

終了時評価調査結果要約表（英文）

I. Outline of the Project	
Country : Hashemite Kingdom of Jordan	Project title : The Capacity Development of Learning Resources Centers (LRCs) for Science Education Utilizing ICT
Issue/Sector : IT	Cooperation scheme : Technical Cooperation Project
Division in charge : Economic Infrastructure Development Department	Total cost : 236,000,000 yen
Period of Cooperation on	(R/D): From March 10, 2006 to February 28, 2009
	(E/N) (Grant Aid)
Partner Country's Implementing Organization : Ministry of Education	Supporting Organization in Japan :
Related Cooperation :	
<p>1 Background of the Project</p> <p>Science teachers in Jordan used to teach mainly theories and students had little chance to do experiment in their classrooms. To improve science education and increase the competitiveness of human resources, the Government of Jordan decided to adopt students-centered approach and promote ICT usage in the classroom. Queen Rania Al Abudullar Educational Technology Center (QRC) in Amman and Learning Resource Centers (LRCs) established all over the country were supposed to provide necessary technical advice to schools. However, capacity of QRC and LRCs was not enough to meet such requirement. The Government of Jordan requested technical assistance to the Japanese government in order to strengthen QRC and LRCs' functions. Then, the Project started in March 2006.</p> <p>Under the Project, it was planned to nurture more than 60 teachers and staff as a trainer, while there are approximately 7000 science teachers and 2000 laboratory technicians all over the country</p> <p>2 Project Overview</p> <p>(1) Overall Goal:</p> <p>Teachers for basic education in the target areas implement effective science education utilizing ICT.</p> <p>(2) Project Purpose:</p> <p>QRC and pilot LRCs/FDs are capable of functioning as the centers to develop the capacities of teachers that implement effective science education utilizing ICT (Grade 7-10).</p> <p>(3) Outputs:</p> <ol style="list-style-type: none"> 1) Institutional framework of QRC to develop the capacity of trainers and teachers who can conduct effective science education is established. 2) Teachers' training courses to implement effective science education are developed and maintained at QRC. 3) Capacities of core trainers who conduct teachers' training courses for effective science education are developed at QRC. 4) Teachers and staff of pilot LRCs/FDs develop the capacity to conduct teachers' training courses 	

for an effective science education for teachers and staff of trail schools.

(4) Inputs

Japanese side :

Long-term Expert:

Short-term Expert: 27 in total

Trainees received: 12

Equipment:

Local cost: 236,000,000 yen approximately

Others Yen

Jordanian Side :

Counterpart: 23

Land and Facilities

OthersYen

Yen

Equipment Yen

Local Cost

Yen

II. Evaluation Team

Members of Evaluation Team	Mr. Yoshio Niizeki, Senior Advisor, Department of Human Resources for International Cooperation, JICA	
	Mr. Takahiro Goto, Transportation and ICT Division II, Economic Infrastructure Development Department, JICA	
	Mr. Atsushi Tokura, Senior Consultant, IC Net Limited	
Period of Evaluation	26/10/2008~ 05/11/2008	Type of Evaluation : Final evaluation

III. Results of Evaluation

1 Summary of Evaluation Results

(1) Relevance

It is fair to say that the overall relevance of the Project is high. Details are as follows.

1)Relevance of the Project to Jordanian Government's Policy

The Ministry of Education has implemented an education reform program called Education Reform for Knowledge Economy (ERfKE). The Project' contribution to Component Two of ERfKE, which consists of restructuring and realignment of education programs and practices to achieve relevant learning outcomes, is recognized. Lessons learned of the Project were utilized for the formulation of the second phase of ERfKE, which is planned to start from December, 2008.

The Ministry implemented the reform of QRC. The reform clarified the relation among QRC, LRCs, FDs and schools The reform gave QRC a role to provide technical assistance to LRCs. The aim of the Project to strengthen the capacity of the QRC/LRCs is aligned to the QRC reform.

2)Relevance of the Project to the Target Group

The training course is aligned to the needs of the target group. The Project conducted needs assessment in 2006 and clarified the needs of teachers for basic education. Then, the training course and curricula were formulated. The assessment was conducted again in 2007 and 2008, and the course and curriculum were revised in accordance with the results of the assessment.

3)Relevance of the Project to Japan's Assistance Policy

The Project is still relevant to JICA's assistance policy. The Project is expected to contribute to reduction of social disparity in Jordan through educational reform.

(2) Effectiveness

Effectiveness of the Project is high, although some factors might hinder the achievement of the Project Purpose.

1)Probability of Achieving the Project Purpose

The Project Purpose is expected to be achieved, although the teachers' training course is still ongoing.

It will be realized based on the achievement of the outputs. Thus logical connection between the outputs and the Project Purpose is strong.

The extent of achievement of the Project Purpose was measured based on the following indicators; “Total number of developed trainers at QRC and pilot LRCs/FDs reaches to more than 70” and “More than 75% of participants of teachers’ training courses for trial schools are satisfied with the training by pilot LRC/FDs”. The first indicator has already been reached, as 74 trainers in total were developed by the Project. It is going to be assessed whether or not the second indicator is achieved after the teachers’ training is completed in November. According to the simple questionnaire survey at the final evaluation, all the trainees of teachers’ training course are satisfied with the training contents. Thus the second indicator is expected to be reached.

While the Project is implemented, QRC-LRC reform has been conducted by the Ministry of Education. Synergy effect between the Project and the reform has been generated, so that capacity of QRC and LRCs has been strengthened.

2) Factors that Hindered the Achievement of the Project Purpose

The following factors hindered the achievement of the Project Purpose.

- Preparatory study for the Project was not implemented and the framework of the Project was not very clear at the beginning. The Project had to do research on the present situation and conduct problem analysis while members of the Project were implementing activities referred to in the PDM.
- The Jordanian and Japanese sides had no consensus on the principle of fair burden sharing because no preparatory study for the Project was introduced. Such misunderstanding among the stakeholders occasionally hindered the Project’ smooth operation.
- The Project did not receive adequate support from some F/Ds, although most of them were cooperative. Awareness of the significance of the Project among some F/Ds was not high enough.
- The certificate of the training is not accredited by the Ministry of Education for the purpose of teacher ranking. Motivation of the trainees might have been negatively affected.
- Position of QRC in the Ministry of Education was not clarified at the beginning, although the Project aims to strengthen QRC’s capacity.

(3) Efficiency

The efficiency of the Project is relatively high.

1) Dispatch of the Japanese Experts

The questionnaire survey shows that most of the C/Ps felt the dispatch of the Japanese experts had been adequate in terms of their expertise, the number of experts, the dispatch period and timing. However, the interview revealed that some C/Ps feel the experts were replaced often and technology transfer activities were negatively affected. It was also heard that the C/Ps wish the Japanese experts could have stayed during the teachers’ training period. The Japanese experts themselves think their dispatch has been satisfactory, although the dispatch period was sometimes not very long enough to achieve the expected output.

Volunteers (JOCV) were dispatched to QRC and some LRCs. A synergy effect between the project activities and the JOCV activities was expected to increase the Project’s efficiency. However, no such synergy effect has been realized.

2) Provision of Machinery and Equipment

Both the C/Ps and the Japanese experts felt that the building, facilities and equipment are adequate in terms of quantity and quality. Renovation of QRC rooms, improvement of facilities, and purchase of necessary equipment were carried out jointly by the Ministry of Education, the JICA project, the Microsoft project and the USAID project. This is the promoting factor for the Project’s efficiency.

3) Training in Japan

Ex-participants of the training in Japan found that it was effective in improving their knowledge and skills. For instance, the ex-participants directly observed and learned about the advanced teaching method and ICT usage in Japan and were able to present their new knowledge and skills to their colleagues and trainees. The retirement of one of the former participants undercut the Project's efficiency.

4)Counterpart Personnel Allocation

While number of C/P was increased from 12 to 20, the numbers of trainers nurtured by the Project and the trainees were increased. Ministry of Education bore the extra cost for substitute teachers, as the numbers of the trainers and trainees were increased. The Japanese experts think the allocation of the C/Ps is adequate in terms of number and their expertise. The Steering Committee was established as an advisory board of the Jordanian side.

(4) Impact

The Project is expected to have a certain positive impact.

1)Probability of Achieving the Overall Goal

The Overall Goal of the Project will be realized when LRCs/FDs trainers and teachers in the target areas continuously improve their knowledge and skills. The teacher's training is still ongoing and it is too early to judge whether or not the indicators of the Overall Goal, or "More than 75% of schools that dispatch teachers to the teachers' training for effective science education are satisfied with their improvement" and "Students in the target areas show that their higher interests in science education than other areas" will be realized. However, according to the simple questionnaire conducted at the final evaluation, most of schoolmasters and supervisors were positive about the training. The Team observed firsthand the students' positive attitude in the trial lessons.

2)Policy Impact

Lessons learned of the Project were utilized for the formulation of the second phase of ERfKE.

3)Technical Impact

Achievement of the Project could be expanded to the other schools in the target directorates. In addition, the training could be expanded to other areas beside the target directorates in Jordan. Conducting training is a task of the Directorate of Training, Qualification and Supervision (DTQS) in the Ministry of Education. The relevant directorates in the Ministry must work together to realize such impact.

Achievement of the Project could also be utilized for other types of training. QRC plans to apply the Project's training method to the teachers' academy and the special school for talented children. In fact, the training course for laboratory technicians has already adopted the new training method developed by the Project.

The C/Ps have reportedly realized the importance of group-oriented activities such as lesson study. Some teachers also stressed that they enjoyed working with other teachers to improve teaching skills. Such behavior changes would have a positive impact on teachers in Jordan.

(5) Sustainability

The Project's sustainability will be strengthened if some measures are taken from now on. The Ministry of Education's interest in the Project, and highly motivated trainers and trainees are promoting factors for the Project's sustainability.

1)Institutional and Financial Aspects

QRC's institutional capacity has been strengthened through the Project and the QRC reform. The result of assessment on QRC management capacity among the C/Ps and the Japanese experts is positive. To continue the training after the Project period, cooperation among DTQS, DCT and QRC is indispensable. An interview with the Ministry of Education confirmed that the cost of future training will be covered by the Ministry, as the Project contributes to realization of ERfKE.

2) Technical Aspects

The Japanese experts assessed that the trainers would be able to maintain their knowledge and skills. The C/Ps also positively responded in the questionnaire that the trainers will be able to update their knowledge and skills by themselves even after the termination of the Project. From now on, C/Ps have to gain new knowledge and skills by themselves, not from the Japanese experts. At the moment, no system is in place to develop their knowledge and skills further. It was also heard that universities and research institutes in Jordan have not gained enough capacity to conduct research on teaching method and ICT usage in classes.

The Project has been effectively conducting monitoring, and curricula and textbooks have been revised based on the monitoring results. Both the C/Ps and the Japanese experts expressed their confidence in the Jordanian side's capacity to modify the curricula and the textbooks.

2. Factors that promoted realization of effects**(1) Factors concerning to Planning**

The Project was very relevant to the educational reform and QRC-LRC reform. This is due to the fact that the framework of the Project was carefully formulated after the Project started. The Japanese experts and C/Ps carefully observed the educational reform and aligned the Project to the reform. The QRC-LRC reform was conducted by the Ministry of Education. Although the Project did not intervene to the reform, it was expected that the Ministry adjusted the direction of the reform in order to coordinate the reform and the Project. Thus the Project could have adequate support from the Ministry. This is promoting factor for the Project's smooth operation.

The former Secretary General and General Director were the Project Director and the Project Manager when the Project started. Then, the former Secretary General was promoted to the Minister and the former General Director to the Secretary General. The Project could have adequate support from the senior level of the Ministry.

(2) Factors concerning to the Implementation Process

Needs assessment was carried out every year and the training contents, curricula and materials were modified based on the results. Thus the Project is very relevant to the local needs.

JICA's concept of supporting the self-help efforts of recipient countries is well understood by the Jordanian side and cooperative work between the C/Ps and the Japanese experts was effective. The C/Ps enjoyed the hand-in-hand working style with the Japanese experts, which is different from lectures by experts. Teachers at the teachers' training also mentioned during the interviews that collaboration work with other teachers is a new experience and it was very effective.

3. Factors that impeded realization of effects**(1) Factors concerning to Planning**

Preparatory study for the Project was not implemented and the framework of the Project was not very clear at the beginning. The Project had to do research on the present situation and conduct problem analysis while members of the Project were implementing activities referred to in the PDM.

The Jordanian and Japanese sides had no consensus on the principle of fair burden sharing because no preparatory study for the Project was introduced. Such misunderstanding among the stakeholders occasionally hindered the Project's smooth operation.

Position of QRC in the Ministry of Education was not clarified at the beginning, although the Project aims to strengthen QRC's capacity.

(2) Factors concerning to the Implementation Process

The Project did not receive adequate support from some F/Ds, although most of them were cooperative. Awareness of the significance of the Project among some F/Ds was not high enough.

The certificate of the training is not accredited by the Ministry of Education for the purpose of teacher ranking. Motivation of the trainees might have been negatively affected.

4. Conclusion

Based on the five evaluation criteria, it is concluded that the Project has been satisfactorily implemented and will achieve the expected purpose. The Project will be completed on the 28th February, 2009 as scheduled. Several measures should be taken during the remaining period to ensure its achievement and increase the Project's sustainability.

5. Recommendations

Based on the evaluation results, the Team makes the following recommendations to the Project and the Ministry of Education. The Team and the Ministry of Education discussed further cooperation to ensure the Project's impact.

(1) Formulating the second teachers' training plan

To increase efficiency and sustainability of the Project, the Team recommends that the Project formulate a plan for the next teachers' training during the remaining project period. There are still some trainers at LRCs/FDs who have had not a chance to teach at the first training. To increase the Project's efficiency, they should utilize their knowledge and skills acquired through the project activities. To increase the Project's sustainability, the Team requested the Project formulate the next training plan in collaboration with DTQS and DCT, as QRC and those Directorates are supposed to implement the teachers' training together after the project period.

(2) Strengthening legitimacy of the training

To increase impact and sustainability, the Team recommends that certificate of the training be accredited by the Ministry of Education. The Team also requests that the training's certificate should be a qualification for teacher's promotion, as well as other training courses accredited by the Ministry.

(3) Establishing the Project's Website

To increase effectiveness, impact and sustainability, the Team recommends that a Website for the training and science teachers be established soon.

(4) Increasing capacity to do research on new teaching methods and ICT usage

To increase sustainability, the Team recommends that the Project increase research skills of new teaching methods and ICT usage, as the C/Ps will have to increase their knowledge and skills without support from the Japanese experts.

(5) Publicizing the Project's achievement

To increase relevance, impact and sustainability, the Team recommends that the Project's success and lessons learned be shared among the stakeholders of ERfKE, as the Project is very aligned to ERfKE.

The Team recommends that the Project publicize its significant achievements, as the Project is still not very well-known in Jordan. The Team proposes that the Project and the Ministry of Education hold a workshop and all LRCs and F/Ds be invited to increase their awareness of the Project.

(6) Strengthening the Plan-Do-Check-Action cycle

One of the most significant achievements of the Project is the improvement of the C/P's planning skills. To increase sustainability, the Team recommends that statistical analysis skills be transferred to the C/Ps as they are an effective tool for the Project's monitoring and evaluation. The Team also recommends that awareness of the project cycle management system such as Plan-Do-Check-Action among teachers be increased through the project activities, as it is effective management tool.

6. Lessons Learned

(1) Importance of preparatory study

The Project did not start smoothly, as the framework of the Project was not clearly defined and the principle of burden sharing was not shared between the Jordanian and the Japanese side. Preparatory study is indispensable for a project's effective and efficient operation.

(2) Significance of JICA technical cooperation

JICA's concept of supporting the self-help efforts of recipient countries is well understood by the Jordanian side and cooperative work between the C/Ps and the Japanese experts is effective. Significance of JICA technical cooperation should be stressed during the preparation stage of technical cooperation project and mutual understanding should be secured between the Japanese and the recipient country sides.

(3) Effective ICT usage

Concept of ICT usage for education has been changed. ICT is a tool to operate a class efficiently and its usage is not absolute. It is important to combine teaching method and ICT usage effectively to improve the quality of classes.