Knowledge Co-Creation Program
(Group & Region Focus)

GENERAL INFORMATION ON

INDUSTRIAL TECHNOLOGY EDUCATION
課題別研修「産業技術教育」
JFY 2015
<Type: Solution Creation / 類型:課題解決促進型>
NO. J15-04232 / ID. 1584363
From Sep 2015 to May, 2016
Phase in Japan: From October 15, 2015 to November 28, 2015

This information pertains to one of the JICA Knowledge Co-Creation Program (Group & Region Focus) of the Japan International Cooperation Agency (JICA), which shall be implemented as part of the Official Development Assistance of the Government of Japan based on bilateral agreement between both Governments.

'JICA Knowledge Co-Creation (KCC) Program' as a New Start

In the Development Cooperation Charter which is released from the Japanese Cabinet on February 2015, it is clearly pointed out that *"In its development cooperation, Japan has maintained the spirit of jointly creating things that suit partner countries while respecting ownership, intentions and intrinsic characteristics of the country concerned based on a field-oriented approach through dialogue and collaboration. It has also maintained the approach of building reciprocal relationships with developing countries in which both sides learn from each other and grow and develop together."* We believe that this 'Knowledge Co-Creation Program' will serve as a center of mutual learning process.

I. Concept

Background

In Japan, industrial technology is indispensable for production of high quality goods. In comparison with developing countries, technology education at schools in Japan, where fundamental capabilities in manufacturing and production are fostered, is found to play an important role in developing human resources as well as the use of highly developed manufacturing and production equipment.

For the sake of promoting and developing industrial technology in developing countries, it is useful for the leaders of such countries to learn of the curriculum and methods of Japanese technology education and to utilize them in their own countries.

For what?

This program aims to contribute to the development of human resources in the field of industrial technology education in developing countries by providing information on Japanese activities and systems for the promotion and enhancement of industrial technology education.

For whom?

This program is offered to officials who are engaged in policy making for industrial technology education in the educational administration of central or local government.

How?

Participants shall have opportunities to get an overview of technology education in Japan, to study the curriculum and methods in six areas (metalworking, wood working, machining, electricity, information and cultivation) of Japanese technology education and to experience Japanese industrial technology through lectures, observations and discussions. Participants will also formulate an action plan describing what they will do after going back to home countries, putting the knowledge and ideas acquired and discussed in Japan among others into their on-going activities.

II. Description

1. **Title (J-No.): Industrial Technology Education (J15-04232)**

2. **Course Period in JAPAN**
   October 15 to November 28, 2015

3. **Target Regions or Countries**
   Ghana, Kenya, Zimbabwe, Sudan, Tanzania, Lesotho, Egypt, Brazil, Peru, Mexico, Cambodia, Solomon Islands, Myanmar, India, Sri Lanka,

4. **Eligible / Target Organization**
   This program is designed for offices/divisions/departments in charge of policy making for industrial technology education in the educational administration of central or local government.

5. **Course Capacity (Upper limit of Participants)**
   15 participants

6. **Language to be used in this program**: English

7. **Course Objective:**
   Participants formulate action plans with a focus on teacher training curriculum and textbooks for industrial technology education and the basic direction of their action plans is organized in their participating organizations.
   Note: This training program is **not** designed for acquisition of technical skills, and there is **no** hands-on technical training.

8. **Overall Goal**
   The participating organizations formulate action plans regarding teacher training curriculum and textbooks for industrial technology education, and propose the plan to authority concerned.

9. Expected Module Output and Contents:

This program consists of the following components. Details on each component are given below:

(1) Preliminary Phase in a participant's home country
(September 18 to October 14, 2015)
Participating organizations make required preparation for the Program in the respective country.

Expected Module Output	Activities
【Module1】 To clarify current domestic educational system, contents, methods, and the evaluation of these issues through discussion	Formulation and submission of Inception Report

(2) Core Phase in Japan
(October 15 to November 28, 2015)
Participants dispatched by the organizations attend the Program implemented in Japan.

Expected Module Output	Subjects/Agendas	Methodology
【Module2】 To explain current school education, industrial technology, industrial technology education, teacher training, and selection of teaching materials in Japan	(1) Education and Industrial Technology ➢ School Education ➢ Japanese Industry ➢ Science and Technology Society	Lecture
	(2) Industrial Technology Education ➢ Management of Teacher Training Institutions ➢ Technology Education ➢ Management of Industrial Education ➢ Teaching Materials ➢ Management of Industrial High School and Technical Junior College	Lecture Observation
	(3) Teacher Training and Teaching Materials ➢ Teacher Training System ➢ Selection of Teaching Materials ➢ Technology Education (Metalworking, Woodworking, Electricity, Machines, Cultivation, Information Technology)	Lecture

【Module3】 To explain the linkage between education and economic development through the Japanese case.	Industrial Technology Society : Visits to various companies ➢ Machinery Manufacturer ➢ Electrical Machine Manufacturer ➢ Electronics Manufacturer ➢ Automobile Manufacturer	Observation
【Module4】 To make an action plan to improve teacher training curriculum and textbooks for industrial technology education	(1) Action Plan guidance (2) Presentation of Action Plan	Lecture Discussion Presentation

(3)Finalization Phase in a participant's home country

Participating organizations produce final outputs by making use of results brought back by participants. This phase marks the end of the Program.

Expected Module Output	Activities
To implement an interim report (action plan)	Application and implementation of the action plan (interim report) back in the participant's country and submission of its final report by May 30, 2016 based on the follow-up questionnaire to be provided during the Program.

**Agendas are subject to be minor change.*

<Structure of the program>

Industrial Technology Education Training Program

Objective: The participating organizations formulate improvement plan regarding teacher training curriculum and textbooks for industrial technology education, and propose the plan to authority concerned.

【Contents】

1. Orientation
Participants will fully understand the objectives and outline of training program to grasp the program structure clearly.

2. Country Report Presentation
Participants will make a presentation about the current situations of industrial technology education in their respective countries. Discussions will be held among the participants and lecturers.

3. Outline of Education and Industrial Technology
Participants will learn the current situations of school education in Japan and acquire the general knowledge about industrial technology society.

4. Industrial Technology Education
- Industrial technology education
- Management of junior high school, technical high school, technical college, faculty of engineering of university
- Technology education in schools
- Educational materials

5. Teacher Education
- Teacher training
- Woodworking
- Metalworking
- Electricity
- Machines
- Cultivation
- Information Technology

6. Industrial Technology Society
- Machinery manufacturer
- Tool maker
- Electrical machine maker
- Electronics maker
- Automobile manufacturer

7. Other Technologies
- Wooden architecture
- Modern architecture
- Traditional craft
- Health management
- Occupational Safety and Health Education
- Textbook of Industrial Education
- Education for Sustainable Development※

(Refer to the next page)

【Methodology】

(Lecture)
Current situations and problems will be discussed. Participants will acquire new knowledge and technology.

(Observation)
Participants will learn the case examples through the site visits to schools and companies.

(Discussion)
Participants and lecturers will discuss about an action plan for the development of industrial technology education.

Action Plan Presentation
Participants will formulate an action plan with the guidance of lecturers. The purpose is to clarify how to implement some projects in your position using the knowledge acquired in Japan.

【Output】
1. To explain current school education, industrial technology, industrial technology education, teacher training, and selection of teaching materials in Japan
2. To explain the linkage between education and economic development through the Japanese case
3. To make an action plan to improve their teacher training curriculum and textbooks for industrial technology education
4. To implement the interim report (action plan) in participating organization with sharing the knowledge and experiences acquired during the training

【Program Objective】
Participants formulate action plans with a focus on teacher training curriculum and textbooks for industrial education, and the basic direction of their action plans is organized in their participating organization.

※What's Education for Sustainable Development (ESD).

(From P.6 "Structure of the program "7. Other Technologies)

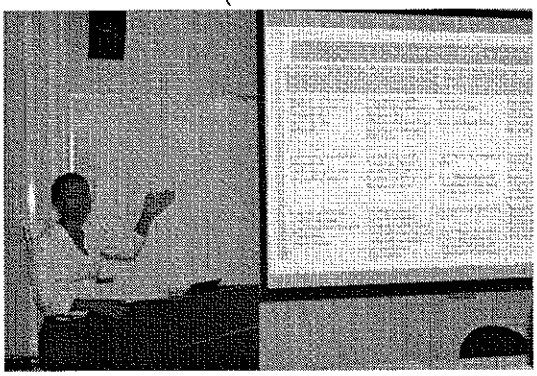
Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behavior and take action for sustainable development. Education for Sustainable Development consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way.

Education for Sustainable Development requires far-reaching changes in the way education is often practiced today.

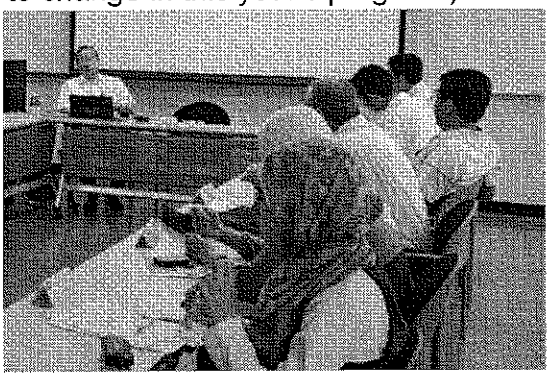
(http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-sustainable-development/)

Reference: Photos of the past program

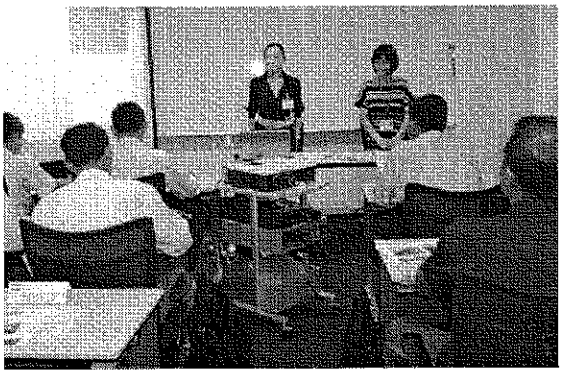
(NOTE: Activities are subject to change in this year's program.)



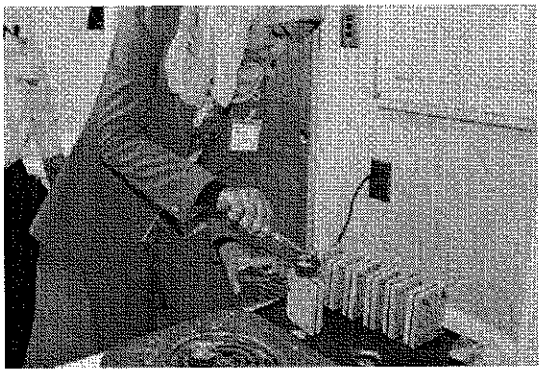
Country and Job report presentation (Module1)



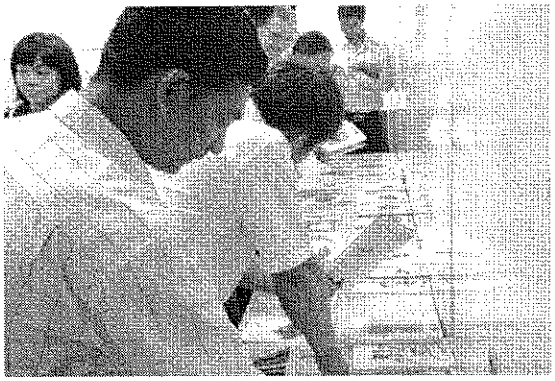
Basic of Technology Education (Module2)



Japanese Education System& History (Module2)



Workshop (Metalwork) (Module2)



Teaching Material & Facility (Module2)

Kindergarten & Elementary School (Module2)

Commemorative Museum of Industry & Technology (Module3)

Discussion among the participants

Reference: Training Schedule of 2014 * Activities are subject to change in this year's program.

Overall Schedule of JICA Training "Industrial Technology Education" Fiscal 2014

**This is a tentative schedule, subject to change. L:Lecture / D:Discussion / P:Prsentation / V:Visit / W: Workshop

Date		AM/PM	Module	Programs	Training Site
19-Oct	Sun			Arrival at Chubu International Airport	
20-Oct	Mon	AM	-	Briefing / Program Orientation	JICA Chubu
		PM	-	JICA Orientation	
			-	Course Orientation	
21-Oct	Tue	AM	-	Chubu Univ. Briefing / Opening Ceremony / Welcome Lunch	Kasugai Campus, Chubu University (CU)
		PM	-	V: Museum of Ethnology Art, Do-un-tei	
			-	L: Japan's Effort for Earthquake Disaster Reconstruction	
22-Oct	Wed	AM	2-2	L: Technology Education in Japan (1)	Nagoya Campus, CU
		PM	3	L: Japanese Society and Industry	
23-Oct	Thu	AM	2-1	L: Universities in Japan (Special Speech by the President of Chubu University)	Kasugai Campus, CU
		PM	4 / 1	D: Action Plan Making & Guidance (1) / Preparation for Country Report Presentation	
24-Oct	Fri	AM	2-1	L: Japanese Education System & History	Nagoya Campus, CU
		PM	3	L: Japanese Culture (Flower Arrangement)	
			1	D: Preparation for Country Report Presentation	
25-Oct	Sat	AM	2-1	L: ESD (Education for Sustainable Development) Activities in Japan	JICA Chubu
		PM	2-1	L: Special Lecture on ESD (Organized by Chubu University)	Kasugai Campus, CU
26-Oct	Sun				
27-Oct	Mon	AM/PM	1	P: Country Report Presentations	Kasugai Campus, CU
28-Oct	Tue	AM	2-1	V: Haruhigaoka Junior High School	See left cell
		PM	2-1	V: Haruhigaoka Senior High School	
29-Oct	Wed	AM	2-2	V: Suzuka National College of Technology	See left cell
		PM	2-1	V: Toyota Commemorative Museum of Industry & Technology	
30-Oct	Thu	AM	4	D: Action Plan Making & Guidance (2)	JICA Chubu
		PM	2-2	L: Industrial Education Policy in Japan	
31-Oct	Fri	AM	2-2	L: Technology Ethics Education in Japan	Nagoya Campus, CU
		PM	2-2	V: Kasugai Industrial High School	See left cells
1-Nov	Sat				
2-Nov	Sun		3	Move to Hiroshima by Shinkansen / V: World Heritage Sites (Miyajima, Hiroshima Peace Memorial Museum)	See left cell
3-Nov	Mon	AM	2-2	L: Actual Situation of Technology Education	JICA Chugoku
		PM	2-2	L: Technology Education in Japan (2) / Move to Nara by Local Trains & Shinkansen	
4-Nov	Tue	AM	2-1	L: Wooden Architecture Technology in Japan	Todaiji Temple
		PM	-	Return to Nagoya by Bus	
5-Nov	Wed	AM	4	D: Action Plan Making & Guidance (3)	JICA Chubu
		PM	-	Rest	
6-Nov	Thu	AM	2-1	L: Summit Symposium of International Exchange Partner Universities	Kasugai Campus, CU
		PM	2-3	L: Industrial Technology in Higher Education (College of Life and Health Science)	
7-Nov	Fri	AM	2-3	L: Industrial Technology in Higher Education (Dept. of Robotic Science & Technology, College of Engineering (CoE))	Kasugai Campus, CU
		PM	2-3	L: Industrial Technology in Higher Education (College of Bioscience and Biotechnology)	
8-Nov	Sat				
9-Nov	Sun				
10-Nov	Mon	AM	2-3	V: Aichi Steel Corporation	See left cell
		PM	2-3	L: Industrial Technology in Higher Education (Department of Electrical Engineering, CoE)	Kasugai Campus, CU
11-Nov	Tue	AM	2-3	L: Industrial Technology in Higher Education (Dept. of Electronics & Information Engineering, CoE)	Kasugai Campus, CU
		PM	2-1	D: Participation in Events of UNESCO World Conference on ESD	Nagoya Congress Center
12-Nov	Wed	AM	2-1	D: Participation in Event of UNESCO World Conference on ESD	Nagoya Congress Center
		PM	2-3	L: Industrial Technology in Higher Education (Department of Computer Science, CoE)	Kasugai Campus, CU
13-Nov	Thu	AM	2-3	L: Industrial Technology in Higher Education (Department of Applied Chemistry, CoE)	Kasugai Campus, CU
		PM	2-3	L: Industrial Technology in Higher Education (Department of Mechanical Engineering, CoE)	
14-Nov	Fri	AM	2-3	L: Industrial Technology in Higher Education (Department of Architecture, CoE)	Kasugai Campus, CU
		PM	2-3	L: Industrial Technology in Higher Education (Department of Civil Engineering, CoE)	
15-Nov	Sat				
16-Nov	Sun				
17-Nov	Mon	AM	3	V: Toyota Motor Corporation	See left cell
		PM	3	V: DENSO E&TS Training Center Corp.	
18-Nov	Tue	AM	3	V: Aishin Com-Center / Brother Communication Space	See left cell
		PM	4	D: Action Plan Making & Guidance (4)	JICA Chubu
19-Nov	Wed	AM	-	Move to Tokyo by Shinkansen	
		PM	2-3	V: Japan Textbook Research Center	See left cell
20-Nov	Thu	AM	2-3	V: Jikkyo Shuppan Co. Ltd. (Textbook Publisher)	See left cell
		PM	2-3	V: Uchida Yoko Co., Ltd. (Educational Materials & Equipment)	
21-Nov	Fri	AM	2-1	V: TEPIA Advanced Technology Exhibition Hall	See left cell
		PM	2-1	V: Tokyo Sky Tree	
22-Nov	Sat			Observation of Japanese Culture in Tokyo / Return to Nagoya by Shinkansen	
23-Nov	Sun				
24-Nov	Mon	AM	3	L: Labor and Mental Health	JICA Chubu
		PM	2-1	L: School Education and Occupational Safety and Health	
25-Nov	Tue	AM	3	V: Company Visit	To be announced
		PM	3	V: Company Visit	
26-Nov	Wed	AM	2-2	L: Industrial Technology Education in Japan (3)	JICA Chubu
			4	D: Action Plan Making & Guidance (5)	
		PM	-	L: Current Situation and Outlook of Japan's International Cooperation	
27-Nov	Thu	AM/PM	4	P: Action Plan Presentations	Kasugai Campus, CU
28-Nov	Fri	AM	2-2	L: Next Industrial Technology Education	
		PM	-	L: Language and Mind of Japanese People	
			-	Evaluation, Closing Ceremony, Farewell Party	
29-Nov	Sat			Leaving Japan from Chubu International Airport	

III. Conditions and Procedures for Application

1. Expectations from the Participating Organizations:

(1) This program is designed primarily for organizations that intend to address specific issues or problems identified in their operation. Participating organizations are expected to use the project for those specific purposes.

(2) This program is enriched with contents and facilitation schemes specially developed in collaboration with relevant prominent organizations in Japan. These special features enable the project to meet specific requirements of applying organizations and effectively facilitate them toward solutions for the issues and problems.

2. Nominee Qualifications:

Applying Organizations are expected to select nominees who meet the following qualifications.

(1) Essential Qualifications

1) Current Duties: personnel who engaged in the industrial technology education field

2) Experience in the relevant field: have more than 5 years' experience in the field of practical experience in field of Making Things

3) Educational Background: be a graduate of university or equivalent

4) Language: have a competent command of spoken and written English which is equal to TOEFL iBT 100(CBT 250) or more (This workshop includes active participation in discussions, action plan (interim report) development, thus requires high competence of English ability.

5) Health: must be in good health, both physically and mentally, to participate in the Program in Japan.

6) Must not be serving any form of military service.

(2) Recommendable Qualifications

1) Age: be between the ages of twenty-five (25) and forty-five (45) years

3. Required Documents for Application

(1) Application Form: The Application Form is available at **the JICA office (or the Embassy of Japan).**

*Pregnancy

Pregnant participants are strictly requested to attach the following documents in order to minimize the risk for their health.

1. letter of the participant's consent to bear economic and physical risks
2. letter of consent from the participant's supervisor
3. doctor's letter with permission of her training participation.

Please ask JICA Staff for the details.

(2)Reports: Please submit together with the Application Form to be used for screening applicants. Please refer to **Ⅵ.** Annex1-5: Requirement for applicants.

1. Basic Information on Nominee
2. Country Report
3. Job Report
4. Inception Report

(3)Photocopy of passport: to be submitted with the application form, if you possess your passport which you will carry when entering Japan for this program.
*Photocopy should include the followings:
Name, Date of birth, Nationality, Sex, Passport number and Expire date.

(4)Nominee's English Score Sheet: to be submitted with the application form. If you have any official documentation of English ability. (e.g., TOEFL, TOEIC, IELTS)

4. Procedures for Application and Selection:

(1) Submission of the Application Documents:

Closing date for applications: **Please inquire to the JICA office (or the Embassy of Japan).**
(After receiving applications, the JICA office (or the Embassy of Japan) will send them to **the JICA Center in JAPAN** by **August 25, 2015**)

(2) Selection:

After receiving the documents through proper channels from your government, the JICA office (or the embassy of Japan) will conduct screenings, and then forward the documents to the JICA Center in Japan. Selection will be made by the JICA Center in consultation with concerned organizations in Japan. *The applying organization with the best intention to utilize the opportunity of this program will be highly valued in the selection.*

(3) Notice of Acceptance

Notification of results will be made by the JICA office (or the Embassy of Japan) **not later than September 18, 2015.**

5. Conditions for Attendance:

(1) to strictly adhere to the program schedule.
(2) not to change the program topics.
(3) not to extend the period of stay in Japan.
(4) not to be accompanied by family members during the program.
(5) to return to home countries at the end of the program in accordance with the travel schedule designated by JICA.
(6) to refrain from engaging in any political activities, or any form of employment for profit or gain.

(7) to observe Japanese laws and ordinances. If there is any violation of said laws and ordinances, participants may be required to return part or all of the training expenditure depending on the severity of said violation.

(8) to observe the rules and regulations of the accommodation and not to change the accommodation designated by JICA.

IV. Administrative Arrangements

1. **Organizer:**
   (1) Name: JICA Chubu
   (2) Contact: Mr. ITO Hideki (mail to: cbictp1@jica.go.jp)
   ※Please insert "training course number & the title" in the subject when emailing.
   For instance, "J15-04232 & INDUSTRIAL TECHNOLOGY EDUCATION"

2. **Implementing Partner:**
   (1) Name: CHUBU UNIVERSITY
   (2) Contact: Dr. MIYAKAWA Hidetoshi, (Professor of CHUBU UNIVERSITY in charge of the training), Faculty of Contemporary Education
   (3) URL: http://www.chubu.ac.jp/english/
   Remark: In line with the motto "Your actions and words should always go together to be a reliable person," Chubu University aims at contributing to society's progress by developing reliable individuals who are highly cultivated and have a cosmopolitan outlook, specialized capabilities and the ability to act and who are independent, yet care about the public good. Chubu University also aims at contributing to society through outstanding research achievements and generous sharing of the University's intellectual and material resources with society.

3. **Travel to Japan:**
   (1) Air Ticket: The cost of a round-trip ticket between an international airport designated by JICA and Japan will be borne by JICA.
   (2) Travel Insurance: Coverage is from time of arrival up to departure in Japan. Thus traveling time outside Japan will not be covered.

4. **Accommodation in Japan:**
   JICA will arrange the following accommodations for the participants in Japan:

   JICA Chubu International Center (JICA Chubu)
   Address: 4-60-7 Hiraikecho, Nakamura-ku, Nagoya 453-0872, Japan
   TEL: +81-52-533-0220 FAX: +81-52-564-3751
   (where "81" is the country code for Japan, and "52" is the local area code)

   If there is no vacancy at JICA Chubu (CBIC), JICA will arrange alternative accommodations for the participants.

5. **Expenses:**
   The following expenses will be provided for the participants by JICA:
   (1) Allowances for accommodation, meals, living expenses, outfit, and shipping
   (2) Expenses for study tours (basically in the form of train tickets.)
   (3) Free medical care for participants who become ill after arriving in Japan (costs related to pre-existing illness, pregnancy, or dental treatment are not included)
   (4) Expenses for program implementation, including materials
   For more details, please see "III. ALLOWANCES" of the brochure for participants

titled "KENSHU-IN GUIDE BOOK," which will be given before departure for Japan.

6. Pre-departure Orientation:

A pre-departure orientation will be held at the respective country's JICA office (or Japanese Embassy), to provide participants with details on travel to Japan, conditions of the workshop, and other matters.

V. Other Information

1. Key Schedule in the Training Program

(1)Arriving Japan, Central Japan International Airport near Nagoya city, on October 15, 2015

(2)Orientation and others in JICA Chubu from October 16, 2015

(3)Technical training starts on October 19, 2015

(4)Closing ceremony on November 27, 2015

(5)Leaving Japan from Central Japan International Airport near Nagoya city on November 28, 2015

2. Personal-use computer

It is suggested for the participants to complete their reports; i.e. Feedback reports, Action plan, etc. by computer applications. Information on schedule and some of the training materials will be delivered through Internet during the training program. JICA CHUBU, where participants stay, has the room with computers for these purposes. For better and effective work, it would be advisable to bring your own lap-top computer. Minimum requirements of applications would be MS Word and Excel together with an anti-virus soft built-in. Also mobile computers with complement of JICA will be available for the participants who do not have their own.

VI. ANNEX:

ANNEX1

Requirement for applicants
Please describe the following 4 reports. These reports should be typewritten. 1.Basic Information on Nominee, 2. Country Report, 3. Job Report, and 4. Inception Report, according to the following items.
Attention
1. The reports are used for reference to select applicants. Application not accompanied by a completed questionnaire cannot be considered. 2. Country Report and Job Report will be a basic material to understand each country and each applicant. 3. Inception Report will be important material to make Action Plan as one of the result of the training course. That is the first step for making Action Plan. Please describe about the future vision for Industrial Technology Education based on a discussion with your superior and colleague. 4. The reports are used for comparative studies during the training course. 5. The reports presentation Purpose: Lecturers and people concerned with this training will be present at the meeting to grasp the current situation of each participant. Attendants: The JICA participants, lecturers, JICA program officer, and other people concerned with this training course. Time: The time allocation for each presentation is about 15 minutes followed by a 5-minute Q & A period. Presentation: Each participant is requested to give a presentation based on the presentation materials. Reference materials: The participants are also expected to bring the PowerPoint data files, pamphlet of their organizations, photos, slides which illustrate the report, to be used during the report presentation (15 minutes). PowerPoint on the personal computer is available.

ANNEX2

Basic Information on Nominee

- Basic Information on nominee should be shown by a run of item.

1	Name of the nominee	
2	Country	
3	Your Organization and Position	

ANNEX 3

Country Report Format

*Country Report should be shown by a run of item.

1	**Name of country**	
2	**Education system**	*Organization chart showing relationship of organizations related to education should be attached.*
3	**Contents of Industrial Technology Education**	Primary education: Secondary education: Advanced education:
4	**Technology Education contests or exhibitions**	
5	**Teacher training institution**	
6	**Major problems in Technology Education in your country**	
7	**Major activities in Occupational Safety and Health Education**	
8	**Major activities in Education for Sustainable Development**	
9	**Organization chart**	*Please attach organization chart showing relationship of organizations.*

ANNEX 4

Job Report Format

*Job Report should be shown by a run of the item.

1	**Name of applicant**	
2	**Your organization and position**	
3	**Major activities of your organization and section**	
4	**Your duties in your section**	
5	**Difficulties in performing your duties**	
6	**Future plans**	**On-going projects**: **Medium-term programs**: **Long-term programs**:
7	**Expectation to this training course**	
8	**Organization chart**	*Please attach organization chart of your own organization.*

ANNEX 5

Inception Report Format

* As a representative of education official in your organization or country, please create a vision related to future Industrial Technology Education.

1	**Name of applicant**	
2	**Vision in next 10 years**	***"How are you going to create the future of Industrial Technology Education in your country?"***
3	**Details of present problems on Industrial Technology Education**	
4	**Countermeasures towards the problem (past and present)**	
5	**Practical effort by your organization or section**	
6	**Expected impact after the problem solved or improved**	
7	**Expected obstructions to problem solving**	

REFERENCES: Small & Medium Enterprises (SMEs) in Japan

(1) Definition of SMEs

(a) Definition of Small & Medium Enterprises

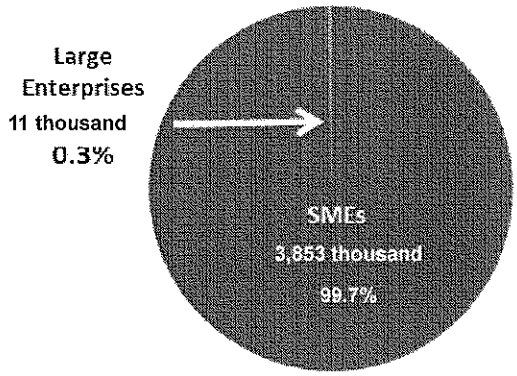
Type of Industry	Capital Size (million yen)	No. of employees
Manufacturing & others	300 or less	300 or less
Wholesale	100 or less	100 or less
Retail	50 or less	50 or less
Services		100 or less

(b) Definition of Micro Enterprises

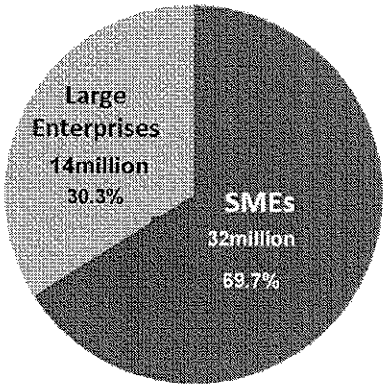
Type of Industry	No. of employees
Manufacturing & others	Not more than 20 employees
Commerce, service	Not more than 5 employees

(2) Share of SMEs in the Japanese Economy

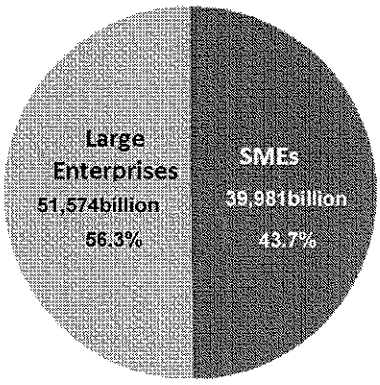
Number of Enterprises



Number of Employees



Value of Shipment in Manufacturing



Source: Small and Medium Enterprise Agency, METI, 2012
More detailed for http://www.sme.ne.jp

For Your Reference

JICA and Capacity Development

The key concept underpinning JICA operations since its establishment in 1974 has been the conviction that "capacity development" is central to the socioeconomic development of any country, regardless of the specific operational scheme one may be undertaking, i.e. expert assignments, development projects, development study projects, training programs, JOCV programs, etc.

Within this wide range of programs, Training Programs have long occupied an important place in JICA operations. Conducted in Japan, they provide partner countries with opportunities to acquire practical knowledge accumulated in Japanese society. Participants dispatched by partner countries might find useful knowledge and re-create their own knowledge for enhancement of their own capacity or that of the organization and society to which they belong.

About 460 pre-organized programs cover a wide range of professional fields, ranging from education, health, infrastructure, energy, trade and finance, to agriculture, rural development, gender mainstreaming, and environmental protection. A variety of programs and are being customized to address the specific needs of different target organizations, such as policy-making organizations, service provision organizations, as well as research and academic institutions. Some programs are organized to target a certain group of countries with similar developmental challenges.

Japanese Development Experience

Japan was the first non-Western country to successfully modernize its society and industrialize its economy. At the core of this process, which started more than 140 years ago, was the *"adopt and adapt"* concept by which a wide range of appropriate skills and knowledge have been imported from developed countries; these skills and knowledge have been adapted and/or improved using local skills, knowledge and initiatives. They finally became internalized in Japanese society to suit its local needs and conditions.

From engineering technology to production management methods, most of the know-how that has enabled Japan to become what it is today has emanated from this "*adoption and adaptation*" process, which, of course, has been accompanied by countless failures and errors behind the success stories. We presume that such experiences, both successful and unsuccessful, will be useful to our partners who are trying to address the challenges currently faced by developing countries.

However, it is rather challenging to share with our partners this whole body of Japan's developmental experience. This difficulty has to do, in part, with the challenge of explaining a body of "tacit knowledge," a type of knowledge that cannot fully be expressed in words or numbers. Adding to this difficulty are the social and cultural systems of Japan that vastly differ from those of other Western industrialized countries, and hence still remain unfamiliar to many partner countries. Simply stated, coming to Japan might be one way of overcoming such a cultural gap.

JICA, therefore, would like to invite as many leaders of partner countries as possible to come and visit us, to mingle with the Japanese people, and witness the advantages as well as the disadvantages of Japanese systems, so that integration of their findings might help them reach their developmental objectives.

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