

Terminal Evaluation

Latin America and the Caribbean

1. Project Summary

- Country: United Mexican States
- Project Name: Development of Research and Educational Methods in Mexico's Electronics Sector
- Field: Revitalization of small and medium-sized companies
- Type of Aid: Technical project
- Section in Charge: Central America and Caribbean team, Central and South America Department
- Cooperation amount (at time of evaluation): 20,375,000 yen
- Cooperation period
(R/D): November 1, 2003 - April 1, 2004
(Extension):
(F/U):
(E/N) (free of charge)
- Beneficiary country's related institutions: Centro de Investigación y Desarrollo de la Formación para el Trabajo (CIDFORT)
- Cooperating organization for Japan side: none
- Other related cooperation: none

1-1 Background and Overview of the Cooperation

The National Job Training Center (Centros de Capacitación para el Trabajo Industrial: CECATI), under the jurisdiction of the Center for Job Training (Dirección General de Centro de Formación para el Trabajo: DGCFT) of the Ministry of Education's (Secretaría de Educación Pública: SEP) Technology Education and Research Subsecretariat (Subsecretaría de Educación e Investigación Tecnológicas: SEIT), is under pressure to transition to a curriculum that would meet the current need to train company employees. It is essential that an educational system and educational techniques conforming with a curriculum appropriate for current conditions be developed, and for that purpose the Job Training Research and Development Center (Centro de Investigación y Desarrollo de la Formación para el Trabajo: CIDFORT) was established in November 2000. The majority of CIDFORT instructors have little experience in training workers, and their skills as instructors and teachers are inadequate. The technical cooperation project "Development of Research and Educational Methods in Mexico's Electronics Sector" was carried out from November 1, 2003 to April 1, 2004 with the objective of preparing educational materials for CECATI instructors and improving their development skills under the aforementioned conditions.

1-2 Description of the Cooperation

(1) Overall Goal

To improve the quality of the services provided at job training schools through the use of new technology.

(2) Project Goal

To improve the skills of job training school instructors in preparing educational materials by using new electronic technology (Macromedia, Pinnacle, MsProducer, and software creating charts and graphics).

(3) Outputs

1. CIDFORT facilities will be established for the purpose of training.
2. The system for distance learning will be improved.
3. Educational materials to train CECATI instructors will be prepared.
4. Training for instructors will be provided so that instructors at job training schools can carry out training.

(4) Input (at time of evaluation)

Japan side:

Dispatch of long-term experts: 1 Donation of equipment: approximately 13 million yen

Dispatch of short-term experts: 0

Acceptance of trainees: 0

Beneficiary country's side:

Assignment of counterparts: total of 6

Provision of land and facilities: Project office, training facilities

Other

2. Overview of the Evaluation Study Team

Researchers

Mr. Yasushi Wada, Director of Latin America office, IC Net Limited

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Study period

February 4, 2005

Type of Evaluation:

Terminal evaluation

3. Overview of Evaluation Results

3-1 Confirmation of Achievements

(1) Extent to which Output 1 was achieved

Although the equipment had been provided as of the project completion date (April 2004), it was not until July 2004 that the equipment had been completely installed and the training space had been prepared. The Mexican side provided CIDFORT with computer facilities, network facilities, photography equipment and video equipment, and this infrastructure was completed in March 2004. Despite the delays, the training space needed to prepare educational materials and improve development skills at CIDFORT was secured.

(2) Extent to which Output 2 was achieved

At the time that the terminal evaluation was carried out, training in the preparation of educational materials using this technology had not been carried out, but there are plans to bring the instructors from the Center in which the aforementioned software was installed to CIDFORT and provide training in the use of this technology. In addition, there are also plans to install technology for distance learning at the Center serving as the base for other remote areas. Training in the preparation of educational materials using this technology from the Center in which it was installed started from April 2005, and there are plans to achieve the project purpose of providing training using installed technology to 80 people at four centers by November 2005.

(3) Extent to which Output 3 was achieved

By the time that the terminal evaluation was carried out, four sets of educational material (methods for preparing educational materials using the Internet, use of Flash Mx, methods for preparing materials using slides, and methods for using digital cameras and digital video) to be used in training CECATI instructors had been prepared. As the objective was to prepare four sets of educational materials, the objective was achieved.

(4) Extent to which Output 4 was achieved

At the time that the terminal evaluation was carried out, four types of training for a total of nine training sessions had been carried out. A total of 151 CECATI instructors had received this training. As the objective was for 120 instructors to receive training, actual results exceeded the objective.

(5) Project Goal

By January 2005, a total of 151 instructors had participated in the training course, of which 108 passed the final exam. This put the percentage of instructors passing the exam at 71.5%, slightly undercutting the project goal of 80%. Another indicator for the project goal was to develop, through the project, five sets of educational materials to the point where they could be used. As of the time that the terminal evaluation was carried out (January 2005), 20 sets of educational materials could be utilized, resulting in the fulfillment of the project goal. These educational materials were completed in CD format, and the possibility of distributing them via the Internet is being considered to ensure that they are spread across as wide an area as possible in the most affordable way.

3-2 Summary of Evaluation Results

(1) Relevance

1) Relevance of overall goal

Mexico's primary goal is to foster small and medium-sized companies. Further, one of Japan's priority areas for aid in Mexico is industrial development and regional development. Since aid for education in vocational technology would fall under this rubric, the overall goal of improving the quality of the educational services provided by CECATI by using cutting-edge technology is deemed relevant.

2) Relevance of project goal

a) Consistency with overall goal

By achieving the project goal, the instructors' overall skills in providing training would be improved and the educational materials prepared by the instructors would be dispersed and utilized, thus standardizing training instruction. Since this would likely lead to the achievement of the overall goal, the project goal and the overall goal are consistent.

b) Consistency with implanting institution's organizational needs

By developing educational materials using cutting-edge technology and creating a distance training system, the nationwide CECATI would be able to provide uniform training instruction. Accordingly, the organizational need for CECATI instructors to improve their skills in providing technology training is consistent with the project goal.

(2) Effectiveness

The percentage of instructors that passed the final exam was 71.50%, about 10% below the indicator for the project goal of 80%. Nevertheless, 20 sets of educational materials were brought to a level at which they can be used, well exceeding the goal of five sets. The project goal of improving CECATI instructors' skills in preparing educational materials using cutting-edge technology can thus be deemed to have been generally achieved.

(3) Efficiency

The interview results demonstrate conclusively that the input time and field of expertise for the dispatch of experts were appropriate. The status of use of the donated equipment and their maintenance is also favorable. It has been pointed out that some of the materials for distance training are not being used, but this is not because of the materials themselves but because of problems with the Internet system. Currently, the goal is to set up the Internet environment as soon as possible.

(4) Impact

The installation of equipment through this project enables CECATI instructors to prepare educational materials using advanced technology; a total of 151 instructors received this training. Further, organizations other than CIDFORT have expressed interest in CIDFORT's training activities on the preparation of materials using advanced technology, and the state governments have also shown strong interest in them. Further, the equipment for the television conference system that was donated makes it easier for Mexico to communicate with other countries. Another output is shown in plans to prepare educational materials for the Internet in cooperation with other Central and South American countries in the future. The materials needed for training and the skills of the instructors that will use these materials have improved, contributing to the improvement of CECATI's services, which was the project's overall goal.

(5) Sustainability

While there are some uncertainties in terms of the organization and systems, such as the fact that the allocation of staff has not been determined past 2006, in terms of finances, budget allocations have been determined through 2008 and independent revenue sources have been secured. Accordingly, sustainability is high. Further, CIDFORT counterparts responded that they will also use the materials introduced in this project and that activities can be continued in the future, making technical sustainability high.

3-3 Factors contributing to the Achievement of Outputs

(1) Factors related to plans

Individual experts were dispatched before the project started in order to ascertain the role and function of the beneficiary country's organizations and their needs. This ensured that the plans were consistent with current conditions and needs, and facilitated the achievement of the project's output.

(2) Factors related to implementation process

As described above, the experts dispatched before the project was carried out were dispatched to the project on a continuous basis. This meant that there was no need for the usual preparation period (typically used to coordinate with counterparts, build up personal relationships, determine needs and confirm the baseline) and immediately after the project started. This project lasted only five months, which was quite a brief period, but the efficiency of the implementation process was a major factor in preventing the briefness of the period from resulting in substantial losses.

3-4 Factors Inducing Problematic Issues and Problems

(1) Factors related to plans

This technical project aimed to donate materials and equipment that could not be provided through the dispatch of individual experts. Given this particular background, a project design matrix (PDM) was not prepared, and the indicators essential for managing the progress of the project were not set. This impeded the efficiency of the project's management.

(2) Factors related to implementation process

Although a framework for the project itself was not developed, CIDFORT prepared its own activity plans and donated materials were utilized in accordance with these plans. Accordingly, there were no major obstacles facing the implementation process.

3-5 Conclusion

As of the terminal evaluation, 151 of the approximately 3,500 CECATI instructors nationwide had participated in the training. However, this number is expected to increase, as the skills of the CIDFORT instructors providing the training were improved through the project implementation, training materials were set up, and facilities and technology for future distance training are in the process of being set up. Accordingly, the project's initial goal has been achieved.

3-6 Recommendations

(1) Train instructors efficiently using the cascade method.

There are a large number of CECATI instructors, with about 3,500 nationwide. These instructors can be trained efficiently by developing a system in which the core instructors are first trained and these instructors then train the other instructors.

(2) Use independent revenue to upgrade materials and equipment.

In many cases, a change in policy can dramatically change the budgets allocated to public organizations. It is essential that CIDFORT secure human resources and the material and equipment necessary for its operations in order to ensure that its original role is stable. In particular, the service life of electronic equipment is quite short and technical innovations affecting the equipment are rapid. Using independent sources of revenue as much as possible to upgrade this equipment is important for ensuring CIDFORT's continued functions.

(3) Develop a monitoring system and ensure effective project management.

This project did not have a PDM, and was started without setting clear project goals or the indicators that would determine the extent to which the goals had been achieved. This was due to the particular circumstances in which this project was formed, but a system should be developed to ensure that the project framework is clarified, a monitoring system is developed and the project is managed more effectively.

3-7 Lessons Learned

Long-term experts were dispatched before the project started. Judging from the extent to which the materials and equipment were being used as of the terminal evaluation, the role and needs of CIDFORT - where the experts were sent - were accurately identified by the experts. As with this project, sending individual experts and accurately ascertaining the functions and needs of the organization to which the experts were dispatched is very important in terms of efficiency when forming technical projects.

Also, CIDFORT's activities were praised in this project and led to support from the state government. Creating channels through which the project's results can be publicized and appealing to the project's significance would not only enhance the project's efficiency, but is also important in ensuring its continuation after the project is completed. Public relations activities should be actively utilized in other projects as well.

3-8 Follow-up Situation

Nothing relevant.