

Summary of Evaluation

1. Outline of the Project	
Country: Republic of Rwanda	Project title: Project for Strengthening the Capacity of Tumba College of Technology
Issue/Sector: Technical Education	Cooperation scheme: Technical Cooperation Project
Division in charge: Technical and Higher Education Division, Human Development Department	Total cost: 945.891 million JPY
Period of Cooperation: (R/D): 8 July 2007 to 7 July 2012 (5 years)	Partner Country's Implementing Organization: Tumba College of Technology
	Supporting Organization in Japan: none
<p>1-1 Background of the Project</p> <p>Rwanda's Vision 2020 aims at developing a knowledge-based economy. However, the industrial sector faces a serious shortage of technicians and engineers because of the civil war and genocide. Therefore, the vision puts high priority on human resource development in science and technology. Rwanda's Educational Sector Strategic Plan for 2006-2010 put emphasis on science and technology education and the introduction of a nine-year basic education. It aimed to develop the human resources for the science and technology sector in each level of education, namely basic education (primary and secondary), technical and vocational education and training (TVET), and higher education on engineering. Accordingly, the Government of Rwanda decided to establish the Tumba College of Technology (TCT) which will offer three courses, namely Information Technology (IT), Electronics and Telecommunications (ET), and Alternative Energy (AE).</p> <p>Against such background, the Government of Rwanda requested the Government of Japan for the current technical cooperation project. The project aims to develop the TCT into an effective A1 level institution which provides practical technical education and training relevant to the industrial and social needs. The project commenced in July 2007 and is expected to close in June 2012.</p> <p>1-2 Project Overview</p> <p>(1) Overall Goal</p> <p>Human resource development in science, technology and innovation in Rwanda is promoted through the capacity development of TCT.</p> <p>(2) Project Purpose</p> <p>TCT becomes an effective A1 level institution that provides practical technical education and training relevant to industrial and social needs.</p> <p>(3) Outputs</p> <ol style="list-style-type: none"> 1. The basic management system of TCT is established. 2. A course management cycle is established. 3. Technical, pedagogical and managerial skills of TCT staff (teaching staff and administrative staff) are improved. 	

4. The management capacity including employment promotion and income generation activities of TCT is enhanced.

(4) Inputs

Japanese side

Experts: 228.25 person-months (Japanese experts: 133.7 person-months)

Local consultant: 84,100 USD

Equipment: 255 million JPY

Local cost: 60 million JPY

Training in Japan and third country: 83 placements

Rwandan side

Counterparts: 89 individuals

Local cost: 2.2 billion RWF

Infrastructure development: 1.5 billion RWF (counterpart fund from Japanese Non-project Grant Aid))

2. Evaluation Team

Members of Evaluation Team	<p>1) Team Leader: Hiroyuki Kobayashi, Resident Representative, JICA Rwanda Office</p> <p>2) Technical Education: Manabu Tsunoda, Senior Advisor, JICA</p> <p>3) Cooperation Planning: Nana Kondo, Technical and Higher Education Division, Human Development Department, JICA</p> <p>4) Evaluation Analysis: Hirofumi Ishizaka, IC Net Limited</p>
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Evaluation Period: 5 to 15 March 2012

Type of Evaluation: Terminal

3. Results of Evaluation

3-1 Achievement

(1) Output 1

The successful completion of Output 1 was a prerequisite to progress to the second stage of the project. Responding to this, the objectively verifiable indicators of Output 1 have largely been satisfied during the first stage. The operational plan of TCT has been formulated. Necessary budget for school and course management has been allocated. TCT started three A1 courses in August 2007, so that Output 1 is fully achieved.

(2) Output 2

Judging from the available information including the fact that TCT was able to send off four batches of students since the project started, it can be assumed that Output 2 has been achieved.

Although a guideline for department management was not developed, several means such as mentor system and have been introduced. The curricula and syllabi have been developed for the three courses offered by TCT. The teaching materials have been developed utilizing various sources including textbooks developed by past JICA projects.

A list of equipment to be procured has been compiled on a yearly basis taking into consideration the needs and budget constraints. The Maintenance Unit has been established and the Systematic

Asset Management has also been initiated.

TCT has already taken six batches of students of which four have graduated since its establishment in 2007. The total number of graduates to date is 561.

(3) Output 3

TCT has been increasing its staff to meet the challenges of providing effective education and managing the school properly. Through the technical transfer by the JICA experts and training provided in Rwanda and overseas, the technical and teaching skills of TCT teachers have been upgraded.

Some of the objectively verifiable indicators of Output 3 are unhelpful because they do not specify a target. However, in terms of attaining the stated objective of Output 3, which is 'Technical, pedagogical and managerial skills of TCT staff (teaching staff and administrative staff) are improved,' improvements have been observed and the objective is being met.

The capacity enhancement of the administrative staff, there is the need to establish effective administrative systems to properly manage the school. On the academic side, skill levels of teachers need to be properly assessed and understood by the concerned parties so that appropriate capacity enhancement measures can be implemented.

(4) Output 4

The mission and vision of TCT have been defined. A second five-year strategic plan covering the period from 2012 to 2017 has been formulated.

Regarding collaborative activities with the industry and local communities, the industrial attachment for students has been conducted every year.

TCT has so far signed a minutes of understanding with the Kigali Institute of Science and Technology, Electronic Engineering Polytechnic Institute of Surabaya, Rwanda Tourism University College, Ministry of Infrastructure, Rwanda Correctional Services and Energy, Water and Sanitation Authority.

TCT has established the ICT Training Center in Kigali. The center is offering ICT related short courses since February 2010. The Tracer Survey of the graduates has been conducted twice. The Entrepreneurship Guideline has been developed.

With respect to income generation activities, the ICT Training Center has been successful in creating a cash flow for TCT. The consultancy work has also generated income for TCT. Such additional income is enabling the TCT to provide top-up salary which will help the retention of its qualified staff.

(5) Project Purpose

According to the Tracer Survey of 2011, 81.5 % of the first batch graduates were employed, running business or continuing study. For the second batch the figure was 68.2% . The figure for the second batch can be expected to improve with time.

The second indicator, 'TCT staff can prepare, conduct, and evaluate courses by themselves,' should have been set as an indicator of Output 2 as it is on course management cycle. As discussed under Output 2, TCT staff is conducting the courses without major problems. However, as also discussed, the capacity of TCT staff to properly conduct course evaluation is yet to be proven.

Regarding the third indicator, the 2011 Tracer Survey found that of the first and second batch graduates surveyed, 20.8% were very satisfied and 55% were satisfied towards TCT.

According to the Satisfaction Survey conducted in 2011, 97.4% of the employers were satisfied with TCT graduates they employed. This figure is much higher compared to the finding of a similar survey conducted by the Workforce Development Authority for other TVET institution graduates standing at 71.6% .

In terms of attaining the stated goal, 'TCT becomes an effective A1 level institution that provides practical technical education and training relevant to industrial and social needs,' many sources suggest that it is being achieved, but to judge with certainty some questions need to be answered.

(6) Overall Goal

In the PDM, no objectively verifiable indicators are set for the Overall Goal. In terms of meeting the stated goal, 'Human resource development in science, technology and innovation in Rwanda is promoted through the capacity development of TCT,' it is quite clear that the project is contributing towards this end. In that sense the likeliness of the overall goal been attained is high. But in order to make an objective judgement, appropriate indicators need to set and monitored.

3-2 Summary of Evaluation Results

(1) Relevance

The relevance of the project was very high. The project has addressed issues of high priority. The Project Purpose and Overall Goal are consistent with the development policies and education policies of Rwanda. The project is also in line with the aid policies of Japan towards Rwanda.

The necessity of the project was high. The project content matched with the needs regarding higher education. The approach of the project was sound. The combination of equipment provision, technical training and infrastructure development, which was implemented utilizing the counterpart fund from the Japanese Non-project Grant Aid, contributed to the success of the project. The approach of forging collaboration with the industry was also effective.

However, it can be inferred that the utility of producing A1 level graduates needs to be considered. In addition, TCT is located in a remote place and access has been a challenge for attracting and retaining staff, and conducting some of the project activities.

(2) Effectiveness

The effectiveness of the project was high. The Project Purpose has mostly been achieved although it may be argued that TCT is becoming 'an effective A1 level institution that provides practical technical education and training relevant to industrial and social needs.'

The activities planned in the PDM were largely appropriate. However, it would have been better if the activities were structured in a way that their objective was clearer.

(3) Efficiency

The efficiency of the project was high. The achievement levels of the outputs are mostly adequate.

Given the magnitude of the project beneficiaries consisting of approximately 90 TCT staff members and over 1000 students so far, the relatively large amount of input is justified. Moreover, the Japanese side has been able to provide a larger volume of technical transfer through the extensive

utilization of third country resources, raising the efficiency of the project.

However, there were some issues which compromised efficiently. The remote location of TCT, high turnover of TCT staff members, absence of TCT staff members from training, experts with inappropriate technical or communication skills, cultural differences and delay in procurement of equipment are issues that have been observed.

(4) Impact

Several positive impacts have been observed. In a broad sense, the stated Overall Goal is likely to be met. However, an objective judgment cannot be made because there is no objectively verifiable indicator defined for the Overall Goal.

No negative impact has been observed so far.

(5) Sustainability

The likeliness of the achievements attained by the project being sustained is moderate. Policies and institutions are likely to remain conducive to sustaining the achievements of the project. The Rwandan government has been putting high priority on human resource development in science and technology. However, the framework for TVET has been evolving and there are some uncertainties regarding the governance of TCT in the future.

The Rwandan government has been allocating significant financial resources to TCT. The government is also supporting many students financially to study in higher education. Such trends will enhance the likeliness of sustaining the project achievements.

The overall capacity of TCT has been enhanced substantially. However, the turnover rate is not low.

The technical level of the TCT teachers may be sufficient to conduct the courses under the current curricula. However, it is not clear if the TCT staff members can fully sustain the achievements attained by the project entirely on their own.

3-3 Factors that promoted realization of effects

The high level of commitment of the Rwandan government in allocating the resources to TCT and the education sector has contributed greatly to the success of the project.

3-4 Factors that impeded realization of effects

There are no major factors that obstruct the success of the project. However, the remote location of TCT was and still remains an issue. For many TCT staff members, they have to sacrifice their social activities such as caring for their families to some extent. It is also very challenging to continue further study, which is the desire of many academic members. Measures to improve the situation such as providing staff quarters and school bus are in place and it is expected that the access road will be upgraded so that communication to the main road and access to social activities will become easier.

The high turnover of TCT staff poses a challenge on sustainability. The remote location of TCT and standard of salary are identified as main reasons for the resignation of staff members. Ironically, some have pointed that resignation is also a sign of how successful the project is training the TCT staff members because many of them get a better job owing to their enhanced competency.

3-5 Conclusions

The relevance of the project was very high, and effectiveness and efficiency were high. Several positive impacts have been observed. Although there are some concerns regarding the sustainability, it can be judged that overall, the project has been implemented successfully. The project may close according to the plan pending the execution of appropriate actions to respond to the recommendations below.

3-6 Recommendations

1) The objectively verifiable indicators of the Overall Goal and their means of verification must be set. The parties concerned should agree to the proposal set below.

Objective Verifiable Indicators	Means of Verification
1. Number of graduates TCT produces each year reaches at least 300 by 2015.	1. School records
2. More than 80 % of graduates are employed, running business or continuing study in relevant field by 2017.	2. Tracer Survey
3. At least 85% of employers who have employed TCT graduates for more than six months evaluate graduates' practical abilities as satisfactory.	3. Employer Satisfaction Survey

2) The project should make all relevant educational materials available through the intranet.

Educational materials beneficial for the students including the AE course manuals should be made available without delay.

3) The project should complete the evaluation of the teachers with the involvement of the teachers.

Ideally, in the future, such an exercise should be internalized within the TCT system. It would be beneficial for TCT and future capacity development interventions if the project can propose a mechanism which can be incorporated into the TCT system.

4) The project should make an effort to ensure that TCT staff members are capable of conducting the various surveys on the graduates.

TCT staff should become capable conducting activities such as the Tracer Survey, Course Evaluation Survey and Satisfaction Survey. It is recommended for the project to fully engage TCT staff members when it will implement the next surveys.

5) TCT should continue to enhance its public relations activities.

In addition to the audiences on the industry side, it would be pertinent to focus on the prospective students and their parents so that TCT can attract good students. Initiative such as the robot contest and open campus would be good measures.

6) TCT should continue to properly maintain the equipment.

The equipment is a valuable asset of TCT. TCT should continue to pay sufficient attention and allocate budget for maintenance.

7) TCT should continue its effort to reduce the staff turnover.

In order to enhance the sustainability of project achievements, TCT should continue to make effort

to retain qualified staff.

8) The Rwandan government should strengthen the top management of TCT through the assignment of the Vice Principal.

TCT has grown considerably since its establishment. Strengthening of the top management is necessary for effective management of the school and providing quality education.

9) The Rwandan government should establish the legal basis for TCT.

The status of TCT should be clearly backed by a law so that uncertainties regarding the future governance of TCT are reduced.

10) The Rwandan government should upgrade the access road to TCT without delay.

The remoteness of the location of TCT has been a challenge for many project members. If the access road from the main road to TCT is upgraded, it will have substantial positive effects on TCT, for example in attracting and retaining qualified staff.

3-7 Lessons learned

Collaboration with Industry

The collaboration with the industry has produced many positive outcomes. It has helped match the course content with the needs of the industry, given students to experience practical work before graduation, made TCT known to the industry and increased the chances of graduates getting a job in the industry. Initiatives such as the establishment of the Industry Relations Officer and TAG, and conducting industrial attachment are good measures that can be replicated by TVET institutions elsewhere.