

Republic of Mozambique

Ex-Post Evaluation of Japanese Grant Aid Project

“Construction of Secondary Schools”

External Evaluator: Juichi Inada, Senshu University

0. Summary

The project’s objective was to improve access to lower secondary education, by constructing 4 schools and extending the capacity of existing schools and their facilities in the target areas of Maputo Province and Gaza Province, thereby contributing to improvement of the quality of education. The project’s objective coincides with the development policy of Mozambique, which emphasizes the expansion of access to secondary education at the time of planning and also ex-post evaluation. It also coincides with the development needs of Mozambique, because there are very strong needs for the construction of secondary schools in order to respond to the rapid increase in the number of students who wish to receive secondary education. It was also relevant to Japan’s ODA policy at the time of planning. Thus, its relevance is high.

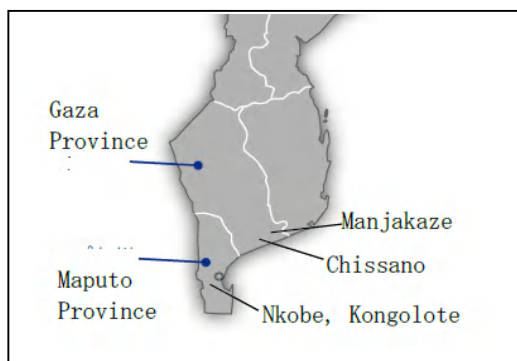
The project cost and the project period are the same as planned, thus its efficiency is high.

As to the effects of the project, 4 schools and 58 classrooms were constructed as planned, the number of students enrolled at those schools exceeded the original target, and other positive effects were revealed in terms of the access to secondary education such as improvement of educational environment and reduction in commuting time to schools. Thus, its effectiveness is high. There were some negative impacts of the project; for example, the IT classrooms of some schools were not utilized as planned, and the promotion rate declined in some grades of 2 schools in Maputo Province partly because the number of students per classroom far exceeded the capacity of the classroom. On the other hand, there were some positive indirect impacts as planned; the promotion rate improved in 2 schools in Gaza Province, and the learning attitudes of students and teaching attitudes of teachers also improved. Thus, the project’s effectiveness and impact are high.

As to the aspects of operation and maintenance (O&M), there were no serious problems in the technical aspect, but there were some problems in the institutional and financial aspects, as well as the O&M situations. Thus, sustainability of the project is fair.

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

1. Project Description



Project Locations



Athletic field of Kongolote school, Gaza Province

1.1 Background

The Mozambique government prioritized education of the people and human capital development in its national development plan. It formulated the “Plano Estrategico da Educacão e Cultura 2006-2010/2011 (PEEC),” implemented the strategic plan which prioritized the spread of primary education¹, and achieved 100% gross enrollment ratio for lower primary education². Furthermore, for the implementation of PEEC, the government formulated the “Estrategico da Ensino Secundario (EES) 2008-2015” and has been putting in place measures to expand access to secondary education, improve the quality of education, and strengthen the systems.

However, the shortage of secondary educational facilities created an immediate bottleneck for improving access to education, and classes conducted in three sessions while exceeding capacity, as well as poor environment, were negative factors for improving the quality of education. Therefore, improving secondary educational facilities was a pressing issue. In the EES, the Mozambique government set out the aim of expanding and improving secondary educational facilities by constructing 930 classrooms per year until 2015.

1.2 Project Outline

The project’s objective was to improve access to secondary education and the quality of education, by constructing 4 secondary schools and related facilities in Maputo Province and Gaza Province.

¹ Primary education in Mozambique is divided into 5 years of lower primary education (EP1: 1-5 grades) and 2 years of higher primary education (EP2: 6-7 grades), and 3 years of lower secondary education (ESG: 8-10 grades) and 2 years of higher secondary education (ESG2: 11-12 grades).

² “Gross Enrollment Rate” refers to the percentage of the official school age population that corresponds to the same level of education in a given school year.

Grant Limit/ Actual Grant Amount		1,015 million yen /1,015 million yen
Exchange of Notes Date/ Grant Agreement Date		October 2009/ October 2009
Implementing Agency		Ministry of Education and Culture (Ministry of Education at the time of completion) ³
Project Completion Date		January 2012
Project Implementation	Contractors	Construction: Ceta Construção E Servicosp S.A. Procurement: L. Duarte Dos Santos Lda
	Consultants	Matsuda Consultant, Inc.
Basic Design		March 2009
Detailed Design		October 2009
Related Projects		<p>Technical Cooperation: Strengthening of In-Service Training for Primary Teachers in Gaza Province (2006-2009), Advisor for Teacher Training Development (2010-2012), Advisor for Strengthening In-service Teacher Training System for Secondary Education (2014-2015)</p> <p>Grant Aid: Project for the Construction of Primary and Secondary Schools in Maputo City (2001-2003, 984 million yen), Project for the Construction of the Chimoio Primary Teacher Training Center (2005-2007, 945 million yen), Project for Construction of the Cuamba Teacher Training Center (2007-2009, 997 million yen), Project for the Construction of Secondary Schools in Nampula Province (2012-2013, 1,063 million yen), Project for the Construction of Monapo Primary Teacher Training Institute in Nampula Province (2013-2015, 1,024 million yen)</p> <p>Other Organizations: The Fund for Education Sector (FASE), (The World Bank, EU, other 9 countries, Phase I: 2003-2008, Phase II: 2008-2012, Phase III: 2012-2016), Education Project IV (African Development Bank, 2008-2010)</p>

2. Outline of the Evaluation Study

2.1 External Evaluator

Juichi Inada, Senshu University

2.2 Duration of Evaluation Study

This evaluation study was performed according to the following schedule.

Duration of the Study: November, 2014–December, 2015

³ Because the name of the Ministry of Education and Culture was changed to the Ministry of Education at the time of project completion, this evaluation report uses the name of the Ministry of Education.

Duration of the Field Study : February 16, 2015–February 26, 2015, May 3, 2015– May 9, 2015

3. Results of the Evaluation (Overall Rating: A⁴)

3.1. Relevance (Rating: ③⁵)

3.1.1 Relevance to the Development Plan of Mozambique

Education was a prioritized agenda in human capital development, which was one of the three pillars of the Mozambique National Development Plan (Plano de Acção para a Redução da Pobreza Absoluta II 2006-2009: PARPA II). Of these, expansion of secondary education with better quality to respond to the needs of the society was established as the primary objective, while pursuing improvement of facilities for responding to the rapidly increasing needs for secondary education, increasing the number of qualified teachers, reform of the curriculum, and alleviating the gap between urban and rural areas were the aims set out to achieve this primary objective. The government also adopted the “Plano de Acção para a Redução da Pobreza (PARP 2011-2014),” which continues to prioritize the spread of education with the aim of achieving comprehensive economic development and escape from poverty.

Under PEEC 2006-2010/2011, the government implemented a strategic plan which prioritized primary education, and achieved 100% gross enrollment rate for lower primary education in 2008. The government then formulated EES 2008-2015, and has been putting effort into expanding access to secondary education, improving the quality of education, and strengthening institutions, in order to realize the objectives of PEEC. Even in the Plano Estrategico do Sector da Educacão (PEE) 2012-2016, which follows PEEC 2006-2010/11, the necessity of increasing the number of schools for secondary education to respond to the increasing need for secondary education is mentioned.

Therefore, this project is relevant to “EES 2008-2015,” which mentions the expansion of access to secondary education and the improvement of the quality of education, at the time of appraisal. The project is also relevant to “PARP 2011-2014” and “PEE 2012-2016,” which mention the spread of education and response to the rapidly increasing needs of secondary education, at the time of ex-post evaluation.

3.1.2 Relevance to the Development Needs of Mozambique

100% gross enrollment rate for lower primary education was achieved in 2008 in Mozambique, and the number of secondary students has also been increasing. For instance, the number of students at the lower secondary levels (ESG 1: 8-10 grades) doubled, and that of the higher secondary levels (ESG 2: 11-12 grades) became 2.6 times from 2004 to 2008. The gross

⁴ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁵ ③: High, ②: Fair, ①: Low

enrollment rate for ESG 1 in 2008 was 39.4% (net enrollment rate was 8.9%)⁶, and the gross enrollment rate for ESG 2 in 2008 was 12.5% (net enrollment rate was 1.3%). Although the rates were still low, the number of students enrolled in secondary education was expected to increase at the time of appraisal. In fact, the total number of students in ESG 1 was tripled (to about 500,000), and that in ESG 2 was quadrupled (to about 100,000), from 2004 to 2011. The gross enrollment rate for ESG 1 in 2010 was 46%, and that for ESG 2 was 19%, marking a further increase since 2008⁷. The need for constructing secondary schools is very high; therefore, this project takes on great significance in responding to these needs⁸.

Matola City in Maputo Province is a suburban city near Maputo, the capital city of Mozambique, where the population has been increasing and the number of students who want to enroll in secondary school has also increased rapidly. The construction of 2 schools in Maputo Province (Nkobe school and Kongolote school) is helping to meet the growing demand for secondary schools, and the selection of the locations of the two schools is regarded as appropriate. The population of Gaza Province, which neighbors Maputo Province, has been also increasing, and the number of students who want to go to secondary school is also expanding. There are a small number of secondary schools, and the students must walk a long distance to schools in the area where Chissano school and Manjakaze school are located. The project aims to improve the educational environment, including cutting down on the amount of time it takes students to commute to school, through the construction of secondary schools in small cities in the rural areas, as well as the selection of locations that is regarded as appropriate.

On the other hand, advancements have been made in aid coordination in the educational sector in Mozambique, and the FASE (Fundo de Apoio ao Sector da Educação) is a typical example of the use of common funds for assisting the educational sector, which began in 1995. The World Bank has been initiating the FASE since 2008. The FASE has been the largest financial resource in the educational sector, and the largest share of it has been used for construction of schools. FASE assisted in the construction of 20 new secondary schools and rehabilitated one secondary school from 2008 to 2011, the World Bank itself assisted in the construction of 6 new secondary schools and rehabilitated 6 schools from 2003 to 2008, and the

⁶ "Net Enrollment Rate" refers to the number of children enrolled in school who belong to the age group that officially corresponds to schooling, divided by the total population of the same age group. "Gross enrollment rate" is higher than the "net enrollment rate," because the former includes the number of students who are outside the official school age of population (repeaters, readmitted, etc.)

⁷ PEE (2012-2016), p.130.

⁸ "Project for the Construction of Primary and Secondary Schools in Maputo City," started in 2001 (984 Million yen), was offered as a scheme of General Grant Aid. On the other hand, "The Project for the Construction of Secondary Schools in Nampula Province," started in 2012 (1,063 Million yen), which provided assistance to construct 4 schools (49 classrooms) in Nampula Province, was offered as a scheme of Grant Aid for Community Empowerment. One of the differences between the General Grant Aid and the Grant Aid for Community Empowerment is that local contractors (with a share of local capital of more than 50%) are selected as contractors for the construction of facilities and procurement of equipment in the latter scheme, which is highly estimated by the Mozambique side because it corresponds to the expectation and needs for using local companies.

African Development Bank assisted in the construction of 5 new secondary schools and rehabilitated 4 schools from 2004 to 2009. At the time of 2009, the African Development Bank had a plan to assist in the construction of 2 schools in the North, and the Kuwaiti Government had a plan to construct 2 schools in the middle area of Mozambique; therefore, the Japanese government focused on the South of Mozambique as its target. The decision for the selection of location is regarded as appropriate.

Therefore, the project is responding to development needs, both at the time of appraisal and at the time of ex-post evaluation.

3.1.3 Relevance to Japan's ODA Policy

The Japanese government has been providing ODA in the areas of economic infrastructure building, rural and agricultural development, and human resource development, among others. Human resource development was raised as one of the prioritized areas at the "Policy Dialogue with Mozambique" held in 2007. Therefore, assisting in the improvement of educational facilities is consistent with the priorities of Japanese ODA policies for Mozambique⁹. The Japanese government announced its plans to assist in the improvement of access to education in Africa by constructing 1,000 primary and secondary schools and 5,500 classrooms at the Fourth Tokyo International Conference on African Development (TICAD-IV). Therefore, the project is consistent with this initiative and Japanese ODA policy at the time of planning.

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

3.2 Efficiency (Rating③)

3.2.1 Project Outputs

58 classrooms (19 classroom buildings¹⁰ and other 16 buildings) in 4 schools (Chissano school and Manjakaze school in Gaza Province, Nkobe school and Kongolote school in Maputo Province) were constructed as planned¹¹.

There were no major changes from the original plan in terms of major facilities. Athletic field, field locker room, teachers' locker room and store house in Chissano school were excluded at the time of bid because of budget limitations, but those were finally constructed in batch 4 by using the remaining balance of the budget. Actual total floor space of the 4 schools was

⁹ "Country assistance Policy for Mozambique" had not yet been formulated in 2009.

¹⁰ This number of classrooms includes the number of multipurpose classrooms.

¹¹ At the time of ex-post evaluation, the name of Kongolote school was changed to Bonifacio school, and the name of Manjakaze school was changed to Samora Machel school. However, this report uses the names of schools at the time of planning, to maintain consistency with the names at the time of planning.

12,672.70 m², in contrast with the 13,746.70 m² as planned. The decrease in total floor space was due to the decrease in the space of facilities attached to the athletic field of Chissano school, without any major changes to the facilities of the 4 schools¹².

Table 1: Details of Constructed Facilities

Batch Number	Province/District/School	Facilities (number of blocks)
1	Gaza/ Chissano, Bilenemasia/ Chissano	4 Classroom Block×2 Block(8 Classrooms in total), Multipurpose Classroom Block, Administration Block, Toilet Block, Warden’s Block, Athletic Field with Roof
	Gaza/ Manjakaze, Manjakaze/ Manjakaze	3 Classroom Block×1, 4 Classroom Block×3 Block (15 Classrooms in total), Multipurpose Classroom Block, Administration Block, Toilet Block, Warden’s Block
2	Maputo/ Matola, Mashaba/ Nkobe	3 Classroom Block×1, 4 Classroom Block×3 Block (15 Classrooms in total), Multipurpose Classroom Block, Administration Block, Toilet Block, Wardens Block, Athletic Field with Roof
	Maputo/ Matola, Inflene/ Kongolote	4 Classroom Block×5 Block (20 Classrooms in total), Multipurpose Classroom Block, Administration Block, Toilet Block, Wardens Block, Athletic Field with Roof ‘
4	Athletic field with roof of Manjakaze School (Batch 1)	Athletic Field with Roof

(Source) JICA Reports. Batch 3 involved the procurement of furniture for 4 schools, which is not listed in Table 1.



Photo1: Nkobe/Maputo



Photo2: Kongolote/Maputo



Photo3: Chissano/Gaza



Photo4: Manjakaze/Gaza

¹² Based on JICA Reports.

There were no major changes from the original plan in terms of major facilities. Athletic field, field locker room, teachers' locker room and store house in Chissano school were excluded at the time of bid because of budget limitations, but those were finally constructed in batch 4 by using the remaining balance of the budget. Actual total floor space of the 4 schools was 12,672.70 m², in contrast with the 13,746.70 m² as planned. The decrease in total floor space was due to the decrease in the space of facilities attached to the athletic field of Chissano school, without any major changes to the facilities of the 4 schools¹³.

As to the major furniture and equipment, there were minor changes in the number of sanitary equipments (washstands and sinks etc.) for both male and female shower rooms at the 4 schools. Cisterns were also added to the toilet blocks of the 4 schools. These changes were made to respond to the requests of the counterparts of the project. There were no other major changes to the furniture and equipment.

Although the students' hostels and teachers' houses are normally constructed according to the MoE's standard design, this project excluded those facilities to construct as many schools as possible within its budget of about 1 billion yen, because the cost of construction of 1 school would become doubled if those facilities were included. Choosing the location of schools with relatively better access reduced the need for students' hostels, but the MoE constructed teachers' houses using their own budget for the Chissano school and Manjakaze school in Gaza Province, where there was a strong need for teachers' houses. Also, in the case of athletic fields, the seats (stands) were constructed based on the MoE's normal design. However, the seats were excluded from the design of the 4 schools in this project in order to reduce the cost of construction per school.

3.2.2 Projects Inputs

3.2.2.1 Project Cost

Project cost on the Japanese side was 1,015 million yen, provided as Grant Aid for Community Empowerment. The remaining amount of the budget at the time of completion of disbursement to contractors in March 2013 was 27.60 million yen, which was reimbursed to the implementing agency (Ministry of Education) in September 2013 in accordance with the request of the Ministry, to cover the cost of constructing other secondary schools. Therefore, the final project cost was 1,015 million yen, which was the same as planned (100%).

The project component borne by the Mozambique side included the surrounding facilities, land, and water equipment for the 4 schools, which were provided as planned. (The amount of the cost borne by the Mozambique side was 54 million yen at the time of planning.) The Mozambique side paid for additional components such as extension of roads to neighboring

¹³ Based on JICA Reports.

cities and construction of teachers' houses, which were not included in the original plan. (Their actual cost is unknown.) On the other hand, although IT and science class equipment were expected to be provided by the Mozambique side, science class equipment has not yet been provided in all 4 schools, while IT equipment (computers, monitors, etc.) has been provided in 3 schools but not yet been provided in Chissano school of Gaza Province.

Thus, project cost on the Japanese side remained as planned. As we have not been able to identify the details of the project cost for the Mozambique side, project cost was evaluated based on that for the Japanese side only.

3.2.2.2 Project Period

Project period was 28 months from October 2009 (E/N of G/A) to January 2012 at the time of appraisal, and the actual project period was also 28 months from October 2009 (E/N of G/A) to January 2012 (completion of construction and handover of facilities and equipment), which was 100% according to plan. Thus, the project period was the same as planned.

Both the project cost and the project period were as planned. Therefore, efficiency of the project is high.

3.3 Effectiveness¹⁴(Rating: ③)

3.3.1 Quantitative Effects (Operational and Effect Indicators)

The number of classrooms as an operational indicator, and the number of students who are able to go to schools and the number of teachers and staff as effect indicators, were examined at the time of ex-post evaluation¹⁵. Since there is no exact data on the enrollment rate of each division, we compared the number of students in the 4 target schools of the project at the time of both planning and ex-post evaluation, with the increase in the number of students in Matola city in Maputo Province and Gaza Province as a whole.

(1) The number of classrooms

As already mentioned in the section on project outputs, 4 schools and 58 classrooms were constructed, and the target was achieved.

(2) The number of students who are able to go to schools

¹⁴ The rating of effectiveness includes the evaluation of the impact of the project.

¹⁵ As the Preparatory Survey of JICA mentioned in its report that the construction of 58 classrooms, and 184 teachers and 102 staff (administrative and other staff), are necessary for the management of the 4 secondary schools to be constructed under the project, these figures were verified as operational indicators.

The target number of students who can enroll in the schools was 9,570, which was calculated based on the formula “55 persons per classroom¹⁶ × 3 sessions × number of classrooms (58)”, which was the same as the output figures. The actual number of students in the 4 schools is the most important indicator for assessing the effective utilization of the facilities.

At the time of planning, the expected number of students who can enroll in the schools was estimated to expand to 9,570 in 2014 (2 years after the project completion), and the actual number of students in February 2014 was 10,356 (and 12,723 in 2015), which was more than the expected number at the time of planning¹⁷. (See Table 2)

Table 2: Comparison of Operational Indicators between the Target and the Actual

	Baseline	Target	Actual			
	2008	2014	2012	2013	2014	2015
	Assessment Year	2 years After Completion	Year of Completion	1 Year After Completion	2 years After Completion	3 Years After Completion
Number of classrooms	2	60	60	60	60	60
Number of students	678	9,570	n.a.	5,993	10,356	12,723
Nkobe school	0	2,475	431	1,351	2,805	3,780
Knongolote school	0	3,300	n.a.	2,022	4,205	4,519
Chissano school	678	1,320	1,292	1,455	1,518	1,954
Manjakaze school	0	2,475	761	1,165	1,828	2,470
Number of teachers (number of staff)	n.a.	184(102)	n.a.	124(48)	195(56)	213(67)
Nkobe school	0	46	13(6)	31(11)	51(14)	54(14)
Kongolote school	0	61	n.a.	42(17)	62(20)	67(29)
Chissano school	n.a.	31	22(7)	27(8)	37(8)	44(9)
Manjakaze school	0	46	18(8)	24(12)	45(14)	48(15)

Source: Baseline and target figures are based on JICA Report. Actual data is based on the documents offered by MoE and the 4 schools.

Notes: (1) 15 new classrooms were constructed in Nkobe school, 20 new classrooms in Kongolote, and 15 new classrooms in Manjakaze. In Chissano school, 2 classrooms were already existing, and 8 new classrooms were constructed. (2) The targeted number of students in 2014 refers to the capacity of the schools, while other student figures are all actual figures.

Table 3 shows the number of students for Matola city of Maputo Province and Gaza Province as a whole in 2009, 2012 and 2014, as well as the number of students for the 4 schools¹⁸. There were 39 secondary schools in Matola city in Maputo Province, and the increase in the number of

¹⁶ The number of students per classroom was based on the figure mentioned in “Estrategico da Ensino Secundario (EES) 2008-2015”.

¹⁷ The ex-ante evaluation report of JICA mentioned that ex-post evaluation would be conducted 2 years after the completion of the project, and a comparison made between the figures at the time of planning and the figures for February 2014.

¹⁸ Total number of students enrolled in two days and one night sessions together, based on the statistics offered by DPEC (Direccoes Provincial de Educacão e Cultura) of Maputo Province.

secondary school students from 2009 to 2014 was 19,794. The number of students for Nkobe school and Kongolote school was 7,010 (2,805 and 4,205 respectively), which was 35.4% of the total increase of 19,794. The number of new schools constructed during the period from 2009 to 2014 was 4, of which 2 were constructed with assistance from JICA while the other 2 were constructed with assistance by FASE. There were 50 secondary schools in Gaza Province, and the increase in the number of secondary students from 2009 to 2014 was 17,481. The increase in the number of students of 2 schools in Chissano and Manjakaze schools was 2,668 (840 and 1,823 respectively), which was 15.3% of the total increase of 17,481¹⁹.

The increase in the number of students under the project was 9,678, making 26.0% of 37,275, which was the total increase in Matola city in Maputo Province and Gaza city as a whole. Hence, the 4 schools assisted under the Project made a large contribution in accepting the increase in the number of students who want to go to secondary schools in those areas.

Table 3: The Total Number of Students in the Target Areas and the Share of the Number of Targeted Schools

		Total number of enrolled students			Increase between 2009-2014 (A)	Number of enrolled students in targeted 2 schools (B)	Share of the targeted 2 schools in total increase (B/A)
		2009	2012	2014			
Matola city/ Maputo Province	ESG1	40,274	50,354	53,192	19,794	7,010	35.4%
	ESG2	5,309	10,783	12,185			
Gaza Province*	ESG1	44,390	55,815	58,009	17,481	3,346 (2,668)	19.1% (15.3%)
	ESG2	9,975	11,483	13,837			

Notes: Based on the documents offered by MoE and the 4 schools.

* The data for Maputo Province in this table shows the data for Matola city only, but the data for Gaza Province shows the data for Gaza Province as a whole, because 2 schools supported by the project were located in different districts and no district specific data was available. In Chissano school, there were 678 students in 2008, and the figures shown in brackets () are the net increase obtained by subtracting the existing number of students from the current number of students in 2014.

(3) The number of teachers/staff

At the time of February 2014, the number of teachers in the 4 schools was 195 in total. This number exceeded 184, which was the target number of teachers at the time of appraisal. Therefore, the necessary number of teachers was stationed. On the other hand, the number of administrative staff (secretary and management staff) was 56 in 2014. This number was less

¹⁹ Based on the data offered by DPEC of 2 Provinces and interviews. The expected number of students in Manjakaze school in 2014 at the time of appraisal was 2,475 (15 classrooms × 3 sessions × 55 students per classroom), but the actual number of students in 2014 was 1,828, which was less than expected. This is because the Manjakaze school accepted students from the 8th grade and 11th grade only. (Students of other grades were students who had advanced from the previous grades and included no newcomers.) The actual number of students in 2015 is almost the same as the targeted number of students.

than 102, the number of target staff at the time of appraisal. Therefore, the necessary number of staff was not stationed.

3.3.2 Qualitative Effects (Other Effects)

The expected qualitative effects produced by the project are as follows.

(1) Improvement in Educational Environment

At the time of planning, it was expected that it would become possible to conduct school lessons in accordance with the regular curriculum, and that the quality of education would improve through the provision of multipurpose classrooms, IT classrooms, libraries, athletic fields with roofs, which are necessary to conduct lessons in accordance with the regular curriculum of secondary schools.

However, science classrooms were used as normal classrooms because science equipment in the multipurpose classrooms had not yet provided to all 4 schools. Besides, IT equipment such as computers were provided only to the 2 schools of Kongolote school (in 2012) and Manjakaze (in 2015) by the Ministry of Education, but had not yet been provided to Chissano school²⁰ (at the time of ex-post evaluation). Furthermore, the IT equipment of Nkobe school was stolen in 2014. (See Photo 5.) Therefore, science and IT classrooms were often used as normal classrooms, and were not used in the ways they were expected to be used.

Based on the beneficiary survey seeking the opinions of students about the facilities of the constructed schools, the level of satisfaction of the students was relatively high in general²¹. Satisfaction level on “desks and chairs” was relatively low. (It is believed that the reason was because the number of desks and chairs was far less than the number of students in Nkobe school and Kongolote school.) Satisfaction level on “IT classrooms” was low in Chissano school and Nkobe school. (It is believed that the reason was that there were no computer equipment in those schools.) Satisfaction level on “libraries” was also low in Chissano school and Manjakaze school. (It is believed that the reason was that the number of books in libraries was very limited in those schools.) Satisfaction level on athletic fields and administration offices was relatively high²²; on the other hand, satisfaction level on toilet facilities was relatively low in general.

²⁰ One Japanese physics teacher was dispatched to Chissano school in February 2015, as a member of JOCV (Japan Overseas Cooperation Volunteers).

²¹ Beneficiary Survey was conducted, and interviews were conducted on 50 students per school (20 students in the morning session, 20 students in the afternoon session, 10 students in the night session, with 25 boys and 25 girls among them, 200 in total) and 15 teachers per school (60 in total), during the period from February to March 2015.

²² The athletic fields with roofs are open after school and during weekends, and are used by the adults and children in the neighboring communities. They are also used as the meeting places for school committees.

Based on the beneficiary survey seeking opinions on the necessity for teachers' houses, as well as students' hostel and canteens, many respondents answered that all of these facilities were necessary in the Chissano school and Manjakaze school, which are located in rural areas. On the other hand, there were less positive answers for the Kongolote school and Nkobe school. (See Table 4.)

Table 4: The Perception about the Necessity of Teachers' Houses, and Students' Hostel and Canteens

(Proportion of "Yes" answers: %)

School	Teachers' Houses	Students' hostel		Canteen	
	teacher	teacher	student	teacher	student
Chissano/Gaza Province	80	80	72	87	82
Manjakaza/Gaza Province	93	80	88	93	92
Kongolote/Maputo Province	47	60	46	80	74
Nkobe/Maputo Province	80	60	56	100	72

Notes: Based on the questionnaires conducted on teachers in the case of teachers' houses, and conducted on both teachers and students in the case of students' hostel and canteens.



Photo 5: IT classroom of Manjakaze school



Photo 6: Teachers' house of Manjakaze school (under construction)

(2) Reduction in commuting time to schools

The reduction in commuting time to schools is shown in Table 5, which shows that commuting time has decreased for all 4 schools.

Overall, the expected effects produced by the project, including the number of classrooms, the number of enrolled students in the 4 schools, and the number of teachers, were achieved. Educational environment was improved because it became regular to conduct lessons in accordance with the regular curriculum although the IT classrooms were not used as planned, and commuting time to schools was also reduced. Therefore, this project has largely achieved its objectives.

Table 5: Reduction in Commuting Time to 4 Schools

School	Improvement of access to schools	Time taken to commute to schools based on beneficiary survey (average)
Nkobe/Maputo	In comparison with the situations before the construction of the new school, commuting time was reduced from 30 minutes to 15 minutes by bus, and from 1 hour to 30 minutes on foot.	Decreased from 66 to 52
Kongolote/Maaputo	After the construction of the new school, students no longer have to commute to schools far from their community. (Zonaverde, Matola: 5-7km distance)	Decreased from 52 to 41
Chissano/Gaza	Before the expansion of the school, many students commuted to the next nearest school located 10km away.	Decreased from 29 to 21
Manjakaze/Gaza	Before the construction of the new school, many students commuted to another secondary school located 7km away, which took them almost 2 hours to reach. Now, students who live in the nearby community take between 5 to 30 minutes to commute, while students in other communities take about 1.5 hours (2 hours previously).	Decreased from 29 to 20

(Notes) The sentences in the middle column are based on interviews with the principals. The right column shows the average commuting time based on the beneficiary survey (questions addressed to 50 students in each school, 200 in total, about the commuting time to schools before and after the construction of new schools).

3.4 Impacts

3.4.1 Intended Impacts

The following impact has been identified in this project.

(1) Improvement in promotion rate (Aproveitamento Escolar)

One of the indicators used to assess the results of school lessons on learning is “promotion rate (Aproveitamento Escolar),” which means the rate of the number of students who are able to move to the next grade, based on the results of lessons or scores in examination for entering 10th grade and 12th grade.

Table 6 shows that promotion rates have improved since 2013 in Chissano school and Manjakaze school where the number of students were within the official capacity. On the other hand, the promotion rates had not improved, or had declined, in some grades in Nkobe school and Kongolote school in Maputo Province.

The promotion rates in Chissano school and Manjakaze school had improved and the quality of education was achieved, it was believed, partly by keeping the number of students within the official classroom capacity. On the other hand, the promotion rates in Nkobe school and Kongolote school had not improved, it was believed, partly because the number of enrolled students had rapidly expanded and lessons were conducted under conditions of overcapacity. In comparison with the average promotion rate in Matola city in Maputo Province and Gaza

Province as a whole, the promotion rates for Nkobe school and Manjakaze school were not as high as the average.

Table 6: The shift in Promotion Rate for Each Grade in the 4 Schools

School	Shift in promotion rate (%)					
Nkobe/ Maputo		8th	9th	10th		
	2013	76	82	na		
	2014	62	56	57		
	(8th-10th grades only. 11th grade starts in 2016.)					
Kongolote/Maputo		8th	9th	10th	11th	12th
	2013	77	97	na	85	na
	2014	79	78	39	85	60
Chissano/Gaza		8th	9th	10th		
	2010	65	68	na		
	2011	62	68	60		
	2012	64	77	55		
	2013	80	80	80		
	2014	89	82	86		
(8th-10th grades only. 11th grade started in 2015.)						
Manjakaze/Gaza		8th	9th	10th	11th	12th
	2012	65	na	na	na	na
	2013	75	69	na	72	na
	2014	79	72	72	73	84
	(8th grade started in 2012, and 11th grade started in 2013.)					

Source: Based on interviews with, and documents from, the 4 schools.

(2) Improvement in learning attitudes of students and teaching attitudes of teachers

In the interviews conducted with the 4 schools, all schools provided answers such as the following: “Getting desks and chairs has made it easier for us to study;” “There are less students who are leaving the classroom halfway through the lessons;” “There are many students who want to come to this school because the facilities are very good;” “The quality of education has improved because teachers can walk around the classrooms.” These were achieved as a result of the improvement of facilities under the project.

Table 7: Beneficiary Survey Results on the Quality of Education

School	Question1: Have the new school facilities made an impact on your performance at school? (question to students)	Question2: Was there any positive impact on the learning attitudes of students? (question to teachers)	Question 3: Was there any positive impact on the teaching attitudes of teachers? (question to teachers)
Nkobe/Maputo	56	93	80
Kongolote/Maputo	82	93	93
Chissano/Gaza	82	53	80
Manjakaze/Gaza	86	60	93

Notes: The number of responses was: 50 students in each school making a total of 200 in 4 schools, and 15 teachers in each school making a total of 60 in 4 schools.

In addition, Table 7 shows the positive answers pertaining to the impact of the project. Both students and teachers answered that the learning attitudes of students and teaching attitudes of teachers have been improved through the construction of new school facilities.

(3) Number of students per classroom

The number of students per classroom differs according to the policy for accepting local students in the 4 schools. (See Table 8.)

In the 2 schools in Maputo Province, schools accepted all students who wanted to enroll. As a result, the number of students per classroom exceeded the capacity, reaching about 80 students per classroom, and leaving many students to study without desks and chairs. Nkobe school accepted students from 8th to 10th grades, where its classrooms were crowded. Hence, the number of students exceeded the classroom capacity, resulting in the students studying their lessons while sitting on the floor. The situation was the same in Kongolote school.

Table 8: Shift in the Number of Students per Classroom of 4 Schools

	Capacity of classroom	2012	2013	2014	2015
Nkobe/Maputo	55	50-55	60-65	65-70	70-80
Kongolote/Maputo	55	n.a.	65	70-75	75-80
Chissano/Gaza	55	56	56	56	n.a.
Manjakaze/Gaza	55	50	52	55	56

(Notes) Based on the interviews with principals of 4 schools

In the 2 schools in Gaza Province, schools set their quota for accepting students at a maximum of 56 students per classroom. In Chissano school, lessons were sometimes held outside without classroom facilities before the project, and the situation improved after the construction of 8 classrooms under the project. Chissano school accepted the students for ESG 1 (8-10 grades) before 2014, but began to accept students for ESG 2 (11th grade) as well, so the number of students was on the rise²³. As such, the school was still using the existing classrooms by buying plastic chairs using their own budget (without desks) (See Photo 9). Manjakaze school began to accept students of 8th grade in 2012, and continued to accept new 8th grade students every year to keep the number of students per classroom under the maximum capacity of 55 until 2014. However, it became difficult for the school to accept an increasing number of students who wanted to enter the school after 2015. Hence, it has

²³ Chissano school has set its quota on the number of students to accept based on the capacity of its classrooms. Since the number of students has increased and more classrooms are necessary to accept them, members of the local community have tried to construct a new building of 4 classrooms by themselves. However, they were only able to construct its walls without a roof.

requested the Government to construct new classrooms, and is reviewing the limit on the number of students as a temporary measure in the meantime.



Photo 7: Classroom of Kongolote school



Photo 8: Classroom of Manjakaze school



Photo 9: Existing Classroom of Chissano school

3.4.2 Other Impacts

(1) Impact on the Natural Environment

None.

(2) Land Acquisition and Resettlement

No land acquisition was necessary for the project because the land for the 4 schools was all state-owned land. Resettlement happened only in the case of Nkobe school, where 6 households agreed to resettle with compensation, but one household near the school rejected resettlement and is still located just outside the wall of school. (See Photo 10.) In the case of the construction of the Manjakaze school, 4 tombs were relocated with the understanding of local residents.

As the Mozambique government has been accepting financial assistance for the educational sector from FASE coordinated by the World Bank, the Ministry of Education is maintaining the standards requested by the World Bank in its operational procedures of construction for all schools. For instance, the government is compliant with “OP4.12: Operational Guidelines of Involuntary Resettlement” drawn up by the World Bank in December 2001²⁴.

(3) Other Impact: Impact on Gender Issues

This project gave consideration to female students in improving the school facilities, by constructing toilet facilities and shower rooms in athletic fields for girls so as not to discriminate girls’ access to schools.

The proportion of female students in Mozambique was 47.2% in ESG 1 (8th -10th grades) and 44.5% in ESG 2 (11th -12th grades) in 2008²⁵. The proportion of female students was higher

²⁴ The government enacted a law on involuntary resettlement in 2012, and is compliant with the procedures stipulated under the law. Furthermore, “Social and environmental safeguards” drawn up by the World Bank in 2012 has been applied not only to the projects of FASE, but also to the projects assisted by Japan.

²⁵ Based on JICA reports.

than the national average in the southern part of Mozambique. For instance, the proportion of female students in Matola city in Maputo Province was 54.8% for ESG 1 and 50.5% for ESG 2 in 2008, and 55.9% for ESG 1 and 58.6% for ESG 2 in 2014, which signified a gradual increase in ESG 1 and rapid increase in ESG 2 from 2008 to 2014.

In fact, the number of female students exceeds the number of male students in all 4 schools. In the case of day sessions (morning and afternoon sessions) for ESG 1 in 2014, the proportion of female students was 52.1% in Nkobe school, 57.0% in Kongolote school, 60.0% in Chissano school, 58.3% in Manjakaze school, and 57.2% on average for the 4 schools. Some of the underlying factors for this situation are that the number of girls is higher than that of boys demographically, and many boys of secondary school age are working in South Africa. Furthermore, one of the responses indicated that female students tend not to become pregnant as compared with girls who do not attend schools. This is considered to be an indirect impact of education for girls²⁶.

(4) Other Impact: Expansion of Business in the Neighboring Areas of Schools

Population has increased, and the number of shops has also increased, in the areas surrounding Kongolote school in Maputo Province. It is clear that residents have moved to locations near to the school for better access to the school, and school bus services managed by private companies are popular.

In the areas surrounding Manjakaze school in Gaza Province, the number of houses has increased, more people have come to settle in these areas, and more shops and small business have opened. (See Photo 11.) Electricity service was extended to the areas surrounding the school in tandem with the construction and electrification of the Manjakaze school²⁷.



Photo 10: The resident who denied resettlement outside Nkobe school (left side: school wall, right side: residence house)



Photo 11: Shops near Manjakaze school

²⁶ Based on interviews with the Principal of Kongolote school in Maputo Province.

²⁷ The water system is provided only inside the school area, and the people of the neighboring community have to fetch water from other natural water sources.

In short, the number of students has increased for all 4 schools as a result of the construction of schools, and the number of residents and shops in the surrounding areas has also increased. These represent the indirect positive impacts of the project.

As mentioned above, the number of classrooms, the number of students who can enroll in 4 schools, and the number of teachers exceeded the target figures at the time of planning, and the project has contributed to the increase in the number of students in secondary students in Matola city in Maputo Province and Gaza Province as a whole. It has become possible to conduct lessons in accordance with the regular curriculum, although IT classrooms are not used as planned in some schools, and commuting time to schools has decreased. Therefore, effectiveness of this project is high.

As to the impact of the project, the improvement in promotion rate in 2 schools in Gaza Province, as well as the improvement in learning attitudes of students and teaching attitudes of teachers, have been identified as indirect impacts. These are mostly on par with expectations. There has been no negative impact in terms of natural environment and resettlement.

Thus, this project has largely achieved its objectives as planned, and effectiveness and impact of the project are high.

3.5 Sustainability (Rating: ②)

3.5.1 Institutional Aspects of Operation and Maintenance

(1) O&M by the Ministry of Education

Technical maintenance and procurement management of the facilities constructed by the Ministry of Education are under the charge of the Department of Construction, which handles the drawing up of standard designs for facilities, implementation of the entire process from bidding and signing of contracts to the management of the construction of facilities and procurement of equipment. The administration of education services, such as operation and maintenance and implementation, at the provincial level is under the charge of DPEC (Provincial Department of Education and Culture), which has departments for education, planning, human resources, construction, finance, and other departments corresponding to the central organizations. The DPEC requests for the necessary budget, allocates teachers for school management, and secures budget for operation and maintenance, under the supervision of the Department of Planning and Cooperation (DIPLAC) of the Ministry of Education. There were no major changes to the organizational structure in 2009, 2012 and 2015. In 2015, restructuring of the Ministry of Education had begun, but the basic framework of secondary education has remained almost the same as the structure mentioned above.

The number of staff in the Construction Department (CEE) was 33 including 19 technical staff in 2009. 3 more staff members were added and one staff member died later; consequently,

the number of staff was 35 including 22 technical staff in March 2015. The staff members added were an expert on the social impact of projects, and an expert on the environmental impact of projects. They are in charge of providing compensation to residents in the implementation of projects. Thus, the allocation of human resources in the Ministry of Education is considered appropriate.

(2) O&M by the Provincial Department of Education and Culture: The relationship among DPEC, Provincial Education Service and Schools

As to the maintenance of school facilities, schools report to DPEC in case there is any major damage to the facilities, and schools themselves undertake the daily maintenance of facilities and equipment. The District Educational Services Office is in charge of coordinating between the schools and the provincial governments²⁸. When a school reports a major damage to DPEC, DPEC will check the damage. However, there are many cases where DPEC is unable to fix the damage due to budgetary constraints.

(3) O&M by Schools

Table 9 shows the systems and the number of staff responsible for maintenance in the 4 schools. The number of staff responsible for maintenance varies depending on the schools, and only Kongolote school has specific staff for the maintenance of electricity and equipment.

Table 9: O&M Systems of the 4 Schools

School	Number of Maintenance Staff and O&M System	Total Number
Nkobe/Maputo	5 security guards, 4 cleaning staff.	9
Kongolote/Maputo	5 security guards, 4 cleaning staff, 1 gardener, 1 electricity maintenance staff, 1 equipment maintenance staff. New security system was introduced by the chief of the School Committee.	12
Chissano/Gaza	2 security guards, 2 cleaning staff, excluding the management staff such as secretaries. No changes from 2012 to 2015.	4
Manjakaze/Gaza	The number of maintenance staff has increased from 4 in 2012 to 7 in 2015. 4 security guards, 3 cleaning staff. Security guards are hired using contributions from the local community.	7

Source: Based on interviews with the Principals of the 4 schools.

²⁸ Advancements have been made in decentralization in Mozambique, and there are no personnel and budgetary transfers and relations between the Ministry of Education of the central government and DPEC of the provincial governments. District Education Services Offices are offices placed in each district to connect schools and DPEC, and they are small in terms of the facilities and the number of personnel, and have no technical staff.

Teachers and staff are allocated by the Ministry of Education and the provincial government based on the plan provided to them, and their salaries are covered by the general budget from the government. Hence, the number of teachers and staff is usually sufficient. On the other hand, the number of the maintenance staff tends to be insufficient because maintenance staff is hired by schools, and their salaries must be covered by the school's budget. The maintenance staff for facilities, plumbing and electricity should be stationed at secondary schools in accordance with the official guidelines set forth by the Ministry of Education, but it often happens that they are not stationed because of the budgetary constraints faced by the schools.

"School committees," which consist of the school principal, teachers and parents of students, are normally established in all schools, and their meetings are held based on need. The school committees serve the roles of connecting schools with local communities, and participating in the management of the school (such as making decision on school uniforms, providing assistance to poor households, dealing with problematic students, and undertaking voluntary work such as cleaning school facilities). The school committee of Manjakaze school has been paying a part of the salaries of maintenance staff, such as the security guards.

Thus, there are some problems with regard to sustainability in terms of the institutional aspect, such as the shortage of maintenance staff in some schools.

3.5.2 Technical Aspects of Operation and Maintenance

(1) Technical situations at the Ministry of Education

The CEE of the Ministry of Education is in charge of constructing schools, and has technical staff for architecture, civil engineering, calculation, survey, construction management, and other areas. The CEE has been engaged in all construction projects under the Ministry of Education, including projects supported by international donors, and has implemented the series of work ranging from planning, design of schools, selection of contractors, to construction management. It therefore has sufficient knowledge and experience of each process of school construction. The CEE uses manuals that summarize all procedures of planning, construction and management of schools, which were formulated with financial and technical support from FASE, and it has organized seminars to help familiarize school staff with these manuals.

(2) Technical situations in provincial governments

The DPEC has some technical staff who work not only for the schools constructed by FASE, but also provide technical support for the maintenance of all schools under the Ministry of Education, and who have adequate technical knowledge and experience. The manuals drawn up with support from FASE are also distributed to DPEC, and are used at DPEC.

There are 145 staff members in total in DPEC in Maputo Province, and 4 technical staff have

been allocated to the School Construction Unit, of whom 2 have been hired by FASE. There are 3 technical staff in the Schools Construction Unit of DPEC in Gaza Province, but there is no other technical staff hired by FASE.

(3) Technical Situations at Schools

Teachers and staff are engaged in daily maintenance works, which do not require a high level of technical knowledge. These include minor repairs and checking the damage of facilities and equipment. Minor damages are sometimes repaired by these school staff, but the repair works for damage to electricity facilities, water systems, plumbing, windows, desks and chairs, and door knobs cannot be managed by these school staff. External companies are normally requested to undertake these repairs. Decisions on the need for repairs are made by schools, while major damages such as damage to buildings are reported to the DPEC, which is also requested to provide support to repair these damages.

Thus, there are no specific problems because the central and provincial governments have enough experience and knowhow, although there are limitations in terms of the technical aspects at the school level.

3.5.3 Financial Aspects of Operation and Maintenance

(1) Budget of the central and provincial governments in the education sector

The governmental expenditures (including provincial governments) in the education sector was 20,908 million MT²⁹ (21% as a proportion of total governmental expenditures) in 2010, of which 16,584 million MT was the amount from domestic resources and 4,324 million MT was the amount from foreign resources (20.7% as a proportion of the total)³⁰. The budget in the education sector is expected to increase in tandem with the increase in GDP, which has been estimated to increase by 7.8% annually during the period of 2012-2016 (“PEE 2012-2016”, p.128). Actual governmental expenditures in the education sector have increased from 16,673 million MT in 2009 to 31,290 million MT in 2013. (See Table 10.) Looking at the details of the financial resources, foreign resources decreased slightly from 4,773 million MT in 2009 to 4,476 million MT in 2013 (decrease of 6%), domestic resources increased from 11,828 million MT in 2009 to 26,814 million MT in 2013 (increase by 2.27 times), and the proportion of domestic resources has been increasing alongside with the continuing economic development of

²⁹ MT is the currency unit of Mozambique. 1MT is approximately 4.5 Japanese yen at the time of ex-post evaluation in 2015.

³⁰ “Domestic resources” refers to the budget allocated from the revenue of the government. “Foreign resources” refers to the budget obtained from aid and loans from international organizations, foreign governments and organizations, including the FASE (Fund for Assisting Education Sector).

Mozambique³¹. Based on this trend, the domestic resources for the education sector are expected to increase even in the future. Most of the foreign resources have been dependent on FASE.

On the other hand, among the governmental expenditures for the education sector, the proportion of expenditures for secondary education was 17.8% in 2010, and expected to reach about 21% in 2016. Among the expenditures for the education sector, the share of expenditures for human resources was 71.1% in 2010, the share of expenditures for school facilities and equipment was 7.8%, and the expenditures for the maintenance of facilities and equipment formed only a part of this³².

Table 10: Expenditures of the Central Government in the Education Sector
(Million MT)

	2009	2013
Domestic resources	11,828	26,814
External resources	4,773	4,476
Total	16,673	31,290

Notes: Based on MoE, “Evolução do Sistema Educativo:2010-2014”, p.75.
The total amount for 2009 does not tally, but has been shown as it is.

(2) External Financial Resources in the Education Sector (Aid and Loan from International Donors)

The greatest amount of foreign resources has come through the FASE, which makes up the largest share of foreign resources³³. The FASE has been offered continuously since 2003, in Phase I (2003-2008), Phase II (2008-2012), and Phase III (2012-2016). At present, Phase III (2012-2016) is in progress, and a similar level of assistance is expected at least up to 2016³⁴.

The resources from FASE have been used for the construction of schools and the provision of equipment, and 1,454 million MT was used for the construction of primary schools and 916 million MT was used for the construction of secondary schools in 2014. Of the 916 million MT used in the construction of secondary schools, 66 million MT was disbursed in Maputo Province and 72 million MT was disbursed in Gaza Province. The FASE has been used for “Apoio Directo as Escolas (ADE),” which is the direct budgetary support provided to schools via provincial governments.

³¹ MoE, Evolução do Sistema Educativo:2010-2014, p.75.

³² PEE 2012-2016, p.133.

³³ The shares of major donors to FASE in 2014 are as follows: The World Bank 58.7%, KfW 12.9%, CIDA 10.5%, Finland 6.0%, Ireland 5.4%, DfID 4.8%, etc.

³⁴ Some donors have committed to FASE by multi-year basis, and other donors have committed to FASE by one-year basis. Major donor such as the World Bank have committed their assistance to FASE until 2016 fiscal year at the time of March 2015.

(3) Operation and Maintenance Budget of Schools

There are 3 different categories of budgets for schools.

① The ADE (Direct Budgetary Support from FASE): This budget cannot be used for the maintenance of schools, so the budget for maintenance must be covered by the following ② and ③.

② General budget provided annually (twice a year) by the Ministry of Finance via provincial governments

③ Income from the tuition fees collected from students: Secondary education is not free and students must pay tuition fees at the start of each school year, normally 400-500 MT per person.

Table 11 shows the annual budget and expenditures for maintenance in the 4 schools in 2014. Most of the operational budget was used for personnel costs as well as lighting and heating expenses. Only a part of the budget was used for maintenance, and was insufficient in all 4 schools.

Table 11: Annual Budget for Operation and Maintenance of 4 Schools

School	Operational Budget			Expenditures for Maintenance
	ADE	General Budget	Income from Tuition Fees	
Nkobe/Maputo	181	940	863	20 (1.8%)
Kongolote/Maputo	250	940	1,700	100 (3.5%)
Chissano/Gaza	128	485	238	20 (2.4%)
Manjakaze/Gaza	127	435	422	67 (6.8%)

Notes: Based on interviews with principals of the 4 schools. Figures on the right show the proportion of expenditures for maintenance in the total operation budget (%).

Thus, although the budget for the education sector and the budget for schools were expected to be adhered to some extent through the use of financial resources such as FASE, the budgetary situation after 2016 remains unclear. Besides, there is also a problem such as constant issues of insufficient maintenance budget.

3.5.4 Current Status of Operation and Maintenance

(1) O&M Issues at the Provincial Government Level

In general, there has been no severe damage to the school facilities. However, the following 2 issues could not be managed at the school level, and DPEC was requested to provide assistance for the damages.

① In Nkobe school in Maputo Province, there were many subsided blocks near the bottom of pillars. (See Photo 12) This damage was believed to have occurred as a result of poor rainwater drainage and ground subsidence.

② In Manjakaze school in Gaza Province, some cracks appeared on the grounds of the athletic field after the completion and handover of the facility in 2012.

Both the damages in ① and ② were repaired by the construction contractor within a year of completion, which fell within the period of liability of the contractor. However, the problems still remained even after the period, and the schools requested DPEC to carry out repairs. However, the damages were still there at the time of ex-post evaluation.

(2) Situations of Daily Maintenance

Desks and chairs, as well as windows of the classrooms, have been damaged through daily use in all 4 schools, but these damages have been repaired using the respective school budgets and requests to specific companies. These repair works have been carried out periodically, but the equipment to be supplemented has often not been covered by the schools' budget, and has therefore not yet been supplemented.

Most of the doorknobs of the classrooms are damaged and have not yet been repaired. In Manjakaze school, the doorknobs for many classrooms were replaced 3 times using the school budget³⁵.

There is much trouble with toilet facilities, most of which have not been fixed due to the shortage of budget for maintenance, and lower priority for these facilities in comparison with the desks and chairs in classrooms.

Table 12: Major Issues in the Maintenance of Facilities and Equipments for the 4 Schools

School	Situation of maintenance of facilities and equipments
Nkobe/Maputo	The subsided blocks have not been fixed, although the damage was reported to DPEC. This damage was once repaired in 2012, within a year after the completion. The current problem of subsided blocks in floors and near pillars seems to have occurred after 2013.
Kongolote/Maputo	No major damage, although there is some damage in the toilet blocks.
Chissano/Gaza	No major damage, although there is some damage in the toilet blocks. Some toilet damage was reported as having been fixed in 2012, but there have been similar problems that were not fixed after 2013.
Manjakaze/Gaza	There are some cracks on the floor of athletic fields, and they have not been fixed, although the problem was reported to DPEC. The cracks were once repaired in 2012, but the current problems seem to have occurred again after 2013.

Notes: Based on the site-visits at the time of the first and second field surveys, and JICA project documents.

³⁵ There was a problem with the specifications of the doorknobs, and the MoE now uses another type of doorknobs when constructing new schools. (Interviews with the MoE.)



Photo 11: Broken doorknob (Chissano school)



Photo 12: Subsided blocks (Nkobe school)

As mentioned above, as to the institutional aspect of operation and maintenance, there are problems such as shortage in the number of maintenance staff in some schools. There are no major problems in the technical aspect of operation and maintenance, because the Ministry of Education and DPEC have enough knowledge and experience, although there are limitations to the maintenance level carried out by schools. Regarding the financial aspect, there are constant issues of insufficient maintenance budget, although the budget for the education sector and schools is expected to be adhered to some extent through the use of FASE and other sources. Some problems were observed with regard to the current status of maintenance, because some damaged facilities remain unrepaired.

Thus, some minor problems have been observed in terms of institutions, finances and situations of operation and maintenance. Therefore, sustainability of the effects of the project is fair.

4. Conclusion, Lessons Learned, and Recommendations

4.1 Conclusion

The project's objective was to improve access to lower secondary education, by constructing 4 schools and extending the capacity of existing schools and their facilities in the target areas of Maputo Province and Gaza Province, thereby, contributing to improvement of the quality of education. The project's objective coincides with the development policy of Mozambique, which emphasizes the expansion of access to secondary education at the time of planning and also ex-post evaluation. It also coincides with the development needs of Mozambique, because there are very strong needs for the construction of secondary schools in order to respond to the rapid increase in the number of students who wish to receive secondary education. It was also relevant to Japan's ODA policy at the time of planning. Thus, its relevance is high.

The project cost and the project period are the same as planned, thus its efficiency is high.

As to the effects of the project, 4 schools and 58 classrooms were constructed as planned, the number of students enrolled at those schools exceeded the original target, and other positive effects were revealed in terms of the Access to secondary education such as improvement of educational environment and reduction in commuting time to schools. Thus, its effectiveness is high. There were some negative impacts of the project; for example, the IT classrooms of some schools were not utilized as planned, and the promotion rate declined in some grades of 2 schools in Maputo Province partly because the number of students per classroom far exceeded the capacity of the classroom. On the other hand, there were some positive indirect impacts as planned; the promotion rate improved in 2 schools in Gaza Province, and the learning attitudes of students and teaching attitudes of teachers also improved. Thus, the project's effectiveness and impact are high.

As to the aspects of operation and maintenance (O&M), there were no serious problems in the technical aspect, but there were some problems in the institutional and financial aspects, as well as the O&M situations. Thus, sustainability of the project is fair.

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

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agency

(1) Recommendations to the Ministry of Education: The urgent need for providing IT and experimental equipment to schools

Although 3 years have passed since the completion of the schools, experiment equipment has not been provided to all 4 schools, and IT equipment has not been provided to Chissano school. The MoE has the responsibility to prepare the budget and provide this equipment as soon as possible, because it is necessary in order to maintain and improve the quality of education.

(2) Recommendations to the schools: Allocation of an adequate number of maintenance staff

Maintenance staff for facilities, equipment and electricity should be stationed at schools based on the MoE guidelines, but the number of such staff is less than sufficient, except in Kongolote school. Even under the budgetary constraints, all schools should try to secure enough staff for maintenance. Each school should put effort into keeping the necessary staffs for maintenance, by sharing its experiences with other schools. For instance, Manjakaze school has made efforts to obtain financial contribution from the local community to provide for the cost of hiring security guards.

4.2.2 Recommendations to JICA

None.

4.3 Lessons Learned

(1) The possibility of incorporating the component to be borne by the recipient government into the component of the Japanese side at the time of planning of the project

Although 3 years have passed since the completion of schools, experiment equipment has not been provided to all 4 schools, and IT equipment has not been provided to Chissano school. This poses a barrier to maintaining and improving the quality of education. The MoE has the responsibility to provide this equipment, but there are some factors that prevent it from doing so, such as the budgetary constraints and/or lower priority for the provision of educational equipment in the MoE. To encourage the effective use of IT and science classrooms in the schools constructed through Japanese assistance, JICA should consider the possibility of including the budget for IT and experimental equipment in the package for constructing school facilities through assistance from the Japanese side, at the time of planning of the project.

In short, JICA should consider the possibility of incorporating the component that is to be borne by the recipient government into the component of the Japanese side, after a detailed examination of the feasibility of the component of the counterpart, for effective implementation of the whole.

(2) The possibility of including additional facilities such as teachers' houses and canteens in the design for constructing school facilities located in rural areas

This project excluded the construction of students' hostels and teachers' houses, which are standard facilities of the schools in remote areas in MOE's standard design. The reason for the exclusion was to construct more schools within the budget. However, the MoE constructed teachers' houses in 2 schools in Gaza Province, because those schools are located in rural areas and there are fewer places for teachers to stay in. There is a significant need to construct these additional facilities in the rural areas, and the beneficiary survey also showed the same results. Therefore, JICA should consider the possibility of including additional facilities such as teachers' houses and canteens in the design for constructing school facilities located in rural area far from cities, at the time of planning of the project.