthly subscriptions are collected from the community in 19 of 24 schools. In addition to this, in 8 out of 24 schools visited, the impact of actively participating in particularly school management was confirmed such as constructing school buildings, school gardens, VEDC offices and others mainly by VEDC after implementation of this project. Before this project was implemented, school participation in the communities in these 8 schools had never occurred. Construction costs were not based on support from districts, provinces or donors, but the funds from the community obtained by agreement. It can be said that the project has some positive impact on improving the community's participation in school education.

Table 5 Awareness of community participation in school education

	Number of schools	Percentage
Percentage of schools conducting regular monthly collections from the community	19/24 school	79.2%

Source: Created from interviews with schools

4) With the provision of new classrooms students have increased motivation to study

²⁹ The degree of satisfaction was surveyed in five stages of "very agree", "I think so", "Fair", "do not agree", "not at all".

³⁰ There are 4 schools where toilets are not used, and they are included in survey conducted by random sampling of all schools. Regarding this question, they answered about the situation when the toilet was available.

³¹ VEDC members consist of seven people, village chief, elder's organization representative, principal, faculty representative, female alliance representative, youth alliance representative, and parents' association representative, and they are engaged in the administration of the school.

³² 24 out of 95 target schools (target 2 provinces × 6 districts / province = 12 districts, 1 primary school per 1 district, 1 lower secondary school per 1 district, 2 schools in total) were selected by random sampling and visited and investigated.

As a result of the beneficiary survey, students' motivation to study due to classroom improvement has improved to be 4.0 (primary school) and 4.1 (lower secondary school) out of 5. The following answers were obtained from students; "The school became clean and I am now motivated for study." "There are desks and chairs being maintained and I am well motivated for schooling ."

5) With the provision of new teaching staffrooms teachers have experienced increased motivation for teaching.

As a result of the beneficiary survey, teachers' motivation for teaching has improved to be 4.6 out of 5 for both the primary and lower secondary schools. Its result was quite high. The following answers were obtained from teachers; "The temperature of the room became stable and I can concentrate on my teaching.", "I can continue the lessons even if it rains."

6) With the provision of new toilets female students have increased motivation for schooling

A survey was conducted with 44 primary female students and 40 lower secondary female students in all schools with the provision of new toilet. As a result, female students have increased motivation for schooling by 3.8 in primary and 4.1 in lower secondary school.

3.4.2 Other Positive and Negative Impacts

(1) Impacts on the Natural Environment, Land Acquisition and Resettlement

In this project, as a result of an interview with the executing agency, we confirmed that no particular impact was observed on the natural environment and resettlement of residents and land acquisition.

Based on the above, This project has largely achieved its objectives. Therefore effectiveness and impact of the project are high.

3.5 Sustainability (Rating: ②)

3.5.1 Institutional Aspects of Operation and Maintenance

(1) Institutional Aspects of Operation and Maintenance at MoES

From the time of the ex-ante evaluation to the time of the ex-post evaluation, there is no change in the main functions such as the operation duties etc. regarding the management system. In carrying out the project, under the direction of the Planning and Cooperation Bureau of the Ministry of Education and Sports, the budgetary measures for projects implemented by the provinces, arrangements for teachers concerning school administration, securing teacher salary budgets, etc have been executed. Regarding teacher placements, the required number of teachers based on government standards has not been satisfied due to the lack of current budget.

However, in the hearing from the Director the current number of teachers are enough for the current operation and maintenance. Also it was confirmed by MoES that the improvement policy to eliminate non-regular teachers will be implemented with a high probability during the 8th ESDP implementation. So the lack of teachers due to the classroom development is minor problem.

The organizational chart of the Ministry of Education and Sports is as follows.

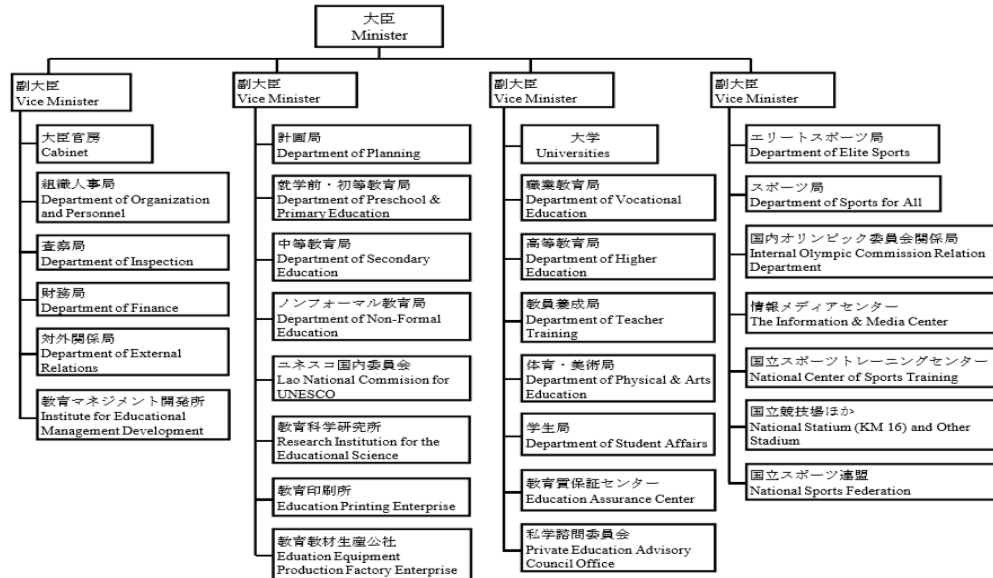


Figure 8 Organization chart of MoES

Source: Confirmed to MoES

The provincial education administration is managed by PESS which is under MoES. Regarding the maintenance and management of the school facilities in the project when the major damages are found VEDC in primary schools and VEDC or parents associations which manage several VEDCs contact to DESB. Since DESB is responsible for coordination and communication between the schools and PESS, it can be said that operation and maintenance at MoES is generally functioning.

(2) Institutional Aspects of Operation and Maintenance at community level

Some problems were confirmed in the coordination system and instructive system in the organizational management at the community level. Active participation in school management by the VEDC was recommended in the 8th ESDP and VEDC was obliged to set up in each village by a ministerial decree³³. The VEDC is organized in primary schools and VEDC /

³³ It was obliged to set VEDC in Minister of Education Order No. 2300 (September 3, 2008) in 2008.

parents association is organized in lower secondary schools for operation and maintenance at each school. For example, one of the lower secondary schools in Sanasomboun in Champasack province students came from 15 villages. So that 15 VEDCs are involved in school management by forming a parent association managed by a principal mainly. The VEDC or parents association regularly inspects school facilities or holds a meeting on school management. They collect contributions from each student's family and use it for repairing facilities or for expenses etc.

Much of the organizational management is left to the school and VEDC / parents association at present. Only 3 out of 95 of the target primary schools which undertook organized training of the VEDC within JICA's "Project for Supporting Community Initiative for Education Development (Phase2)³⁴". In addition to this, the number of workshops was once only. The coordination system and instructional system of VEDC are different for each school and are not necessarily clarified. There are only 10 schools in 24 schools that have organizational charts.

There were 6 out of 24 schools that when the principal retired the knowledge and experience in the previous training, records of financial statements were not inherited properly nor the lack of clarity over the staff in charge of cash management was seen.

3.5.2 Technical Aspects of Operation and Maintenance

(1) Technical Aspects of Operation and Maintenance at MoES

Regarding the maintenance of school facilities institutionally, DESB provides technical assistance including cost sharing. However, due to the limited budget, VEDC / parents associations are often forced to conduct repairs of small breakages and to do daily maintenance. If there are major damages to facilities and equipment, the school contacts DESB and DESB provides the expenses and technical assistance. The MoES is engaged in the operation and maintenance of the school through the distribution of the budget to the districts and provinces instead of providing technical assistance to the schools directly. DESB is also not only involved in this project but also in other school construction projects supported by other donors and NGOs. They have a certain experience and know-how. For example, through holding monthly meetings and periodical training the principal reports the current situation of school to DESB and at the same time DESB also reports the current status of the whole districts or provides workshops to schools. There are some schools which need repairmen partly, but most schools can manage without major repairs.

(2) Technical Aspects of Operation and Maintenance at community level

³⁴ JICA's technical cooperation project that supported the strengthening of the management system and capacity at each level of educational administration to expand and develop the learning and improvement effect of primary education through the activation of VEDC conducted in 2012-2016.

The community has sufficient technical capability in the maintenance of facilities. Concerning the operation and maintenance at the community level a result of conducting an interview survey with the principal and the VEDC is shown in Table 6 below.

Table 6 Community level operation and maintenance situation

Number of schools which understand the procedure when repairs occur	23/24	95.8%
Number of school which have a meeting with VEDC more than once a month	19/24	79.2%
Number of school which maintain the school facilities with VEDC more than once a month	19/24	79.2%

Source: Created from interviews with schools

Almost all schools become familiar with the procedure at the time of a repair occurring. If minor repairs occur to school facilities, a principal will hold a meeting with the VEDC to discuss future repair policies, whether they can be repaired within the budget, whether to support the supplies from the community and whether additional funding is required. If serious repairs are required the school reports to the DESB and submits a document stating the improvement plan. In addition to this, 19 out of 24 schools conducted regular meetings at least once a month between the school and the VEDC. At regular meetings they check the current situation and discuss future plans including school administration, student instruction and community activities. There were 19 out of 24 schools that conducted maintenance of facilities more than once a month. Maintenance tasks such as inspecting the door knob in the classroom, confirming the closing of the window, confirming the clean condition of the toilet, etc. are carried out at each school. In addition to this, after the project, 8 of 24 schools proceeded to rebuild their old school buildings as a dining hall and built a VEDC office and conference room on the school grounds.

3.5.3 Financial Aspects of Operation and Maintenance

(1) Financial Aspects of Operation and Maintenance at MoES

The finance of MoES operation and maintenance is expected to be secured to a certain extent in the future. So the sustainability of finance is generally high. According to the data of the Department of Finance, the annual budget of MoES is as shown in the table below.

Table7 MoES annual budget (Unit: Millions of Kip³⁵)

	2012/2013	2013/2014	2014/2015	2015/2016
Education budget	3,811,959	3,951,527	3,714,502	4,416,806
(Ordinary expenses)	(2,785,180)	(2,940,721)	(2,997,217)	(3,623,110)
(Capital expenses)	(1,026,779)	(1,010,806)	(717,285)	(793,696)
Ordinary expenditure rate	73.0 %	74.4 %	80.0 %	82.0 %
Government budget rate	16.7 %	15.5 %	15.5%	17.0 %

Source: MoES Department of Finance (2016), 2015/16 data is based on budget

Although the education budget doubled in the past five years, the government budget ratio has been in the range of 14 to 16%. The 18% targeted goal listed in the Education Law has not yet been achieved. In the 8th ESDP the goal is to increase the share of educational expenses in the government budget from 13% to 18%. And since other donors' financial support is also provided, certain finance related to education is expected to be secured. The maintenance costs of the facilities are included in the maintenance costs of the current budget. According to the Department of Finance, nearly 90% of the current budget has been occupied by employee salaries and allowances. It was confirmed that the proportion of the maintenance budget to the entire education budget and the current budget is extremely small. However, an improvement policy (elimination of non-regular teachers) is expected to be implemented during the 8th ESDP period.

On the other hand, the additional number of necessary teachers for target schools and the actual number of employed teachers are as follows. We confirmed that it's the burden of MoES budget for the additional teaching staffs. The additional number of necessary teachers in the developed classrooms are not sufficiently supplemented due to the lack of budget in MoES, PESS and DESB. However, it is confirmed by interview with the MoES that the improvement policy is expected to be implemented with a high probability by the 8th ESDP. It was confirmed by interviews with the school and VEDCs that the distribution of chalk and the repainting of blackboards was implemented at all of the target schools with the MoES's own budget.

³⁵ 1Kip=¥ 0.01402(December 2016 present)

Table 8 (Existing school) Additional number of necessary teachers for target schools and the actual number of employed teachers

	Primary			Lower Secondary		
	Necessary	Actual	Fulfillment rate	Necessary	Actual	Fulfillment rate
Champasack	15	3	20.0%	9	2	22.2%
Savannakhet	30	8	26.7%	16	4	25.0%
Total	45	11	24.4%	25	6	24.0%

Source: Interviews with target schools

Table 9 (Newly constructed school) Additional number of necessary teachers for target schools and the actual number of employed teachers

Name of school (ID)	Vang Tao (PT-14S)		Ang Kham (PT-15S)		Somsa Arth (XB-12S)	
	Necessary	Actual	Necessary	Actual	Necessary	Actual
Principle	1	1	1	1	1	1
Vice Principle	2	1	2	1	1	1
Teacher	24	14	16	10	22	17
Administration staff	2	3	1	2	3	8
Total	29	19	20	13	27	27

Source: Interviews with target schools

(2) Financial Aspects of Operation and Maintenance at community level

The finance of the operation and maintenance at the community level is secured to a certain extent for the future. So the sustainability of finance is generally high. Regarding the school administration budget as an ordinary budget, in primary schools 70,000 kip per student, in lower secondary schools 50,000 kip per student are allocated as the school subsidy transferred from the DESB to the schools through MoES and PESS. In addition to this, many of the schools collect 5,000 to 50,000 kips per student for school operating expenses. In schools which do not collect money from families, there is often a shop in the school or the fields are plowed and vegetables are sold so that the school can secure other income sources. In all the visited schools, the maintenance costs decreased after the project.

3.5.4 Current Status of Operation and Maintenance

Classrooms, toilets, equipment, etc. of the target schools are generally used appropriately, and maintained and managed. Table 10 below shows the aging situation of the classrooms, teachers' rooms, and toilets constructed in this project.

Table 10 condition of the classrooms, teachers' rooms, and toilets

(Lower % is the ratio of facilities in a good condition)

	Classrooms		Teachers' rooms		Toilet	
	Constructi on	Good condition	Constructi on	Good condition	Constructi on	Good condition
Primary	274	272 (99.3%)	53	53 (100%)	46	43 (93.5%)
Lower Secondary	153	151 (98.7%)	14	14 (100%)	20	19 (95%)
Total	427	423 (99.1%)	67	67 (100%)	66	62 (93.9%)

Source: Interviews with target schools

Situations such as the ceiling falling out at some of the classrooms and some cracks on the floor of the visited school were seen. Regarding the ceiling falling out, the school submitted a request for repair to DESB. DESB is also already aware of this situation and is planning to take measures. Floor cracks are at a level that can be repaired by the VEDC, which is usually repairable in a short period of time. Other than that, it is mostly minor repairs and schools are mostly in a good situation. After the repairs occurred the schools that were repaired amounted to 6 of 10 schools visited. And it's confirmed by the VEDC that the remaining 4 schools had a plan to carry out repairs during the next semester holiday.

It was confirmed with an oral survey of schools that the MoES have been carrying out improvements concerning the distribution of textbooks and chalk, and the regular exchange of blackboards. Regarding the removal of sediments in the toilet, 62 out of 66 schools that had installed toilets have eliminated themselves using the original budget of the school last year or existing equipment. In the remaining 4 schools toilets could not be used at the time of ex-post evaluation. It was confirmed with an oral survey with schools and the DESB that the reason why 4 toilets could not be used is as follows; 1) 2 schools can not use water during only dry season because the amount of water in water source is not enough and water from the area is not supplied 2) In 1 school there is a water source in the area however it is difficult to maintain a sufficient amount of water because the depth of the water source is not sufficient 3) In 1 school the pipe connecting the toilet was stolen.

Some minor problems have been observed in terms of the institutional aspect. Therefore sustainability of the project effects is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The objective of this project was to improve the quality of primary and lower secondary education in Champasack province and Savannakhet province in the southern region by constructing facilities and providing equipment for 91 primary and lower secondary schools and improving school environment.

At the time of the ex-post evaluation, securing access to high quality primary education and lower secondary education in the two southern provinces continues to be a priority issue. The project is consistent with development policy. In the two target provinces there is still a high need to support the rebuilding of school buildings. Since this project is consistent with Japan's ODA policy at the time of planning as well, the relevance of this project is high.

Although the cost of this project was within the plan, the project period exceeded the plan. So, the efficiency is considered fair.

In this project, some problems remain in terms of the achievement rate of the actual against the target in the indicator of "The number of students who can study in a decent learning environment" which is one of the quantitative effect indicators. But other quantitative and qualitative effects indicators are generally high.

Regarding the impact, the indicators were set according to quantitative effects and qualitative effects in which the planned effect was observed such as with an improvement of the net enrollment rate of the target schools and with increased awareness of students' sanitation needs due to the improvement of the toilets. Also, another observed impact included students' willingness to attend school, improving motivation for teachers' teaching and girls' willingness for schooling. Therefore, the project's effectiveness and impact are considered high.

The executing agencies and communities of this project have the necessary operational and maintenance techniques to maintain the effectiveness of this project. On the other hand, some problems have been found in the community-level operation and maintenance system. Thus, sustainability is viewed as fair.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

(1) Securing education budget to expand teacher's new employment

There are some schools where classrooms constructed by this project are not used due to a lack of teachers and schools where one teacher teaches a large number of students which causes overcrowded classes. It is desirable that MoES should also take into consideration securing education budgets to expand teachers' new employment as soon as possible using the donor's

financial support and others.

4.2.2 Recommendations to JICA

None

4.3 Lesson Learned

(1) Community's active participation in school management through community development support

This project could lead to an improvement in the community awareness for active participation in school education with the school construction project. At 8 out of 24 schools visited, the impact of active participation in school management was confirmed, such as constructing school buildings, school gardens and VEDC offices by mainly VEDC themselves after the project. One of the features of the community development support grants project (current procurement proxy method³⁶) is to reduce project costs by utilizing local contractors. VEDC and teachers at schools saw that local contractors and equipment were actively utilized from the stage of construction of schools. It was confirmed by interview with schools that ownership of the facility management and operation after the school construction had been developed. Therefore it can be said that it's important to consider to utilize the local contractors actively in grant aid projects from the viewpoint of not only reducing expenses but also to improve the awareness of participation in school education by the community in the future.

³⁶ At present, the sub-scheme of grant aid is abolished, and it is organized as "procurement method of facilities / equipment" and "procurement proxy method". The former community development support grant project is classified into the latter.