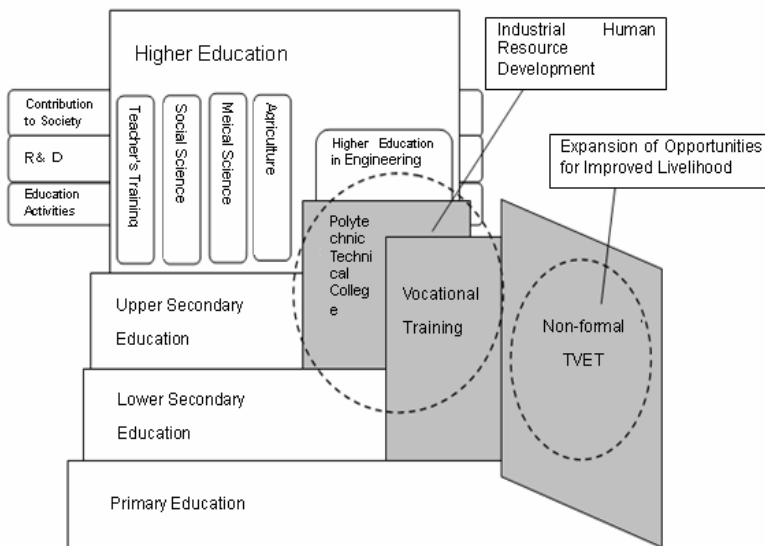


## ~JICA's Cooperation on Technical and Vocational Education and Training (TVET)~

### <JICA's View on TVET>

Needs for human resource that can respond and adapt to the rapid progress of technological innovation and changes of the working environment are growing due to the globalization and knowledge economies. In developing countries it is a challenge to develop individual's competency relevant to industrial needs and to secure labor force with high productivity and competitiveness. From education sector point of view, the expansion of basic education in recent years, especially primary education, lead a rise of discussion on post primary education in development agenda, which draw attention on TVET.



TVET Conceptual Framework

TVET can be defined as “an integral part of general education on practical skills, attitudes, and understanding to prepare for occupational fields and for effective participation in the world of work”.<sup>1</sup> TVET also has an aspect of lifelong learning. As shown in the figure, JICA categorizes wide range of education and training as TVET, such as technical education, vocational training, on-the-job training, or apprenticeship training, delivered in formal and non-formal way.

JICA's two main approaches for TVET are the followings;

1. Human resource development for industry
2. Expansion of opportunities for livelihood improvement.

#### Case Study 1: JICA's Support of Nakawa Vocational Training Institute (Nakawa VTI), Uganda (1997- present)

\*Photo: Instructors and students of Nakawa VTI



In Uganda, with the expansion of primary education, post-primary education including vocational training becomes an issue. The government of Uganda is under the process of introducing Uganda Vocational Qualifications Framework (UVQF) in view of standardizing the knowledge and technique gained from education and training. Training of TVET instructors who can deliver the training according to the UVQF is also in need.

JICA has been supporting the capacity development of Nakawa VTI for more than ten years. Our cooperation allows the institute to provide training corresponding to the needs of industry as shown that the employment rate of the graduates attains around 90% every year. Nakawa VTI has now become one of Centers of Excellence in vocational training in the country.

In Nakawa VTI, a new technical cooperation project supported by JICA has launched in 2007 with the aim of improving training skills of instructors taking advantage of this remarkable capacity of Nakawa VTI. The project focuses on; 1. Support to the Ministry of Education for the creation of new qualifications for TVET instructors and 2. Establishment of in-service training system for instructors in Nakawa VTI in accordance with the new qualifications. It is expected that the project can contribute to the development of a system to train highly qualified instructors, and eventually upgrading the quality of TVET in Uganda.

<sup>1</sup> Final Report, UNESCO International Experts Meeting, Learning for Work, Citizenship and Sustainability

In collaboration with JICA, Nakawa VTI expands its activities in the region as well, such as providing training programs for instructors from Eastern and Southern African countries and dispatching trainers to Southern Sudan. Nakawa VTI now contributes to human resource development in the country as well as in the region.

### <JICA's Approach 1: Human resource development for industry>

In human resource development for industry, it is critical the training meets the needs of the labor market so that the trainees can smoothly enter to the labor market making use of the skills gained through the training. Establishing an effective TVET framework based on a well-designed policy, and ensuring its smooth operation by the government are one of JICA's priority issues. For the management side, it is also necessary to establish a collaborative relationship between TVET institutions and industries to ensure the industrial needs would be reflected in the training contents to avoid that the training contents would be outdated. At the classroom/workshop level, there are several issues for strengthening the capacity of TVET institutions, including development of training materials, effective instruction of practical skills, pre-service and in-service training of instructors, and provision and maintenance of equipment.

#### [Main objectives of human resource development for industry approach]

1. Institutional building and establishment of organizational framework of TVET sector
2. Establishment of collaborative relationship with industry
3. Improvement of quality in training delivery

#### Case Study 2: Project on Improvement of Vocational Training, Ecuador (2002-2007)

\*Photo: JICA Expert and his counterpart working on lathe turning machine



Human resource development in manufacturing becomes a key issue in Ecuador. The Ecuadorian Professional Training Service (SECAP), a governmental organization which provides trainings for technicians nationwide, had some difficulties in sufficiently matching the demand of industry to the contents of training. In the project, training courses in the fields of engineering, metal work, and electric/electronics were developed within the main center of SECAP (CERFIN) located in the capital city, Quito.

The project first identified the needs of the enterprises in Quito and its surroundings, and improved a few week upgrading training courses for employees. Making use of this experience, the project then developed and implemented two year pre-service training courses. Through these courses developed by the project, more than 5000 engineers have been trained and they contributed to the expansion of quantity and the improvement of quality of Ecuadorian engineers.

Trainings for instructors in rural centers were also implemented by CERFIN, and the achievement of these trainings made it possible to establish a system of training for instructors in the whole SECAP.

#### Case Study 3: Establishment of Industrial Automation Technologies Departments in Anatolian Technical High School, Turkey (2001-2006)

\*Photo: Practical lessons in laboratory

Turkey is facing urgent needs of developing middle-level technicians because of the rapid growth of manufacturing industry in recent years. The project supported to establish the department of automatic controlling in Izmir campus and Konya campus of Anatolian Technical High School, which is a five year school for lower secondary graduates to become middle-level technicians.



Thus far, the technical education in Turkey was heavily concentrated on theoretical lessons. The project, in collaboration of local private sector, developed curricula well-balanced between theory and practice. The project also set up a course management cycle composed of; developing drafted textbooks, upgrading technical skills of instructors, delivering courses, and modifying the textbooks feeding-back the lessons drawn from the courses. Through the process, the project achieved to develop a high-quality textbook. In-plant training was also included in the curricula, and the enterprises which received the students highly appreciate the skills of trainees.

JICA and the Government of Turkey started the second stage project, supporting to open the department of automatic controlling in other Anatolian Technical High Schools from August, 2007.

### <JICA's Approach 2: Expansion of opportunities for livelihood improvement>

One of the characteristics of the labor market in developing countries is the existence of huge informal sector, comprised of numerous small and micro enterprises. The training for the workers in the informal sector is another approach in TVET in view of livelihood improvement and poverty reduction. In post-conflict countries as well, there are needs on basic skills training for unskilled people so that they can participate in the reconstruction work.

In these circumstances, it is crucial to plan and implement trainings taking into consideration of the social context and needs of communities. It is also important to provide comprehensive training services including entrepreneurship and sometimes literacy and numeracy to make sure that the achievement of the trainings would lead to a stable, self-reliant life. JICA is expanding its activities in this approach mainly in conflict-affected areas in collaboration with other donors and local NGOs.

#### [Main objectives of expansion of opportunities for livelihood improvement approach]

1. Delivery of basic skills and knowledge necessary for work through trainings
2. Strengthening the framework of training delivery

#### Case Study 4: Project for Improvement of Basic Skills and Vocational Training, Sudan (2006-2009)

\*Photo: Sewing training for youth living in older people headed households (targeting improvement of household income by providing earning opportunities of younger generation)



The Comprehensive Peace Agreement (CPA) was signed in January, 2005, and 20 year long civil war ended in Sudan. This project started in September, 2006 in Southern Sudan, which was granted autonomy under CPA. The project aims at; 1. Strengthening the capacity of vocational training of the Government of Southern Sudan (GOSS), 2. Strengthening the capacity of non formal training providers (such as NGOs) who implement basic trainings responding to the reconstruction needs, and 3. Establishing a vocational training information center for a better linkage of the labor market and various trainings.

The project takes dual approaches aiming to contribute to short term and urgent training needs, as well as mid to longer term development in Southern Sudan. The project also considers much importance on coordination and partnership among GOSS, non formal training providers, and other donors in TVET sector such as UNHCR, GTZ, and WFP. The project staff is engaged in the activities in the field, creating a relationship of trust with the people of newly born Southern Sudan.

Project URL: <http://project.jica.go.jp/sudan/0604444/01/index.html>

Information Center URL: <http://sc-tokyo.co.jp/sudan>

## <Project Map of JICA's Cooperation in TVET in Recent Years>

### <Africa>

Eritrea: Basic Training for Reintegration of Demobilized Soldiers

Ghana : *The Study for Development of a M/P to Strengthen Technical Education*

Technical and Vocational Education and Training Support Project

Kenya: Kenya Institute of Surveying and Mapping

Tanzania: *The Project for the Supply of Training Equipment to Mtwara Vocational Training Center*

Uganda: Nakawa Vocational Training Institute Project

- *The Project for Instructors Training for Vocational Education and Training in Uganda*
- The Project for Instructors Training for Vocational Education and Training in Uganda

Zambia: *Technical and Vocational Improvement Project in Zambia(A/C)*

Senegal: *High-Level Technician(BTS) Training Project at the Senegal-Japan Vocational Training Center*

- *The Senegal-Japan Vocational Training Center(A/C)*
- *Project d'extension du Centre de Formation Professionnelle et Technique*

Sudan : Project on Improvement of Basic Skills and Vocational Training

Rwanda : Project for Strengthening the Capacity of Tumba College of Technology(TCT)

### <Middle East/Europe>

Iran : *Project on the improvement of Audio-visual Aids and Instruction Methods in Vocational Training at The Instructor Training Center(ITC)*

- Project for Strengthening TVT Management Skills in TVTO
- *Project on Improvement of Vocational Training (Industrial Electron)*

Jordan : *Specialized Institute for Metal Industries Project (STIMI)*

- *The project for Improvement of Equipment for Vocational Training For the People with Disabilities*
- *Vocational Training Advisor for Palestinian Refugee Women*
- Project for Strengthening the Capacity of Training management of VTC

Oman : *Expert in Vocational Training and Trade Skill*

Saudi Arabia :

- Technical Education Development and Training Center
- *Saudi Japanese Automobile High Institute Project*

Syria : *Electricity and Mechatronics*

Turkey : *Establishment of Industrial Automation Technologies Departments in Anatolian Technical High School*

The Project on Strengthening the Program Of Expanding Industrial Automation Technologies Department

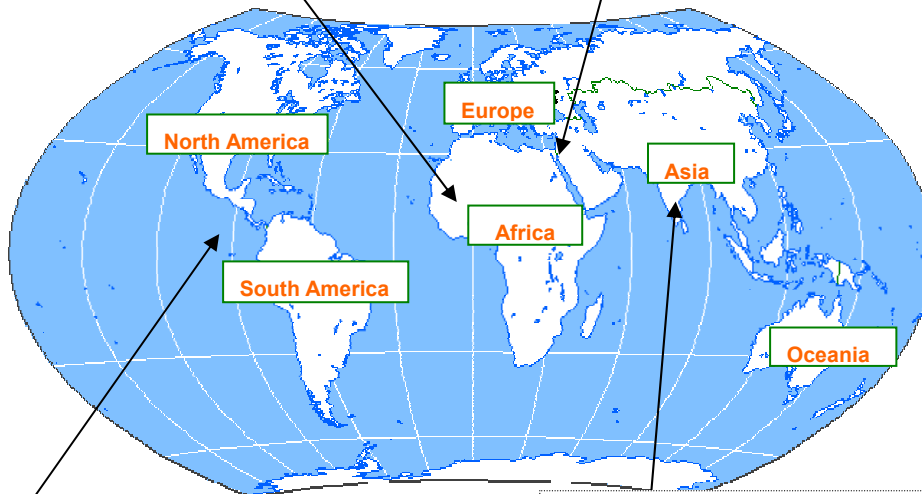
Egypt : *Job Opportunity Study and Development of Pilot Training Courses*

Tunisia : *Project for the Establishment of the Vocational Training Center for the Electric and Electronics Industry*

Afghanistan : Project on the Basic Vocational Training

(Basic Training Programs for Reintegration of Ex-combatants)

Grant Aid  
Cooperation  
Cooperation  
Project  
Development  
Study  
Dispatch of  
Technical  
Advisors  
Third-country  
Training  
Terminated  
Project



### <Latin America/Caribbean>

Guatemala :

- *El Proyecto de Mejoramiento de Equipos para los Centros Capacitacion*
- International Course for Improvement of Vocational Training PROTS

Ecuador : Project on Improvement of Vocational Training

- *El Proyecto de Mejoramiento de Entrenamiento Vocacional*

Paraguay : *Japan-Paraguay Skill Development Promotion Center*

- *The Project on Extension and Strengthening of the Training Program of Senior Technicians in Rural Areas of the Republic of Paraguay*

Peru : *The Japan-Peru Aftercare Technical Cooperation for SENAI south Zonal Vocational Training Center(A/C)*

Venezuela : *Information and Mechatronics Technology*

Brazil : *SENAI/SP Manufacturing automation center*

Mexico : *TVET Activation center*

- *Application Robot Engineering*

### <Asia>

Indonesia : Science and technology policy making function strengthening

- *The Project for Instructors Training for Electricity system Polytechnic*

Malaysia : *The occupation Ability Development administration*

- *Computer Networking Technology*
- *Japan-Malaysia Technical Institute(JMTI)*
- *Human resource Development Administration*

Vietnam : *The Project for Strengthening Training Capability for Technical Workers in the Hanoi Industrial College*

Sri Lanka : The Project for the Establishment of Japan Sri Lanka College of Technology to Strengthen Technical Education and Training

Samoa : *Project for Upgrading and Extension of Samoa Polytechnic*

- *Strengthening Technical and Vocational Education Development in Samoa*

China : *The Project for Improvement of the Equipment for the Secondary Vocational Education*

Bhutan : Strengthening the Capacity of Trainer's of Vocational Training Institutes

Solomon : Improvement of Education in National Technical College (industrial development department)

As of June 1<sup>st</sup>, 2007