Kingdom of Lesotho

FY2017 Ex-Post Evaluation of Japanese Grant Aid Project The Project for the Construction of New Secondary Schools and Upgrading of Facilities in Existing Secondary Schools

External Evaluator : Yudai NISHIYAMA, INTEM Consulting Inc.

0. Summary

The objective of this project was to expand the enrollment opportunities to the secondary education and improve the learning environment by constructing new secondary schools and upgrading facilities at existing secondary schools at total 12 sites in seven districts, thereby contributing to the improvement of access to and quality of education.

At the time of planning and ex-post evaluation stage, as the construction and upgrade of educational facilities to improve access to high-quality education was prioritized by policy in Lesotho, the project for constructing new secondary schools and upgrading facilities at existing schools is consistent with policy. From the current situation that the number of secondary schools is insufficient, there is a high need to support the upgrade of the facilities. Since this project is consistent with Japan's ODA policy with an emphasis on enhancing basic education, the relevance of this project is high.

Although the project cost was within the plan, the project period exceeded the plan as construction by local contractors was delayed. So, the efficiency is considered fair.

Achievement level of effectiveness indicators such as "number of enrolled students", "commuting time" and impact indicators such as "students' motivation to learn", "teachers' motivation to teach" are generally high. As other impact, some degree of improvement of the learning environment for disabled students could be seen. Therefore, the project's effectiveness and impact are considered high.

The executing agencies and school management committees of communities operate under a good enough institutional structure with techniques that are necessary for operation and maintenance to ensure the effectiveness of this project. On the other hand, some problems have been found in the finance of operation and maintenance. Thus, sustainability is fair.

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



Project Locations

Fusi in Berea District, built under this project

1.1 Background

The literacy rate in Lesotho was 82.2% (2002) which was slightly higher than the average of 80% in the countries where human development were proceeded to moderate. In the top-level national plan of Poverty Reduction Strategy Plan (PRSP), "access to and completion of high quality primary and secondary education" was the objective and it aimed to achieve the complete enrollment in primary education which is one of the Millennium Development Goals. As one of the strategies to achieve that, Lesotho started Free Primary Education (herein after referred to as "FPE") from 2000. Based on this strategy, the Ministry of Education and Training (hereinafter referred to as "MoET") formulated the Education Sector Development Plan (2005-2015) and the Medium-Term Education Sector Plan (2009-2012, MTESP) and constructed secondary schools in the mountainous area and highly populated area. As a result, the number of secondary school enrollments in Lesotho had increased since around 2007 when FPE first-year graduates entered secondary schools. However number of "combined schools (primary school attached with secondary school)" increased rapidly as development of the facilities did not catch up. A combined school is a facility that uses primary school facilities as secondary education facilities as emergency. For this reason, secondary school students took classes in primary school buildings, churches, mobile classrooms and other substitutes and the shortage of facilities was a serious issue. In addition, the number of enrolled students in secondary education in 2009 was 113,500 students which was 14,000 more students than the predicted number, and the classroom shortage was even more remarkable. The specific goal by 2015 was the achievement of 85% of the gross enrollment rate in secondary education (47.7% as of 2009).

Given this background, this project was implemented with the objective of expanding the enrollment opportunities of secondary education and improvement of the learning environment by expanding total 12 schools in seven districts (six new secondary schools and six existing schools).

1.2 Project Outline

The objective of this project is to expand the enrollment opportunities to the secondary education and improve the learning environment by constructing new secondary schools and upgrading facilities at existing schools at total 12 schools in seven districts, thereby contributing to the improvement of access to and quality of education.

G/A Grant Limit / Actual Grant	1,069 million yen / 1,069 million yen
Amount	
Exchange of Notes Date	March 2011/ April 2011
Executing Agency	MoET
Project Completion	April 2014
Main Contractors	Construction companies : Melupe Construction, These Construction Services (Pty) Ltd, Kaybon (Pty) Ltd, Sigma Construction (Pty) Ltd, Morning Star Construction (Pty) Ltd , Twentieth Construction (Pty) Ltd, Monahali Construction (Pty) Ltd, Shelile Construction (Pty) Ltd Procurement of Equipment : Sebabatso Suppliers (Pty) Ltd
Main Consultant	Fukunaga Architects-Engineers
Procurement Agency	Japan International Cooperation System (JICS)
Outline Design	March 2010 - March 2011
Related Projects	<pre>【Technical Cooperation】 : Preparatory survey on education project for Kingdom of Lesotho and Swaziland (2008) 【Grant Aid】 : The project for the construction of secondary schools (2008)</pre>

2. Outline of the Evaluation Study

2.1 External Evaluater

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: October 2017 - October 2018 Duration of the Field Study: January 14 - February 19, April 22 - May 14, 2018

2.3 Constraints during the Evaluation Study

Although attempts were made to collect Net Enrollment Ratio of target districts from MoET, which is necessary to analyze the impact, no reliable data could be obtained as the census of Lesotho is conducted only once in 10 years.

3. Results of the Evaluation (Overall Rating: B¹)

3.1 Relevance (Rating : 3^2)

3.1.1 Consistency with the Development Plan of Lesotho

In Lesotho's development policy of *Vision 2020* at the time of planning period of this project, it aimed at achieving the 90% completion rate for basic education by 2015. In addition to this, in *Education Sector Strategic Plan* (hereinafter referred tp as "ESSP") (2005-2015) which is Lesotho's national development plan, it aimed at strengthening primary and secondary education and it was necessary to improve quality aspects such as improvement of curriculum and teacher training as well as developing the infrastructure for equal access to education. As for secondary education, in order to expand the opportunity for schooling, it aimed at constructing additional 570 classrooms between 2008 and 2012³. In addition to this, the ESSP aimed at developing a comprehensive education sector, specifically aiming at securing access to free and high quality primary and secondary education for all children by 2015.

At the time of the ex-post evaluation, *Vision 2020* continues to be the development policy of Lesotho and still aims to achieve 90% completion rate for primary and secondary (basic) education. In the ESSP (2016 - 2026) and *Education Sector Plan* (hereinafter referred to as the "ESP" (2016 - 2026)), it aims at strengthening primary and secondary education, improving quality aspects such as improvement of curriculum and teacher training as well as developing the infrastructure for equal access to education. Furthermore, in the ESP, it aims to secure

¹ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

² ③: High, ②: Fair, ①: Low

³ 141 classrooms per year from 2008 to 2009, and 96 classrooms per year from 2010 to 2012 were targeted. (Project preliminary evaluation table)

access to free and high-quality primary education for all children by 2026 and to achieve a secondary education enrollment rate of 80%. As the education sector continues to be a priority sector, the construction and upgrading of educational facilities are part of the top priority for improving access to high-quality education.

As mentioned above, Lesotho's development policy has not changed at the planning and the ex-post evaluation stage, and the development policy of Lesotho is consistent with this project.

3.1.2 Consistency with the Development Needs of Lesotho

At the time of planning stage for this project, after FPE which began in 2000, the number of primary school students had increased sharply. In 2007 when FPE first-year graduates started to enroll into the secodary education, the number of secondary school students increased year by year. The number of students who enrolled into the secondary school in 2009 was 113,562, and it was 14,000 more students than predicted as of 2007. The shortage of classroom facilities became more serious. In addition, there were some schools which were just diverted from primary school classrooms and churches into secondary schools. However, as these schools did not have the necessary facilities for secondary education, it was difficult to receive appropriate education. As the school administration budget and the government budget were limited, it was not easy to carry out the facility development.

At the time of ex-post evaluation, there are only 341 secondary schools for 1,478 primary schools⁴ in 2017 and its absolute number is short. Furthermore, the number of secondary schools in the target seven districts is still insufficient compared with the number of primary schools⁵. The number of students enrolled in the secondary schools at the time of the ex-post evaluation is 128,780 students (2016), and it is increasing. However, the transition rate from primary school to secondary school at the time of ex-post evaluation is 73% (2016), and it has not reached 100% as the target of the ESSP (2016 - 2026). The actual number of enrolled students in 2017 is 32,609 (86.5%), while the number of students who are eligible to go to secondary school is 37,695 (2017) and there are some students who are qualified to attend secondary schools but are not able to attend schools. For that reason, measures to improve the access to secondary education by improving the education infrastructure in remote areas and highly populated areas is listed in the *National Strategic Development Plan* (2013-2017) and there are needs for facility development.

From the above, the project is consistent with the development needs from planning stage to ex-post evaluation stage, and development needs continue to be high.

⁴ Hearing at MoET

⁵ Number of secondary schools in the target districts in 2016 is 23 (Butha-Buthe), 40 (Mafeteng), 25 (Mohale's Hoek), 72 (Maseru), 43 (Berea), 69 (Leribe), 19 schools (ThabaTseka). Number of primary schools is 83 schools (Butha-Buthe), 158 (Mafeteng), 171 (Mohale's Hoek), 254 (Maseru), 139 (Berea), 199 (Leribe), 142 schools (ThabaTseka).

3.1.3 Consistency with Japan's ODA Policy

As stated in the *Basic Education for Growth Initiative* (BEGIN⁶) at the G8 Kananaskis Summit in 2002, the Japanese government emphasized the strengthening of basic education support. In addition, in economic cooperative policy talks with Lesotho conducted in June 2010, the Japanese government shared that Japan's priority areas would be human resources development related to common issues within the Southern Africa region, including education⁷. Therefore, this project was consistent with the aid policy at the time.

From the above, this project has been highly relevant to the Lesotho's development plan 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 outputs from the Japanese side for this project were the development of educational facilities and the procurement of educational equipment. The outputs from Lesotho's side were to secure the water supply works, the electricity supply works, the landscaping works, procurement of the laboratory equipment and the supply of teacher's room equipment, etc. Outline of the outputs of this project is shown in Table 1.

	Number of	Number of	Number of	Number of	Number of	Number of
	schools	classrooms	rooms	teacher's toilets		Teachers'
				rooms		houses
New	6/6	60/60	6/6	6/6	12/12	12/12
Schools						
Existing	6/6	45/45	6/6	3/3	10/12	12/12
Schools						
Total	12/12	105/105	12/12	9/9	22/24	24/24

Table 1 Planned / Actual number of educational facilities

Source: Created from the result of hearing with the target schools

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

As part of the Japanese side's output, boy's and girls' toilets were newly constructed at Fusi school and the number of toilets was increased by two blocks. This is because the number of

⁶ BEGIN: Basic Education for Growth Initiative

⁷ Source: Japan's ODA Data by Country, Official Development Assistance, 2010, P.685

students increased 1.8 times in two years from 2011 to 2012 and it increased faster than the initial expectation. The other changes made after the detailed design were actually newly constructed and are now used without any problem. As for the boy's and girl's toilets, one booth of each toilet building was secured for people with disabilities. This change was due to a request from MoET before the bid announcement and it is consistent with MoET's *inclusive education policies*. In addition, it was confirmed from the hearing with MoET that the initially planned quantity of educational equipment such as desks and chairs was delivered.

As for the output from Lesotho side, as a result of hearing with MoET, there was a response that the outputs were implemented as planned. By the visual confirmation at sites by evaluator, it was confirmed that the items and inputs to be borne by the Lesotho side, such as the dismantling and removal of existing facilities and obstacles, external construction work, the connection of electricity and securing a water supply and so on were implemented.

Establishment of efficient collaboration between consultants and the procurement agency

As this project was grant aid for community empowerment, the procurement agency (JICS) contracted a local contractor as the agent on behalf of the client, and the Japanese consultants carried out the construction supervision. This project was a decentralized project where there were some mountainous sites which took 5-6 hours to reach from the resident area in capital city. In the field, monthly meetings with MoET, the procurement agency, the supervisor (Japanese consultant) and the local contractor, and weekly meetings at the sites were carried out. While communication was sometimes stagnant, the project tried to share and update information among the stakeholders. Resident supervisors reported on project progress, shared problems and provided technical advice. Through maintaining close contact with stakeholders to grasp the situation and establishing a system to cope with problems, it led to generate high project's effects even in the decentralization type project in mountainous areas.

3.2.2 Project Inputs

3.2.2. 1 Project Cost

The project cost was estimated as 1,070 million yen at the time of planning stage, but the actual project costs was 1,069 million yen and it was as within the plan⁸. Although it was confirmed that all the matters to be borne by Lesotho were done as planned, the actual cost for these works was not able to be confirmed.

⁸ It was confirmed from consultants in charge of design that there were design change, contract cancellation of local contractors and the collection of delay penalty fee and the calculation of remaining budget was reported to JICA and accepted at each time. As a result, there were changes of amount of budget, such as extension of two toilets and corridors, but the project cost was 100% as the planned amount.

3.2.2.2 Project Period

The project period was estimated 24 months in the plan, whereas the actual result was 33 months, and it exceeded the plan (138% compared to the plan). The reasons for the difference on the project period were as follows; releasing contract due to construction delay, bidding for the remaining work and the implementing remaining works. In the construction supervision for the first batch, as the local construction contractor delayed work and it was difficult to prospect the completion, the contract was terminated and a new contract was made again with the subcontractor of the construction company on the remaining works. In the second batch, for three lots whose construction were delayed by less than eight months, the contract was canceled because of low prospects of completion and the nominated competitive bid related to the remaining works was carried out. Therefore, the project period was extended by nine months and the plan was exceeded by 138%⁹.

From the above, although the project cost was within the plan, the project period exceeded the plan. Therefore, efficiency of the project is fair.

3.3 Effectiveness and Impacts¹⁰ (Rating: ③)

3.3.1 Effectiveness

3.3.1.1 Quantitative Effects (Operation and Effect Indicators)

In order to confirm the improvement of the learning environment at the target schools and the expansion of the opportunities to attend secondary education in the target area, 1) The number of enrolled students at the six new schools (60 classrooms), 2) The number of enrolled students at the six existing schools (45 classrooms) were confirmed as the indicators of the quantitative effect and the evaluation was made. In addition to that, 3) The number of classrooms, toilets, teacher's rooms, science rooms, and the teachers' houses that are actually being used and 4) The number of overcrowded classrooms and the number of students in overcrowded classrooms at the target 12 schools, were set as additional indicators and the evaluation was made.

Table 2 shows the number of enrolled students at the target new schools and the existing schools.

 $^{^{9}}$ 138% = 33 months / 24 months (including EN)

¹⁰ Sub-rating for Effectiveness is to be put with consideration of Impacts.

Target Actual							
	2019	2014	2015	2016	2017	2018	Achieve ment Level (2018)
	5 years After completi on	Compl etion Year	1 year After completi on	2 years After completi on	3 years After completi on	4 years After completi on	Actual / Target
Number of students at new schools	2,400	911	1,143	1,298	1,471	1,613	67.2 %
Number of students at existing schools	2,560	2,094	2,429	2,345	2,404	2,369	92.5 %
Total number of students	4,960	3,005	3,572	3,643	3,875	3,982	80.3 %

Table2 Number of enrolled students at the new schools and existing schools.

Source: Created from the result of hearing with the target schools

For a target of 2,400 students at new schools in 2019¹¹ (five years after the project completion), the actual number of students in 2018 was 1,613. For a target of 2,560 students at existing schools, the actual number of students was 2,369, the total actual number of students was 3,982. The achievement level of the indicator at new schools was 67.2% (1,613 out of 2,400 students) and 92.5% (2,369 out of 2,560 students) at existing schools and 80.3% at total. The probability of reaching the target value by 2019 at the new school is low, but for existing schools, it has been achieved generally. On the actual values (2017) against target value at the time of ex-post evaluation (three years after the project completion) which was set at the time of planning stage, number in 2017 was 1,471 at new schools and 2,404 at existing schools¹². The actual values in 2017 have achieved their respective targets.

It was confirmed from the hearing with MoET and target schools that the reason why the achievement level at the new schools is lower than that of the existing schools are as follows; 1) The number of enrolled students in secondary education has remained flat in the past three years¹³ and the increase rate of enrollment is slowing compared to the original plan. 2) There is a possibility that parents choose the existing schools with good teaching records and good reputation instead of the new schools. 3) Population movement from the region where new

¹¹ Because the project period was extended, it is 2019 after five years of project completion.

¹² Not only the target number of five years after the completion of the project, but also intermediate target number was set at the timing of ex-post evaluation. The target numbers for 2017 were 1,440 for new schools and 2,363 for existing schools.

¹³ It was confirmed from hearing with MoET that the number of enrolled students in secondary education from 2014 to 2016 is 112,418 (2014), 112,256 (2015) and 112,323 students (2016).

schools are located to urban areas as well as from Lesotho to South Africa may have occurred¹⁴.

Also, in order to investigate factors that are unlikely to reach the initially planned target numbers (at five years after the project completion), the following data were acquired by the evaluator and compared; 1) The number of graduated students in primary education and the number of enrolled students in secondary education in each district, 2) The number of applicants to the 12 target schools and actual number of enrolled students. As for 1), according to the hearing with MoET, the number of primary education graduates in 10 districts including the target districts in 2017 was 41,097 and the number of enrolled students in secondary education was 34,146 so that 83.1% of graduated students continued to secondary education. As for 2), nine of 12 target schools accepted all the applicants who wished to enter the schools in 2018. For the remaining three schools¹⁵, 89-97%¹⁶ of the applicants who want to enroll and the reasons for the students for whom admission is declined are factors from the family side. Thus, the reason why the number of secondary education enrollment is flat is not a factor from school side.

	Target			Ac	tual		
	2018	2014	2015	2016	2017	2018	Achieve ment Level (2018)
	4 Years After Complet ion	Compl etion Year	1 Year After Comple tion	2 Years After Comple tion	3 Years After Comple tion	4Years After Compl etion	Actual /Target
Number of classrooms	105	69	79	85	92	91	86.7 %
Number of science rooms	12	12	12	12	12	12	100.0 %
Number of toilets blocks	24	24	24	24	24	24	100.0 %
Number of teacher's rooms	9	9	9	9	9	9	100.0 %
Number of teachers' house blocks	24	24	24	24	24	24	100.0 %

Table 3 Comparison of target and actual number of operational indicators

Source: Provided by JICA(Target), confirmed by school visit (Actual)

¹⁴ It is pointed out by CEO of Secondary at MoET. However, the exact factor is unknown in the current statistic data.

¹⁵ Those three schools are Linareng, St. Theresa and Fusi.

¹⁶ Number of applicants and enrolled students to Linareng, St. Theresa and Fusi were 119/113, 236/228 and 112/100 respectively.

¹⁷ It was confirmed from the hearing with the principals and the families who abandoned enrollment that the reasons why students did not enroll although they wished to enroll is that "Tuition fee cannot be paid", "There is no transportation means." etc.

For the number of classrooms, the actual number is 91^{18} and the target in 2018 (four years after completion) is 105, so that the achievement level is 86.7%. For the others, such as science rooms, toilets, teacher's rooms, and teachers' houses, the target numbers are achieved so that the indicators have achieved. For classrooms which are not in use, those are being used as warehouses or dining halls. Due to the fact that the actual number of students are less than expected and the lack of teachers, there are some empty classrooms.

At the time of ex-post evaluation, the number of classrooms and students in overcrowded classes¹⁹ was as follows.

Item	2013	2014	2015	2016	2017	2018
Number of	24	40	51	43	56	48
overcrowded	/49	/69	/79	/85	/92	/91
classrooms						
(classrooms)						
Number of students in	1,444	2,128	2,696	2,294	2,882	2,583
overcrowded	/2,273	/3,005	/3,572	/3,643	/3,875	/3,982
classrooms (persons)						

Table 4: Number of classrooms and students in which overcrowded classes were held

Source: Created from the result of hearing with the target schools

Note: The denominator in the top row is the total number of classrooms, the denominator in bottom row is the total number of students

At the time of the ex-post evaluation, there were 48 overcrowded classes, and it was 52.7% to 91 classrooms which were actually used. The number of students in overcrowded classrooms was 2,583 students, and it was 64.9% to the total number of students of 3,982 students. The average number per class in overcrowded classrooms was 54 students/classroom²⁰ and average numner per class in all classrooms was 44 students/classroom²¹. Figure 1 shows the frequency distribution of the number of students per classroom at the target schools.

¹⁸ At the time of the ex-post evaluation, the schools where there are unused classrooms are Nlthakeng (N4) as five classrooms, Sehlabeng, (N5) as four classrooms, Ha Belo (N1) as three classrooms, St. Margaret (E3) and Fusi (E5) as one classroom each. Total 14 classrooms are unused.

¹⁹ The definition of overcrowded classroom is 40 students or more per classroom, which is a medium-term target of ESP.

²⁰ The total number of students and total classrooms in overcrowded classes are 2,583 students and 48 classrooms respectively. Therefore, the average number of students per overcrowded classroom is 54 students.

²¹ The total number of students and classrooms in the target schools are 3,982 students and 91 classrooms respectively. The average number of students per a classroom is 44.



Figure 1 Frequency distribution of the number of students per classroom Source: Created from the result of hearing with the target schools

There are some overcrowded classrooms where one teacher teaches more than 40 students (the recommended class size is 40 students/class) due to a lack of teachers and classrooms. The number of unused classrooms and the number of overcrowded classrooms at each school are shown in Figure 2



Figure 2 Number of unused classrooms and the overcrowded classrooms at each school²² Source: Created from the result of hearing with the target schools

For the schools with many overcrowded classrooms and few unused classrooms (E1. Lekokoaneng, E2. Linareng etc.), the reason for the overcrowded classrooms is due to many students and few classrooms. On the other hand, for schools with many overcrowded classrooms but also many unused classrooms (N1. Ha Belo, N5. Sehlabeng etc.), the reason for the overcrowded classrooms is due to the shortage of teachers and thus there are some unused classrooms. It can be said that this trend in new schools has stronger than in existing schools.

²² E and N put before the school name in the figure indicate the "Existing school" and "New school" respectively

From the above, while the effect of increasing the number of enrolled students by this project can been seen, the degree of overcrowding in classrooms remains high at some schools due to the lack of classrooms and teachers.

3.3.1.2 Qualitative Effects (Other Effects)

For the qualitative effects, the indicator was set from the two points which are the expansion of enrollment opportunities and the improvement of learning environment and the evaluation was made. Regarding the expansion of enrollment opportunities, 1) Student's commuting time and distance to school was set as a new indicator. Regarding the improvement of the learning environment, in addition to the original indicator of 2) The classes in accordance with the official curriculum of secondary education has been provided with the provision of science rooms, 3) Satisfaction level of school facilities for students and teachers and 4) Appropriate assignments of teachers and staffs were set as indicators and the evaluation was made.

(1) Students' commuting time and distance to school have been shortened due to construction of new schools

Effectiveness was evaluated through the group interviews²³ with students. Table 5 shows the students' transportation means and commuting time to target schools.

Method of	Students		Commuting time						
transportation		Less than	Less than	1hr. or more	2hrs. or more				
		30mins	1hr.						
Walk (persons)	54	34	8	10	2				
Taxi (persons)	4	2	0	0	2				
Total (persons)	58	36	8	10	4				
Percentage	100%	62%	14%	17%	7%				
Percentage of	93%	59%	14%	17%	3%				

Table 5 Students' means of transportation and commuting times to target schools

Source: Result of group interview with students

The data shows that $76\%^{24}$ of the total students commute to schools in less than an hour. In addition, the number of students who commute to schools not using the bus nor taxi but less than an hour walk was $73\%^{25}$ of total numbers. As additional information, following opinions were heard from students' parents; "Children who have been at home or in the village at

²³ For group interviews with students, five students were selected by random sampling at each school in 12 target schools and it was carried out at the site visited by the evaluator. Sample size was 56 students (28 boys and 28 girls), and students who wish to go to a new school from a distance were excluded from the evaluation.

²⁴ 76%=62% (Less than 30mins) +14% (Less than 1hr.)

²⁵ 73%=59% (Less than 30mins) +14% (Less than 1hr.)

daytime have come to school." (Parents, Lekokoaneng), "It took 45 minutes by taxi before, but now it is only 10 minutes walk to school. The cost of going to school has been reduced." (Parents, Nlthakeng,).

(2) It is possible to carry out the classes in accordance with the official curriculum of secondary education due to the provision of science rooms

In all target schools, the class hours for science are being carried out in according with the official curriculum²⁶. Additionally, as upper secondary education was to start at the six existing schools, one science specialist teacher per school was planned to assign. The actual number was six people. Due to the provision of science rooms, the following statement were heard from the teachers; "The students are looking forward to the experiment, but on the other hand, expectations from students for experimental instruments are also high. The science experiment became a motivation for students toward science." (Teacher, Ha Sechele)

(3) Satisfaction level of school facilities is improved

Table 6 shows the group interview²⁷ results on the satisfaction level with classrooms, toilets and science rooms for students.

	Classroom	Toilet	Science room
Satisfaction level	3.3 /4.0	2.9 /4.0	2.6 /4.0
Very satisfied · satisfied	88.3%	58.3%	50.0%
Very dissatisfied · dissatisfied	11.7%	41.7%	50.0%

Table 6 Satisfaction levels with classrooms, toilets and science rooms for students.

Source: Group interview with students

Students' satisfaction level on the toilets was 2.9 out of four sclaes. As the reasons of answer for "very dissatisfied", "dissatisfied", there were comments that "Many students go to toilet during a break time at the same time, and I have to wait for the toilet for a long time.", "Because the keys are still broken, I feel restless." Students' satisfaction level on the science rooms was 2.6 out of four sclase. As the reasons of answer for "very dissatisfied", "dissatisfied", there were comments students of most schools that "There are few experimental equipment and reagents at the minimum." As a result of being able to conduct minimum experiments, it seems that students increase their interest toward more advanced experiments so that the level of

²⁶ Official lesson hours for science is 40 minutes per lesson, six lessons per week from eighth to 12th grade.

²⁷ For group interviews with students, 5 students were selected by random sampling for each school of 12 target schools and it was carried out at the site by the evaluator. Sample size was 60 students (30 boys and 30 girls).

satisfaction was not necessarily a negative evaluation.

Table 7 shows the results of group interviews²⁸ in terms of the teachers' satisfaction levels with classrooms, toilets, teachers' rooms and teachers' houses.

Table 7 Teachers' satisfaction levels with classrooms, toilets, teachers' rooms and teachers'

	Classrooms	Toilets	Teachers'	Teachers'
			rooms	house
Satisfaction level	2.9 /4.0	2.5 /4.0	3.2 /4.0	3.5 /4.0
Very satisfied ·	62.9%	17.1%	68.6%	94.3%
satisfied				
Very dissatisfied ·	37.1%	82.9%	31.4%	5.7%
dissatisfied				

Source: Group interview with teachers

houses

The teachers' satisfaction level of classroom, teachers' room and teachers' house is generally high. The teachers' satisfaction level on toilets was 2.5 out of four scales. The reasons of answers for "very dissatisfied", "dissatisfied" were that "It is dirty because we are using the toilet same as the students.", "Each toilet is not completely private room and is connected with other toilets at the top. I am dissatisfied on the aspect of privacy."

(4) Number of teachers and staff at the target schools are appropriately assigned

The necessary number of teachers and staff to be newly hired and actual number of employed teachers and staff at the target schools were as follows.

	Necessary numbers	Actual numbers	Satisfaction rate
	at planning (persons)	(persons)	
Principal (New school)	6	6	100 %
Vice Principal	9	0	0 %
Teacher	65	54 (4)	83 %
Science specialist teacher	6	6	100 %
Staff	18	17	94 %
Total	104	83 (4)	80 %

Table 8 Number of necessary teachers and staff at planning and actually employed

Source: Created from the result of hearing with the target schools

Note: () is the number of people whose salary are born by school.

The number of additional necessary teachers and staff for the project was planned to be 104

²⁸ For group interviews with teachers, 3 teachers were selected at each school in 12 target schools and it was carried out at the site visited by the evaluator. Sample size was 35 teachers (18 male and 17 female).

persons. The actual number of assigned teachers and staffs is 83 persons. Among them the salary of four teachers is covered by the schools and the salary of others is covered by the government. The reason why the actual number of assigned vice principals is smaller than the planned is that in case the number of students is less than 450 students, the vice principal is not assigned²⁹. Although the assigned staffs were fewer than the others, there was no complaint that the burden on the current staffs was increasing because of that.

Based on the above, as for the improvement of the learning environment, the indicators such as 1) Usage situation of constructed facilities, 2) Level of overcrowded classrooms, 3) Provisioning situation of official curriculum, 4) Students and teachers' satisfaction level of constructed facilities, and 5) Assignment of teachers have been generally achieved. Regarding the expansion of school enrollment opportunities, the indicator has already been achieved from the point of, 1) Number of enrolled students, and 2) Commuting time. Therefore, its effectiveness is high.

3.3.2 Impacts

3.3.2.1 Intended Impacts

This project was expected to contribute the improvement of the access to and quality of secondary education by improving the environment of learning facilities. As for the access to education, 1) Number of enrolled students in the target districts, and as for the quality of education, 2) Pass rate of the lower secondary education examination at the target schools (hereinafter referred to as "JC examination"), 3) Students' motivation to study due to the provision of new classrooms ,4) Teacher's motivation to teach due to the provision of new teacher's rooms, and 5) Promotion of teacher's assignment in rural areas with the construction of new teachers' houses, were set as the indicators for the qualitative effect of impact and evaluation was made. For the originally set indicator of "Mitigation of the education gap between urban and rural areas", it could not be confirmed as reliable data from MoET and District Education Office (hereinafter referred to as "DEO") was not obtained.

(1) Number of enrolled students in the target districts

Changes in the number of enrolled students are as shown in Figure 3 below. There were no significant changes in each district. The reason why significant changes cannot be seen is written in the factor analysis of the number of enrolled students as the quantitative effect of "3.3.1 Effectiveness" (p.9-10).

²⁹ The main task of the principal (Vice principal) is to manage the school and some principals (Vice principals) are in charge of lessons as teachers. Lesotho government has frozen the expansion of new posts due to the soaring salaries of government officials in recent years, carefully selecting the new teachers. Therefore, initially planned number of teachers and staff are not secured.



Figure 3 Number of enrolled students in the target districts (2014-2016) Source: Created from documents provided by MoET

(2) Pass rate of JC examination (examination of lower secondary education) at the target schools

Changes in the JC examination pass rate at target schools are as shown in Figure 4 and Figure 5 below. Although there are variations in the results depending on each school, no significant changes have been seen in the JC examination pass rate³⁰.



Figure 4 JC examination pass rate at new schools (2015 - 2017³¹)



 $^{^{30}}$ JC examination pass rate at new schools were compared with the national average and judged. JC examination pass rate in nation is 67.2% in 2015, and 66.8% in 2016. National average in 2017 had not been submitted yet at the time of ex-post evaluation.

³¹ As for the new schools, since the 10th grade students who take the JC examination did not exist until 2014, it is the JC examination pass rate from 2015 to 2017.



Figure 5 JC examination pass rate at existing schools (2013 - 2017) Source: Created from documents provided by target schools

(3) Student's Motivation to study has increased due to the provision of new classrooms As a result of the group interviews with students, the increase in student's motivation to study due to classroom improvement was 3.5 out of four scales. There are comments made by students such as "I can concentrate on my study even if it rains and it does not matter about the sound.", "I can enjoy studying as the walls are beautiful color". In addition, as a result of the group interviews with teachers and principals³², the result was 3.9 out of four sclaes. There were commentssuch as "The congestion in the classroom was solved, and the students started to study more intensively than before.", "Students are less tired and more be able to focus on study as school location from their home is closer than before."

(4) Teacher's Motivation to teach has increased due to the provision of new teachers' room As a result of the group interviews with teachers, the increase in teachers' motivation to teach due to the improvement in the teachers' rooms was 3.7 out of four scales. There were comments made by teachers such as "The temperature of the room is stable, and I can concentrate to prepare lessons." "It's easy to store materials because there is a desk for my own use." In addition, the result of the question about whether the improvements in other teachers' motivation to teach can be seen is 3.8 out of four scales, which was a high result. The commets made by teachers obtained such as "Since the number of students has more increased than before, the teachers have become more motivated to teach.", "Teachers' absence has decreased".

 $^{^{32}}$ Five teachers and one principal, who know the situation before the classrooms are developed, were selected at each school in the six existing schools and it was conducted for the site visited by the evaluator. Sample size is 36 persons (20 male, 16 female).

(5) Teacher's assignments to rural areas have been promoted with the construction of teachers' houses

At the time of the ex-ante evaluation, the number of teachers using the teachers' houses was planned to be 48 persons. But the actual number was 34 persons (14 male, 20 female) and the satisfaction rate was 70.8%. In case, the principal uses teacher's house, he/she use 1 teachers' house while there are many cases that two teachers use 1 house together. All 24 teachers' houses out of 24 constructed by this project are being used now³³.

3.3.2.2 Other Positive and Negative Impacts

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

In this project, as a result of hearing with the executing agency, it was confirmed that no particular impact on the natural environment and resettlement of residents and land acquisition were occurred.

(2) Other Impacts

As a result of that the design of the toilets and the corridors was partially changed so as to be designed considering students with disabilities, it was confirmed with hearing from MoET that the schooling opportunities for students with disabilities had been promoted at some target schools.

Based on the above, for the access to education, there were no significant changes in the number of enrolled students in the target districts, though improvement of the access to education for the students with disabilities could be seen. Regarding the quality of education, no significant changes were seen in, 1) Pass rate of JC examination at the target schools. However, the indicator of impact has been generally achieved due to 2) Improvement of students' motivation to study with the provision of new classrooms, and 3) Improvement of teachers' motivation to teach with the provision of new teachers' room.

From the above, this project has largely achieved its objectives. Therefore effectiveness and impacts of the project are high.

3.4 Sustainability (Rating: 2)

- 3.4.1 Institutional / Organizational Aspect of Operation and Maintenance
 - (1) Institutional / Organizational Aspect of Operation and Maintenance at MoET

MoET manages the entire education sector from pre-primary education to higher education, vocational training and technical education. The responsible department for this project is

³³ Teachers who live farthest from the school preferentially use teachers' house.

Secondary Education Department. The executing agency for the construction of secondary education facilities is the Procurement Unit and Education Facilities Unit (hereinafter referred to as "EFU") under the Deputy Principal Secretary, which bids, supervises and hands over the educational facilities. To ensure that the target schools are properly maintained and managed, EFU also conducts an annual monitoring, provides advice to DEO, establishes the human- and budgetary measures for maintenance and management of the facilities, etc. There are only seven staff members and visiting to all schools is only once a year. Teaching Service Department is in charge of teacher assignments and its training.



Figure 6 Organization chart of MoET

Source: MoET

(2) Institutional / Organizational Aspect of Operation and Maintenance at DEO

The role of DEO is to implement policies of MoET at the district level. The budgeting right at the district level and authority over personnel issues related to teacher assignment and so on are not delegated to DEO. DEO is led by the head of DEO and sections such as school inspection, distance education, pre-primary education and scholarships, etc are placed. In case that a major

damage in the school facilities and the equipment were seen, the school would report to DEO. DEO has to report to EFU. As for monitoring, instruction of general knowledge on operation and maintenance to each school is provided by EFU.

(3) Institutional / Organizational Aspect of Operation and Maintenance at school and community level

The school and the school management committee periodically conduct meetings on school management and inspections of the school facilities and report to DEO in case that a major damage in school facilities and equipment is seen, and DEO reports it to EFU. The operational system such as its role and number of staffs is also clear. The school management committee is established by educational law and consists of nine members including parents, representative of teachers, principal, district administrators and traditional chiefs and so on. They are responsible for the application and securing of the budget related to the maintenance and management of school facilities, as well as the contract and supervision of repairing companies and so on. Operation and management system at school and community level is functioning. Table 9 shows the result of the confirmation of school management committee's awareness of participation in school education.

Number of schools which have a regular meeting ³⁴		
between school and school management committee once a	10/12 schools	83.3%
semester or more		
Number of schools which maintain the school facilities ³⁵		
between school and school management committee once a	12/12 schools	100.0%
week or more		
Number of schools in which voluntary labor support ³⁶		
was provided by the school management committee after	8/12 schools	66.7%
the project		
Number of schools which understand the procedure when repairs occur	12/12 schools	100.0%

Table 9 School committee's awareness of participation in school education

Source: Created from the result of hearing with the schools

³⁴ Operation and maintenance related matters are included in the contents of the regular meeting, and they confirm the current situation and discuss future plan on school management, student guidance and community activities, and so on.

³⁵ According to the hearing from the principals, the maintenance conducted at the school includes the inspection of the doorknob and confirmation of window closing in the classroom and washing condition of the toilet etc.

³⁶ After implementation of the project, there were eight schools where voluntary labor supports were provided, including construction of cafeterias, test result cabinet, toilet for exclusive use of techers, pig huts for agricultural education, etc. and food preparation and distribution.

Out of the 12 schools visited at the ex-post evaluation survey, 10 schools hold the regular meetings four times a year (once in each semester). The remaining two schools hold meetings three times in a year.

From the above, there is no change of function of the operational and maintenance strucrures of MoET, schools and the community level from the time of ex-ante evaluation to the ex-post evaluation, and it is functioning.

3.4.2 Technical Aspect of Operation and Maintenance

(1) Technical Aspect of Operation and Maintenance at MoET

MoET has adequate technical capability related to operation and maintenance. Since DEO does not provide direct technical provision to schools, the necessary techniques for operation and maintenance is limited to communication between the school and MoET, but no particular problem has arisen. At EFU, there are seven staff as of 2018, with construction engineers, civil engineers, managers, surveying technicians, qualified accounting personnel, and engineers. They are responsible for designing school construction, creating bidding documents, supervising construction and the practical works related to school repairs. At the target schools, no serious damages which require large-scale repair have occurred so far. Since MoET has experience of school repair other than the target schools, there is no problem with technical aspect of operation and maintenance.

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

Through a field survey at the time of ex-post evaluation, it was confirmed that the community had sufficient technical capabilities in maintenance and the management of facilities. In case small repairs occur to school facilities, a meeting is held by the school management committee and discusses on repair policy, whether it can be repaired within the budget and whether supply of goods from the community and additional funding are necessary or not. In the case that serious repairs occur, the comittee reports to DEO and submits a document stating the improvement plan. Maintenance such as checking the doorknobs in the classrooms, confirming the opening and closing the window and the condition of toilet, etc. are carried out at each school. After implementation of this project, there were eight schools out of 12 schools which constructed cafeterias, test results cabinets, teacher exclusive toilets, pig huts for agricultural education, and so on.

3.4.3 Financial Aspect of Operation and Maintenance

- (1) Financial Aspect of Operation and Maintenance at MoET
- In terms of the financial aspect of operations and maintenance at MoET, some minor

problems have been observed. Table 10 shows the annual budget of MoET.

				(Unit: Millio	ns of Maloti ³⁷)
		2014	2015	2016	2017
National	Ordinary budget	10,821.1	11,993.0	12,396.4	13,503.2
Budget	Capital budget	5,001.5	4,686.6	4,798.2	5,342.6
MoET	Ordinary budget	2,034.6	2,249.8	2,306.2	2,320.1
	Capital budget	229.5	86.0	127.2	102.6
	Ordinary budget rate (%)	18%	19%	19%	17%
	Capital budget rate (%)	5%	2%	3%	2%
Secondary	Ordinary budget	22.7	17.3	13.6	11.6
Department	Capital budget	6.0	12.0	21.0	8.2
	Total of Secondary	28.7	29.3	34.6	19.8
	Department				

Table10 Aannual budget of MoET

Source: MoET Finance department

The government budget and MoET's ordinary budget continue to increase every year. 17-19% of the government's ordinary budget is allocated to MoET's ordinary budget every year³⁸. The budget to be spent at DEO is allocated quarterly by MoET. But the large-scale budget such as the budget required for free primary education (school grants), the school lunch budget and so on, are not delegated to the district but managed directly by MoET. MoET also manages the budget on secondary education.

As described in the qualitative effect in 3.3.1.2, the actual number of assignments was 83 for additionally needed 104 teachers. The salaries of 4 teachers³⁹ out of them are covered by the schools. This is because the school asked DEO to recruit the teachers, but MoET didn't give them permission. The schools recruited the teachers by themselves and pay their salaries by themselves. According to the documents provided by JICA, the government provided maintenance and management expenses of 10,000 Maloti to government school each year before. However, at the time of ex-post evaluation, due to the budget constraint of the Secondary Education Department since 2017, the government has not been able to provide subsidies necessary for maintenance and management expenses at each school.

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

Some problems are seen in the sustainability of finance. There are 0 schools out of 12 schools

³⁷ 1Maloti=¥ 8.79(As of May 2018)

³⁸ The reason why the allocation of the project budget and budget to the secondary education department drastically decreased in 2017 is due to the completion of the construction of secondary schools by the African Development Bank and the Chinese government.

³⁹ It was confirmed with hearing from the principals that these four teachers were assigned to differnt schools. They also mentioned that if the burden of labor cost is only one person at each school, it is within the allowable range.

receiving funding for operation and maintenance from MoET and DEO and income source depends on the tuition fees collected from each household. The annual tuition fee per student is 800-1,700 Maloti, which is different at each school and is collected from each house according to the government's regulation. School management expenses⁴⁰ other than teacher salaries and textbooks provided by government are covered by tuition fee. Four out of 12 schools secured other income by placing a kiosk in the school or by cultivating fields. Because the budget is limited, seven out of nine schools with minor damages in the facility have not been repaired and are in a damaged condition.

3.4.4 Status of Operation and Maintenance

Although the status of maintenance is in a good condition, some minor problems have been observed in the status of operation. Table 11 below shows the current status of the classrooms, science rooms, teachers' rooms, toilets and teachers' houses constructed by this project.

tea	chers' ho	ouses								
	Class	room	Scienc	Science room		Teachers'		ilet	Teac	hers'
					roe	om			ho	use
	Const	Good	Const	Good	Const	Good	Const	Good	Const	Good
	ructio	condi	ructio	condi	ructio	condi	ructio	condi	ructio	condi
	n	tion	n	tion	n	tion	n	tion	n	tion
New	60	59	6	6	6	6	12	11	12	12
Schools										
Existing	45	44	6	6	3	3	12	11	12	12
Schools										
Sub total	105	103	12	12	9	9	24	22	24	24

Table 11 Aging situation of the classrooms, science rooms, teachers' rooms, toilets and

Source: Created from the result of hearing with the target schools

A small proportion, which are two out of 24 toilets and two out of 105 classrooms, is in damaged. However, the status of maintenance of the facilities constructed by this project is generally good. As for the school operation, some problems arise from the fact of overcrowded classrooms due to the lack of teachers. On the other hand, there are empty classrooms at some schools due to the lack of enrolled students.

From the above, some minor problems have been observed in terms of the financial aspect/

⁴⁰ These are school building repair, supplementary educational materials, teaching materials used for technical subjects, utility costs and so on.

current status. Therefore sustainability of the project effects is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The objective of this project was to expand the enrollment opportunities to the secondary education and improve the learning environment by constructing new secondary schools and upgrading facilities at existing secondary schools at total 12 sites in seven districts, thereby contributing to the improvement of access to and quality of education.

At the time of planning and ex-post evaluation stage, as the construction and upgrade of educational facilities to improve access to high-quality education was prioritized by policy in Lesotho, the project for constructing new secondary schools and upgrading facilities at existing schools is consistent with policy. From the current situation that the number of secondary schools is insufficient, there is a high need to support the upgrade of the facilities. Since this project is consistent with Japan's ODA policy with an emphasis on enhancing basic education, the relevance of this project is high.

Although the project cost was within the plan, the project period exceeded the plan as construction by local contractors was delayed. So, the efficiency is considered fair.

Achievement level of effectiveness indicators such as "number of enrolled students", "commuting time" and impact indicators such as "students' motivation to learn", "teachers' motivation to teach" are generally high. As other impact, some degree of improvement of the learning environment for disabled students could be seen. Therefore, the project's effectiveness and impact are considered high.

The executing agencies and school management committees of communities operate under a good enough institutional structure with techniques that are necessary for operation and maintenance to ensure the effectiveness of this project. On the other hand, some problems have been found in the finance of operation and maintenance. Thus, sustainability is 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 the educational budget to expand teacher's new employment

There are some schools where the classrooms constructed in this project are not used due to the lack of teachers and where as one teacher teaches a large number of students the classrooms have become overcrowded. It is desirable that MoET should secure the education budget for expanding the new employment of teachers as soon as possible such as by establishing a continuous cooperation system with other donors.

(2) Consideration of free lower secondary education

School administration funds are not provided by the government to schools and income from students' tuition is the main source at each school. Challenges in the financial aspect of the operation and maintenance of schools are that it is impossible to repair educational facilities in a timely manner, and new teachers cannot be hired. MoET is currently considering free secondary education with cooperation of World Bank while financial problems are seen in the current statue of operation and maintenance. It's necessary to consider discussing with other donors whether it is possible to provide high quality education without putting a burden on schools and communities by promoting free education.

4.2.2 Recommendations to JICA

None

4.3 Lessons Learned

Establishment of the construction period considering the special characteristics of community empowerment

Using the scheme of grant aid for community empowerment in the project (current procurement proxy method)⁴¹, this project was able to economically construct schools at a lower cost by utilizing local contractors. Meanwhile, as a result of using small local contractors in construction and procurement work, this led to the delays in the construction by local contractors, cancellation of contracts due to the delays in the construction and delay in the construction period due to the bid and implementation of the remaining construction works so that overall construction period became 138% of the planned. It is necessary to establish the construction period with margin considering the special characteristics of the grant aid for community empowerment

Necessity of setting target value in line with reality as an outcome indicator of a project

The probability of reaching the target value⁴² of enrolled students at the target new schools is low. At the time of planning stage, the forecasted number of students was calculated based on the number of students in the 5th to 7th grade of primary education and the forecasted transition rate. In calculation of the expected number of students to proceed, it is necessary to consider again the authenticity of necessary data and calculation method. Specifically, it is necessary to consider that the maximum forecasted number and the minimum forecasted number should be

⁴¹ 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 grant aid for community empowerment is classified as the latter.

⁴² The target value is in 2019 which is five years after completion.

clalified, that whether all students who are out of schools in districts should be included in the calculation or that the data from national census should be used and so on.