



TRAINING AND DIALOGUE PROGRAMS

**GENERAL INFORMATION ON
PRACTICAL PRODUCTION MANAGEMENT (THEORY AND PRACTICE
ON PRODUCTIVITY IMPROVEMENT) FOR SOUTH AMERICA**

地域別研修「南米地域生産性向上実践技術」

JFY 2010

<Type: Solution Creation / 類型: 課題解決促進型>

NO. J1004179/ ID. 1084221

From September 2010 to May 2011

Phases in Japan: From Oct. 12, 2010 to Feb. 11, 2011

This information pertains to one of the Training and Dialogue Programs 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.

I. Concept

Background

In developing nations, due to the inadequate application and introduction of effective production techniques, factories are not currently able to produce at their full capacity. Additionally, the competitive environment for both cost and quality of products is becoming undeniably harsher as the world of economic activities becomes increasingly borderless. In order to improve such a situation and strengthen the industrial competitiveness of developing nations, it is essential to make the plan aiming at substantial improvement with cooperation with all of persons concerned in factories. Therefore, managers and supervisors who have the ability to solve problems related to the improvement of productivity and production capacity in factories are required.

For what?

This program aims to teach the skills and basic knowledge regarding quality control and productivity improvement, to lead to solutions for the various problems in industries in developing nations.

For whom?

This program is offered to mainly industry policy supervisors, factory managers and engineers in the field of production management of manufacturing or assembly industries.

How?

Participants shall have opportunities in Japan to be lectured and conduct practices about productivity management, and visit Japanese industries to observe the techniques used in Japan. Through the opportunities, participants will make plans for solving the problems in industries in their countries.

II. Description

1. Title (J-No.): PRACTICAL PRODUCTION MANAGEMENT (THEORY AND PRACTICE ON PRODUCTIVITY IMPROVEMENT) FOR SOUTH AMERICA (J1004179)

2. Period of program:

Duration of whole program: September 2010 to May 2011

Preliminary Phase: September 2010 to October 2010

(in a participant's home country)

Core Phase in Japan: October 12, 2010 to February 11, 2011

Finalization Phase: February 2011 to May 2011

(in a participant's home country)

3. Target Regions or Countries:

Ecuador, Argentina, Chile, Columbia, Paraguay, and Peru

4. Eligible / Target Organization :

Organizations in the field of manufacturing or assembly industry

5. Total Number of Participants :

8 Participants

6. Language to be used in this program :

Spanish (Some training subjects are in English)

7 . Program Objective:

The program objective is that factory managers and engineers acquire the practical abilities to improve the productivity and the quality on the production site.

To achieve this program objective, the participants are expected to achieve the following;

(1) Understanding the outline of productivity and the reason why productivity is important.

(2) Acquiring the method to find out Muda=Waste on the production site.

(3) Acquiring the method and the techniques of solving quality problems on the production site.

(4) Making a feasible action plan based on the program.

8 . Overall Goal:

Overall goal is to improve the productivity and the quality on the production site.

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 2010 to October 2010) <i>Participating organizations make required preparation for the Program in the respective country.</i>	
Expected Module Output	Activities
Job report & IAS	Formulation and submission of Job Report and the Issue Analysis Sheet (IAS). See the sample attached

(2) Core Phase in Japan (Oct. 12, 2010 to Feb. 11, 2011) <i>Participants dispatched by the organizations attend the Program implemented in Japan.</i>		
Modules	Subjects/Agendas	Methodology
(1) Understanding the outline of productivity and the reason why productivity is important.	<ul style="list-style-type: none"> • Productivity and management engineering productivity factors basis of IE single arrangement Poka Yoke just in time (JIT) 	Lecture Practice
(2) Acquiring the method to find out Muda=Waste on the production site.	<ul style="list-style-type: none"> • Improvement practice 1 • Improvement practice 2 • Two days improvement 	Field study
(3) Acquiring the method to find out the optimal operating conditions.	<ul style="list-style-type: none"> • Outline of QC, basis of SQC, QC seven tools, sampling inspection, control chart, small group activity, new QC seven tools, employee education of Japanese company • Outline of TAGUCHI Method • Example and Exercise of TAGUCHI Method 	Lecture Practice Plant visit Study tour
(4) Making a feasible action plan based on the program.	<ul style="list-style-type: none"> • explanation of curriculum • presentation of job report • answering questionnaire • lecturing how to make action plan • presentation of action plan 	Lecture Presentation

Curriculum of the program

Subject	Contents	Hours				
		Lecture	Practice	Field Study	Others	Total
1. Productivity and Management Engineering	Definition of productivity and productivity improvement <ul style="list-style-type: none"> • Development of productivity movement • Current productivity in Japan • Management modernization and productivity improvement 	24				24
2. Typical Organization of Japanese Companies	Characteristics of Japanese companies <ul style="list-style-type: none"> • Personnel system in Japan • Lifetime employment system • Labour management relations in Japan • Responsibility and authority of staff 	5		1		6
3. Factors Affecting Productivity	Factors which should be considered in order to improve productivity <ul style="list-style-type: none"> • 5S • Finding 'wastes' in production • 6 big losses (equipment effectiveness) • Quality 	18				18
4. Basic Improvement Method (IE)	'Wastes' and finding out the 'wastes' at the work site Elimination of 'wastes' as the essence of productivity improvement <ul style="list-style-type: none"> • Basic concept of IE • Process study, Time study and Motion study • Case study 	16	8			24
5. Work Improvement	Actual practice of improvement activities at the plant <ul style="list-style-type: none"> • Process and time study on the work site • Analysing the results and understanding problems 	3 3	24 24	3 3		30 30
6 Single Arrangement and POKA-YOKE	Shortening the time needed for exchange of dies and preventing defect by POKA-YOKE <ul style="list-style-type: none"> • Improvement of die exchange • POKA-YOKE, the way of preventing simple mistakes 	3		3		6
7 Two-day Improvement Activity	Participating in actual activities in Nissan Two-day improvement activity team <ul style="list-style-type: none"> • Time and motion study on the job site • Improvement plan • Presentation 	6	18			24

Subject	Contents	Hours				
		Lecture	Practice	Field Study	Others	Total
8. Quality Control and Statistical Methods	<p>The factors which enabled Japanese industries to achieve the world's highest level of the product quality</p> <ul style="list-style-type: none"> • Outline of quality control • Arrangement of data and its application • Cause and effect diagram • Stratification • Pareto diagram • Histogram • Scatter diagram • Control-chart • Analysis of discrete values • Probability and distribution • Inspection and sampling inspection 	36	27			63
9. Taguchi Method	<p>To understand what is Taguchi Method and how to use</p> <ul style="list-style-type: none"> • Outline of Taguchi Method • Examples and Exercise 	9	9			18
10. QC Circle Activity (Small Group)	<ul style="list-style-type: none"> • Practice on carrying out the improvement activities through QC small circle and Implementation of QC circle • Utilization of QC 7 tools 	6	21			27
11. Employee Education	<p>In-house education system of a medium size company</p> <ul style="list-style-type: none"> • How to educate foreman, the key persons for promoting productivity 	6	3			9
12. QC Seven New Tools	<p>QC 7 New tools, recently applied and utilized mainly for the purpose of putting complicated language data in order</p> <ul style="list-style-type: none"> • Matrix diagram • Relation diagram • Systematic diagram 	6	12			18
13. Productivity Improvement Activity	<ul style="list-style-type: none"> • Total Quality Control • Just-In-Time production system • Other production management activities 	21	3			24
14. Recycling and Reuse of Resources	<p>Kitakyushu City has many test and pilot plants developing re-circulation of resources.</p> <ul style="list-style-type: none"> • Lecture and field study of these technologies. 			6		6
15. Study Trip	Kansai-Tokyo area	3		19	17	39
16. Plant Visit				27		27

Subject	Contents	Hours				
		Lecture	Practice	Field Study	Others	Total
17.Orientation & Evaluation Presentation by the Participants	Action Plan, Questionnaire Course Orientation, Mid-term Evaluation, Final Evaluation Presentation of the Job Report and Action Plan	9			27	36
18.Others	Closing Ceremony etc.				3	3
Total		174	149	62	47	432

(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, 2011.

Japanese Language Course

Intensive Japanese language course of 25 hours will be conducted prior to technical training.

Formulation of Action Plan

Participants are required to formulate an Action Plan (AP) based on the knowledge and skills acquired during the course. The AP should be practical and applicable to one's own professional activity/career from the viewpoint of production management.

III. Conditions and Procedures for Application

1. Expectations for 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.
- (3) As this program is designed to facilitate organizations to come up with concrete solutions for their issues, participating organizations are expected to make due preparation before dispatching their participants to Japan by carrying out the activities of the Preliminary Phase described in section II-9.
- (4) Participating organizations are also expected to make the best use of the results achieved by their participants in Japan by carrying out the activities of the Finalization Phase described in section II-9.

2. Nominee Qualifications:

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

(1) Essential Qualifications

- 1) Current Duties and experience in the relevant field: be currently engaged in production management of manufacturing and assembling industries, and have combined 5 years of work experience in the fields concerned.
- 2) Education: be university graduates from the faculty of engineering, or the equivalent
- 3) Language: have a sufficient command of spoken and written English. Although the training will be conducted with an interpreter for Spanish-Japanese, the half of the text books will be in English and other materials such as video tapes are English version. Please describe your English level in the Application Form.
- 4) Health: must be in good health, both physically and mentally, to participate in the Program in Japan (As the training schedule includes much field work (trips) that would be too demanding for pregnant women, pregnancy is regarded as a disqualifying condition for participation in this training course.)
- 5) Must not be serving any form of military service.

(2) Recommendable Qualifications

be younger than 40 years of age

3. Required Documents for Application

(1) Application Form:

The Application Form is attached to this General Information.

(2) Job Report (Annex 1):

- to be submitted with the Application Form
- Job Report is a report to understand an outline of an organization that an applicant belongs to as well his/her work experience in a relevant field(s).

(3) IAS: Issue Analysis Sheet (Annex 2):

- to be submitted with the Application Form.
- The purpose of IAS is to logically organize relationships between facing problems of the organization an applicant belongs to and contents of fields taken in a training course.
- The sheet is to be utilized as a logical process control sheet to draw improvement plans for problems filled out the sheet in the phases from prior to participant's arrival in Japan through the end of training.

Annexes 1-2 are necessary documents for screening of an applicant, and an applicant is required to submit his/her Job Report and IAS with the Application Form. Each participant will be required to present his/her Job Report and IAS in approximately 10 minutes in an early stage of training. An applicant should submit his/her IAS with approval of his/her superior, and IAS without approval is not accepted.

4. Procedure for Application and Selection :

(1) Submitting the Application Documents:

Closing date for application to the JICA Center in JAPAN: **August 31, 2010**

Note: Please confirm the closing date set by the respective country's JICA office or Embassy of Japan in your country to meet the final date in Japan.

(2) Selection:

After receiving the document(s) through due administrative procedures in the respective government, the respective country's JICA office (or Japanese Embassy) shall conduct screenings, and send the documents to the JICA Center in charge in Japan, which organizes this project. Selection shall be made by the JICA Center in consultation with the organizations concerned in Japan based on submitted documents according to qualifications. *The organization with*

intention to utilize the opportunity of this program will be highly valued in the selection.

(3) Notice of Acceptance

Notification of results shall be made by the respective country's JICA office (or Embassy of Japan) to the respective Government by **not later than September 13, 2010**

5. Document(s) to be submitted by accepted participants:

None.

Soft (data) and hard copy of Job Report and IAS should be brought to Japan along with participants.

6. Conditions for Attendance:

- (1) to observe the schedule of the program,
- (2) not to change the program subjects or extend the period of stay in Japan,
- (3) not to bring any members of their family,
- (4) to return to their home countries at the end of the program in Japan according to the travel schedule designated by JICA,
- (5) to refrain from engaging in political activities, or any form of employment for profit or gain,
- (6) to observe the rules and regulations of their place of accommodation and not to change the accommodation designated by JICA, and
- (7) to participate the whole program including a preparatory phase prior to the program in Japan. Applying organizations, after receiving notice of acceptance for their nominees, are expected to carry out the actions described in section II-9 and section III-4.

IV. Administrative Arrangements

1. Organizer:

- (1) **Name:** JICA Kyushu
- (2) **Contact:** Mr. OTA Masaaki, Program Officer (Ota.Masaaki@jica.go.jp)
Ms. Tomoko-Ikemoto(Ikemoto-Tomoko@jica.go.jp)

2. Implementing Partner:

- (1) **Name:** Kitakyushu International Techno-cooperative Association
- (2) **Contact:** Mr. MIYAMOTO Tadashi (course leader)

(3) **URL:** http://www.kita.or.jp/english/e_index.html

(4) **Remark:** KITA has carried out JICA training projects since 1980, and over the period from 1980 to 2007 has accepted a total of 3,706 participants. The courses cover environmental policies, promotion of a recycling-oriented society, production techniques and facility maintenance as well as projects related to the improvement of work training management ability, and in 2008 it offers a total of 34 courses.

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:** Term of Insurance: From arrival to departure in Japan. *the traveling time outside Japan shall not be covered.

4. Accommodation in Japan:

JICA will arrange the following accommodations for the participants in Japan:

JICA Kyushu International Center (JICA Kyushu)

Address: 2-2-1 Hirano, Yahatahigashi-ku, Kitakyushu-shi, Fukuoka,
805-8505, Japan

TEL: 81-93-671-6311 FAX: 81-93-663-1350

(where "81" is the country code for Japan, and "93" is the local area code)

If there is no vacancy at JICA KYUSHU, JICA will arrange alternative accommodations for the participants. Please refer to facility guide of KIC at its URL, <http://www.jica.go.jp/english/contact/pdf/kyushu01.pdf>

5. Expenses:

The following expenses will be provided for the participants by JICA:

(1) Allowances for accommodation, 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 p. 9-16 of the brochure for participants titled "KENSU-IN GUIDE BOOK," which will be given to the selected participants before (or at the time of) the pre-departure orientation.

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, living conditions in Japan, and other matters.

V. Other Information

1. Pre-departure orientation is held at JICA overseas offices (or the Embassy of Japan) to provide the selected candidates with details on travel to Japan, conditions of training, and other matters. Participants will see a video, "TRAINING IN JAPAN", and will receive a textbook and cassette tape, "SIMPLE CONVERSATION IN JAPANESE". A brochure, "GUIDE TO TRAINING IN JAPAN" will be handed to each selected candidate before (or at the time of) the orientation.

2. Reports & Presentation

(1) Job Report & IAS

As written in the previous page, each applicant is required to submit his/her own Job Report and IAS. Participants will have a presentation of his/her Job Report and IAS up to 10 minutes at the earlier stage of the training in order to share knowledge and background with other participants as well as instructors. Visual materials such as Power Point and pictures may be helpful for your presentation if you bring them with you.

(2) Action Plan Report

Participants are required to make an Action Plan at the end of the training to express idea and plan, which you carry out after you return, reflecting the knowledge and method you acquire from the training. Each person is required to give a presentation in 10 minutes. The report would be sent to each JICA office in participant's country.

3. Certification

Participants who have successfully completed the course will be awarded a certificate by JICA.

4. International Exchange Program with Local Communities

JICA encourages international exchange between JICA participants and local communities. Participants will have a chance to visit elementary schools or junior high schools. Therefore, participants are recommended to bring their national costumes or crafts and materials such as cassette tapes and photographs that will make the Exchange Program more fruitful.

5. Remarks

This training is designed for the purpose of acquiring the knowledge and the techniques of Japan, NOT for a specific participant's country. Participants are kindly requested to understand the differences and not to insist on the techniques of their countries.

VI. ANNEX 1:

PRACTICAL PRODUCTION MANAGEMENT (THEORY AND PRACTICE ON PRODUCTIVITY IMPROVEMENT) FOR SOUTH AMERICA (JFY 2010)

Job Report

Name of applicant:

Country:

Organization and present post:

E-mail / FAX:

Remarks 1: The Report should be typewritten in English (12-point font, A4 size paper), and total pages of the report must be limited to 3 pages (not including organization chart).

Remarks 2: Each participant is required to have presentation in 10 minutes based on this Country Report at the early stage of the training for the purpose of making the training more effective and fruitful by comprehending the situations and problems of the participants each other.

Remarks 3: At Job Report presentation, your explanations will preferably be desired with visual aids such as Power Point, slide films and other materials.

1. Organization and main tasks

(1) Main tasks of the organization

(Please include annual turnover or product amount, name of products and number of employees.)

(2) Organization chart:

Please draw a chart of your organization including the department (section) names with the number of staffs in it and mark where you are positioned. (The chart should be attached and not be counted in this page limit.)

(3) Brief description of your assignments.

2. Expectations for the training course

(1) Most interesting subjects or topics in the training course

(2) How do you expect to apply skills and knowledge for your problem solving according to listed items in curriculum (in section II., page 2) after you return to your home country?

(3) Other matters you are expecting for this course

3. Work Experience

(1) Please answer if you have ever learned the following subjects. If you have, write when it was and whether you have applied it to your job.

Subjects	Yes	No	If yes		Application		
			At the Univ.	After graduation	Past use	Present use	No
Production Planning & Control							
Industrial Engineering (methods engineering, work measurement)							
Statistical Quality Control							
Personal Computer							
Plant Maintenance							

Supplementary explanations, if any, should be briefly given below.

(2) Please describe any official technical qualifications you have.

VI. ANNEX 2:

Issue Analysis Sheet (IAS) Guidelines

1. What is IAS?

- (1) IAS is a tool to logically organize relationships between issues or problems which a nominee's organization is facing and the subjects to be covered in the training program in Japan.
- (2) IAS will help a nominee to clarify his/her issues or problems to be covered in each expected module output and to formulate solutions to them.
- (3) The sheet is to be utilized as a logical process control sheet to draw on improvement plans for issues by filling out the sheet in phases from prior to a nominee's arrival in Japan and through the end of training.
- (4) Also, it is used for the course leader and lectures to understand the issues that each participant is facing to, and provide him/her technical advice, useful reference and solutions through the training program in Japan

2. How to fill out IAS?

- (1) Please refer to Item 2 "Purpose of Application" of Part A in the Application Form, and describe the issues or problems which your department is facing in the columns "A" and "B" in each "Expected Module Output" of IAS. You will formulate practical solutions to those issues/problems through the training program in Japan.
- (2) Please leave the columns C and D blank. These columns are filled out during the training program in Japan.
- (3) If your organization has many issues/problems to be solved, you can submit two or more sheets.

4. Remarks

- (1) IAS without approval of a nominee's superior is not accepted.
- (2) IAS is a key material for screening of nominees. Japan side puts emphasis on its content and proceeds screening.
- (3) Accepted participants will make a presentation on the IAS and the job report at the beginning of the training program in Japan
- (3) Accepted participants are requested to bring this IAS in electronic file when coming to Japan.

<p>(3) Acquiring the method and the techniques of solving quality problems on the production site.</p>	<p>Outline of QC, basis of SQC, QC seven tools, sampling inspection, control chart, small group activity, new QC seven tools, employee education of Japanese company Outline of TAGUCHI Method Example and Exercise of TAGUCHI Method</p>		<p>1-1 There is no improvement activity, based on the field site. 1-2 The approach of improvement is not understood by workers. 1-3. Rational data analysis is not utilized.</p>		
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Name of Superior Officer _____

Designation/Position of superior officer _____

Signature _____

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 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.



CORRESPONDENCE

For enquiries and further information, please contact the JICA office or the Embassy of Japan. Further, address correspondence to:

JICA Kyushu International Center (JICA KYUSHU)

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