

Summary of the Results of Evaluation Study

I. Outline of the Project	
Country: Republic of Indonesia	Project Title: The Project for Research and Education Development on Information and Communication Technology in Institut Teknologi Sepuluh Nopember, Phase 2
Issues/Sector: Higher Education	Cooperation Scheme: Technical Cooperation Project
Division in Charge: Human Development Department	Total Cost at the Time of Evaluation: 328 Million Japanese Yen
Period of Cooperation: January 2012 - December 2014	Partner Country's Implementation Organizations: Directorate General of Higher Education (DGHE), Ministry of Education and Culture Sepuluh Nopember Institute of Technology
	Supporting Organizations in Japan: Kumamoto University
<p>1. Background of the Project</p> <p>The Republic of Indonesia is realizing steady economic growth, however, there are still disparities of growth between the western and the eastern part of Indonesia (EPI). The development of industries and communities in the EPI has been one of the most important issues for the sustainable economic growth. Indonesia has prioritized the development of Information and Communication Technology (ICT) related industries.</p> <p>Institut Teknologi Sepuluh Nopember (ITS) is recognized as a leading institute which contribute to stable socio-economic development of EPI by utilizing ICT. JICA implemented a technical cooperation project, "Project for Research and Education Development on Information and Communication Technology in Institut Teknologi Sepuluh Nopember (Phase 1)" from 2006 to 2010. The Phase 1 project successfully strengthened research and educational capacity of ICT related engineering departments in ITS by Lab-based-Education (LBE) and joint researches. It also contributed development of universities in EPI (EPI universities), since researchers of EPI universities studying in ITS joined the project activities.</p> <p>The Government of Indonesia made a request to the Government of Japan for a new project aiming at further strengthening of international level researches and LBE as well as expanding them to EPI universities. In response to the request, Japan International Cooperation Agency (JICA) decided to conduct "The Project for Research and Education Development on Information and Communication Technology in Institut Teknologi Sepuluh Nopember, Phase 2 (the Project)".</p> <p>2. Project Overview</p> <p>(1) Overall Goal</p> <p>Universities in EPI and ITS will enhance their education and research capabilities, and thereby contribute to the development of industries and communities in EPI.</p> <p>(2) Project Purpose</p> <p>ITS strengthens its education and research capabilities in the ICT-related engineering fields as a resource university in EPI.</p>	

<p>(3) Outputs</p> <ol style="list-style-type: none"> 1. Lab-based-Education (LBE) is strengthened in the ICT related engineering fields of ITS. 2. Research performance is improved in ITS. 3. Human resources networks among ITS and EPI universities are strengthened. <p>(4) Inputs (by the end of March 2014)</p> <p>Japanese Side:</p> <ul style="list-style-type: none"> Dispatch of Experts: 10 experts (28 person-months) Training of Counterpart Personnel in Japan: (21 people) Equipment: Server, software, etc. Local cost: JPY 49,683,000 (as of December 2013) <p>Indonesian Side:</p> <ul style="list-style-type: none"> Counterpart personnel Office with facilities Local cost: IDR 116,836,000 (as of December 2013) 			
<p>II. Evaluation Team</p>			
Members	Mr. Daisuke UEDA	Leader	Director, Technical and Higher Education Division, Human Development Department, JICA
	Mr. Masaharu SHIBUYA	Cooperation Planning	Deputy Director, Technical and Higher Education Division, Human Development Department, JICA
	Dr. Satryo SOEMANTRI	Higher Education	Advisor (Higher Education), Indonesia Office, JICA
	Dr. Jun TSURUI	Evaluation Analysis	Consultant, Sustainable Inc.
Period of Evaluation: 15 June – 28 June 2014		Type of Evaluation: Terminal Evaluation	
<p>III. Results of Evaluation</p>			
<p>1. Achievements</p> <p>1-1. Achievements of Outputs</p> <p>(1) Output 1: Mostly achieved</p> <p>Output 1 “Lab-based-Education (LBE) is strengthened in the ICT related engineering fields of ITS” has been mostly achieved.</p> <p>Indicator 1-1, 1-2, 1-3, and 1-4 present full achievement of the target. Indicator 1-5 (submission of monitoring sheets by authorized LBE labs) has been achieved fairly (achieved 80%).</p> <p>(2) Output2: Mostly achieved</p> <p>Output 2 “Research performance is improved in ITS” has been mostly achieved.</p> <p>Indicator 2-1, 2-3, 2-4, 2-5, 2-6 and 2-7 shows full achievement of the target. Indicator 2-2 (submission of research papers to international journals by all the authorized LBE labs) has been achieved fairly (achieved 80%).</p>			

(3) Output 3: Achieved

Output 3 “Human resources networks among ITS and EPI universities are strengthened.” has been fully achieved.

Indicator 3-1, 3-2, 3-3, 3-4, 3-5, and 3-6 shows full achievement of the target.

1-2. Achievement of Project Purpose

The Project Purpose “ITS strengthens its education and research capabilities in the ICT-related engineering fields as a resource university in EPI.” has been achieved moderately at the time of Terminal Evaluation. Indicator B and C have been fully achieved. Indicator A (submission of research papers co-authored by researchers of ITS with EPI universities to international journals by all the JICA Joint Research teams) is yet to be achieved (achieved 25%).

2. Summary of Evaluation Results

2-1. Relevance: High

The Project responds to the needs of ITS, which is to strengthen research and educational capacity by applying LBE. The Project Purpose is in line with development policies of Indonesia as well as country assistance policy of Japan. It is appropriate to introduce experience of Japanese higher education to ITS. LBE has been developed based on the higher education system for science and technology in Japan.

2-2. Effectiveness: Moderately high

The Project Purpose has been mostly achieved at the time of evaluation. The Project has generated many positive effects. Research and educational capacity of ITS and EPI universities has been improved. However, it would difficult to fully achieve one of the three indicators. It was confirmed that full achievement of the Indicator A (submission of research papers co-authored by researchers of ITS with EPI universities to international journals by all the JICA Joint Research teams) requires longer time than it was expected.

2-3. Efficiency: High

The Output 1 has been mostly achieved and it is expected to be fully achieved by the end of the Project. The Output 2 has also been mostly achieved. One of the seven indicators, which is “submission of research papers to international journals by authorized LBE labs”, has been achieved fairly but would not be fully achieved by the end of the Project. The Output 3 has been achieved.

Inputs from Indonesian and Japanese sides have been appropriate. Counterpart training in Japan has generated positive effects.

2-4. Impact: High

The Overall Goal has been achieved. Introduction and application of LBE has spread to many departments in ITS although the Project targeted mainly ICT related engineering departments. Activities of the Project has influenced ITS to initiate own activities, such as “EPI-U net (network with EPI universities)” and e-learning system development for EPI universities.

2-5. Sustainability: Moderately high

Sustainability of policy, institutional, and organizational aspects are high. Financial sustainability is a

concern. It might be difficult to obtain appropriate equipment for research after the Project. Research grant of DGHE normally does not allow purchase of expensive new equipment. Technical sustainability is high. Most of academic staff of ITS had completed graduate program abroad and experienced LBE-like education. It is not difficult for them to apply LBE in their research teams. Social sustainability and environmental sustainability are high but cultural sustainability is another concern. It is often difficult for ITS to keep good communication with EPI universities because of cultural gap.

3. Supporting factors to achieve the Project Purpose

- Academic staff of ITS is qualified and highly motivated to improve research and education system.
- Capacity of ITS students is high and they are motivated.
- JICA Joint Research was used as a tool of disseminating LBE.
- LBE has been introduced not only to ICT related departments but also to the entire department under the concept of “ICT for all”.
- Many academic staff of ITS have experienced LBE-like education system abroad.
- Training courses (one month research courses) in Japan were well programmed and effectively used by ITS academic staff.
- Successful results of model LBE labs in Phase 1 attracted interests of other labs in Phase 2 activities.
- Human network created in Phase 1 was effectively used in Phase 2.
- Communication among ITS academic staff and JICA team was good.

4. Hampering factors to achieve the Project Purpose

- Difficulty in coordinating with EPI universities during the Joint Research.
- Patent application procedures required time mainly due to frequent change of ITS internal financial arrangement for patent application.

5. Conclusion

The Evaluation Team confirmed that the Project has been producing many positive effects. The Project Purpose is expected to be generally achieved by December 2014. The Team concluded that the Project will be terminated in December 2014, as it was planned.

6. Recommendations

(1) DGHE

- Increasing support to ITS and EPI universities
- Expansion of application of LBE to universities throughout Indonesia

(2) To ITS

- Increasing number of publishing papers in international journals co-authored with EPI university members
- Expanding Application of LBE within ITS
- Expanding and Strengthening Research Networks
- Acceleration of Patent Application Process

7. Lessons Learnt

- Preconditions for introducing LBE
- Strategic introduction and dissemination of LBE
- Networking among researchers
- Confidence-building of counterparts by introducing various communication channels
- Ensuring sustainability by creating various communication channels
- Revision of Project Design Matrix (PDM) during the project period