Ex-ante Evaluation

| 1. Name of the Project |
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| Country: The Republic of Indonesia<br>Project: ICT Utilization Project for Educational Quality Enhancement in Yogyakarta Province<br>(Loan Agreement: 03/29/2007, Loan Amount: 2,911 million yen, Borrower: The Republic of Indonesia) |
| **2. Necessity and Relevance of JBIC's Assistance** |
| The net enrolment rate in Indonesia for primary education at 94% (2004) is high, and the enrolment rate for secondary education is 56.4% (2000). On the other hand, the ratio of teachers with adequate qualifications at 46.1% for primary school level and 66.5% (2000) for junior high school level is low. Textbooks and teaching materials are also lacking in both quality and quantity. According to the Program for International Student Assessment (PISA) undertaken in 2003 by the OECD on 15-year old students at the time of completion of basic education, Indonesia ranked in the lowest group in all four subject areas. Therefore, improving access to basic education by making primary education universal and by improving the rate of enrolment in secondary education, along with improving the overall quality of education, are important issues in the area of basic education. Reading comprehension as well as math and science skills, in particular, are seen as pivotal areas which require immediate and significant improvement. The reasons for weakness in these areas are considered to be inadequate policies and standards in specific areas of the educational system, including: leadership and management skills in schools, specialist education knowledge and teaching skills, quality and quantity of teaching materials and facilities, and school management, budgeting, and curriculum.<br>Indonesia's National Medium Term Development Plan (Rencana Pembangunan Jangka Menengah Nasional: RPJM) places importance on improving the quality of basic education. The national education strategy plan (RENSTRA, 2005-2009) also states that increasing access to high-quality education is essential for the development of the country, and earmarks (1) increasing educational opportunities, (2) improving quality of education, and (3) improving governance and accountability, as the three pillars of the strategy. In RENSTRA, information and communications technology (ICT) is also referred to as playing a role in effective learning at the stage of basic education. The Ministry of Communication and Information Technology is also currently promoting a "one school, one computer lab program" to promote the use of ICT at school.<br>Yogyakarta Province, the target area of this project—home to Gadjah Mada University, the oldest university in Indonesia—is known for its commitment to education. In this area, the net enrolment rate for junior high school is 76% (2005), which is comparatively high on a national basis. In efforts to correct the disparity among schools and to improve the quality of education through the utilization of ICT, the province has prepared a Human Resource Development Program (2005–2009) in which the retraining of teachers, development of infrastructure for science and technology education, and education using ICT are the three mainstays. Although Yogyakarta Province sustained significant casualties in an earthquake in the Central Java in May 2006, recovery is proceeding satisfactorily and is expected to be completed in 2008. It has been confirmed that there are no changes to plans in the implementation of this project. |

In the area of basic education, the Government of Japan's "Country Assistance Plan for Indonesia" (November 2004) places emphasis on assistance for improving educational administration at the local level, which takes into consideration regional decentralization, improving the quality of education (qualitative improvement of teachers and improvement in school management, etc.), and improving enrolment rates as priority areas and important subjects for assistance in "the creation of a democratic and fair society." This project is, therefore, consistent with these principles. Moreover, JBIC's Medium-term Strategy for Overseas Economic Cooperation Operations (April 2005) cites the development of basic infrastructure for sustainable growth and assistance for human resource training as priority areas. Promoting the use of ICT will lead to an improvement in the quality of social services including education. In addition, the strategy places importance on intellectual cooperation and technical assistance in strengthening the implementation structure under regional decentralization in Indonesia. Therefore, the project is consistent with this strategy.

## 3. Project Objectives

Targeting primary and junior high schools in Yogyakarta Province, this project, as a model in the utilization of ICT in education, will promote improvement in the quality of education by enhancing educational facilities through the purchase of necessary materials and equipment, the establishment of an ICT environment, the development of an e-learning system, and by providing assistance with a participatory approach to school management and educational activities. Widespread application of the lessons learned from this project in other provinces will also contribute to the improvement of the quality of education of Indonesia in general.

## 4. Project Description

(1) Target Area

Yogyakarta Province

(2) Project Outline

The following will be carried out to enhance the capability and facilities of a total of 500 schools (planned) consisting of 300 primary schools and 200 junior high schools.

    (a) Installation of ICT equipment and a connecting environment

    (b) Provision of the necessary materials and equipment for schools and assistance in school activities

    (c) Conducting training programs for teachers, etc.

    (d) Development of teaching materials using ICT

    (e) System development for an Internet data center (IDC)

    (f) Consulting services (detailed design, assistance with bidding, supervision, assistance with drafting school proposals, preparation and guidance in training guidelines, and assistance with the development of teaching materials)

(3) Total Project Cost/Loan Amount

    4,376 million yen (Yen Loan Amount: 2,911 million yen)

(4) Schedule

    April 2007 – December 2012 (69 months)

(5) Implementation Structure

    (a) Borrower: The Republic of Indonesia

    (b) Executing Agency: Directorate General of ICT Applications, Ministry of Communication and Information Technology

    (c) Operation and Maintenance Agencies: Directorate General of ICT Applications, Ministry of Communication and Information Technology and Yogyakarta Province

(6) Environmental and Social Considerations

    (a) Environmental Effects/Land Acquisition and Resident Relocation

        (i)   Category: C

        (ii)   Reason for Categorization:

This project is categorized as Category C because it does not include projects in sensitive sectors or with sensitive characteristics, does not take place in sensitive areas as stated in the "Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations" (established April 2002), and adverse effects on the environment are deemed to be minimal.

    (b) Promotion of Poverty Reduction

      None.

    (c) Promotion of Social Development (e.g. Gender Perspective)

The provision of equipment to schools and assistance with school activities will be conducted based on the proposals prepared and submitted by the school staff members and relevant stakeholders, including the local community. Therefore, this project will provide assistance with a participatory approach to school management.

(7) Other Important Issues

    None.

## 5. Outcome Targets

(1)   Evaluation Indicators (Operation and Effect Indicator)

Yogyakarta Province

| Indicator | Baseline (2005) | Target (2012, at the time of project completion) |
|---|---|---|
| Ratio of schools with IDC access (%) | - | 29% |
| Number of teaching staff who have undergone training | 1,080 | 3,000 |
| Number of students per PC in primary school | 147 | 29 |
| Number of students per PC in junior high school | 21 | 11 |
| Number of subjects utilizing ICT | 2 | 6 |
| Ratio of schools which have computer labs | 7% | 29% |

| | | |
|---|---|---|
| Net enrolment rate at primary school level (%) | 96.09% | 100% (target schools) |
| Net enrolment rate at junior high school level (%) | 76.42% | 100% (target schools) |

Impact indicators: (a) Number of provinces in which education quality improvement projects utilizing ICT have been implemented, (b) difference in the average scores on graduation exams in primary and junior high schools (difference in average scores before and after the project of target schools less the difference in the average scores before and after the project of non-target schools)

(2)　Internal Rate of Return (Financial and Economic Internal Rate of Return)
Calculation of profitability is not considered appropriate for education projects and therefore no calculation will be done.

## 6. External Risk Factors

None.

## 7. Lessons Learned from Findings of Similar Projects Undertaken in the Past

In previous ODA loan projects, it was learned that flexibility is important in making decisions on the purchase of materials and equipment that are prone to the effects of technological innovation after adequately taking into consideration obsolescence with the passage of time. The Ministry of Communication and Information Technology, which is the executing agency of this project, is a body that is promoting open resource use as a policy of the government and, at the time of the appraisal, made a decision not to limit specifications for personal computers. From the perspective of the life-cycle cost, this decision has been determined to be appropriate. Personal computers will be purchased after specifications that can ensure fair competition are established with the assistance of the consultants. In addition, facilities for target schools will be provided in three batches over a period of three years, and the procurement of personal computers will also be divided into three packages to enable schools to deal flexibly with technical innovation.

## 8. Plans for Future Evaluation

(1) Indicators for Future Evaluation
  (a) Ratio of schools with IDC access (%)
  (b) Number of staff who have undergone training
  (c) Number of students per PC in primary school
  (d) Number of students per PC in junior high school
  (e) Number of subjects utilizing ICT
  (f) Ratio of schools which have computer labs and use PCs during class
  (g) Net enrolment rate at primary school level (%)
  (h) Net enrolment rate at junior high school level (%)
(2) Timing of Next Evaluation
After project completion.