

Evaluation Report 2018-7

**Ex-post Evaluation of ICT Education Capability Building
in Colombia Project**

November 2018

The Export-Import Bank of Korea

EDCF Evaluation Team

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

This evaluation was entrusted to the external research team led by Professor Paek Seonuck at Sangmyung University for the purpose of conducting an independent assessment. The findings or statements contained herein do not necessarily reflect the official position of Korea Eximbank and EDCF.

Table of Contents

I. Overview

1. Project Details
2. Evaluation Overview and Procedure
3. Method of Evaluation

II. Project Design and Execution

1. Project Design
2. Project Outputs

III. Evaluation Results

1. Overall Result
2. Relevance
3. Efficiency
4. Effectiveness
5. Impact
6. Sustainability

IV. Lessons and Recommendations

I. Overview

1. Project Details

- ❑ The ICT Education Capability Building in Colombia Project (“Project”) was approved for a development project loan. The borrower is the Ministry of Finance and Public Credit, and the project executing agency is the Ministry of Education.
- ❑ The expenditure of the Project is shown as in Table 1 below.

Table 1. Project Expenditure

(Unit: USD 1 thousand)

Type	Planned	Actual	Difference
Total	36,000	41,935	5,935
EDCF	30,000	28,794	Δ1,206
Colombian Government	6,000	13,141	7,141

Source: Project Completion Evaluation Report by the Korea Eximbank (2015)

- ❑ The time frame of the Project is shown as in Table 2 below.

Table 2. Time Frame

Date	Note
October 2006	Feasibility study by KIPA
September 3, 2008	Loan requested by the Colombian Government
October 9, 2008	F/S improvement requested by experts
October 2008 – February 2009	Discussion on the project execution method and F/S improvement with the Colombian Government
February 17, 2009	F/S improvement requested by the Colombian Government
March 24, 2009	Selection of consultants for F/S improvement (KERIS)
August 3, 2009	Submission of F/S
September 2009	Field study by Korea Eximbank (Sep 3rd through 10th)

Source: Appraisal Report by Korea Eximbank (2009)

2. Evaluation Overview and Procedure

- Sangmyung University International Development Evaluation Centre was tasked with ex-post evaluation for the Project. The evaluation team analyzed the achievement of the Project as well as success and failure factors. Based on such analysis, concrete, realizable lessons and suggestions that can apply to similar project design in the future are derived.

Table 3. Ex-post Evaluation Team

Organization	Title	Name	Task
Sangmyung University International Development Evaluation Centre	Professor	Seonuck Paek	Overall management
	Research Professor	Jina Byun	Evaluation design
	Researcher	Youngjin Kim	Evaluation research
Veg Box Scheme Prototype	Researcher	Margarita Mendez	Research assistance

- The evaluation was conducted for about 7 months from April to November 2018. The evaluation procedure is as follows:

Table 4. Evaluation Procedure

Date	Note
December 2017	Design of annual evaluation plan
April 30, 2018	Selection of external evaluation team
May 17, 2018	Submission of evaluation questionnaires
May 26, 2018 – June 11, 2018	1 st field study
July 24, 2018	Midpoint review
July 27, 2018 – August 4, 2018	2 nd field study
September 2018	Preparation of final report
October 8, 2018 – October 9, 2018	3 rd field study
November 2018	Final review

□ The Project Design Matrix (PDM) designed by the consultant at the beginning of the Project is as follows:

Table 5. Original Project Design Matrix (PDM)

Project Summary	Objectives/Indicators	Source	Assumptions/Risks
<p>Impact</p> <ul style="list-style-type: none"> - Improve the ICT environment in Colombia - Increase the efficiency in the education sector 	<ol style="list-style-type: none"> 1. Network Readiness Index (WEF) <ul style="list-style-type: none"> - Current: 64th → Goal: 55th 2. Digital Opportunity Index (ITU) <ul style="list-style-type: none"> - Current: 70th → Goal: 66th 3. Public schools' ICT usage hours per week <ul style="list-style-type: none"> <Individual activity> <ul style="list-style-type: none"> - Current: 1 hour → Goal: 3 hours <Collaborative activity> <ul style="list-style-type: none"> - Current: 5 hours → Goal: 7.5 hours 	<p>WEF, ITU, and statistical reports by Ministry of Education</p>	<ul style="list-style-type: none"> ✓ Assumption <ul style="list-style-type: none"> - The Colombian government's strong support for ICT growth policy ✓ Risks <ul style="list-style-type: none"> - Lack of willingness of teachers to utilize ICT during class
<p>Outcomes</p> <ul style="list-style-type: none"> - Strengthen ICT education service - Improve the quality of education through teacher training and evaluation 	<ol style="list-style-type: none"> 1. e-Portal (Colombia Aprende) <ul style="list-style-type: none"> <No. of registrations> <ul style="list-style-type: none"> - Current: 832,000 → Goal: 1,900,000 <No. of daily visitors> <ul style="list-style-type: none"> - Current: 30,000 → Goal: 70,000 2. ICT master teacher: 75 trained ICT leader teacher: 15,000 trained 	<p>Statistical reports by Ministry of Education</p>	<ul style="list-style-type: none"> ✓ Assumption <ul style="list-style-type: none"> - Efficient network system construction - Secured qualified teachers ✓ Risks <ul style="list-style-type: none"> - Lack of willingness of the government to promote a teacher training program
<p>Outputs</p> <ul style="list-style-type: none"> - Strengthen education capacity through informatization 	<ol style="list-style-type: none"> 1. Construction of NIC and 4 RICs 2. Advancement of e-Portal (Colombia Aprende) and operation of Help Desk 3. Operation of 50 pilot schools 4. Development of contents for 32 subjects 5. Standardization of metadata 	<p>Project completion report</p>	<ul style="list-style-type: none"> ✓ Risks <ul style="list-style-type: none"> - Delay in the signing of inter-governmental agreements and loans - Delay in equipment supply and training
<p>Activities with Milestones</p>	<ol style="list-style-type: none"> 1. Selection of consultant (3 months after L/A) 2. Preparation of bidding document (3 months after selection of consultant) 3. Selection of provider (3 months after preparation of bidding document) 4. Project execution (21 months after selection of provider) <ul style="list-style-type: none"> - Contents development and standardization - Teacher training - e-Portal development and pilot test 		

	- Construction of NIC and RICs - Installation of education network
Inputs	EDCF: USD 30,000,000 (83.3% of total budget) Colombia: USD 6,000,000 (16.7% of total budget)

Source: Request of Proposal by Korea Eximbank (2017)

- The evaluation team reconstructed the performance evaluation indices of the Project based on its appraisal report, completion evaluation report, data obtained, and field survey results as follows:

Table 6. Modified Project Design Matrix (PDM)

Project Summary	Objectives / Indicators	Source	Assumptions / Risks
Impact Increase the efficiency in public education	Reduce ICT utilization differences between private and public schools or/and regions	Statistical reports by Ministry of Education	<ul style="list-style-type: none"> ✓ Assumption - The Colombian government's strong support for ICT growth policy ✓ Risks - Lack of infrastructure for teachers to utilize ICT during class
Outcomes 1. Sustainable educational contents development 2. Increased use of contents in school	1.1 Contents developed by RICs 1.2 Number of contents produced by teachers 2.1 Increasing e-Portal visitors	Statistical reports by Ministry of Education	<ul style="list-style-type: none"> ✓ Assumption - Sustainable employment and training of content developers ✓ Risks - Lack of willingness of the government to promote a teacher training program
Outputs 1.1 NIC establishment and e-Portal enhancement 1.2 Establishment of RICs for content development 1.3 Trained master teachers 2.1 Operation of pilot schools 2.2 Standardized elementary and secondary education contents	1.1 NIC and e-portal 1.2 Four RICs and 15,000 leader Teachers 1.3 120 master teachers 2.1 Computer classrooms for 50 pilot schools 2.2 32 Contents for secondary schools	Project completion report	<ul style="list-style-type: none"> ✓ Risks - Delay in the signing of inter-governmental agreements and loans - Delay in equipment supply and training
Activities with Milestones - NIC / RICs space remodeling	Inputs EDCF: USD 30,000,000 (83.3% of total budget)		

- e-Portal improvements - Master teacher training - Content development and standardization	Colombia: USD 6,000,000 (16.7% of total budget)
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- The evaluation criteria are based on the five evaluation criteria recommended by the OECD Development Assistance Committee (OECD / DAC).

Table 7. OECD/DAC Evaluation Criteria

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 evaluation team developed evaluation questions based on the OECD/DAC evaluation criteria and cross-sector issues

Table 8. Evaluation Questions & Methods

Evaluation Criteria	Evaluation Questions	Methods
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Relevance	<ul style="list-style-type: none"> • Was the Project in its design relevant to Colombian education policy? • Were the components of the Project designed properly? 	<ul style="list-style-type: none"> • Literature review • Colombian education policy • F/S report • Appraisal report
Efficiency	<ul style="list-style-type: none"> • Was the input cost efficiently managed? • Was the project input time managed efficiently? 	<ul style="list-style-type: none"> • Literature review • Project completion report • Documents regarding the project • Stakeholder interview
Effectiveness	<ul style="list-style-type: none"> • Were outputs delivered? • Were outcomes delivered? 	<ul style="list-style-type: none"> • Project completion report • Field study • Beneficiary interview
Impact	<ul style="list-style-type: none"> • Is the project's impact achieved? • Are there unintended positive/negative impacts? 	<ul style="list-style-type: none"> • National statistical data
Sustainability	<ul style="list-style-type: none"> • Is performance expected to continue? 	<ul style="list-style-type: none"> • Field study • Collection of local documents

3. Method of Evaluation

- 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 Colombia.

- 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.

II. Project Design and Execution

1. Project Design

- The Project is aimed to enhance national competitiveness, ultimately through educational informatization. The purpose of the Project is as follows:

Note 1.

- To improve the quality of public education and reduce the educational gap between regions and classes through the national support for primary and secondary schools via NIC and RICs.
- To promote ICT utilization at schools as well as to improve education services for people through e-Portal development and advancement.
- To strengthen the educational capacity of Colombia through developing necessary contents for schools and systematic informatization teacher training.
- To promote contents industry as well as educational contents exchanges via standardization of contents

Source: Project Review Report by Korea Eximbank (2009)

2. Project Outputs

- The main outputs of the Project can be roughly classified into infrastructure, software, and teacher training.

Table 9. Project Outputs

Category	Subcategory	Planned	Actual	Note
Infrastructure	Establishment of a NIC and RICs	- (One) NIC - (Four) RICs	- (One) NIC - (Five) RICs	Change in the purpose of NIC and addition of one RIC
Software	e-Portal development	- Upgrade of e-Portal	Same as the planned output in	

	and upgrade	<ul style="list-style-type: none"> - Content distribution (CD and DVD) - Reuse of pre-existing contents - Operation of Help Desk - Operation of 50 pilot schools 	the left column	
	Contents development and standardization	<p>Development of production guidelines</p> <ul style="list-style-type: none"> - Content development (32 types) - Development of the sharing system - - Design of a standard scheme 	Content development (33 types)	
Teacher training	Training program development and teacher training	<ul style="list-style-type: none"> - Training program and textbook development - Development of teacher evaluation criteria - Teacher training (75 master teachers and 15,000 leader teachers) 	<ul style="list-style-type: none"> - Teacher training (120 master teachers and 16,000 leader teachers) - Other outputs are the same as the planned output in the left column 	Increase in training program participants

Source: Project Completion Evaluation Report by Korea Eximbank (2015)

III. Evaluation Results

1. Overall Result

- The evaluation results based on the five OECD/DAC evaluation criteria are as follows:

Table 10. Evaluation Results

Evaluation Criteria	Evaluation score	Explanation
Relevance	3.5	The Project was highly consistent with the educational development policies and strategies in Colombia. It was an excellent approach to various factors, such as contents and teacher training for public schools, in order to reduce the gap in informatization. However, despite the fact that each local authority has its own educational informatization strategy, applying the same teacher training and contents to the whole country was rather inappropriate.
Efficiency	3.5	Since the launch of the Project, it was cost-effective to expand the scope of the Project without increasing budget by partially reducing the role of NICs and adding one more RIC. The Project was delayed twice due to the failure in the bidding process for purchaser selection. However, after the selection of the purchaser, all planned outputs were achieved within the planned time frame.
Effectiveness	3	All planned outputs, such as NIC/RICs, pilot schools and content development, were delivered. However, in terms of teacher training, the planned number of training programs were provided, but the number of completed master and leader teachers did not meet the plan. Major goals intended by the Project were largely achieved. However, the number of contents developed by teachers is small compared to the number of leader teachers. Each RIC is actively developing contents except for northern (Cartagena) and eastern (Villavicencio) RICs, but it is considered that the original plan has not been achieved since all RICs did not share their contents with one another.
Sustainability	3.5	The RICs, which are operated directly by local authorities or existing universities, have high sustainability in their operating budgets and content development capacity. However, the northern RIC currently has no clear operating entity and is at a stage where it transfers the operating power

		to a new university. As such, sustainability is currently very low.
Total	3.375	-

2. Relevance

Was the Project in its design relevant to Colombian education policy?

- The Project includes teacher ICT training, educational informatization infrastructure, and educational multimedia contents throughout Colombia. It is relevant to Colombian educational policy “Plan of Government 2006 - 2010” as well as “Vision Colombia Second Centenary 2019”.
- In addition, it is designed to meet two key points (education quality and efficiency), among the four existing key points (education quality, inclusiveness, efficiency, and appropriateness) presented in the “Revolution of Education: Vision 2019”.
- In other words, the Project was designed to ensure that the education information service would be fully offered by the government and the standardization of the contents was promoted in accordance with the effectiveness of Colombian educational innovation.

Were the components of the Project designed properly?

- The appropriateness of project elements and the plan to reflect the complexity of various factors, such as contents and teacher training for public schools, are excellent for solving the gap of informatization in education. However, it should

be pointed out that despite many education platforms and projects run by local authorities, the link between existing platforms and projects was not taken into account in the project design.

3. Efficiency

❑ Was the input cost efficiently managed?

- The overall project budget was USD 36 million, with EDCF funds of USD 30 million and Colombian government funds of USD 6 million. However, at the time of implementation, USD 28 million of EDCF funds were spent and the Colombian government funds were raised to USD 13 million.

Table 11. Planned Budget and Actual Expenditure

(Unit: 1 thousand US dollars)

		EDCF			Colombia		
		Planned	Actual	Difference	Planned	Actual	Difference
1. Infrastructure	Construction of one NIC	2,943	1,259	Δ1,684	1,111	-	Δ1,111
	Construction of five RICs	7,562	9,383	1,821	2,223	2,289	66
	Network connection, etc.	763	635	Δ128	-	-	-
	Sub-total	11,268	11,277	9	3,334	2,289	Δ1,045
2. Development and advancement of e-Portal		6,190	4,722	Δ1,468	-	-	-
3. Development and standardization of contents		5,032	5,379	347	-	-	-
4. Teacher training		3,830	4,963	1,133	-	-	-
5. Expert's work		705	1,073	368	-	-	-
6. Consulting service		1,123	1,351	228	-	-	-
7. Reserve fund		1,822	-	Δ1,822	666	500	Δ166
8. Taxes and the utility' charges		-	-		2,000	10,352	8,352
9. Loan fee		30	29	Δ1	-	-	-

Total	30,000	28,794	Δ1,206	6,000	13,141	7,141
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Source: Project Completion Evaluation Report by Korea Eximbank (2015)

- Regarding infrastructure, the NIC took USD 1,684,000 and USD 1,111,000 less than the planned amount from EDCF and the Colombian government, respectively, and the e-Portal development and upgrade cost USD 1,468,000 less than the planned amount. Less spending was likely caused by the design change to concentrate the installation of e-Portal servers and others into the NIC for its stability, as well as concurrent changes in e-Portal development and upgrade, resulting in reduced expenditure compared to the planned cost.

❑ Was the project input time managed effectively?

- The Project took 23 months longer than planned. This was attributable to the delay in selection of the consultant and the purchaser. The selection of the consultant was delayed by 18 months due to the internal approval procedure of the project executing agency and delayed negotiation of the contract. Additional nine months were required as the contract with the purchaser was concluded after two failed bids by such purchaser and the project executing agency had to perform further duties, including the quality control report and the project expansion plan.

4. Effectiveness

❑ Were outputs delivered?

- (Output 1.1: NIC establishment and e-Portal enhancement) Through the Project, the NIC was established within the Ministry of Education. The NIC serves as the operational and management center of Colombia Aprende. About 77,000 contents have been uploaded, including those developed prior to the Project, 33,000 contents developed during the Project, and those uploaded by teachers after the period of the Project.

Figure 1. Colombia Aprende Website



Source: Colombia Aprende Website (<http://aprende.colombiaaprende.edu.co/cainicio>)

- (Output 1.2: Establishment of RICs for contents development and teacher training) RICs for each region were established, and a studio for multimedia development, a content development lab (Lab), and a lecture hall for teacher training were formed. However, in the case of teacher training, 12,248 and 5,056 teachers applied for pre- and post-test, respectively, of the training program provided to 16,000 teachers, and it was merely 41.3% who actually completed the entire course. Each RIC pointed out that there were limitations of teachers' different level in providing the 7-week program to all teachers en bloc.
- (Output 1.3: Trained master teachers) Each RIC selected teachers to be trained as master teachers and sent them to Bogota. The master teacher training was designed for 120 participating teachers; however in the end only 88 teachers¹ completed the training course. Colombia, a non-English speaking country, uses Spanish as its official language. It has been shown that the effectiveness of the master teacher training was lowered by the facts that materials translated but not proofread materials were used and that lectures were delivered through interpreters. In addition, it is pointed out as a drawback of the training course that the design of the program was based on the general teaching method although trainees already served as teachers.
- (Output 2.1: Operation of pilot schools) 10 schools for each region based on RIC, 50 in total, were designated as education informatization pilot schools and provided with the related infrastructure.
- (Output 2.2: Standardized elementary and secondary education content) During

¹ In the case of the northern (Cartagena) RIC, an insufficient teachers applied for the training, but eventually only eight (i.e. four local public teachers and four ordinary people) could be dispatched to Bogota.

the Project, 33,000 educational multimedia materials were developed and installed on Colombia Aprende, the e-Portal. Originally, a total of 32 types in 8 subjects, 4 grades, were planned. However, in order to expand the scope of beneficiaries, 33 types were developed in 3 subjects, 11 grades. 33,000 educational contents were jointly developed by RICs after their establishment. In particular, these contents were created by local developers and the Korean development team through collaborative work.

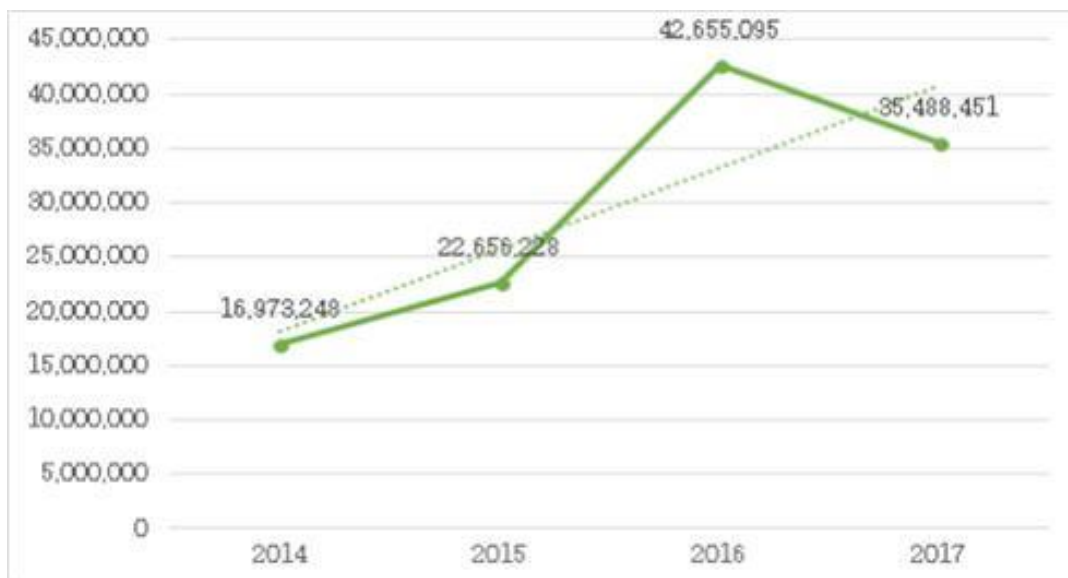
❑ Were outcomes delivered?

- (Outcome 1: Sustainable educational contents development) Contents are being developed by each RIC's team based on the multimedia studio built in each RIC. However, in the case of the northern (Cartagena) RIC, there has been no content since the previously selected university abandoned operation of that RIC just before the end of the Project. Each local authority is still using its own educational portal services and contents produced by the private sector or through its own projects. Therefore, the contents developed by RICs after the Project are uploaded not to Colombia Aprende but to each individual portal Website. In this respect, contents standardization, which was intended to improve the efficiency by developing the same type of contents nationwide and sharing them in one place, has not been achieved. On the other hand, in the case of contents developed by teachers themselves, 79 items were registered for e-Portal from 2014 to the present, and 42 among them have been registered after the Project showing a low achievement rate.

- (Outcome 2: Increased use of contents at school) Colombia Aprende, the e-Portal in the Project, has a total of 77,000 materials, including both pre-existing and newly developed data. As a result, the number of visitors has increased from 12 to 30 million annually.

Figure 2. e-Portal Visitors by Year

(Unit: Number of visitors)



Source: MoE internal data

- Certain contents are used but such use is not reflected in the number of new visitors. The materials were distributed in CDs so that schools may use contents without Internet access. In case of the western RIC (Envigado), the local government provides its own contents access proxy (CAP) to schools to promote content use in classrooms without Internet access. Teachers are actively using the materials on the e-Portal, Colombia Aprende, during classes, and it is estimated that the Project has been effective in solving digital divide.

- However, since educational materials are packaged by unit, it is rather inconvenient to use necessary parts only, and some schools point out as a limitation the fact that large files take a long time to download.

Table 12. Pros and Cons of Contents Usage

Pros	Cons
<ul style="list-style-type: none"> - Systematic organization of contents (e.g. course objective, contents, and evaluation method) - Provision of materials for parents and students, in addition to those for teachers 	<ul style="list-style-type: none"> - Too large packages - Content error²

5. Impact

- Is the project's impact achieved?

- The Project was originally designed for public schools for the purpose of eliminating the discrepancies between public and private schools. Private schools already had ICT infrastructure and teacher training opportunities, along with an excellent teacher selection process. The Project is currently estimated to contribute to its long-term performance. However, it is pointed out as a limitation that this achievement differs according to the competence of each RIC operating entity.

² The contents produced during the project period were three subjects, i.e. mathematics, language, and science. However, after the Project was completed, not only these three subjects have been updated but due to high demand, contents for other subjects have been developed. Teachers, on the other hand, do not know what subjects were developed during the Project, and thus it cannot be concluded that "content error" is a disadvantage of contents derived from the Project.

Are there unintended positive/negative impacts?

- According to the private school teachers interviewed by the evaluation team, the contents developed by the Project appear to be used by private schools teachers as well. This is not what the Project originally intended, but it is estimated that the benefits of the Project are also being given to students attending private schools.

6. Sustainability

Is the performance expected to continue?

- (Continuous content development/RIC) In Colombia, where many powers are granted to local authorities, each RIC is operated independently in accordance with the operation policy of each local government. Sustainability is evaluated differently depending on the type of operation in each region.

Table 12. Operation Structure of Each RIC

Classification	Planned	Actual Operating Agency
Central (Cundinamarca)	Selection of universities through bidding	Joint operation of 7 districts and entrusted to Universidad Nacional de Colombia
Eastern (Villavicencio)		Universidad de los Llanos
Western (Envigado)		City of Envigado
Southern (Cali)		Universidad del Valle
Northern (Cartagena)		Universidad de Cartagena Campus de La Salud

Table 13. Budget and Key Project of Each RIC

Classification	Budget	Key Project
Central (Cundinamarca)	Project-based funding (e.g. content development) and municipal-level funding from the local government for allowances for master teacher activities	Content development and pilot school research support
Eastern (Villavicencio)	University intramural funding	Content development (related to research projects for master's degree students at the relevant university)
Western (Envigado)	Budget allocation by the local government	Content development and teacher training
Southern (Cali)	University intramural funding and project-based funding	Teacher training (TiT@) program development, higher education content development, and education informatization research
Northern (Cartagena)	None	None

- (Continuous content development/Teacher) Currently, some regions have supported content development as part of the activities of master and leader teachers, whereas others no longer continue their training activities. Therefore, the content development performance of teachers depends on each region's teacher activities. However, even as teachers attempt to develop and share contents, NIC's approval and final upload in response to that is very slow. As such, there will not be many cases where teachers voluntarily share their own produced contents.
- (Increased use of contents in school) The number of pilot schools selected by the Project was 50. Immediately after the Project, contents were utilized only in urban schools and 50 pilot schools with excellent ICT infrastructure. However, as local governments plan and operate a variety of educational informatization projects to disseminate ICT equipment to schools, it is expected that the contents

utilization performance will continue to expand. In particular, southern (Cali) and western (Envigado) RICs continue to produce contents that reflect the latest trends, such as interactive learning.

IV. Lessons and Recommendations

- ❑ The evaluation results are greatly influenced by the degree of willingness and involvement of each local government based on the main criteria of ex-post evaluation, such as effectiveness, impact, and sustainability. When a nationwide project is implemented in Colombia, a country where the role of the local government is big, it is necessary to encourage the participation of the local government in the process of such project and to continuously manage collaboration between local and central governments. In addition, it should be considered that the Korean educational informatization model, which is led by the central government and spreads the same model all over the country in a short period of time, is not easy to be successfully completed in a geographically large country with the powerful authority of each local government, like Colombia. In particular, the consultants and the purchaser who conduct the Project seem to have had difficulty in completing the Project by coordinating opinions among the Ministry of Education and local governments based on the policies of each local government.

Table 14. Lessons and Recommendations

Evaluation Results	Lessons	Recommendations
Evaluation Criteria		
Relevance	The Project accords with the education development plan of the central government, but the design and implementation of the Project need to consider the governance of the local authorities	- Local governments' willingness to participate in the Project and demand surveys in each region should be reflected in the evaluation of the partner country's preparations for the Project.
Efficiency	Strategies to absorb NIC/RICs into existing buildings contributed to cost/time efficiency.	RICs installed in existing buildings enables less cost and time and more active involvement of the operating entity.
Effectiveness	<ul style="list-style-type: none"> - The achievement level of the regional project goals is different due to the competence of each RIC operating entity. - The Project is beneficial only to the teachers under the local government involved in RIC operation. - Some schools are still unable to access contents due to poor infrastructure. - It is difficult to attain content development and sharing just with the 7-week training 	<ul style="list-style-type: none"> - It is possible to clearly define the RIC operating entity or separately establish the operational objective for each RIC operating entity. - It can be considered to expand the scope of pilot schools, or select schools with poor infrastructure. - In countries with an existing teacher ICT training, it is possible to design projects with advanced training rather than basic training and to contribute more directly to strengthening a content development capability.
Sustainability	The Project is sustainable when the partner country has a strong local autonomy	- In case of strong local autonomy, it is possible to receive the operating plan from each center and reflect it in the project design stage.