Terminal Evaluation

Middle East

1. Outline of the Project

Country:
Egypt

Project title:
Construction Equipment Training

Issue/Sector:
Vocational Training

Cooperation scheme:
Third Country Training Program (Phase 2)

Division in charge:
Middle East and Europe Division, Regional Department IV(Africa,Middle East and Europe)

Total cost:

Period of Cooperation Fiscal Years 1999 - 2003

Partner Country's Implementing Organization:
Construction Equipment Training Center (CETC)

Supporting Organization in Japan:

Related Cooperation:

1-1 Background of the Project

At the Tokyo International Conference for African Development 2 (TICAD 2) held in October 1998, the government of Japan and the government of Egypt agreed upon the realization of the South-South cooperation in Africa and the implementation of the Japan-Egypt Triangular Technical Cooperation Program (Triangular Cooperation) in order to support social and economic development in African countries. Upon this agreement, the training was implemented.

1-2 Project Overview

In order to improve the quality of construction workplaces, the training transfers basic knowledge on the use and management of construction equipment to the participants from African countries, as CETC was utilized as the implementing agency.

(1) Overall Goal

The level of construction work in workplaces where ex-participants are working is improved .

(2) Project Purpose

Skills and knowledge that the African participants acquired through the training course are disseminated.

(3) Outputs

1) The participants acquire the ability to manage and operate mechanical workshops.
2) The participants acquire basic knowledge of work schedules and construction machines.
3) The participants understand the use, maintenance and storage of construction equipment and storage of spare parts.

(4) Inputs

Japanese side:

Dispatched Lecturer 1/year

Local Cost

Egyptian Side:

Lecturer

Facilities and Equipment

Local Cost 43 million yen

(5) Participant Countries

Cote d'Ivoire, Eritrea, Ethiopia, Ghana, Guinea, Kenya, Madagascar, Malawi, Namibia, Niger, Rwanda, Senegal, Tanzania, Uganda, Zambia and Zimbabwe

2. Evaluation Team

Members of Evaluation Team

Taissir Hosam ELDIN, Planning and Evaluation Consultant, World Bank Cairo Office
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Period of Evaluation

15 October 2002 - 15 January 2003

Type of Evaluation:

Terminal Evaluation by Overseas Office

3. Results of Evaluation

3-1 Summary of Evaluation Results

(1) Relevance

The training on machinery operation, selection, management and maintenance were all relevant to the needs of the participants because almost all the participants of the training were mechanical or civil engineers. However, some parts of training were not relevant to the needs of civil engineers such as machinery design and repair as these tasks were not necessary for their daily works. As the African countries were in the process of transferring techniques of construction equipment, the need to build a cadre of engineers who were able to serve and maintain construction equipment was consistent with the needs of the respective countries.

(2) Effectiveness

The training accomplished the original purpose of the training plan. Based on the questionnaire survey implemented at the termination of the training, it was indicated that some participants utilized the knowledge and techniques attained in the training to their daily works, which showed that the contents of the training were appropriate. The results of the pre-test and post-test evaluations conducted in FY 2002 reflected improvements in the level of skills and knowledge of the participants.

(3) Efficiency

The lecturers of CETC have both the academic background and the technical experiences on construction machinery and they were capable of instructing the participants from both a technical and practical point of view. Although the teaching materials had been utilized for about ten years, the contents were currently appropriate and the additional handouts suitably covered insufficient parts of the materials. The site owned by CETC was wide enough to operate the machinery for practice and the course was implemented favorably. Concerning the course management, the participants reported that the course was managed very efficiently, although some of them were not satisfied with the time management.

(4) Impact

The participants disseminated the acquired knowledge and skills through different channels such as providing lectures, giving instructions, and presenting catalogues and reference books. The supervisors of the ex-participants who responded to the follow-up monitoring questionnaire stated that the transferred techniques were utilized and applied in their work places.

(5) Sustainability

Since the African countries are in the phase of building and developing infrastructure, the transferred knowledge and skills on construction machinery would be continuously utilized in those countries. The transferred techniques and knowledge would enable the African countries to select the most appropriate machines among various machineries and improve the efficiency and economics of the works.

The implementing organization, CETC, could update the knowledge and skills through the training and would continue to provide training courses and consultancy services on construction machineries. However, CETC is not financially sustainable at this stage, and the national budgetary support is vital to CETC.

3-2 Factors that promoted realization of effects

(1) Factors Concerning the Planning
1) The training was conducted in a well-established and well-equipped training center.
2) The training was delivered using the latest Japanese techniques.

(2) Factors concerning the Implementation Process

1) The quick response to the participants' needs in terms of additional handouts, pamphlets and adjusting flight tickets was observed.
2) The cultural and social atmosphere in Egypt was accommodated in the training. The participants could attend the course without encountering problems based on cultural differences.

3-3 Factors that impeded realization of effects

(1) Factors Concerning the Planning

N/A.

(2) Factors concerning the Implementation Process

1) The delay in the distribution of application forms caused a decrease in participants (in 2001 the number of participants was eleven). The travel tickets were not sent on schedule, which made some participants late for the commencement of the training.
2) Some instruments prepared for training had not been well maintained so they had problems due to the missing parts. The CETC needs to keep the condition of the instruments up-dated to conduct the training more efficiently.
3) The lack of equipment in some developing countries may hinder the application of skills and knowledge the participants acquired during the course on a daily basis.
4) There were some problems in time management especially in the morning when the participants had to wait for the bus at the hotel to go the training site.

3-4 Conclusion

The training was implemented on schedule and it accomplished the original objective. The contents of the training were relevant to the needs of the participants, and they utilized their acquired knowledge and skills in their daily works, which showed the positive impacts of the training. Judging from the above factors, the training could be considered as a successful example of the triangular cooperation. However, there were some requests from the participants such as expanding the course duration and allocating more time to practical training than to lectures on theories.

3-5 Recommendations

(1) It is necessary for the CETC to establish a system to keep a tracking record for machineries and inventories as well as allowing the staff to acquire necessary knowledge to understand the budget plan and to evaluate it.

(2) Since many of the participants were managers and supervisors, the course contents should be emphasized in the administration and management issues.

(3) Some of the necessary machineries could not be obtained in some countries, which hampered the application of the acquired techniques. The participants from those countries requested JICA for procuring those machineries.

(4) The participants were required the training courses which were essential for road construction such as "electronics and electrical for construction equipment", "maintenance and repair of stony crushing plants" and "road compacting equipment".

(5) It is recommended that the training should be divided into two, one for mechanical engineers and the other for civil engineers, so that the training is meaningful to all the participants. By dividing the course, the training course for civil engineers who do not need the knowledge on management of machineries can be simplified.

(6) Many participants pointed out that the training period was too short. It is worth considering the extension of the training period from two months at present to three months in the future to cover all the contents of the course including on-site practices.

(7) Teaching materials have not been revised for ten years, and some participants indicated that they "can not clearly understand the meaning of the textbook in some parts". Therefore, it is necessary to revise the material.

(8) CETC staff should be equipped with the capacity of data processing and data management which are useful in developing plan for activities and managing machineries and inventories.

3-6 Lessons Learned

Application forms for participants should be distributed earlier for the full attendance of potential participants.

3-7 Follow-up Situation

N/A.