Ex-post Evaluation of Establishment of the Upazila ICT Training and Resource Center for Education (UITRCE) Project

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The Export-Import Bank of Korea

EDCF Evaluation Team

(Evaluated by Sangmyung University, Cheonan Council for Industry Academic Cooperation)

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I.   Overview

1. Project Details

- Project Name: Establishment of the Upazila ICT Training and Resource Center for Education (UITRCE)

- Project Executing Agency: Bangladesh Bureau of Educational Information Statistics (BANBEIS)

- Supplier: LS Cable & System

- Amount of Loan: USD 38,616,000

- Project Duration: March 21, 2011 – June 30, 2016

Table 1. Time Frame

Type	Date	Notes
EDCF Appraisal Mission	Oct. 10 through 14, 2008	-
Government Decision on EDCF Loan	Dec. 30, 2009	-
Loan Agreement	Feb. 6, 2011	-
Effective Date of Loan Agreement (A)	Mar. 21, 2011	-
First Disbursement	Feb. 1, 2012	Advance payment to consultants
Procurement Contract	Dec. 14, 2012	Main supplier (LSIS)
Project Completion (B)	Jun. 30, 2015	Geological survey found that ground reinforcement work was needed and consequently construction was delayed
Final Disbursement	Dec. 3, 2015	-
Submission of PCR	Sep. 21, 2015	-
Project Duration (A-B)	51 months	Extended by 24 months

2. Project Purpose

❑ The Establishment of Upazila ICT Training and Resource Center for Education Project ("Project") aims to provide ICT education and training to secondary school teachers across the country by establishing the ICT Training and Resource Centers for Education in 128 upazilas and to provide local residents with easier access to the Internet through the cyber cafés in these centers.

❑ In the long run, the Project will contribute to ① paving the way for ICT education and the cultivation of human resources, ② helping Internet penetration throughout Bangladesh, and ③ laying the foundations for ICT industry development ultimately.

3. Project Scope

Table 2. Project Scope

Item	Original Scope (At the time of EDCF appraisal)	Revised/Modified Scope
Construction of UITRCE Building	- 128 sites (No underground piles)	- 125 sites (Underground piles in 49 sites)
Building Foundation	- 2-storied	- 4-storied
Equipment	- ICT Training Equipment in BANBEIS *Equipment for DMC *Equipment for Main Briefing Room *Equipment for EMIS Server Room	- Same as the original scope
	- ICT Training Equipment in 128 UITRCEs *Equipment for Secondary Education Office & UITRCE Office *Equipment for PC Lab *Equipment for Local Cyber Center *Equipment for Server Room *Equipment for Guest Room *Equipment for Reception & Waiting Room *Equipment for Meeting Room *Facilities	- ICT Training Equipment in 126 UITRCEs
EMIS	- EMIS Software	- Same as the original scope

Software Development	*EMIS Server Software *EMIS Client Application *E-school Management System *Interface Module with GIS Tool *E-survey System *Access Control *E-mail Function	
	- GIS Software Development *Customization of Infrastructure Map Server *Customization of Map 3D Application	- Same as the original scope
Training	- Foreign Training *Course 1: 10 trainees/2 weeks *Course 2: 7 trainees/6 weeks *Course 3: 8 trainees/3 weeks *Course 4: 7 trainees/3 weeks	- Same as the original scope
	- Expert Dispatch *1st Dispatch: 66 MDs *2nd Dispatch: 66 MDs	- Same as the original scope

Source: Project Completion Evaluation Report by Korea Eximbank

II. Evaluation Purpose

1. Evaluation Purpose

❑ The evaluation of the Establishment of Upazila ICT Training and Resource Center for Education Project in Bangladesh is carried out on the basis of relevance, effectiveness, efficiency and sustainability. Moreover, the aim is to analyze the performance and achievement of the Project and to identify positive and negative factors to help better implement similar projects in the future.

❑ Sangmyung University International Development Evaluation Center (IDEC) carried out the evaluation with a variety of activities, e.g. literature review, interview and field study, from April to October in 2018.

2. Evaluation Method

❑ The evaluation was conducted based on the five evaluation criteria recommended by the OECD Development Assistance Committee (DAC).

Table 3. Evaluation Questions & Methods

Evaluation Criteria	Explanation
Relevance	The extent to which the aid activity is suited to the priorities and policies of the target group, recipient and donor.
Effectiveness	A measure of the extent to which an aid activity attains its objectives.
Efficiency	Efficiency measures the outputs—qualitative and quantitative—in relation to the inputs. It is an economic term which signifies that the aid uses the least costly resources possible in order to achieve the desired results. This generally requires comparing alternative approaches to achieving the same outputs, to see whether the most efficient process has been adopted.

Impact	The positive and negative changes produced by a development intervention, directly or indirectly, intended or unintended. This involves the main impacts and effects resulting from the activity on the local social, economic, environmental and other development indicators. The examination should be concerned with both intended and unintended results and must also include the positive and negative impact of external factors, such as changes in terms of trade and financial conditions.
Sustainability	Sustainability is concerned with measuring whether the benefits of an activity are likely to continue after donor funding has been withdrawn. Projects need to be environmentally as well as financially sustainable.

Source: "DAC Criteria for Evaluating Development Assistance", accessed on Oct. 1, 2018 at
http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm

❏ The literature review was conducted both in Korea and abroad around the field survey period and analyzed based on documents derived from the project implementation process and statistical data available in Bangladesh.

❏ In addition, interviews were held with local stakeholders during the field surveys, and local inspections were conducted to identify the current situation of the products. Also, in accordance with OECD/DAC recommendations, the opinion of the partner country is reflected in the final evaluation report in order to ensure the objectivity of the evaluation.

III. Evaluation Results

1. Overall Results

❑ Table 4 below summarizes the results of this evaluation. With a score of 3.5 out of 4, the Project is evaluated to have been "successful".

❑ As impact refers to the change (performance) that has occurred over a long period of time, typically 7 to 10 years, it is impossible to measure any impact at this point, just two years after the end of the Project, and therefore impact is not reflected in the score. However, the report suggests the possibility of future impact based on the current situation.

Table 4. Evaluation Score

Evaluation Criteria	Evaluation Score	Description
Relevance	3.6	The Project has a high priority in Bangladesh's national ICT development strategy and education policy. However, in terms of the appropriateness of the project structure, it is deemed that there was an insufficient needs assessment on cyber cafés and DMCs.
Efficiency	3.4	Given the purpose of implementing large-scale teacher training in the short term, the establishment of local education and training centers and the Training of Trainers (TOT) approach applied to building trainers were cost- and time-efficient and in a timely response to the current situation.
Effectiveness	3.5	Through UITRCEs, more than 100,000 secondary school teachers have benefited from ICT training and more than 750 trainers have been trained. Principals and teachers at secondary schools confirmed positive changes of their teachers in the use of teaching methods and ICT technologies after the ICT training. Also, the survey results show that the ICT and TOT training

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		programs have brought about a significant improvement in ICT competence. DMC has not been able to achieve its initial purpose because of the limited use of facilities and the lack of concrete strategies for achieving goals. The effectiveness of the EMIS system cannot be determined at this moment on account of the relatively limited extent of its expansion. Its future effectiveness will largely depend on whether or not BANBEIS's IEIMS-integrated project plan is approved. Cyber cafés have not contributed much to the increased Internet access of the local community. The survey results show that among the entire UITRCEs, the percentage of the centers used by ordinary residents is very low (9.7%).
Sustainability	3.5	The Bangladesh government continues to invest in its workforce and funds to operate the ICT training after the end of the Project. Between 2017 and 2018, USD 4 million was allocated for the UITRCE operation and management, and approximately USD 15,000 per UITRCE was disbursed for its operation. According to the survey, the UITRCE budget was appropriately allocated. The remaining demand for ICT education and training is more than 140,000 secondary school teachers (or 700,000 if primary school teachers are included). In addition, BANBEIS has operated regular monitoring visits and lecturer evaluation system to improve the quality of UITRCE. In the case of DMC, sustainability is uncertain due to the fact that the operation plan and manpower have not yet been fully assigned.
Total score	3.5	Throughout the Project, the implementation approach employed was efficient and the Project was highly aligned with the overarching national development policies both in education and ICT. The main goals of the Project (i.e. providing secondary school teachers with ICT training) were achieved very successfully.

2. Relevance

❑ In the national development documents, "Vision 2021" and "Digital Bangladesh Initiative", the Government of Bangladesh seeks to promote the use and proliferation of a wide range of computer and IT technologies across government and private sectors for a sustainable national growth and a move towards becoming a medium-

income country.

❏ In the Project, ICT training for secondary school teachers is provided to establish the basis for ICT utilization in the whole secondary education system and to encourage the use of ICT technologies by teachers. The Project is therefore very relevant to the Bangladesh government's strategies and priorities.

❏ In order to train secondary school teachers nationwide, UITRCEs were established in more than 100 upazilas. The ICT training was administered leaning on the localized Training of Trainers (TOT) approach. In order to conduct large-scale teacher training in a short period of time, decentralized forms of education and training were adopted and implemented effectively. The trainer candidates were selected among current secondary teachers and then allocated to each UITRCE.

❏ The cyber cafés failed to fulfil their main role to increase Internet access of the local community. DMC was not able to identify the demand for digital contents development clearly and utilization was restricted due to the lack of strategic approach and human resources.

3. Efficiency

❏ The project period was originally intended to be 18 months after execution of the procurement contract, but it took 30 months to complete the Project, extending the original period by 12 months. This was attributable to unavoidable circumstances, including the needs for unexpected changes in construction (ground reinforcement and pile foundation) and procedural changes in project design (3 months) and social and political unrest between 2013 and 2015 (5 months), as well as delays related to

the building company (change of construction manager and local constructor).

❑ The total project cost, including contributions from the recipient country, was USD 46.102 million, 2.8% up from the cost under the project plan. Despite the increased construction cost in the early phase of the Project, the Project was successfully completed as a whole through the adjustment of the total cost.

❑ The DMC construction was mainly composed of equipment supplies and BANBEIS did not develop its own digital contents because its capabilities and technical support were insufficient during actual operation.

❑ The TOT method introduced for ensuring the large-scale instructor training was deemed to be very cost-effective in that it utilized the capacity of the local institutions and successfully fostered such large-scale instructor training over a short period of time.

❑ The TOT program was conducted by high-level instructors of BANBEIS, the contents and progress of lectures took into consideration the level of trainees, and sufficient time was allocated for the training. Overall, it was operated in an efficient manner.

4. Effectiveness

❑ The most important purpose of the Project was to provide ICT training to secondary school teachers nationwide and to utilize UITRCE in the short term. Currently, the proportion of secondary school teachers participating in ICT training is 46%.

❑ The cyber cafés located in UITRCEs were installed for the purpose of improving Internet accessibility of local residents, but it is not clear whether they are being used

by ordinary residents. As a result, the main users of the cyber cafés are deemed to be teachers, trainers, and students.

❑ DMC's purpose was to build an e-learning platform through the production/development of digital contents by BANBEIS itself. However, since the completion of the Project, BANBEIS has not developed e-learning contents using DMC facilities.

❑ Currently, the IEIMS (EMIS) system implemented by BANBEIS is being used only by secondary schools in nine upazilas. BANBEIS has submitted before the Bangladesh government a plan to integrate Bangladesh's fragmented EMIS. It is difficult to judge the effectiveness of IEIMS in this context.

❑ The TOT program was successful in training high quality teachers. The trainees were satisfied with the training and confirmed their role as leading teachers in their schools. The survey also shows that the TOT course contributed to fostering skilled trainers.

5. Sustainability

❑ Adequate budget was allocated for UITRCE facility operation. This is very positive in terms of the sustainable operation and development of the center. In addition, the current UITRCE training process is in place with enough staff to maintain the facilities.

❑ The Bangladesh government emphasizes the use of ICT technology as part of its "Digital Bangladesh" transition, which has a positive effect on creating a favorable environment for continued ICT education.

❑ It takes at least five years for BANBEIS to provide ICT education to all secondary

school teachers. BANBEIS plans to add and/or modify the relevant curriculum in the future, on account of high demand for training.

IV. Lessons and Recommendations

1. Lessons

❏ The Project contributes to the implementation of government policies by establishing training centers that are specialized in educational function with flexibility. BANBEIS, as an experienced provider of ICT instructors, is competent in the relevant businesses. By using these local capacities, TOT instructors were trained to improve the efficiency of the Project.

❏ A considerable correlation between the success of the Project and the policy relevance and priority of the Bangladesh government is found in the ex-post evaluation of the Project. Implementation and application of ICT are emphasized in all aspects of the governmental units. ICT education, which benefits national ICT capacity-building and is led by the Ministry of Education and the Prime Minister, creates a good synergy with the Project. In addition, the effectiveness and sustainability of the Project are promising as various aspects in the ICT sector, such as system, infrastructure, and human resources development, were improved.

❏ Effectiveness and sustainability are affected positively by virtue of the linkage between "Digital Bangladesh", such as Teachers' Portal and the establishment of DMCs, and other related projects, although this was not taken into consideration during the project planning stage. Spontaneous linkage which was not intended during the project implementation contributed to the effectiveness of the Project. Effectiveness will likely improve when relevance to existing policies is greater in the implementation of similar projects.

❑ The establishment of training centers in provinces/rural areas with accessibility is required in order to provide all secondary school teachers with ICT education, since there are more than 240,000 secondary school teachers across the country. The Project contributed to a timely implementation of governmental policy by establishing ICT training centers that specialize in educational function so as to meet training demand flexibly. BANBEIS has a capacity for ICT education thanks to its past experience in BKITCE (Bangladesh-Korea ICT Training Center for Education, 2007) and the project with ADB, which made it possible to have competent human resources of ICT education and to experience ICT TOT program implementation. As a result, instructors were available in a short period of time and at a low cost since Korean experts first trained BANDEIS lead trainers and then lead trainers taught other teachers, i.e. trainees.

❑ Local education authorities showed significant interests in and support for ICT education. The trained teachers applied what they had learned to their own education, teaching and EMIS. With support and cooperation from schools, training courses will be run smoothly.

❑ The building of DMCs and cyber cafés was seen as a key goal for the entire Project, whereas detailed targets and needs assessment survey were insufficient. In contrast to the original plan, DMC had no digital contents developed by BANBEIS. And it was found that only a small number of local residents were used cyber cafés. It would have been possible to prevent these problems if the detailed goals of the Project had been initially identified and the detailed needs assessment survey (e.g. demand survey for local residents, UITRCE's geographical accessibility, and confirmation of similar institutions providing Internet service) had been conducted.

❑ Considering the situation in developing countries where the procurement of budget

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and human resources is tough, the fact that continuous ICT training for teachers was carried out by the government of Bangladesh after completion of the Project propels sustainability. Moreover, based on survey results regarding UITRCE, the timeliness and relevance of budget were evident. Continuous discussion needs to be made regarding support from recipients from an early stage in the project planning.

❑ The significance of proper budget management was discovered in the correlation between the "quality of ICT education" and the "indicators for present conditions of facility". It is found that only budget has a meaningful correlation in statistics with the quality of ICT education and the present condition of the facility in UITRCE. This does not indicate causality but UITRCEs with abundant budget seem to care more about the quality of education and facilities. This also has a positive impact on facility management and the quality of ICT education. Continuous discussion needs to be made regarding support from recipients from an early stage in the project planning.

2. Recommendations

❑ Considering the time it takes to start a project after F/S, conducting a survey on changes in local policies and related government projects will improve the efficiency and effectiveness of future projects.

❑ To provide quality training instructors and ICT training continuously, it is necessary to re-train the current training instructors and maintain a pool of competent trainers. In addition, considering that the education system generally slowly responds to market demand and students' needs for ICT, maintaining qualified training

instructors is required for long-term ICT talent development across the country.

❑ The evaluation of the Project showed that male teachers were more likely to participate in ICT training than female teachers and that conventionally teachers in rural schools and female teachers were being excluded from training opportunities. It seems that further efforts are needed to ensure the cooperation of the partner country so that the Project may help enhance gender equality in education opportunities.

❑ The survey results indicate a slightly high incidence of UPS failure. This may be due to poor electrical conditions (e.g. power outage). In order to handle the similar conditions in future projects, it is recommended to consider providing a sufficient number of UPSs and technical support for UPS-related issues.

❑ In order to maximize the effectiveness of the Project—the application of teachers after ICT training—it is necessary to utilize post-management to identify and solve the difficulties encountered in such application at schools and to encourage the use of ICT. Also, re-training, incentives or any other measures should be taken to maintain the quality of trainers.

❑ In order to maintain or strengthen the effectiveness of the Project, the application of ICT on site and the post-management of training programs (e.g. mentoring and seminars for knowledge-sharing) are recommended for the purpose of resolving the difficulties facing teachers.