Terminal Evaluation

Asia

1. Outline of the Project

Country:
Indonesia

Project title:
Third Country Training Course on Electronic Engineering Education (Extension)

Issue/Sector:
Education

Cooperation scheme:
Third-country Training Program

Division in charge:
Southeast Asia Division, Regional Department I

Total cost:
80 Million Yen

Period of Cooperation
Original: Fiscal year 1993 - 1997
Extension period : Fiscal year 1998 - 2002

Partner Country's Implementing Organization:
Electronic Engineering Polytechnic Institute of Surabaya (EEPIS)

Supporting Organization in Japan:
Ministry of Education, Culture, Sports, Science and Technology, Tokyo Institute of Technology,
Nagaoka University of Technology, Tokai University, Association of National Colleges of Technology

Related Cooperation:
Project-type Technical Cooperation: "The Electronic Engineering Polytechnic Institute In Surabaya" "Strengthening of Polytechnic Education in Electric-related Technology"
Grant Aid: "Construction of Electric Engineering Polytechnic Institute"

1-1 Background of the Project

Many Southeast Asian countries have developed economically in recent years, driven mainly by the manufacturing industry. However, they were dependent on foreign countries in terms of capital and major technologies. This situation pointed out the necessity to become more independent and to foster skilled workers for the development of domestic industries. New training organizations were also required, and existing training organizations required quality upgrading. In line with these needs, the government of Japan implemented Grant Aid in 1987 to build the Electronic Engineering Polytechnic Institute of Surabaya (EEPIS) and Project-type Technical Cooperation from 1987 - 1993 It was also necessary for t countries neighboring Indonesia to upgrade the quality of their instructors and to foster their skills. The Government of Japan implemented the Third-country Training Program "Third Country Training Course on Electronic Engineering Education" from 1993-1997. When terminal evaluation by Overseas Offices for the course was implemented in 1997, it was found that there still remained unfulfilled neighboring- country needs. While technique in this sector progressed on daily basis, it was necessary to provide follow-up covering up-to-date techniques. In view of these circumstances, the government of Japan extended the Course five years. This evaluation applies only to extended-period activities.

1-2 Project Overview

The Training aimed to upgrade participants' skill, knowledge and teaching methodology in the field of electric engineering by implementing training for participants from Asian countries at EEPIS.

(1) Overall Goal

1) Improvement of knowledge in the field of electrical engineering and technology in the countries of participants.
2) Improvement of the technique transfer capability of the implementing organization.

(2) Project Purpose

Participants acquire relevant techniques, knowledge and teaching methodology in the field of electronic engineering.

(3) Outputs

By the end of the course the participants are expected:
1) To handle electronic laboratory equipment for practice, maintenance and repair
2) To develop teaching materials for practice in power electronics and intelligent control, and computer communications
3) To enhance their capability in the application of power electronics and intelligent control techniques, and Internet techniques.

(4) Inputs

Japanese side:

Long-term Experts	20
Local Cost	80 Million Yen

Indonesian side:

Counterparts	80
Local Cost	10 Million Yen

(5) Participant Countries

Malaysia, Philippines, Thailand, Laos, Bangladesh, Nepal, Pakistan, Papua New Guinea, Brunei, Vietnam and Sri Lanka (added in 2000).

2. Evaluation Team

Members of Evaluation Team JICA Indonesia office
(Commissioned to: PT.INDOKOEI INTERNATIONAL)

Period of Evaluation February 2002 - March 2002

Type of Evaluation:
Terminal Evaluation by Overseas Offices

3. Results of Evaluation

3-1 Summary of Evaluation Results

(1) Relevance

Training in wireless long-distance telecommunications techniques, such as wireless LAN and WAN, EMC, blue-tooth techniques, WAP and S.M.S, was in line with each participating country's current condition. As many of the participants belonged to educational or training organizations, where the staff needs to upgrade its teaching ability and be able to develop curriculums, the expectation toward the Training was very high.

(2) Effectiveness

Based on the answers to the questionnaire survey polling the ex-participants after they returned home (eight ex-participants responded), all of the respondents said that the curriculum was good. Sixty-two point five percent (62.5%) of the respondents stated that they almost understood the course content, and 37.5 percent said they understood the content perfectly. In view of the nature of the institutions where the ex-participants are employed, the Training was useful in their daily work. The institutions said that the ex-participants had become more active in carrying out tasks and could utilize the information obtained during the Training for research or curriculum development, and that through these methods the knowledge obtained from research was being disseminated throughout the institution.

(3) Efficiency

Almost all of the necessary equipment and materials were provided, but the equipment related to broadcasting was insufficient. In terms of budget, schedule, curriculum and number of participants, the program was being implemented as planned. Based on the results of the survey of ex-participants, 87.5 percent evaluated the ability of the experts or lecturers (well-known professionals in Japan and Indonesia) as very high . Their lecture methodology was also rated high. Judging from the above, the Course was efficiently put into practice.

(4) Impact

Based on the answers from the institutions where the ex-participants worked, the knowledge and skills the participants acquired was very useful and up-to-date telecommunications techniques. Moreover, they answered the image of the institution was improved by the ex-participants.

In the Implementing Organization, EEPIS, an information sharing network was established which made it possible to share information with educational institutions and governmental organizations of other countries in Asia including Japan in the field of telecommunications. Moreover, their implementation skill has been upgraded to a point closer to the international level.

(5) Sustainability

All the respondents made effort to disseminate the knowledge and skills acquired through the Course through seminars or workshops, or training reports after returning home. On the other hand, 87.5 percent of the respondents said that they had some problems utilizing the knowledge and skills in their current job, mainly because of a lack of trained resources, equipment and funds. To solve these problems and to disseminate the acquired skills and knowledge, the support of the governments of the participating countries and JICA, the Implementing Organizations, and the network of universities in Southeast Asia is required. Another Implementing Organization, EEPIS, had no problems with regard to training facilities, the ability provide high quality lectures and an appropriate curriculum. EEPIS maintains close contact with the 40 ex-participants and revises the curriculum or content of the Course through discussions with them. After the termination of support from JICA, although it is difficult for EEPIS to continue this training course as a whole because of a lack experts and budget, EEPIS is continuing part of the Course utilizing its own budget.

3-2 Factors that promoted realization of effects

(1) Factors concerning Planning

N/A

(2) Factors concerning the Implementation Process

The cooperation effect was promoted by significant contributions of Implementing Organization, EEPIS, such as effective utilization of training management and input, allocation of excellent lectures and provision of high quality materials. As the Japanese side dispatched very capable experts in terms of up-to-date know-how and advanced techniques, the knowledge and techniques of the training participants and presentation of lectures was improved.

3-3 Factors that impeded realization of effects

(1) Factors concerning Planning

N/A

(2) Factors concerning the Implementation Process

The Implementing Organization, EEPIS, had previous experience in implementing training courses supported by the government of Indonesia. However, there remained certain concerns of sustainability in running the international course because of a lack in human resources and budget.

The dissemination of the training effect in participating countries was hampered by lack of funds and equipment.

3-4 Conclusion

The Course showed high efficiency and effectiveness. Ex-participants form Asian countries have channeled effort into spreading their acquired skills and knowledge. However, to continue the Course at EEPIS, the support of an assistance organization is required due to the lack of experts and funding.

3-5 Recommendations

(1) The Implementing Organization should consider the balance of the curriculum component such as lectures, country report, study tour and practical training, panel discussion and field study.

(2) Subjects during the Course should be decided considering the available equipment and facilities in the participating countries so that ex-participants can apply their knowledge and skills after returning home.

(3) EEPIS should monitor the utilization and dissemination of techniques and knowledge which participants have acquired through the Course. In case problems are found, feed-back of the information should be included in the following sessions.

(4) The Governments of participating Countries should select participants on the basis of strict criterion. Participants should have a good command of English so that they can understand and utilize what they learn.

(5) The Third-Country Governments should support the participants by providing ample equipment and funds for actual application of the skills, knowledge and techniques in daily work.

(6) The Government of Japan should continue technical cooperation related to electronic engineering education.

3-6 Lessons Learned

N/A

3-7 Follow-up Situation

To continue technical cooperation related to the electronic engineering education, the Government of Japan has implemented additional projects and training courses mainly in the field of up-to-date IT techniques at Surabaya.