

Ex-post Evaluation Report 2011-2-1

# **Luang Prabang National University Establishment Project**

Loan Agreement No.: LAO-1

Loan Approval Date: April 8, 2005

Country: LAO PDR

The Export-Import Bank of Korea  
(Government Agency for the EDCF)

EDCF Evaluation Team  
(Evaluated by Korea University of Technology and Education)

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## **Executive Summary**

### **Background**

The number of high school graduates in Laos was 33,689 as of 2004, while the capacity of national universities was only 7,000 students. Entering the universities was too competitive and most high school graduates were thrown out to the society without any skill, which caused a serious mass unemployment issue.

The government of Lao PDR decided to establish new universities at hub cities in northern and southern provinces. A local national university was established in Champasak Province in southern area in 2002 and another national university (Souphanouvong University) was established at Luang Prabang Province in northern area under the decree of the Prime Minister in 2003. However the Souphanouvong University was opened without necessary facilities and curriculum required for a college due to lack of financial resources. It was in need of financial support.

The main objectives of this project are:

- ① To promote balanced regional development of Laos by human resource development through establishing a university,
- ② To fulfill the demand for college education in northern provinces by establishing a national university in Luang Prabang Province, the center of northern area,
- ③ To foster human resource development in the field of agriculture, forestry, and tourism which are the major industries in northern area,
- ④ To supply workforces to manufacturing industries considering its growing importance in Laos, and
- ⑤ To develop middle level officials and professionals through special programs.

Luang Prabang National University(Souphanouvong University) establishment project was planned with the above mentioned background and it contributed to the balanced development of Laos, fulfilled the demand for college education in northern area, fostered skilled workforces for manufacturing, agriculture, forestry, and tourism industries, and made positive impact to economic development of Laos.

### **Performance Assessment**

This project is rated 'relevant' considering its consistency of the project objectives and design with the partner country's national development plan and educational policy and EDCF's partnership strategy. The project was completed within the estimated budget,

but the project was delayed 12 months, so the project is rated ‘partly efficient.’ To assess the effectiveness of the project, performance indicators and targets were set and it is analyzed that the project achieved almost all of the targets, so the project is rated ‘highly effective’ in achieving its intended objectives. The project is estimated to deliver ‘positive’ impact to Laos, in the aspect of economic and social development and technology improvement. Considering the status of freshmen recruitment, number of enrolled students, quality of education program, capacity of faculty, operation and maintenance (O&M) structure, and fiscal status, the project is rated ‘likely’ sustainable.

Evaluation result by each criterion for the project is presented below and the overall assessment is ‘successful.’

### **Overall Assessment Result**

<b>Evaluation Criteria</b>	<b>Weight</b>	<b>Score</b>	<b>Assessment</b>
Relevance	20%	3.50	relevant
Efficiency	20%	2.65	partly efficient
Effectiveness)	20%	3.86	highly effective
Impact	20%	3.33	positive
Sustainability	20%	3.0	likely
<b>Overall Score</b>		<b>3.27</b>	<b>successful</b>

## **Lessons Learned and Recommendations**

### **Lessons Learned**

In order to improve the sustainability of a higher education institute, it is important for Project Executing Agency (PEA) to secure the adequate capability of operation and maintenance (O&M) of equipment and facilities. For sustainable O&M, it is essential for PEA to establish a systematic O&M plan, to secure the budget, and to keep adequate personnel. For a similar project in the future, it is necessary to exchange sufficient opinions with PEA at the design stage so that it can recognize the importance of O&M and establish organized O&M system by itself.

For a similar project supported in the future, it would be desirable to include implementation of school register information management system in the project scope for efficient management of information on students and alumni and to emphasize the importance of managing school register information such as statistics on students and graduates during the invitational training and consulting for school operation.

In order to maximize its effect of invitational training and expert dispatch, it is necessary to design a training program reflecting the local educational environment of the institute to be established and textbooks and equipment to be supplied as much as possible, and to organize dispatch experts program to focus on practical knowledge of how to use and how to operate and maintain the equipment to be supplied.

### **Recommendations**

Since newly established higher education institute requires continuous investment in terms of human resource and financial support for smooth operation after opening, it is important to set long-term plan including O&M and necessary actions after completion at the design stage. In order to set a comprehensive long-term plan, it can be considered that linking EDCF loan project with grant aid so that the O&M of the project can be continuously supported by grant aid.

In order to strengthen the capacity of Souphanouvong University's faculty, it is recommended for the university to support its instructors to get academic degrees (master and Ph.D.) by utilizing related ODA projects such as Global Korea Scholarship. For the invitational training and experts dispatch, it is highly recommended to focus on practical contents such as how to use, operate and maintain the equipment supplied rather than on general contents.

# **I. INTRODUCTION**

## **A. PROJECT BACKGROUND**

The number of high school graduates in Laos was 33,689 as of 2004, while the capacity of national universities was only 7,000 students. Entering the universities was too competitive and most high school graduates were thrown out to the society without any skill, which caused a serious mass unemployment issue.

At that time the project was planned, National University of Laos (NUOL), established with ADB's support in 1998 by consolidating 10 existing colleges, was the only regular university equipped with adequate facilities and administration system. This resulted in concentration of talented students into the capital area where NUOL was located.

In order to mitigate the problem of concentration of population into the capital area and to meet rapidly increasing demand for college education, the government of Lao PDR decided to establish universities at hub cities in northern and southern provinces. A local national university was established in Champasak Province in southern area in 2002 and another national university (Souphanouvong University) was established at Luang Prabang Province in northern area under the decree of the Prime Minister in 2003. However the Souphanouvong University was opened without necessary facilities and curriculum required for a college due to lack of financial resources. It was in need of financial support.

Luang Prabang National University(Souphanouvong University) establishment project was planned with the above mentioned background and it contributed to the balanced development of Laos, fulfilled the demand for college education in northern area, fostered skilled workforces for manufacturing industries, agriculture, forestry, and tourism, and made positive impact to economic development of Laos.

## **B. PROJECT OBJECTIVE**

The main objectives of this project are:

- ① To promote balanced regional development of Laos by human resource development through establishing a university,
- ② To fulfill the demand for college education in northern provinces by establishing a national university in Luang Prabang Province, the center of northern area,

- ③ To foster human resource development in the field of agriculture, forestry, and tourism which are the major industries in northern area,
- ④ To supply workforces for manufacturing industries considering its growing importance in Laos, and
- ⑤ To develop middle level officials and professionals through special programs.

### C. PROJECT SCOPE

Major project scopes consist of construction, equipment, expert works, fellowship training, and consulting services.

<Table 1-1> Project Scope

Scopes	Detailed Scopes
1. Construction	<ul style="list-style-type: none"> <li>- Design, civil works and building construction</li> <li>- Construction of main building, 4 classroom buildings, 3 dormitories, a cafeteria, a library, an auditorium, and other buildings (lab, security office, etc.)</li> </ul>
2. Equipment	<ul style="list-style-type: none"> <li>- To supply equipment such as computers, beam projectors, a centrifuge, etc. for 9 departments of 4 colleges</li> <li>- To supply office equipment and vehicles</li> <li>- To supply operational facilities such as audio/video system, telephone exchange system, air conditioners, and LAN, etc.</li> </ul>
3. Expert Works	<ul style="list-style-type: none"> <li>- Consultation of planning, operational strategy, and vocational training program development</li> <li>- To dispatch experts for operation of education projects, R&amp;D, and educational facilities</li> <li>- To develop curriculum and textbooks and to supply books</li> </ul>
4. Fellowship Training	<ul style="list-style-type: none"> <li>- Faculties training</li> <li>- Staffs training</li> <li>- Government officials training</li> </ul>
5. Consulting Services	<ul style="list-style-type: none"> <li>- Supervision of construction</li> <li>- Inspection of equipment and facility and infrastructure operation</li> <li>- Consultation and supervision on expert works and fellowship training</li> </ul>

## **D. EVALUATION APPROACH AND METHODOLOGY**

### **OBJECTIVE OF EVALUATION**

The objective of the ex-post evaluation of the project is to attain lessons learned and recommendations from the project for similar EDCF projects to be implemented in the future by assessing the achievement of project compared to planned short-, mid- and long-term goals in view of evaluation criteria (relevance, efficiency, effectiveness, impact and sustainability) at a certain time after the completion of the project.

### **APPROACH AND METHODOLOGY OF EVALUATION**

The evaluation was performed through review of published materials, questionnaire survey and stakeholder interviews, and materials reviewed are as follows:

- ① Project Appraisal Report (2004. 12)
- ② Loan Agreement (2005. 04)
- ③ Project Completion Report by Project Executing Agency (PEA) (2010. 03)
- ④ Project Completion Evaluation (2010. 06)

Evaluation questionnaires were prepared for each beneficiary such as president of Souphanouvong University, faculty and students, etc. And the questionnaires were sent to the beneficiaries in the preparation period for site survey and their responses were reviewed and utilized for additional inquiries during the site investigation. Site visit was made to identify the output of the project, to collect additional information which was not available from documentation reviews and responses to the questionnaire, and to update related data.

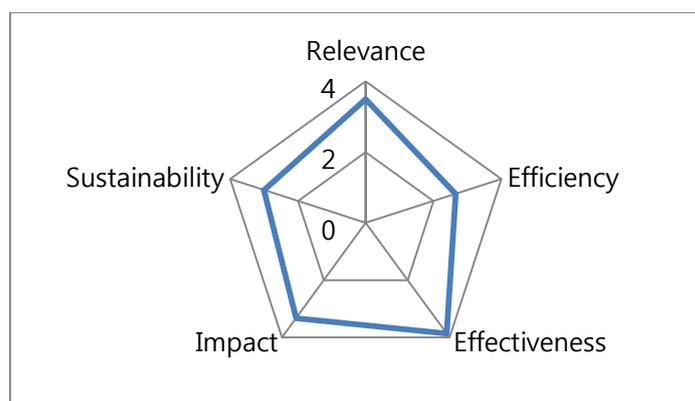
## II. ASSESSMENT FOR EACH EVALUATION CRITERION

Evaluation of the project summarized in the table below and an overall assessment grade is ‘successful.’

<Table 2-1> Comprehensive Scorecard<sup>1)</sup>

Criteria	Results	Descriptions
Relevance	relevant (3.5/4.0)	- The project is relevant to the national economic development plan of Lao PDR
Efficiency	partly efficient (2.65/4.0)	- Disbursement was made within the project budget - Implementation took 12 months more than the scheduled period
Effectiveness	highly effective (3.86/4.0)	- The project is estimated to achieve most of planned output, outcome and mid- and long-term objectives.
Impact	positive (3.33/4.0)	- The project makes positive impact on economic development and regional development by providing equal opportunity of higher education to female students and students in northern area.
Sustainability	likely (3.0/4.0)	- Considering the status of freshmen recruitment, number of enrolled students, quality of education program, capacity of faculty, operation and maintenance (O&M) structure, and fiscal status, the project is rated ‘likely’ sustainable.
<b>Overall Score</b>		<b>successful (3.27/4.0)</b>

<Figure 2-1> Distribution map of Overall Assessment grade



<sup>1)</sup> Overall assessment is a weighted average of grades of five evaluation criteria (20% each). The overall assessment grade is judged to be ‘highly successful’ for a score greater than or equal to 3.6, ‘successful’ for less than 3.6 and greater than or equal to 2.6, ‘partly successful’ for less than 2.6 and greater than or equal to 1.6, and ‘unsuccessful’ for less than 1.6.

## A. RELEVANCE

Considering that project was planned and implemented according to the national development plan and education policy of Laos and donor's partnership strategy and the objectives and design of the project is appropriate, the project is rated 'relevant'.

The government of Lao PDR selected human resource development as a prioritized agenda for national development and has been made best effort for human resource development. Until 1990s, the government focused on primary and secondary education, resulting in relatively slow progress in the area of higher education. Consequently, the government emphasized improvement of higher education and vocational training infrastructure through establishing national universities and vocational training institutes in its Fifth National Socio-Economic Development Plan (2001-2005).

<Table 2-2> Detailed Targets of Education Sector in Laos for 2005

Item	Target	Actual
Literacy	85%	78.6%
Enrollment rate: Primary education	79%('00) → 86%('05)	84.2%
Enrollment rate: Secondary education	47%('00) → 52%('05)	54.8%
Enrollment rate: Higher education	22%('00) → 24%('05)	34.4%
No. of beneficiaries of vocational education	350,000 persons	100,000 persons

Source: 5th National Socio-Economic Development Plan (2001-2005), Government of Laos.

In order to expand the opportunity for higher education, the government established, without foreign aids, a local national university in Champasak Province in southern area in 2002 and established Souphanouvong University at Luang Prabang Province in the northern area in 2003 under the decree of the Prime Minister. However, at the early stage, there were lack of proper educational equipment and facilities in those universities.

For the case of Souphanouvong University, it offered only education and agriculture-oriented departments with inadequate facilities not enough for normal education and it had no educational equipment for practice was available.

Through the project, engineering and tourism departments have been added considering regional representative industries and the adequate equipment and facilities have been

provided, which is estimated to be relevant measures. Therefore, the project is assessed to be consistent with the education policy of Laos to nurture skilled workforce.

The objective of project is to establish a national university in Luang Prabang Province, the northern area of the country, and the project scopes consist of construction, equipment, expert works, fellowship training, and textbook development, thereby leads to a conclusion that it was properly designed for establishment of a new university.

EDCF support mainly focuses on building economic infrastructure, which contributes to economic development of developing countries, such as roads, electricity and communication as well as on building social infrastructure such as health, education and environment to fulfill basic human needs. This project is related to developing social infrastructure by improving education sector, which is consistent with EDCF policy.

## **B. EFFICIENCY**

This project is rated as ‘partly efficient’ based on the evaluation of ‘project period’ and ‘project cost.’

Although the project period (from the effectiveness date of loan agreement to project completion) was supposed to take 18 months for design, construction, equipment supply and training, it has been delayed by 12 months, thereby taking total 30 months for implementation. The delay was caused by bedrock under the ground, design change from such as library expansion and weather conditions including frequently repeating rainy seasons. While it is possible to precede construction in the dry season from September to March, it is difficult to do construction work during the rainy season (April to August) in Laos. It is estimated that such a weather condition has not been reflected in the planned project period.

For the project cost, comparison between planned and actual disbursement for each project component shows that total amount disbursed was within the originally planned budget (97.65% of the budget). Although the project was completed within the estimated budget, the project period was delayed 12 months so that efficiency of the project is rated as ‘partly efficient’ in general.

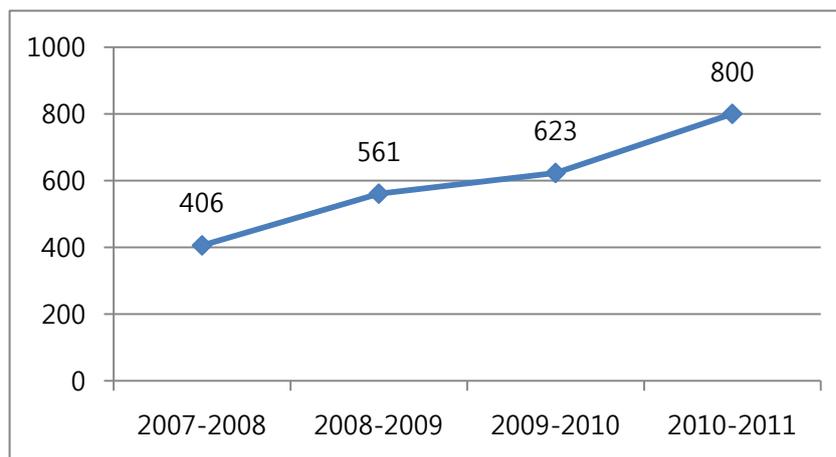
## **C. EFFECTIVENESS**

To assess the effectiveness of the project, performance indicators and targets were set and it is analyzed that the project achieved almost all of the targets, so the project is rated ‘highly effective’ in achieving its intended objectives.

Souphanouvong University can cover 1,200 freshmen, consisting of 600 for regular courses and 600 for evening class. 35% of regular course students consist of allotted number of students for each province. And the evening class students are selected from the employees of industrial companies and from donators. Most freshmen are from eight provinces of northern Laos and entering the university is very competitive, resulting in full enrolment.

The number of graduates of Souphanouvong University has been consistently increasing during the last four years. The employment rate for graduates from evening class is 100% and all graduates from provinces, 35% of total regular course students, were employed. It is estimated that among the remaining 65% of regular course graduates, about 60% were employed. So, the average employment rate of graduates of Souphanouvong University is estimated around 80%.<sup>2</sup>

<Figure 2-2> Number of Yearly Graduates



Regarding the beneficiary's satisfaction about Souphanouvong University, questionnaires including questions on facilities, curriculum, and educational equipment were distributed to the president, faculty, and students of Souphanouvong University on site. The result of satisfaction survey was positive (85% beneficiaries were satisfied) and this shows that the project has highly contributed to achieve project goals.

<sup>2</sup> Since Souphanouvong University was not equipped with school register information management system at that time the evaluation had been conducted, the evaluator couldn't help but estimating employment rate through interviews with staffs of the university.

<Table 2-3> Contents of Satisfaction Survey Questionnaire

Item	Questions	Satisfaction Level
Faculty	Does the quality of practice apparatus meet the technology level of the industry?	90%
	Are you satisfied with practice apparatus supplied?	80%
	Do you sufficiently utilize practice apparatus?	80%
	Do you sufficiently utilize textbooks developed?	30%
	Does this project help development of Laos?	85%
	Has the school been improved after this project was completed?	95%
Students	Is the school helpful in your capacity building?	90%
	Are you satisfied with school's equipment and facility?	85%
	Are you satisfied with the curriculum of the school?	85%
	Do you sufficiently utilize practice apparatus?	90%
	Does college education help your career after graduation?	95%

The operating budget for the university consists of revenues from tuition fee, government subsidy, and profit generating businesses, among which government subsidy makes 50% of the total budget. The budget has increased at a rate of over 10% annually since 2008 and is expected to maintain the similar increase rate of about 10% annually, considering the compulsory primary and secondary education policy observed in the 6<sup>th</sup> National Socio-Economic Development Plan (2006-2010), the policy to improve and expand vocational and higher education, the recent tendency of budget growth, and the consumer price index of Laos.

Currently, the supplied equipment is working well and utilized for training. While some of supplied educational equipment (computers, chemistry lab equipment, and electronic lab equipment) are out of order and not in use due to inadequate operation and maintenance caused from insufficient budget, so the overall utilization rate is estimated to be close to 70%.

This is the first EDCF project in Laos to support establishment of a regular university and it helped to supplement the inadequately operated curriculum through strengthening the capacity of faculty and providing proper educational equipment. It is estimated that this project has contributed to improve the image of Korea and to strengthen the relationship between two countries through contributing to quality improvement of the higher education of Laos.

## **D. IMPACT**

The project is estimated to deliver ‘positive’ impact to Laos, in the aspect of economic and social development and technology improvement.

The project aims for economic and industrial development through human resource development and is expected to create economic impact via supplying quality workforce needed for industry development in the northern Laos. Economic benefits of the project includes wage increase of graduates of Souphanouvong University, community development due to the presence of the school, and increase of value added in major local industries in the area such as tourism and forestry through the supply of professional human resources joining these industries.

Souphanouvong University, as the only national university in northern Laos, contributed to expand higher education opportunity to students of 8 provinces located in the area. After the project was completed, the number of freshmen increased from 500 to 1,200, which contributed to increase of enrollment rate for higher education. 35% of freshmen positions are allotted to the 8 Northern provinces, fulfilling demand for higher education in the regional area and contributing to geographically balanced development of the country.

The university, equipped with the best facilities and equipment in Laos, has made quality university education possible and contributes to local community development through operating short-term courses (computer usage, IT, and English courses) utilizing the university’s facilities.

The university, with a female dormitory, offered increased opportunity of higher education to female students in the northern Laos. Currently, the portion of female students is 38.5% in the university, nearly reaching to average female student portion in Laos (42% in the academic year of 2008/2009).

Opportunities of information and communication technology (ICT) education have been expanded by establishing departments of electronic engineering and computer engineering in the university, and the invitational training programs in Korea for the faculty are ICT of Laos has been estimated to be improved through invitational training program in Korea for the faculty. While some faculty moved to private companies after the completion of the training, it is regarded to have delivered positive technology transfer impacts to Laos as a whole. Also, establishment of departments of IT management and of international business management has enabled to offer business management education.

## **E. SUSTAINABILITY**

In the perspective of software such as recruitment of freshmen and registration status of students, quality of curriculum, and effort to build capacity of faculty, the project seems to be ‘most likely’ sustainable. However the supplement and maintenance of educational equipment requiring financial support has been carried out insufficiently. Therefore, the project is rated ‘likely’ sustainable.

For the case of Souphanouvong University, most students are from eight Northern provinces in Laos. Since it is the only one national university (the second oldest national university in Laos) in that area, it is preferred by high school graduates, resulting in high competition for entrance, which means no problem with recruitment of freshmen.

When it was open on November, 2003, there were 7 departments in Souphanouvong University. Seven departments have been added with the EDCF support for equipment and facilities and 14 departments in total were in operation when the project was completed in 2008. After the completion of the project, college of language (major in English and Lao language) was newly opened and civil engineering department has been added in the college of engineering reflecting the increasing demand for construction workforces. Currently, the university is operating 6 colleges with 17 departments. Souphanouvong University is trying hard to strengthen its education programs reflecting the industrial development and demand for workforces and planning to add departments of chemical engineering, interior design, and food engineering in the college of engineering, departments of Korean, Chinese, Japanese, and Vietnamese language in the college of language, departments of accounting and politics in the college of business administration, the department of physics in the college of education, and master programs.

Souphanouvong University currently has 290 staffs (268 professors and 22 staffs) and plans to hire 30 more. Since the number of staffs grows 20-30% each year, staffing for sound operation is good enough to cover growing number of students. The University recognizes the importance of academic exchange for its growth and supports short term training programs for faculties and overseas study programs for students through sisterhood relationship with foreign universities. Six professors have received master degrees in Korea and at present there are 15 professors studying for degrees in Korea. This is expected to highly contribute to improve the quality of education in Souphanouvong University.

### **III. LESSONS LEARNED AND RECOMMENDATIONS**

#### **A. LESSONS LEARNED**

##### **1. Need to Establish O&M System by the Partner Country's PEA**

In order to improve the sustainability of a higher education institute, it is important for PEA to secure the adequate capability of operation and maintenance (O&M) of equipment and facilities. For sustainable O&M, it is essential for PEA to establish a systematic O&M plan, to secure the budget, and to keep adequate personnel. For a similar project in the future, it is necessary to exchange sufficient opinions with PEA at the design stage so that it can recognize the importance of O&M and establish organized O&M system by itself.

##### **2. Importance of School Register Information Management**

Souphanouvong University is currently experiencing difficulty in managing students efficiently due to absence of school register information management system for students and graduates. It causes trouble in tracing information on the status of students (whether a student is currently enrolled or on leave of absence from school) and graduates (employment status) and in verifying and publicizing the effects of school's services and public relations.

For a similar project in the future, it would be desirable to include establishment of school register information management system in the project scope for efficient management of students and graduates and to emphasize the importance of managing school register information system such as statistics on students and graduates during the invitational training and consulting for school operation.

##### **3. Enhancing Effectiveness of Invitational Training Programs and Expert Dispatch Programs**

Capacity building of the local faculty has been made through invitational training programs in Korea and training by dispatched experts. Since there was a discrepancy between equipment used at the training in Korea and at the site, the invitational training couldn't sufficiently achieve the expected results. In case of expert dispatch program, since the contents of training didn't focus on operation of equipment, the local faculty had some difficulties in operating equipment.

For the similar project in the future, in order to maximize its effect of invitational training and expert dispatch, it is necessary to design a training program reflecting the local educational environment of the institute to be established and textbooks and equipment to be supplied as much as possible, and to organize dispatch experts program to focus on practical knowledge of how to use and how to operate and maintain the equipment to be supplied.

## **B. RECOMMENDATIONS**

### **1. Enhancing Sustainability through Linkage with Grant Aids**

While newly established higher education institute requires continuous investment in terms of human resource and financial support for smooth operation after the opening, most developing countries suffer from lack of operation and maintenance capacity and budget. It can be recommended, therefore, to develop and execute a long-term plan spanning from the stage of construction of infrastructure to the stage of O&M. In order to set a comprehensive long-term plan, it can be considered that linking EDCF loan project with grant aid so that the O&M of the project can be continuously supported by grant aid.

### **2. Strengthening Capacity of Faculty**

Securing superior faculty is a necessary condition for the improvement of a university. And the government of Lao PDR sets the target distribution of academic degrees of faculty (Doctor: 10%, Master: 60%, Bachelor: 30% by 2020) and is striving to strengthen faculty competence. In order to strengthen the capacity of faculty of the university, it is recommended for NPIC to support its instructors to get academic degrees (master and Ph.D.) by utilizing related ODA projects such as Global Korea Scholarship<sup>3)</sup>.

### **3. Improvement of the Invitational Training and Experts Dispatch Program**

As the invitational training programs are offered for short periods (3 to 5 months), the contents of the programs should focus on the practical knowledge to be used in the field rather than on general contents. Especially, the programs should be mainly composed of:

- Curriculum development, and
- Utilization of equipment to be supplied (on how to use, operate and maintain)

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<sup>3)</sup> Global Korea Scholarship: a government-invitation program operated by National Institute for International Education of Korea to provide foreign students with the opportunities to study in Korean undergraduate and graduate schools (numbers of invitation: 100 students for undergraduate and 300 students for graduate programs).

In the invitational training program, it is recommended to select the trainers who will be dispatched as experts for the expert dispatch program, so that the inefficiency, resulting from the inconsistency between the contents of the invitational program and those of site training to be delivered in the partner country, can be prevented. Also, it is recommended that the experts should be dispatched at the time of installation of relevant equipment so that knowhow of using the equipment can be efficiently transferred. For the experts to be dispatched to the site for a long period, they should be dispatched after the completion of the project so that they can help the institute to secure the sustainability through consulting on operation and taking timely actions against the unexpected problems.