

Development of Creativity Lessons for Primary Education



Project Sites Cairo

1. Background of Project

In Egypt, the modernization of education is given high-priority in national policies. Even in the five-year state development plan, the expansion of education is regarded as an important issue. In the palm, not only is the quantitative expansion of education an issue, but so is its qualitative improvement. Specifically, it is required to shift from the current cramming education system towards practical education for skill learning. There is particular emphasis on the necessity of modifying curriculum and training in-service teachers for the modernization of Science and Arithmetic education. Under these circumstances, Japan sent a project formulation mission in 1992, conducted a survey on the current state of school education in 1995, and dispatched experts in 1996. Considering the expert's studies and advice, the Government of Egypt requested of Japan the dispatch of an Individual Team of Experts, for improving teacher training in science and arithmetic education in elementary schools, and improving the teaching method by editing the teachers' guidebooks.

2. Project Overview

(1) Period of Cooperation

1 December 1997 – 30 November 2000

(2) Type of Cooperation

Dispatch of Individual Team of Experts

(3) Partner Country's Implementing Organization

National Center for Education Research and Development (NCERD)

(4) Narrative Summary

1) Overall Goal

The academic ability of the pupils is improved in science and arithmetic.

2) Project Purpose

The method of teaching elementary science and arithmetic is improved.

3) Outputs

- The current situation of the elementary science and arithmetic teaching method is understood.
- The guidebook on the teaching method and the teaching materials are developed.
- The training plan for the in-service teachers are proposed.

4) Inputs

Japanese Side

Long-term experts	3
Short-term experts	14
Trainees received	5
Equipment	22 million yen
Local cost	8 million yen

Egyptian Side

Counterpart	10
Local cost (Execution cost)	

3. Members of Evaluation Team

Team Leader:

Kenichi SAKURAI, Hokkaido University of Education

Science Education:

Hideaki WATANABE, Hokkaido University of Education

Arithmetic Education:

Yoshihiko SUGIYAMA, Hokkaido University of Education

Evaluation Planning:

Makoto ASAI, Program Division, Hokkaido International Center, Sapporo, JICA

Evaluation Analysis:

Akitoshi IIO, Yachiyo Engineering Co., Ltd.

4. Period of Evaluation

11 November 2000 – 22 November 2000

5. Results of Evaluation

(1) Relevance

In the state budget ratio for fiscal year 1997-1998, the government expenditure to the education field in Egypt was 19.1%, and the education budget was also as much as 5.9% of the total GDP. Since human resources development through the expansion of basic education is one of Japan's important fields of assistance for Egypt, this project agrees with the policy of both countries.

(2) Effectiveness

The analysis of the current situation in science and arithmetic education was done through observations of the science and arithmetic classes in a total of seventeen schools, and the collection of the current textbooks and

teachers' guidebooks. As a result, the issues on improving and reforming teaching methods were identified, and a tentative improvement plan was proposed. This tentative plan was implemented for the model classes of the elementary schools in Cairo and Alexandria. The plan's applicability was verified, according to the questionnaire carried out at the time, as 88% of the 635 students replied that they would be interested in science.

The teaching method guidebooks were positioned as teaching materials for how to bring out and foster students' creativity or ability. A total of three guidebooks that include all of the topics of the current textbooks were made. These guidebooks were written with the Japanese experts, not in Arabic but in English since their completion within the project period was intended. Out of these guidebooks, 30% of the science topics, and 54% of the arithmetic topics were developed by the counterpart.

(3) Efficiency

Overall, efficient use was made of the various inputs that contributed to the project activities, such as in understanding the current situation of the science and arithmetic classes, analysis, and guidebook development. However, there were several problems related to efficiency. Firstly, by the characteristic of the Egyptian administration, it was impossible to receive cooperation from the organizations (with the exception of NCERD), when the collecting information and materials or visiting sites that were necessary to analyze present condition and issues. It was difficult to carry out activities effectively and efficiently.

Secondly, because the working hours of Egypt ends at 2PM, the counterparts were arranged as "part-time workers" who needed to work for the project on top of all their original duties, and there were limited collaborations in working time with the Japanese experts. The burden on the counterpart side was also increased due to overtime work without payment. There were problems using the personal computers (e.g. the use of color printers were limited by the Government of Egypt, and the software to be used was not standardized) as well.

(4) Impact

During the project period, periodical meetings were held twice a week between Japanese experts and Egyptian counterparts for both science and arithmetic subjects. These meetings contributed to improve the research ability of the counterpart. A seminar for announcing the results was held at the end of this project. There were a total of 180 participants from various educational organizations, including the Minister of Education, which recognized the necessities of dissemination, application of the guidebooks and future revisions, and introduction to schools. As outline documents on this project were distributed to various fields, it contributed to this project being widely recognized in Egypt.

(5) Sustainability

Since this project was executed as a collaborative research between Japanese experts and their Egyptian counterparts, technical skill transfer on topics such as science and arithmetic teaching methods and teacher training policy was fully carried out during the period of this project. Moreover, the counterparts, formulated an ownership for the results of this project. This can be observed in such voluntary activities as actively translating the guidebooks into Arabic, and considering the distribution of the guidebooks to the related organizations.



An expert advising counterparts in charge of math

6. Lessons Learned and Recommendations

(1) Lessons Learned

When the administrative mechanism is rigid, it is important for the project executing organizations to work towards smooth consultations with the related organizations so that the necessary cooperation for the project can be attained. Moreover, proceeding the project through discussions between the experts and their counterparts motivated the Egyptian side, which led to an effective achievement of the project objectives.

(2) Recommendations

It is important to widely introduce the results and acquired information of this project to the people concerned in the education fields and related organizations in Egypt. It is also important to extend and apply the proposed teaching method for optimizing their existing resources. In the future, for the diffusion and application of this project's teaching method, the following assistance will be important:

- 1) the promotion of the teaching method guidebook by translation into Arabic;
- 2) the execution of the in-service teacher training program and the pilot training;
- 3) and the establishment of the guidebook revision system.

7. Follow-up Situation

Based on the above recommendations, a technical cooperation project for a period of three years ("elementary school science and arithmetic education") is currently being examined for possible execution.