

Summary of Evaluation Results

1. Outline of the Project	
Country: Socialist Republic of Vietnam	Project Title: Project for Human Resources Development for Heavy-Chemical Industry at Industrial University of Ho Chi Minh City
Issue/Sector: Private Sector Development	Cooperation Scheme: Technical Cooperation
	Total Cost (as of the Terminal Evaluation): Approx. 340 million JPY
Department in Charge: JICA Vietnam Office	Implementing Agency/Organization: Ministry of Industry and Trade (MOIT), Industrial University of Ho Chi Minh City (IUH)
(R/D) 27th June 2013	Supporting Agency/Organization in Japan: National Institute of Technology (NIT)
Period of Cooperation: November 2013-October 2016(36month)	Related Projects: None
Period of Extension: November 2016-April 2018(18month)	
1-1 Background of the Project	
<p>For the effective implementation of the “Socio-Economic Development Strategy (SEDS) 2011-2020” with objective of becoming an industrialized country by 2020, the Government of Vietnam approved the Action Plan for the deployment of SEDS. In the Action Plan, the Government clearly mentions one of the main tasks that Vietnam has to embark is to ensure macro-economic stability, renovate the growth model and restructure the economy in the direction of improving productivity, quality, effectiveness and competitiveness.</p> <p>In the meantime, Vietnam has been coping with various macro-economic issues such as ineffective public investment, high inflation, poor operation of banking system, trade deficit etc. Of which, trade deficit, which is partly caused by the import of gasoline, steel, plastic, raw materials, etc. even Vietnam can produce and export crude-oil, iron ore, etc. is one of the challenging issues for Vietnam’s effort to become an industrialized country. The Government of Vietnam has made great efforts to solve the issues of trade deficit, lack of raw materials and energy security by fostering the development of heavy-chemical industry in coastal areas such as Dung Quat, Nghi Son, Nhon Hoi.</p> <p>The first oil refinery plant in Dung Quat, which has been working at full capacity since August 2012, meets 30% of the country’s demand for oil products. The remaining 70% of the current demand is expected to be mostly filled by the second oil refinery plant in Nghi Son, Thanh Hoa Province. In January 2013, the contract was signed between the Nghi Son Petrochemical Co., Ltd. and a group of design, equipment supply and construction contractors for the construction of Nghi Son Oil Refinery Complex. Addressing the signing ceremony, the Prime Minister Nguyen Tan Dung noted that the project was of paramount importance to socio-economic development in Thanh Hoa and the country in general. Once the Nghi Son project was put into operation with the Dung Quat oil refinery, they would meet 70% of domestic petroleum demand, playing an important role in ensuring national energy security, at the same time, marking the development of the petrochemical industry in Vietnam.</p> <p>Besides the establishment of Nghi Son Oil Refinery Complex, various investors in industrial sector such as steel, iron, plastic manufacturers came to seek business opportunities in Thanh Hoa Province and neighboring provinces which formulate the clusters of heavy-chemical industries in these areas. It</p>	

was expected that the development of heavy-chemical industry helped solve the needs of materials for the development of supporting industries, which could be considered as the clue for Vietnam to sharpen its competitiveness.

The operation of large-scale plants in heavy-chemical industry including the future Nghi Son Oil Refinery Plant requires huge number of employees in various occupations such as chemical, electricity, electronics, mechanical engineering etc. However, in Thanh Hoa and neighboring areas, the human resource, which is the core element for the development of heavy-chemical industry, is still weak and fails to meet the industrial sector's needs for employees, especially the source of practical and creative engineers, who can take the initiative and independence rather than working under the supervision and direction.

In order to meet the needs of local industries for human resources, the Industrial University of Ho Chi Minh City (IUH) decided to newly establish the Thanh Hoa Campus with its own budget for investing modern facilities and training equipment in 2008. The Thanh Hoa Campus was planned to provide three types of training ranging from vocational secondary level (two-year), vocational college level (three-year) and tertiary level (four-year). Petro-chemical is one of the occupations within training scale of the Thanh Hoa Campus. However, training curriculum applied by the Thanh Hoa Campus had not yet met the requirements of employers in the field of petro-chemical industry which required rather practical and creative engineers.

In this context, the Government of Vietnam requested the Government of Japan to carry out the technical cooperation project for human resources development (HRD) for heavy-chemical industry at IUH. In response, the Government of Japan decided to implement the above-mentioned project to support the Government of Vietnam to develop human resources with the expectation to contribute to not only refinery sector but also the heavy-chemical industry and others. The beneficiaries were expected not only limited to Thanh Hoa Campus but also the whole system of IUH and other education and training institutions.

Under such situation, it was effective to carry out technical transfer from Japan through Japanese Kosen (a successful model of Technology College which provides practical and creative engineers to industrial sector in Japan) to IUH Thanh Hoa Campus in order to respond to the needs for human resources in heavy-chemical industry in Vietnam. It was expected that the HRD model shown within the framework of the project would provide the reference for the Vietnamese Government to have proper direction to the most suitable HRD for its industrial sector.

1-2 Project Overview

The project aimed at formulating and showing the Vietnamese version of "HRD model which provides practical and creative engineers" through strengthening the organizational capacity of IUH, thereby promoting the new HRD model by the Vietnamese Government in the future.

(1) Overall Goal

The Government of Vietnam promotes a new HRD model which provides practical and creative engineers for the objective of becoming an industrialized country by 2020.

(2) Project Purpose

IUH shows the HRD model which provides practical and creative engineers for the development of Vietnam's heavy-chemical industry.

- (3) Outputs
1. IUH Thanh Hoa Campus is capable in providing more practical and creative human resources in the fields of heavy-chemical industry especially refinery industry.
 2. IUH establishes the collaboration network with local industries and local communities for HRD.
 3. IUH strengthens the effective channel with the Government agencies, other education and training institutions and Vietnamese society for promoting desirable model for HRD of practical and creative engineers.

(4) Inputs (as of the Terminal Evaluation)

<Japanese side>

Dispatch of experts: 5 long-term, 11 short-term

Trainees received: 115 (including persons who participated in training with the cost by MOIT and IUH)

Provision of equipment: JPY 37,974 thousand in total

Local cost: JPY 56,233 thousand in total (estimated amount as of the end of March 2018)

<Vietnamese side>

Allocation of C/P: 99

Land and facilities: Necessary facilities for the project (office space, equipment, electricity, etc.)

Local cost: VND 6,341,130,424 in total (approximately JPY 32 million, estimated amount as of the end of 2017 borne by IUH)

2. Outline of the Evaluation Team

Evaluation Team	<Japanese side>	
	Mr. Naoki Kakioka (Leader)	Senior Representative, JICA Vietnam Office
	Mr. Junichi Mori (Sub Leader/Industrial Human Resource Development)	PhD Candidate, Cardiff School of Social Sciences, Cardiff University
	Dr. Yasushi Kato (Kosen Education)	Senior Consulting Manager, NIT
	Ms. Etsuko Ide (Kosen System)	Senior Program Officer, Global Strategic Planning and Promotion Office, NIT
	Mr. Takashi Matsushita (Cooperation Planning)	Senior Project Formulation Advisor, JICA Vietnam Office
	Ms. Pham Thi Viet Hoa (Cooperation Planning)	Program Officer, JICA Vietnam Office
	Ms. Sawa Hasegawa (Evaluation Analysis)	Principal Consultant, Project Management Department, OPMAC Corporation
	<Vietnamese side>	
	Ms. Nguyen Thi Lam Giang	Deputy Director General, Department of Organization and Personnel, MOIT
Mr. Pham Van Quan	Official, Department of Personnel and Organization, MOIT	
Period of Evaluation: 26 November 2017 to 9 December 2017		Type of Study: Terminal Evaluation

3. Summary of Terminal Evaluation Results

3-1 Progress of the Project

(1) Achievement of Outputs

Achievement level of Output 1 (Achieved)

- The Safety Working Group (WG), Research WG and Collaboration WG were formulated both at IUH Thanh Hoa Campus and IUH Main Campus and the development of manuals and guidelines on safety education and 5S, implementation of graduation research by the students of High Quality College Program (HQCP) course³, collaboration activities with enterprises such as visit to enterprises and plants, internship programs at enterprises, job fair, soft skills training for the HQCP course students were conducted.

Achievement level of Output 2 (Achieved)

- The materials for career guidance and career education for the HQCP course students such as the directory of enterprises, the evaluation sheet of students by enterprises at the internship programs, the annual plan for employment supports including the collaboration with enterprises were developed and utilized.
- The Student Consulting and Support Center was established at IUH Main Campus in December 2016, which has the three functions including collaboration with enterprises, provision of training of soft skills and counselling/consultation for students. The Center developed a dedicated web site in September 2017 for all students of IUH and enterprises to be used for their collaboration works, job matching, etc.

Achievement level of Output 3 (Achieved)

- MOIT held the seminars to introduce the HRD model to the education and training institutions under MOIT for 5 times and visited 25 institutions to promote the HRD model.
- IUH Main Campus as well as IUH Thanh Hoa Campus conducted seminars, events and study visit to introduce and report the practice of the HRD model to ministries and other education and training institutions for 9 times and for 18 times respectively.

(2) Achievement of Project Purpose (To be achieved by the end of the project)

- The HRD model⁴ which provides practical and creative engineers has been formulated at IUH and its applicability has been verified through the implementation of the three-year HQCP course.
- The HRD model have been actively practiced by the three target colleges such as Phuc Yen College of Industry (PCI), Hue Industrial College (HUEIC) and Cao Thang Technical College (CTTC) and its effectiveness has been verified.
- The enterprises which are related with the HQCP course students and graduates in terms of internship and employment appraised the capacity and potentiality of the students and graduates enhanced by the HRD model.

3-2 Summary of Evaluation Results

(1) Relevance (High)

- The project is consistent with the priority issue (industrial development with objective of becoming an

³ The three-year course of HQCP course was newly developed to embody and present the “HRD model which provides practical and creative engineers” in visible ways.

⁴ The concept of the new HRD model was clarified as follows, 1) Strengthening the organization for HRD of practical and creative engineers, 2) Cultivating students’ mind-set as practical and creative engineers, 3) Fostering students’ basic and specialized abilities as practical and creative engineers, 4) Developing students’ creativity as practical and creative engineers, 5) External collaboration for HRD of practical and creative engineers.

industrialized country) addressed in the current national development plans (SEDS and SEDP) as well as the sector development policy of MOIT.

- The project meets the development needs of education and training institutions in the industry sector in Vietnam where they have a high demand for improvement of their quality of education and training contents to meet the requirements in line with the HRD model.
- The project is consistent with the Japan's ODA policy for Vietnam which places the "promotion of economic growth and strengthening international competitiveness" as one of the priority areas.
- While the project design and approach are considered to be appropriate, there are some points to be changed for the indicators for Outputs, Project Purpose and Overall Goal in the present PDM.

(2) Effectiveness (High)

- The Project Purpose is expected to be achieved by the end of the project and the HRD model which provides practical and creative engineers has been formulated and verified.
- The favorable achievement of Project Purpose is caused by the achievement of the three Outputs.
- Although most students of the HQCP course could not finish the course due to the unachieved score of TOEIC, they are expected to sequentially pass the target score and graduate from the course over time and this does not mean that the effectiveness of the HRD model itself was detracted.

(3) Efficiency (Relatively high)

- Both the Japanese and Vietnamese sides have provided their inputs as planned and the outputs commensurate with the inputs have been produced.

(4) Impact (High)

- The current achievement level of Overall Goal is favorable in line with the HRD master project drafted by MOIT at the time of the Terminal Evaluation and the Goal is prospected to be achieved after the project completion.
- As the cases of unintended outcomes, it was confirmed that the inter-faculty and inter-campus communication in IUH were promoted and that there were several cases of self-motivated introduction of the HRD model by other education and training institutions such as the Food Industry College and the Bac Kan Vocational College.

(5) Sustainability (Relatively high)

- Policy and institutional aspects: The HRD model which provides practical and creative engineers formulated and verified by the project is likely to be continuously supported by the Vietnamese Government after the project completion.
- Organizational aspect: The organizational structure for the practice of HRD model was established at both IUH Main Campus and IUH Thanh Hoa Campus during the implementation of the project.
- Financial aspect: While it is difficult for MOIT to secure the budget for the large-scale investment on education for a while due to the recent severe financial situation of the Vietnamese Government, the financial situation of IUH is relatively good with the sufficient student enrollment every year to maintain the university management.
- Technical aspect: There is no serious concern for technical skills of lectures of IUH Main Campus as well as IUH Thanh Hoa Campus to continuously practice the HRD model on their own and to deliver the model to other faculties of IUH and other education and training institutions as necessary.

3-3 Factors that promoted/inhibited the realization of effects

(1) Promoting Factors

<Factors concerning planning>

None

<Factors concerning implementation process>

- 1) Leadership effectively exercised by MOIT throughout the project implementation
- 2) Commitment of key persons of IUH Main Campus and IUH Thanh Hoa Campus
- 3) Active incorporation of the HRD model at PCI, HUEIC and CTTC
- 4) Active and effective implementation of training in Japan

(2) Inhibiting Factors

<Factors concerning planning>

None

<Factors concerning implementation process>

- 1) Change of situation of IUH Thanh Hoa Campus as well as the HQCP course
- 2) Remarkable social tendency of students to prefer the university level to the college level in Vietnam
- 3) Delayed development of Nghi Son economic zone

3-4 Conclusion

Based on the findings of the Terminal Evaluation, the Evaluation Team concludes that the project favorably achieved the three Outputs at the time of the Terminal Evaluation and the Project Purpose is likely to be achieved by the end of the project. The evaluation results based on the five criteria were quite positive. Although the project experienced several external factors which negatively affected the realization of project effects as well as the difficulties in smoothly implementing project activities for a period of time, those involved with the project have tried their bests to gradually improve their performance.

3-5 Recommendations

(1) Revision of PDM

- (2) MOIT assesses the needs of creative and practical engineers in enterprises in order to assist IUH and other pilot education and training institutions in identifying strategic partners
- (3) MOIT and NIT develop the long-term cooperation strategy to promote and improve the HRD model
- (4) IUH improves the mechanism to encourage lecturers to participate in the activities to improve and expand the HRD model
- (5) IUH clarifies the long-term strategies on the operation of IUH Thanh Hoa Campus and utilizes the lecturers trained by the project
- (6) IUH, PCI, HUEIC and CTTC make more efforts to provide a better learning environment for students to promote active learning

3-6 Lessons Learned

- (1) The importance of roles played by MOIT
- (2) Positive effect of competition and experience sharing more than one education and training institution for the improvement of education and training programs
- (3) Necessity of information sharing with relevant ministries
- (4) Necessity of timely revising PDM for the appropriate monitoring and evaluation