Vietnam

Ex-Post Evaluation of Japanese Grant Aid Project

"Project for Improvement of Facilities of Primary Schools in the Northern Mountain Region (Phase 2)"

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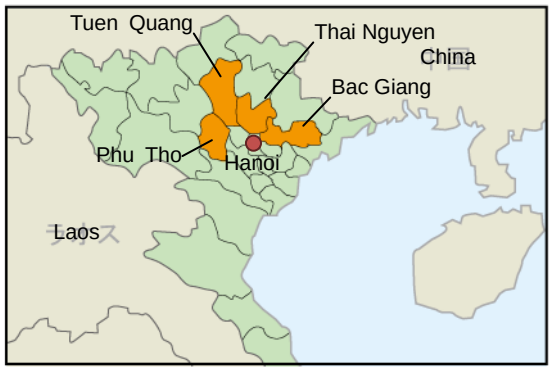
0. Summary

This project was carried out to increase the number of classes capable to provide full-day education and to improve the learning environment in the provinces of Bac Giang, Thai Nguyen, Tuyen Quang, and Phu Tho where the level of the socio-economic development is low due to geographical constraints. As a result of the ex-post evaluation, the project has been considered highly relevant and consistent to the Vietnamese development policy including the Education Development Strategic Plan 2001-2010, as well as to the local development needs and Japan's ODA policy. In combination with the efforts of the Vietnamese people to increase the number of classrooms, the project contributed to bringing down the average number of students per classroom from 107.4 in 2002[1] to 25.1 in 2008. The great majority of the assisted schools now provide full-day education of which favorable influence on the students' learning achievement is suggested. Therefore, the effectiveness and impact is high. Furthermore, its efficiency is evaluated to be high because the project cost and period were within the plan. However, sustainability of the project effect is fair because of some maintenance issues observed concerning the acquisition of repairing techniques, the procurement of replacing parts, and the districts' allocation of management costs to the schools.

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

1. Project Description



Project Locations

A School Building Constructed in the Project

1.1 Background

The Socialist Republic of Vietnam which adopted the "*Doi Moi* (renovation)" policy in 1986 has

[1] This indicator is figured out by dividing the total number of students by the total number of classrooms at the target schools. It does not mean that more than 100 students learned in a classroom at the same time because one classroom is utilized twice if the double-shift education is provided.

introduced market economy and been opening its market to foreign investors. Developing human resources to respond to the new economic environment has become its central concern. The Ministry of Education and Training (MOET) developed the Education Development Strategic Plan for 2001-2010 and strove to improve education quality and facilities, but the outcome was not fully satisfactory. Therefore, the Government of Vietnam sought the assistance of development partners, including the World Bank, to repair and construct school facilities. The Japanese government also carried out grant aid projects in 1994-1998 to improve primary school facilities in 16 coastal provinces frequently affected by storms and floods.

The Northern Mountain Region, the target area of this project, is less developed compared to other regions in Vietnam due to geographical constraints. Its educational environment was underdeveloped. There were shortages of classrooms which forced a considerable number of schools to operate in double shift. The difference between students learning in a double-shift school and those in a full-day school was therefore emerging. Moreover, there were a large number of temporary school buildings constructed with minimal wooden structure without windows or doors which did not meet the design standards for educational facilities. Students in remote areas had difficulty in travelling to school because villages were scattered in the mountainous areas with poor road networks.

Against this background, in 1998, the Government of Vietnam requested the Japanese government to provide grant aid for the construction of facilities and provision of equipment in eight provinces in the Northern Mountain Region. Responding to the request, the Project for Improvement of Facilities of Primary Schools in the Northern Mountainous Region was carried out in 2000-2002 in the four provinces of Ha Giang, Lai Chau, Cao Bang, and Bac Kan. The evaluated project was its second phase for the other four provinces of Bac Giang, Thai Nguyen, Tuyen Quang, and Phu Tho.

1.2 Project Outline

The objective of this project was to improve the educational environment of primary schools in the four northern provinces of Bac Giang, Thai Nguyen, Tuyen Quang, and Phu Tho through reconstruction and expansion of school buildings and provision of educational equipment.

Grant Limit / Actual Grant Amount	1st stage: 494 million yen / 479 million yen 2nd stage: 344 million yen / 296 million yen 3rd stage: 511 million yen / 428 million yen Total: 1,349 million yen / 1,204 million yen
Exchange of Notes Date	1st stage: November 2003 2nd stage: July 2004 3rd stage: July 2006
Implementing Agency	Responsible Organization: Ministry of Education and Training Implementing Organization: International Relations Department, Planning and Finance Department and Primary Education Department of the Ministry of Education and Training

Project Completion Date	1st stage: March 2005 2nd stage: March 2006 3rd stage: February 2008
Main Contractors	1st stage: Fujita Corp. 2nd stage: Kanto Construction Co., Ltd. 3rd stage: Kanto Construction Co., Ltd.
Main Consultant	Mohri Architect & Associates, Inc.
Basic Design	1st mission: July 2002–February 2003 2nd mission: August 2003–September 2003 Implementation Review Study: December 2005–March 2006
Related Projects	Technical Cooperation "Support Program for Primary Education Development Phase 1" (2001-2002) "Support Program for Primary Education Development Phase 2" (2002-2004) "Project for Strengthening Cluster-Based Teacher Training and School Management" (2004-2007) Grant Aid "Improvement of Primary School Facilities Project Phase 1" (1994) "Improvement of Primary School Facilities Project Phase 2" (1995-1996) "Improvement of Primary School Facilities Project Phase 3" (1996-1997) "Improvement of Primary School Facilities Project Phase 4" (1997-1998) "Project for Improvement of Facilities of Primary Schools in the Northern Mountain Region" (2000-2002) Assistance by Other Organizations "Primary Education Project", World Bank (1994-2003) "Primary Education for Disadvantaged Children", World Bank, DfID, CIDA, AusAID, NORAD (2002-2007)

2. Outline of the Evaluation Study

2.1 External Evaluators

Tetsuya Ishii and Hiroshi Okukawa, KRI International Corp.

2.2 Duration of Evaluation Study

Duration of the Study: November 2011–September 2012

Duration of the Field Study: January 3–16, 2012 (1st mission), April 15–21, 2012 (2nd mission)

2.3 Constraints during the Evaluation Study

Out of the 43 schools assisted by the project, the evaluation team conducted site visit to 26 schools due to limited time of the study duration. However, data were collected from all the target schools through a written questionnaire. In addition, more than half of the schools were visited with due consideration of their geographical distribution. Therefore, the result of the evaluation should be considered as based on sufficient evidence. The logic and the process of selecting 22 sample schools in the first mission were as follows:

1) This project was carried out in four provinces and the educational administration of each province would have influence on the school facilities management and promotion of full-day schooling in its respective area. Therefore, the number of sample schools in each province was allotted in accordance with the proportion of the schools assisted in the province to the total assisted schools.
2) Similarly, taking account of the influence of district[2] educational administration and geographical factors (e.g., urban-rural gap), the sample schools were selected from the maximum number of districts. One or a few districts were considered as a stratum from which one sample was identified; random selection was carried out if one stratum included more than one school.

In the second mission, the evaluation team visited project sites relatively close to the provincial capitals mainly due to time constraint in order to collect supplementary data and information.

3. Results of the Evaluation (Overall Rating: A[3])

3.1 Relevance (Rating: ③[4])

3.1.1 Relevance with the Development Plan of Vietnam

When the plan of this project was made in 2003, the Strategy for Socio-Economic Development 2001-2010 of Vietnam stated that one of the objectives for educational development was to promote full-day education. In addition, one of the central targets set in the Education Development Strategic Plan for 2001-2010 was to achieve 99% net enrolment rate in primary education by 2010 through increasing financial resources to strengthen school facilities. Furthermore, the Comprehensive Poverty Reduction and Growth Strategy also provided plans pertinent to the project, including transition from double-shift to full-day schooling, increase of students' average learning time, and increase of proportion of students going to full-day school. Therefore, the project can be considered to be relevant to the development plan of Vietnam.

As far as the national development plan effective at the time of the ex-post evaluation is concerned, the Strategy for Socio-Economic Development 2011-2020 adopted in January 2011 continues to give importance to education reform while its emphasis has shifted to the promotion of vocational training and higher education in science and technology in order to strengthen human

[2] A city (thị xã/thành phố) is administratively at the same level as a district (huyện). In this report, unless otherwise specified, the term "district" includes those administrative units at the district level.
[3] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory
[4] ③: High, ② Fair, ① Low

resources for industrial development. The subsequent document of the Education Development Strategic Plan for 2001-2010 has not been finalized yet[5]. According to its draft, while giving emphasis on human resource development for industry in line with the Socio-Economic Development Strategy, the new plan also recognizes the necessity to continue the improvement of school facilities and aims the provision of full-day education at all primary schools by improving school facilities through the "School Concretization Program". The School Concretization Program is a nationwide government program to construct school buildings made of concrete which will meet the national standards for school facilities. In an interview with officials of the Ministry of Education and Training (MOET), it was reported that the ongoing program aimed to construct 14,600 classrooms by 2012, but actual achievement as of January 2012 was only 8,500-9,000 classrooms. Thus, the next phase of the program is being developed. Taking account of the government's continuous effort to improve school facilities, this project was, and still is, relevant to Vietnam's development policy at the time of the ex-post evaluation.

3.1.2 Relevance with the Development Needs of Vietnam

The Northern Mountain Region is less developed compared to the other areas in Vietnam. Its socio-economic disparities compared to the urban areas is quite high and its educational environment is far from satisfactory level. During the Basic Design (B/D) Study of the project, 48 target schools were selected on the basis of the following criteria from the 89 schools that the Vietnamese government had originally requested:

1) Schools urgently need the rehabilitation because of over aging and/or damage of the existing buildings.
2) Schools urgently need the construction of additional classrooms due to overcrowding.
3) Incomplete schools[6] which are not provided with higher grade classes and are distant from the complete schools.

Based on the above criteria, it can be understood that the selected target schools all require improvement of their facilities.

Additionally, a principal's room and an educational materials room were constructed for schools which did not have such facilities. The project also constructed toilets according to the capacity of classrooms since sanitary facilities were either lacking or in a very poor condition in all the target schools. The evaluation team found no specific problems in the criteria for the selection of target schools or the establishment of additional facilities, considering them to be sufficiently reasonable.

[5] The Education Development Strategic Plan 2009-2020 was in the process for the Prime Minister's approval and yet to be finalized. The project team could obtain only the 14th draft written in December 2008 from the website of UNESCO International Institute for Educational Planning (IIEP). http://planipolis.iiep.unesco.org/upload/Viet%20Nam/Viet_Nam_Education_%20strategy_2009-2020_viet.pdf (accessed 2012-05-29)

[6] An incomplete school signifies one that does not offer G1-G5 classes.

3.1.3 Relevance with Japan's ODA Policy

Japan's Official Development Assistance (ODA) Charter approved by the Cabinet in August 2003 considered poverty reduction through educational development as one of the priority issues and ASEAN countries as one of its priority regions Therefore, this project is consistent with the Charter. The previous Japanese Medium-Term Policy on ODA (August 1999-February 2005), which was adopted throughout the project planning period, also gave priority to assistance for basic education.

The Japanese government implemented the Improvement of Primary School Facilities Project Phase 1 to Phase 4 in 1994-1998 for 16 coastal provinces vulnerable to storms and floods and the Project for Improvement of Facilities of Primary Schools in the Northern Mountain Region Phase 1 in 2000-2002 to lessen the interregional gaps in the country. This project was carried out in four provinces of the same region where Phase 1 was not carried out to ensure strong continuity of the assistance. The Support Program for Primary Education Development of JICA was conducted to assist in the development of Vietnam's Program for Primary Education Development based on the Education Development Strategic Plan for 2001-2010. The program included action plans coherent with this project's approaches such as providing alternative solutions to the lack of classrooms for transition to full-day schooling, constructing new classrooms based on the estimation of future school-age population, and strengthening school facilities management through cooperation between school and commune (subdivision of a district).

Therefore, the coherence of Japan's assistance to the primary education sector of Vietnam has been maintained and the evaluators concluded that the relevance of this project to the Japanese ODA policy was high.

Overall, this project has been highly relevant with Vietnam's development plan, development needs, as well as Japan's ODA policy; therefore its relevance is high.

3.2 Effectiveness[7] (Rating: ③)

3.2.1 Quantitative Effects (Operation and Effect Indicators)

The B/D Study set four indicators to quantitatively measure the effects of the project and Table 1 provides the baseline, target, and actual values. The figures represent the state of the 48 originally targeted schools in reference to the four indicators, which include the number of temporary classrooms, total number of classrooms, number of students per classroom, and proportion of schools capable to provide full-day education. The baseline values representing the state of the schools before the project implementation were measured in 2002 during the B/D Study. The targets were set as expected outcome to be achieved at the project completion in 2006. However, since the entire project was completed in 2008, the values in 2008 were considered as actual achievements of the project. In addition, the values in 2011 were also presented to confirm the present state.

[7] Sub-rating for Effectiveness is to be put with consideration of the Impact

Table 1 Effect Indicators

Indicators	Set in B/D Study		Summed in Ex-Post Evaluation	
	Baseline (2002)	Target (2006)	Actual (2008)	Actual (2011)
Number of Temporary Classrooms	61	0	0	0
Total Number of Classrooms *	245	649	885	923
Number of Students per Classroom**	107.4	34.2	25.1	25.4
Proportion of Schools Capable to Provide Full-day Education***	31.75%	99.2%	Over 100%	Over 100%

Note: All the indicators are for the 48 originally targeted schools.
* Classrooms appropriate for continuous use, ** Total number of students divided by total number of classrooms, *** Total number of classrooms divided by the required number of classrooms (student number/35) according to the national standard limiting the student number in a class up to 35

1) Number of temporary classrooms in the target schools

A temporary classroom is typically made of wood. The great majority of the temporary classrooms are built with mud walls with no provision for windows or doors, and are not easily repaired. There were 61 temporary classrooms aimed to be replaced by the project. The evaluation team confirmed that all temporary classrooms had been demolished[8] by 2008.

2) Total number of classrooms in the target schools

The target number of 649 classrooms is the sum of the 245 classrooms considered as continuously usable in the B/D Study (baseline) and 404 classrooms planned to be newly constructed by the project. However, the data collected from the Provincial Departments of Education and Training (DOET) through a written questionnaire in the ex-post evaluation informed that there were 885 classrooms in the target schools in 2008 and 923 classrooms in 2011. The actual achievement greatly exceeded the target number of classrooms because several values on the actual achievement included: (1) the number of classrooms in branch schools which were not included in the target value[9] and (2) the number of classrooms additionally constructed after the project by the Vietnamese side without Japanese assistance. Thus, a simple comparison between the target and the actual achievement does not represent the project effects. To address the issue, more careful and detailed comparison between the target in 2006[10] and the actual achievement in 2008[11] was carried out for each school.

[8] The data collected through a written questionnaire in the ex-post evaluation informed that there were 109 "over-aged or severely damaged" classrooms in 2008 and 72 in 2011 at the 48 target schools. However, it has been confirmed that all of them were classrooms different from those 61 temporary ones identified in the B/D Study. Actually, they include the number of classrooms in branch schools which were mostly not counted in the baseline or target values. Furthermore, an over-aged or severely damaged school does not necessarily mean a temporary classroom. By careful and detailed examination during the evaluation mission, the above-presented figures have been confirmed.

[9] Educational statistics in Vietnam usually figure out the number of classrooms in a school as the sum of those in the main site and those in the branch(es), if a school has one or more branches. Meanwhile, the B/D Study counted the number of classrooms only in the main site if the project assists the main site and those in a branch if the branch is assisted. Therefore, the baseline and target values were figured out accordingly.

[10] (Considered usable) + (Planned to be constructed in project)

Consequently, it was found out that five schools had smaller number of classrooms in 2008 than the target.

In four out of the five schools, the number of students per classroom was smaller than the national standard of 35. This means that over-aged classrooms were demolished in accordance with the decreased number of students. Therefore, although the number of classrooms was smaller than the target, the project objective was securely met. In the other school (Phan Thiet Primary School in Tuyen Quang Province), the number of classrooms was smaller than the target and the number of students per classroom was larger than the national standard of 35; against the project target of 25 classrooms, it had 24 classrooms with 35.5 students/classroom in 2008, and 28 classrooms with 35.7 students/classroom in 2011. The number of students per classroom is slightly larger than 35 but the exceeding value is quite small. Therefore, the evaluators considered that the project objective was virtually attained.

3) Number of students per classroom

This indicator is computed by dividing the total number of students by the total number of classrooms. The baseline value in 2002 was 107.4 but it does not necessarily mean that more than 100 students received lessons in one classroom at the same time. This figure can be explained by the repeated use of one classroom in the double-shift education and the utilization of facilities other than classrooms to provide lessons. The target of the project for this indicator was 34.2 students per classroom. Meanwhile, the actual values were 25.1 and 25.4 in 2008 and 2011 respectively. These are due to the following reasons: (1) Gradual decrease of school-age population in the target four provinces[12], and (2) Active support of the local community to achieve the 25-student classes as recommended by MOET for effective lessons while the maximum number of students per classroom is limited to 35. Taking this context into account, the evaluators have concluded that the figure of approximately 25 students per classroom represents the sufficiently produced project outcome and does not signify an excessive aid by the project.

4) Proportion of schools capable to provide full-day education

This indicator is calculated by dividing the total number of classrooms by the required number of classrooms (total number of students divided by the national standard of 35). The actual achievement values are over 100% while the target was 99.2%, which shows a complete achievement comparing with the target. The number of schools providing full-day education in each province is given in Table

[11] (Continuously used since pre-project period) – (Demolished due to over-aging) + (Constructed in Project) + (Constructed after Project without Japan's aid)

[12] The B/D Study estimated the number of students in 2006 on the basis of the average annual growth rate of student number for the past five years in each school and figured out the number of classrooms to be constructed in the project accordingly so that one classroom has less than the national standard of 35 students. The evaluation team has compared the estimated number of students and the actual numbers at the time of the project completion and the ex-post evaluation. As a result, several schools had a considerable gap between the estimated and actual values in a way that an increasing tendency of student number was estimated while the reality was decreasing or stable. It can be understood that misestimation may have occurred because the estimation was based only on the micro-data (i.e. five-year change in each school) which were easily influenced by an exceptional factor in a specific year.

2. In fact, all the target schools under the project, except for one, have achieved the transition from double-shift to full-day education. At Dong Van Branch of Thuong Am Primary School where four classrooms were constructed by this project continues double-shift education because it has seven classes for four grades to meet the national standard of 35 students per class. The number of students and that of classes in each grade are as follows: 42 students for 2 classes in Grade 1, 36 students for 2 classes in Grade 2, 27 students for 1 class in Grade 3, and 36 students for 2 classes in Grade 4. There are no Grade 5 students in the branch because all fifth graders study at the main site.

Bac Giang Province has a small number of double-shift schools in 2003 because a trial project was carried out throughout the province to confirm the effectiveness of the full-day education. The contribution of the project for the transition to full-day schooling in each province can be measured by the proportion of the number of schools which made the transition from double-shift to full-day education within the project to that in the entire province. The results of the proportion are 10.4% in Thai Nguyen, 14.8% in Tuyen Quang and 18.2% in Phu Tho. The proportion in Bac Giang Province could not be calculated because it had no double-shift school in 2003.

Table 2 Number of Double-Shift Schools in Each Province

Province	2003			2008			2011		
	Total No. of Schools in the Prov.	Double-shift Schools in the Prov.	Double-shift Schools under the Project	Total No. of Schools in the Prov.	Double-shift Schools in the Prov.	Double-shift Schools under the Project	Total No. of Schools in the Prov.	Double-shift Schools in the Prov.	Double-shift Schools under the Project
Bac Giang	267	7	0	271	54	0	272	0	0
Thai Nguyen	223	67	7	225	0	0	225	0	0
Tuyen Quang	185	150	9	163	96	1	165	28	1
Phu Tho	297	143	8	305	99	0	306	62	0
Total	**972**	**367**	**24**	**964**	**249**	**1**	**968**	**90**	**1**

Source: Evaluation Team

Table 3 shows the state of the facilities and equipment provided in the project, which was confirmed from all the assisted schools through a written questionnaire and can serve as another quantitative indicator for the project effect. It was reported that nearly 100% of provided facilities and equipment of classrooms, toilets and principal rooms were actually utilized. The evaluation team confirmed the proper utilization of the facilities and equipment provided in the project through direct observation during the site visits. On the other hand, the reported proportion of usage of the educational material rooms was relatively low (less than 70%). In fact, several schools changed the purpose of the room which had been supposed to store educational materials and reported, "The number of educational material room established with Japanese assistance was zero." Through the site visit, it was observed that educational material rooms were used as school infirmary (3 schools), teachers' room (1 school), and vice-principal's room (2 schools). One school uses it as a storeroom for unused desks and chairs. The evaluators concluded however that the purpose/use of the educational material room could be autonomously decided by the school since its change would not make a significant influence on the achievement of the project objective, and also a considerable length of

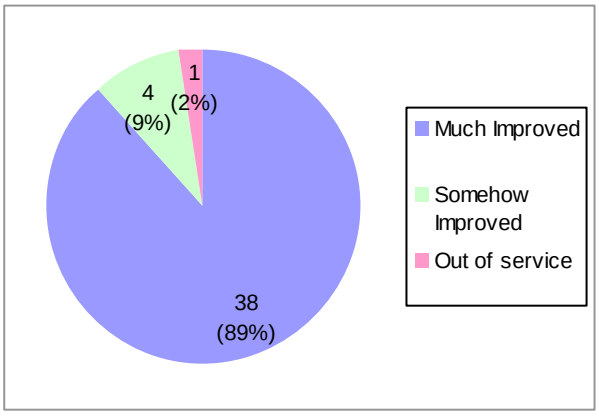
time had passed since the project completion.

Table 3 State of Provided Facilities and Equipment at the Time of Ex-Post Evaluation

Facilities and Equipment	Provided	In Service	Proportion
Classroom	375	375	100%
Student Desk	7,272	7,165	99%
Student Chair	14,544	13,824	95%
Teacher Desk	404	395	98%
Teacher Chair	404	408	101%
Blackboard	404	393	97%
Toilet	50	50	100%
Principal's Room	13	13	100%
Desk	13	13	100%
Chair	13	13	100%
Shelf	39	25	68%
Blackboard	13	12	92%
Educational Material Room	19	13	68%
Shelf	133	88	66%
Meeting Table	76	43	56%
Chair	152	85	56%
Blackboard	19	13	68%

Source: Answers to the questionnaire
Note: The reported number of teacher desks in service was larger than the number of those provided. However, considering it to be within an acceptable error range, the table presents it as reported.

Other project outcome expected in the B/D Study involved the improvement of hygienic conditions through the establishment of toilet facilities and enhanced management of school facilities because of the provision of technical assistance[13] ("soft component" of the grant project). According to the data collected through the questionnaire with regard to the effect of the establishment of toilets, 38 out of 43 schools (89%) answered that the hygienic condition had "much improved". In total, 98% of schools expressed either "much improved" or "somehow improved" (Figure 1). As far as the enhancement of school facilities management is concerned, the establishment of School Facilities Management Committee and involvement of parents and community in the management was observed at around 70% of the 22 schools visited during the first mission. The subsequent paragraphs will discuss the qualitative effects in details.



[13] The technical assistance activities included: (1) analysis of actual use and maintenance of school facilities, (2) development of School Facilities Management Guidebook and (3) provision of workshops on the maintenance and management of facilities according to the Guidebook.

3.2.2 Qualitative Effects

The expected qualitative effects of the project include an improvement of hygienic conditions due to toilet facilities and enhancement of school's facilities management through the provision of technical assistance. According to the interview conducted during the site visit with regard to the hygienic conditions, before the project implementation, sanitary facilities were crude and had no sewage treatment so that the surrounding environment was considerably unsanitary. This often led students to dispose their waste around the toilet without proper disposal, which made the environment even more unsanitary. After the project provided toilet facilities with water flush (with a pail) and sewage treatment system (penetration of purified sewage into the ground), students begun to use the toilet regularly and the hygienic condition improved greatly. Young pupils were taught how to use the toilet properly soon after their entrance to school. Meanwhile, a considerable number of schools expressed difficulty in getting sufficient water pressure since the water tank was situated at a low position. Some of the schools relocated the tank at a higher position.

As far as enhancement of the facilities management is concerned, if a school has established its School Facilities Management Committee (or similar organization), the committee members typically include the principal or vice-principal, teachers, administrative staff, janitor, and parents. Several schools involve a representative of the Communal People's Committee as their committee member, which generally tends to enhance the commitment of the community to the school facilities management. The parents are involved in the following manner:

1) Monitor the facilities on a regular basis,
2) Provide labor for simple repairs of facilities and equipment, and
3) Contribute funds for repairs of facilities and equipment.

Other quantitative effects frequently pointed out during the site visit include the advantages of louver windows as well as the high quality of the construction as a whole. A lot of sunlight penetrates the louver windows so that students are prevented from getting short-sighted in proper lighting. Windows allow fresh and cool air to flow inside the classroom in summer while they can be closed to keep out the cold wind in winter. Besides these advantages, complaints were also made about the difficulty in repairing a louver window once it develops trouble (see details in 3.5.2). Furthermore, some appreciated the student's desks and chairs because they suit the students' physical size and help them maintain good posture and write neatly, while others pointed out that the desks and chairs had become too small for big children due to improved nutrition especially in urban areas. Others reported that the desk and chairs were too heavy to move so that they could not serve as a napping bed for students after school lunch despite the original plan to install flat desks[14].

3.3 Impact

3.3.1 Intended Impacts

The indirect effect of the project implementation expected in the B/D Study involves its contribution

[14] In Vietnam, students usually have time for nap after lunch if it is served in the school.

to the community through the utilization of school facilities for adult education, literacy education, and other community activities. According to the answers to the questionnaire, 37 out of 43 schools (86%) responded that they used the assisted classrooms only for primary education as presented in Table 4. Purposes other than primary education which were identified during the first site visit include mainly cultural activities for children and meetings about education. A limited number of schools were used as venue for an election. The probability of using the classrooms constructed in the project for some purposes other than primary education is small. It was pointed out that the reason behind the limited use of classroom was that adults could not use the small desks and chairs of children in the school. Moreover, communes have recently acquired culture houses and community learning centers where community activities can often be carried out without using the school. During the site visit, negative perception of the classroom's use for non-child education purposes was often observed among the teachers and educational administrators participating in the meeting.

Table 4 Use of Classrooms for Other Purposes

Primary Education Only	37
Adult/Continuing Education	1
Technical and Vocational Education and Training	0
Cultural Activities	6
Health Education	6
Policy Dissemination	0
Others	1

Source: Answers to the questionnaire

Note: n=43; only the schools with the classrooms constructed by this project. Multiple answers allowed. It was specified that "others" involved extra-curricular programs which should be considered as a part of primary education.

Thus, the indirect project effect expected in the B/D Study was not sufficiently generated. However, it does not necessarily mean that the project made little impact because the expected effect scarcely has logical connection with the direct outcome of the project. It would be more reasonable to view the enhanced learning achievement of students as the most important impact to be produced through the increase in the number of classes providing full-day education and the improved educational environment which were aimed at by the project. Nevertheless, because learning achievement can be enhanced by many complex factors besides the conversion from double-shift to full-day education and the improved learning environment, it is quite difficult to accurately and exclusively measure the impact of the project based on the said factors. Therefore, the impact was evaluated to the extent that could be confirmed in the site visit.

Sixteen out of the 22 schools visited during the first mission provided written or verbal data about the increasing proportion of "excellent students" in terms of learning achievement. Usually, a school keeps a chronological record of the proportion of its excellent students through which one can grasp, with a certain reservation on its objectivity, a general tendency of student achievement through the years in the school. An average 3-6% increase could be observed at the schools where more than one year's data were available. During the site visit, a large number of interviewees expressed their view that the introduction of full-day education had increased student's learning achievement because increased class hours led teachers to instruct students more carefully. Their statements and the increased number of excellent students implied that this project had made a certain contribution to the improvement of student's learning achievement.

3.3.2 Other Impacts

1) Impacts on the natural environment

During the site visit, the schools reported that the project had not produced any adverse impact to the natural environment. It was also confirmed by the four provincial DOET that the project had not contributed to negative impact on the natural environment of any target schools.

2) Land Acquisition and Resettlement

During the site visit, the schools reported that no resettlement of residents had been required due to the project implementation. It was also confirmed by the four provincial DOET that no resettlement of residents had been needed at any target schools.

3) Other indirect effects

It was expected, as an impact provided by the technical assistance for the improvement of school facilities maintenance and management, that the technical transfer would be firmly established and further shared among the schools other than those assisted by the project, with the support of MOET and DOET. It was confirmed through the interview during the site visit that the four provincial departments had issued an official instruction to all schools to properly maintain and manage facilities and equipment in accordance with the guideline provided by the project. From that fact, a certain degree of expansion of the project effects can be inferred. Nevertheless, some newly appointed staff members of the district bureaus who accompanied the evaluation team had never seen the School Facilities Management Guidebook (herewith referred to as Guidebook) produced by the project. Thus, there is a concern about the insufficient transfer of the guideline from a staff member to his/her successor with the lapse of time after the project completion.

In addition, the evaluation team explored, to the extent possible, the synergetic effects between this project and the Project for Strengthening Cluster-Based Teacher Training and School Management carried out in Bac Giang from September 2004 to September 2007. It was confirmed that a JICA document on the teacher training project sought linkage between the two projects, which proves the sincere concern about the synergy from the early stage. Bac Giang Province DOET as well as the visited schools highly appreciated that two projects for the improvement of school facilities and teaching methods were carried out almost at the same time, because both the approaches were indispensable to increase the quality of education. However, the synergy could occur almost exclusively in the target areas of the teacher training project (1 city and 4 districts out of 1 city and 9 districts in the province), while most of the target schools of this facilities improvement project in the other districts could not obtain the effect of the technical assistance for pedagogical improvement.

In conclusion, this project has largely achieved its objectives. Therefore, its effectiveness is high.

3.4 Efficiency (Rating: ③)

3.4.1 Project Outputs

The 48 target schools were selected in the B/D Study and supposed to be provided with educational facilities. However, the number of target schools was revised through the Detailed Design (D/D) Study or the Implementation Review Study. A comparison of the project outputs between the plan and the actual result is given in Table 5.

Table 5 Comparison of Project Outputs between Plan and Actual Result

Assisted Items	Province	Plan		Actual Result
		Basic Design	Implementation Review	
Target Schools	Bac Giang	16	-	16
	Thai Nguyen	14	-	10 (-4)
	Tuyen Quang	9	9	9
	Phu Tho	9	8 (-1)	8 (-1)
	Total	**48**	**-**	**43 (-5)**
Classrooms	Bac Giang	158	-	158
	Thai Nguyen	106	-	77 (-29)
	Tuyen Quang	54	53 (-1)	54
	Phu Tho	86	87 (+1)	86
	Total	**404**	**-**	**375 (-29)**
Toilet Facilities	Bac Giang	20	-	20
	Thai Nguyen	16	-	11 (-5)
	Tuyen Quang	9	9	9
	Phu Tho	10	10	10
	Total	**55**	**-**	**50 (-5)**
Principal's Room	Bac Giang	3	-	3
	Thai Nguyen	8	-	4 (-4)
	Tuyen Quang	2	2	2
	Phu Tho	4	4	4
	Total	**17**	**-**	**13 (-4)**
Educational Materials Room	Bac Giang	4	-	4
	Thai Nguyen	12	-	8 (-4)
	Tuyen Quang	3	3	3
	Phu Tho	4	4	4
	Total	**23**	**-**	**19 (-4)**

Source: JICA document

Note: The figures in parentheses are differences from the planned numbers in the B/D Study.
The Implementation Review Study was carried out only in Tuyen Quang and Phu Tho which were the target areas of the 3rd Stage (see 3.4.2.2 Project Period). Therefore, no change was made in the project plan by the Implementation Review Study in Bac Giang (1st Stage) or Thai Nguyen (2nd Stage) and it is indicated by the symbol "-" in the table.

The common reason for the cancellation of facilities improvement in four schools located in Thai Nguyen Province on the 2nd Stage was the virtual alleviation of the shortage of classrooms due to the construction of new classrooms by the Vietnamese side without Japanese assistance after the B/D Study. In addition, an Implementation Review Study was carried out before the Exchange of Notes (E/N) for the 3rd Stage, and the number of classrooms to construct was recalculated on the basis of the actual number of students which had significantly changed after the B/D Study. Consequently, one school in Phu Tho Province was considered ineligible to receive Japan's grant because the number of students had decreased more rapidly than estimated and came below the level requiring classroom construction assistance according to the set criterion. These cancellations can be understood as

reasonable from the perspective of efficient use of limited resources. In addition, there were some minor changes in the construction's position or specifications for some technical reasons. They did not affect the project output (e.g., positional changes) and were technically rationale (e.g., changes on the basis of surveys or soil investigations). Therefore, the evaluation team did not see any problems in the changes which had been made after completion of due procedures.

Table 6 presents the number of participants in the technical assistance activities in the first through third stages. As originally planned, the activities included: (1) Analysis of actual use and maintenance of school facilities, (2) Development of the School Facilities Management Guidebook, and (3) Provision of workshops on the maintenance and management of facilities according to the Guidebook.

Table 6 Number of Participants in TA Activities

Participants	Stage			Total
	1st	2nd	3rd	
School	169	175	181	525
Provincial DOET	5	3	7	15
District BOET	18	7	23	48
Total	192	185	211	588

Source: JICA's document

3.4.2 Project Inputs

3.4.2.1 Project Cost

The grant limit for the entire project from the 1st to the 3rd stages determined in the Exchange of Notes was 1,394 million yen while the actual grant amount was 1,204 million yen (ratio of actual grant to grant limit: 89%). In the 2nd stage, according to the result of the D/D Study, construction of classrooms for four schools was cancelled and the articles in furnishing the schools were altered accordingly (reduction of 53,211 thousand yen). However, since the prices of construction materials increased considerably (increase of 49,214 thousand yen), the gap between the grant limit (344 million yen) and the actual grant amount (296 million yen) was not very large, and the ratio of the latter to the former was 86%. The cost revision can be considered reasonable because it accorded the changed project content and the revised cost was within the grant limit (see Table 7). In summary, the actual grant amount was lower than planned.

Table 7 Grant Limit and Actual Grant Amount

(Unit million yen)

Stage	Grant Limit	Actual Grant Amount	Ratio
1st	494	479	97%
2nd	344	296	86%
3rd	511	428	84%
Total	1,349	1,204	89%

Source: JICA document

Moreover, in order to cut the project cost, the school facilities were designed to use adequate but inexpensive materials and equipment. In fact, the direct costs for construction in this project were 829 million yen and the total floor space was 26,000 m^2 so that the unit cost for one square meter was approximately 32 thousand yen, or equivalent to 5 million Vietnamese dong (1 yen = 157 dong in March 2008). Comparing it with 3 million dong/m^2, the unit cost of a school building constructed by the Vietnamese government which was informed by teachers during the site visit, it can be concluded,

in consideration of the high quality of Japan-assisted classrooms, that the financial input to the project was efficient.

3.4.2.2 Project Period

In the B/D Study, the project period was estimated to be 54 months including the time necessary for the detailed design. The actual period of the project implementation was 50 months (4 years and 2 months) from December 2003, when the contract with the consultant was concluded at the 1st Stage, to February 2008, when the construction was completed at the 3rd Stage; it was therefore shorter than planned. The B/D estimated 18 months' duration of each stage including 3 months of detailed designing, 3 months of tendering process, and 12 months of procurement and construction, and thus 54 months (3 stages x 18 months) as the entire project period from 1st to 3rd stages. Meanwhile, efforts to shorten the project period were exerted during the actual implementation; thorough preparation were made to issue a public announcement of the tender 1 month after the conclusion of contract with the consultant at the 1st stage; D/D and tendering processes were carried out in the 2nd stage in parallel with the 1st stage construction; and an Implementation Review Study was conducted from December 2005 to March 2006 to prepare for the 3rd stage so that the contract with the consultant and public announcement for construction bidding could be immediately made after the Exchange of Notes.

As far as the input from the Vietnamese side is concerned, they were in charge of acquisition and preparation of land, installation of electricity and water supply, construction of surrounding walls, and others. Through interviews with the Executing Agencies of Vietnam and the Japanese engineering consultant, it was confirmed that the responsibilities of the Vietnamese side were fully performed as planned. Nevertheless, the information about the expenses for these works was not provided.

In conclusion, both project cost and project period were within the plan; therefore efficiency of the project is high.

3.5 Sustainability (Rating: ②)

3.5.1 Structural Aspects of Operation and Maintenance

In Vietnam, the educational administrative bodies consist of the MOET at the central government level, 68 Provincial DOET, and Bureaus of Education and Training (BOET) at the district level. The BOET administer primary schools and are thus the most relevant to the project. In this report, the term *facilities management* involves a series of administrative activities in keeping school facilities and educational equipment in proper use such as making an inventory, checking regularly, repairing and amending, if necessary. Special attention is given to the maintenance of the facilities and equipment provided by this project.

According to the documents provided by JICA, the organizational structure for facilities management in school has improved because of the project's technical assistance through involving teachers, parents, and people's committee members, as well as school principals. In order to confirm

that effect, interviews were carried out during the site visit to 26 schools, and 19 (3 in Bac Giang, 5 in Thai Nguyen, 6 in Tuyen Quang and 5 in Phu Tho) of them affirmed the establishment of the School Facilities Management Committee or an equivalent organization. Meanwhile, it was also observed that some other schools carried out facilities management relying upon the existing structure without establishing a new organization; the school accountant was typically in charge of the maintenance of facilities and equipment. While no specific problem was revealed with regard to the structural aspects of facilities management, the evaluation team remarked that facilities tended to be managed better if a larger variety of stakeholders were involved.

The District BOET carries out regular monitoring of schools once or twice a year and supervises school's facilities management. Usually, the monitoring is conducted at the end of school year before long holidays and the responsibilities for repairing facilities, if it is considered to be necessary, are placed on the school, commune, or district according to the degree of damage. A review is carried out at the end of the holidays to confirm the completion of repair works as planned. The bureau is officially appointed to perform the regular school monitoring and actually performs it every year. Therefore, it can be reasonably expected that the monitoring will be continuously carried on in the future.

Overall, the evaluation team concluded that, even though no serious problems could be identified with regard to the management structure, there is still room for improvement in facilities management in schools where involvement of parents and community members should be strengthened through close cooperation.

3.5.2 Technical Aspects of Operation and Maintenance

As mentioned above, the responsible organization for the repair of school facilities depends on the degree of the damage. Since the district is only in charge of serious damage which would require rebuilding of the facilities, other ordinary repairing works are taken in charge by schools or communes. A school generally asks the commune for help if the problem is difficult to be resolved while the degree of reliance on the communal authorities differs considerably from school to school. The evaluation team primarily explored on the capability of teachers and parents to use the techniques necessary to maintain the facilities because majority of damaged facilities are slight enough to be repaired at the school level.

A non-negligible number (at least 6 out of 22) of schools expressed their difficulty in repairing damaged electric circuit, window glass, louver window handle, door lock, water supply system of toilet, and other facilities provided by the project. Depending on the knowledge and skills of teachers, parents, and local technicians, some schools can fix the damage while others cannot. However, all the schools considered that a louver window handle cannot be

repaired by them once it breaks down. As mentioned in 3.2.2 Qualitative Effects, louver windows were selected because of their effectiveness for good lighting and ventilation, and they had been installed since the Improvement of Primary School Facilities Project Phase 3 (1996-1997). Unlike the previous projects, this project used louvers integrated with an aluminum window frame for the sake of maintenance and endurance. However, the evaluators' site visit revealed that their replacement parts are not locally available and a certain level of technique is required to repair them because of their mechanical structure. Some schools claimed that the classrooms that have broken louver window are not conducive for learning due to poor ventilation especially during summer where the temperature is high. The Guidebook suggests asking the manufacturers to repair the windows if trouble occurs such as difficulty to open the windows by turning a handle. Nevertheless, the evaluation team could not find any schools which actually made contact with the manufacturers. Because the contact details of the manufacturers were written in a document other than the Guidebook, the evaluation team provided their addresses and phone numbers (in Hanoi) during the second site visit with the thought that schools were not well informed about the contacts. However, schools and district officials appeared to be reluctant since they considered the replacement parts to be custom-made and expensive. In the meantime, the BOET do not provide schools with technical assistance on the current issues on doors, windows, electric equipment, and water systems since these are not viewed as serious by the district authorities for them to get involved. Therefore, because several schools have failed to repair the facilities with their available techniques and resources, it is concluded from the viewpoint of sustainability that the technical aspects of operation and maintenance still have some issues to be addressed.

3.5.3 Financial Aspects of Operation and Maintenance

The B/D Study and the Implementation Review Study expected that sufficient budget would be allotted for school facilities management by the district. The evaluation team observed that the school has a budget for water and electricity, but it does not have sufficient provision to cover the costs for repairing damaged facilities or equipment. A school is provided with a school budget according to the number of teachers, with an allotment of 80-90% teachers' salary and 10-20% management costs usually termed "other expenses". However, the latter are mainly used for purchasing teaching-aids and carrying out school events, and not much remains to maintain the facilities. As a consequence, donation from student's parents is an important financial source to overcome the financial shortage.

Meanwhile, the MOET prohibits the schools from collecting management costs from the parents regularly. Therefore, a number of schools redress the lack of funds by asking parents for their voluntary donation or asking representatives of parents to collect funds instead of the school staff. The government promote the concept of "socialization of education" meaning that not only public sector but also the entire society including private sector and local community ought to support the educational services. The evaluation team observed, during the site visit, several cases in which the commune collected money and established an "Education Socialization Fund" to afford the cost for repairing facilities. Such practice is remarkable as an alternative means for a financially vulnerable

government to provide the nation with necessary educational services. However, it is too hasty to conclude that the school facilities management has been financially secured by the establishment of the "Education Socialization Fund".

Thus far, no school facilities provided by this project have been damaged so severely that they ought to be reconstructed. The districts have not therefore been obligated to prepare a budget for repair. However, the evaluation team heard from several school staff their concern about the future. Although they are aware of the established procedure through which they would request the BOET to prepare a district budget for an extensive repair in case of necessity, they are somewhat suspicious about the actual budget allocation because there still remain a great number of school facilities to be improved in the district. The evaluation team could not receive any clear responses from the BOET or DOET to the question about the future budget allocation.

Therefore, although no serious financial problems have occurred, the evaluation team has viewed potential vulnerability from the perspective of financial sustainability.

3.5.4 Current Status of Operation and Maintenance

In general, the school facilities provided by this project are considered to be well operated and maintained because they are kept in a condition required to fulfill their primary functions. Furthermore, no specific factors which may largely change the current status have been identified, so that it can be expected that a similar situation will continue for a certain length of time. Meanwhile, the following are some typical issues which a certain number of schools are confronting:

- Slight surface cracks in mortar on walls
- Gaps between the building and its entrance steps
- Damage or loss of window glass and rubber seals
- Damage or malfunction of window handles
- Ill-fitting entrance doors
- Broken door knobs and locks
- Electricity cut-off to classrooms
- Broken water taps in the toilet

Influenced by the length of time after the completion of construction, facilities are damaged more heavily in Bac Giang (1st stage) than in Tuyen Quang or Phu Tho (3rd stage). However, it should be noted that the level of maintenance differs from school to school even in the same province, which implies strong influence of school leaders and teachers' caution as well as the supervision of the district.

Majority of schools require students to clean their classrooms every day. In addition, many schools set one day

of the week for more careful cleaning. At schools where toilets are also cleaned by students, it can be observed that the sanitary facilities are well maintained and hygienic.

Overall, some problems have been observed in terms of technical and financial aspects of operation and maintenance; therefore sustainability of the project effect is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project was carried out to increase the number of classes capable to provide full-day education and to improve the learning environment in the provinces of Bac Giang, Thai Nguyen, Tuyen Quang, and Phu Tho where the level of the socio-economic development is low due to geographical constraints. As a result of the ex-post evaluation, the project has been considered highly relevant and consistent to the Vietnamese development policy including the Education Development Strategic Plan 2001-2010, as well as to the local development needs and Japan's ODA policy. In combination with the efforts of the Vietnamese people to increase the number of classrooms, the project contributed to bringing down the average number of students per classroom from 107.4 in 2002 to 25.1 in 2008. The great majority of the assisted schools now provide full-day education of which favorable influence on the students' learning achievement is suggested. Therefore, the effectiveness and impact is high. Furthermore, its efficiency is evaluated to be high because the project cost and period were within the plan. However, sustainability of the project effect is fair because of some maintenance issues observed concerning the acquisition of repairing techniques, the procurement of replacing parts, and the districts' allocation of management costs to the schools.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

- It is recommended to enhance the involvement of student's parents and Communal People's Committee in utilization and maintenance of school facilities as well as the participation of the principal, vice-principal, teacher, janitor, and other school staff. In fact, community's assistance to school education can be expected to be stronger if the relationship between the school and community become closer. Furthermore, involvement of students, the primary users of the school facilities, in cleaning and monitoring the facilities including toilets should be encouraged, because not only it increases cleanliness of the facilities but also it cultivates students' sense of hygiene and public spirit[15].
- In the interview with the Ministry of Education and Training, it was considered to be desirable to promote and establish a mechanism to strengthen wider community's financial support

[15] In Vietnam, students usually clean their classrooms and the schoolyard in almost all the schools. It depends on the school leader's decision whether students should clean the toilet or not. However, during the site visit, the Ministry of Education and Training agreed to encourage the cleaning of toilet by students.

which may substitute for the regular collection of funds from parents in order to overcome the shortage of facilities management costs provided by the district. Moreover, the district should take account of the estimated durability of the school buildings and give due consideration to the future allocation of its budget for an extensive repair of facilities.

- It has been observed that a number of schools faced technical difficulties in repairing damaged window handles, door locks, electric circuits, and so forth. Meanwhile, some school staff and district educational officials are not aware of the School Facilities Management Guidebook which provides instructions on how to maintain the facilities and equipment. The insufficient usage of the Guidebook implies that several problems could have been resolved if the school and district had referred to it carefully. Therefore, the proper use of the Guidebook should be further promoted and the district and province's supporting mechanism should be established to address issues and problems which the schools or communes cannot resolve.

4.2.2 Recommendations to JICA

Not applicable.

4.3 Lessons Learned

- For a school facilities improvement project, there is a risk of a relatively large error in estimating a future number of students on the basis of solely micro-data such as a trend of student numbers within one school for a short period of time. Therefore, it is important to assist school facilities establishment according to more accurate future needs by estimating number of students in combination with macro-data such as population growth of a larger area.
- As observed in the case of louver windows in this project, high quality of construction material is sometimes incompatible with easiness of its maintenance after handover. Therefore, very careful consideration must be taken during the design period. It is important to maximize the use of locally available techniques, materials and equipment, on the basis of a careful examination, taking account of the extent to which a compromise can be made from the quality perspective.
- While it has been confirmed that technical assistance activities can improve the operation and maintenance of the facilities after handover, sustainability has not yet been completely ensured because of some technical troubles and lack of technical transfer to successors. In this project, one of the problems involves poor understanding of the facilities management guideline which is provided in the Guidebook although it was instructed through workshops. Especially, with regard to the equipment of higher quality and higher techniques than those generally employed at the project sites, it would have been effective for Japanese side to ensure the acquisition of the know-how for maintenance by school and district staff during the project period in order to reduce the uncertainty for sustainability. Therefore, in a grant project for the improvement of educational facilities, technical assistance is desirable to be further strengthened so that those who are responsible for facilities maintenance (school staff, local administrators, and/or

community representatives according to the context) can sufficiently understand how to accurately solve a trouble with the provided facilities and equipment, if it occurs.