

The Association for Overseas Technical Cooperation and Sustainable Partnerships (AOTS)

[Annual Evaluation Report] (Overview)

FY2022 Technical Cooperation Utilization Type / Emerging Market Development Programs

(Training and Expert Dispatch Programs)

[Chapter 1 Program outline] (Outline of the objectives and evaluation of the programs)

Objectives	In order to support the reinforcement of the local footholds required for the overseas business expansion of Japanese companies, improving the level of local industrial technology, and contributing to the development of the economy by training the local human resources of private companies in developing countries through cooperation between the government and private sectors.	
Target Countries/Regions	Developing countries [Target countries/regions for ODA specified by the Development Assistance Committee (DAC) of OECD]	
Implementation Period	April 1, 2022 – March 31, 2023	
Target Field (Requirements)	(1) Technology transfer that contributes to industrial development in developing countries and regions (2) Including the problem-solving perspective according to the current condition of developing countries and regions	
Type of Business	Training Program	(i) Technical Training Engineers in developing countries, etc. are accepted by parent companies in Japan and provided with training. (ii) Management Training Managers in developing countries, etc. are invited to Japan and provided with training. (iii) Overseas Training Training is provided by instructors dispatched from Japan, etc. or instructors in the country where training is provided. (iv) Industry-Academia Collaborative Programs: University lectures and internships for students from developing countries
	Expert Dispatch Program	○ Technical guidance is provided for overseas local companies (companies receiving guidance) through financial contribution or by experts dispatched from Japanese companies (dispatching companies) in a business partner relationship.
Method of Program Evaluation	Prior Evaluation	○ Evaluation of adequacy of each case by the Screening Committee (adequacy of achievement goals, requirements for eligibility of participants, expertise of experts, etc.)
	Interim Evaluation/ Evaluation Immediately After Completion	○ Self-evaluation of goal achievement level by participants, dispatched experts, and using companies (Japanese and local companies)
	Ex-Post Evaluation	○ Questionnaires for companies that used the program and trainees in the fiscal year
	Aging Evaluation	○ Questionnaires for returnee participants and companies that used the program before, and overseas on-site survey

[Chapter 2 Prior Evaluation] (Outlines of review implementation and cases)

1. Outline of review implementation (): the number of participants for training

- Screening Committee - Hold 20 reviews (conducted in document review or online)
- Number of review approvals - Technical Training 28 cases (57), Management Training 9 cases (209), Invitation type Overseas Training 30 cases (411), Planned-by-AOTS type Overseas Training 36 cases (3,380), Industry-Academia Collaborative Programs 15 cases (539), Expert Dispatch 8 cases (63)

2. Outline of cases

(1) Training Program

[1] Technical Training: 28 accepting companies, 57 participants (22 small and medium-sized companies, 39 participants) No cancellations after review approval.

[2] Management Training: number of courses and participants

- Held 9 times in total for Vietnam, Thailand, and India and all developing countries; participants: 183 persons

[3] Overseas Training (Outline of the course and the number of participants)

- Invitation type [Normal type/Third-country type]: Held 29 courses in total in Tanzania, Senegal and other locations in Africa, and Philippines, Myanmar, India and other locations in Southeast and South Asia, and Mexico (hybrid style of online and partial in-person guidance); participants: 374 persons.

- Planned-by-AOTS type: Held 36 courses in total in Cameroon, Morocco, South Africa and other locations in Africa, India(online), and in Thailand (in-person guidance); participants: 2,824 persons.

[4] Industry-Academia Collaborative Programs (programs, internships, and the number of participants)

- Programs held: 15 cases in total, in Burkina Faso, Cambodia, Vietnam, Thailand, Ghana, Mali, Mongolia (online, in-person guidance or hybrid style of online and partial in-person guidance); participants: 562 persons.
- Internships: 12 cases held in total, in Burkina Faso, Cambodia, Ghana, Vietnam, Mali, Mongolia and Japan among the above locations; participants: 161 persons. (Including internships planned to be organized with the FY2023 and subsequent budgets)

(2) Expert Dispatch Program

[1] Number of companies using the expert dispatch program (number of dispatching companies), number of dispatched experts, and number of participants receiving guidance

* In FY2022, the number of companies using the expert dispatch program is six cases, the number of dispatched experts is seven, and the number of participants receiving guidance is 51 (SMEs only).

*The number of participants receiving guidance was submitted by the dispatching companies at the time of application, and the number in the plan of the human resource training goal approved by the review committee was aggravated.

[Chapter 3 Interim Evaluation/ Evaluation Immediately after Completion]

(Evaluation by the companies and participants during the training and immediately after the training)

1. Training Programs

(1) Technical Training (Consisting of general training conducted by AOTS and on-site training conducted by the accepting companies)

- Technical training consists of general training conducted by AOTS and on-site training conducted by the accepting companies. Interim evaluation and evaluation immediately after completion were conducted for general training for four courses: six-week and nine-day courses starting on January 11, 2023, a six-week course starting on February 2, 2023, and a nine-day course starting on February 1, 2023.

[1] General Orientation Course (Objectives: “adaptability for on-site training”, “spreading ability of technical transfer”, and “increasing familiarity with Japan”)

(i) Evaluation of goal achievement level in the general training < Self-evaluation of the participants about 17 items with 7 grades >

- Evaluation goals for “Leader’s role, teamwork, and communication,” “Preparedness for practical training” and “Your role to share what you have learned after returning to your home country” at the start of the training were already high at 4.4-4.5. It shows that when the participants attended the training, they were well-aware of their objectives and the roles they would play after returning to their home countries as leaders or leader candidates at their local companies.

(ii) Evaluation of goal achievement level in Japanese proficiency < Evaluation by AOTS>

- Previously, trainees were encouraged to learn kana-characters and required to take hiragana and katakana exams in order to learn the Japanese language before arrival. It is now possible to manage their learning progress by using an e-learning system in the pre-arrival online Japanese language training course, which started with the January 2023 course. In addition, the pre-arrival online Japanese language training course helps trainees to learn about the characteristics of the Japanese language as a whole and to know more about AOTS Japanese language training. The course specifically aims to prepare trainees for AOTS Japanese language training.

- The achievement score for kana-characters of 93 FY2022 trainees who only took a kana-exam before arrival in Japan was 3.92 and it went up to 4.26. This shows that the pre-arrival online Japanese language training course using the e-learning system to monitor their learning progress was working.

[2] On-site Training

- Interim evaluation and evaluation immediately after completion were conducted for five companies (11 participants) that completed on-site training by the end of March 2023.

(i) Evaluation of effect of general training in on-site training

- Accepting companies: Three items, namely “Understanding of Japanese companies,” “Communication skills” and “General satisfaction level” failed to achieve evaluation goals, but they generally averaged the evaluation goal of 4.0. Evidently, the companies were satisfied with the training.

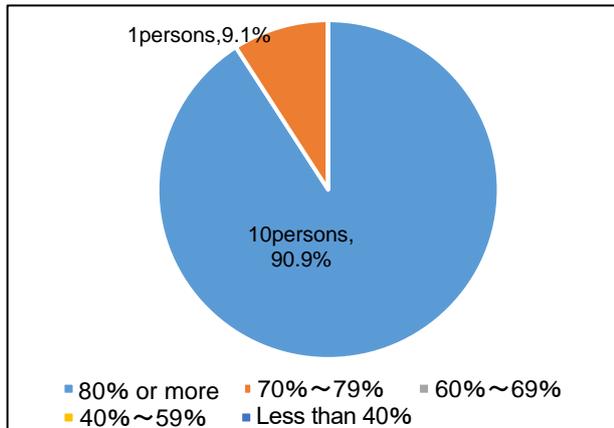
- Participants: The evaluation goal of 4.0 or more was achieved in all items. It was clear that the participants had applied their knowledge about the general training to the on-site training.

(ii) Evaluation of goal achievement level in on-site training

- All of the accepting companies said they achieved 80% or more or 70%-79% or more. Initial goals were generally achieved. 90% of the participants said they achieved 80% or more or 70%-79% or more. The participants generally learned technical skills to a satisfactory level during the on-site training.

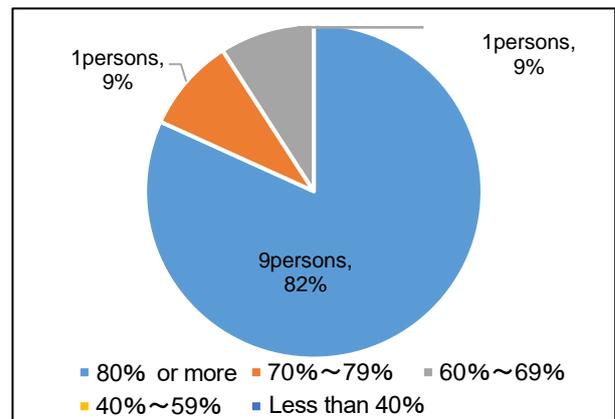
[Evaluation of goal achievement level]

(evaluator: accepting companies) n=11



[Evaluation of goal achievement level]

(evaluator: participants) n=11

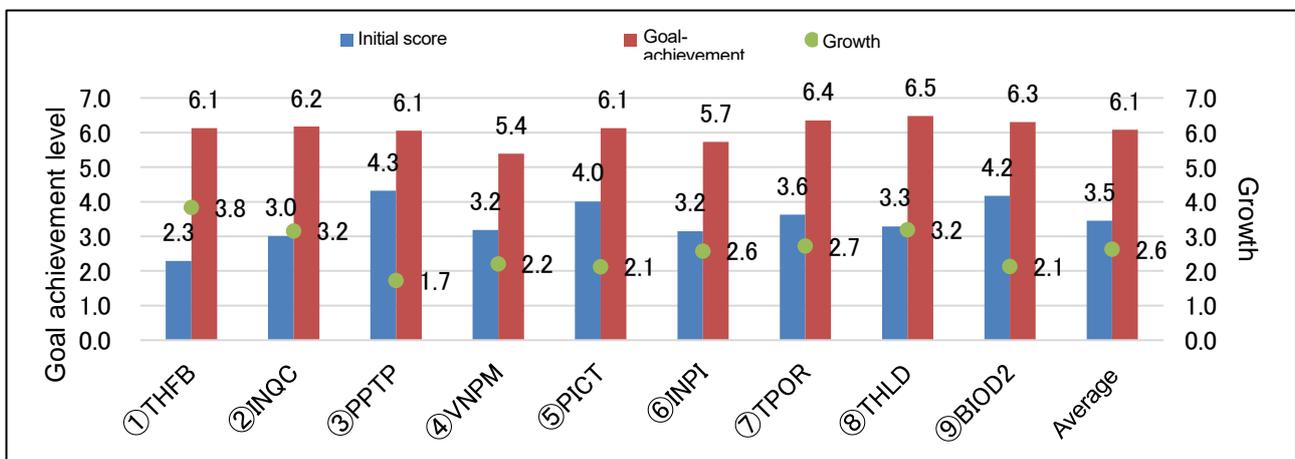


(2) Management Training

- Same as Technical Training, Participants' Evaluation of Goal Achievement Level for Management Training has been conducted.

(i) Evaluation of goal achievement level: All course reached nearly 6.0 (5.4-6.5 with the full score of 7.0) on the final day of each course. This shows the goal set for each course was generally achieved.

[Management Training Distribution of goal achievement levels by training course and averages, Evaluation by participants]



(ii) Review by participants

- Example (various countries): Program on ICT Utilization to overcome DX-related Strategic Management Challenges [PICT]

The essence of DX is to embrace changes, use technologies, and create new innovative business approaches. I have learned that by doing so, businesses can survive competition, adapt to changing market conditions and offer greater value to customers. A study tour is a major investment, both in terms of time and money, but it was worth it. It gave us an opportunity to learn practical skills.

(3) Overseas Training (Invitation type/ Planned-by-AOTS type)

[1] Invitation type (comments from participants [excerpted])

- Example 1(Madagascar): I was very satisfied with the training. (Technical training about electric equipment for producing a solid fuel from rice husk is rare but useful.) It was a good training program.
- Example 2(Senegal: online): I was able to learn practical aspects during the session. We were allowed to ask questions at any time we needed to. It was a very flexible and very good course.
- Example 3(India): The factory was very well organized. I could tell they maintained high quality. It was an interesting training program.

<p>Example 1 Practical exercise: How to operate a machine</p>	<p>Example 2 Lecture</p>

[2] Planned-by-AOTS type (Evaluation of participants):

- Example 1 (Egypt: online): Fundamentals of Threaded Metal Connections: Alternatives to Welded Joints? Maintenance free Japanese Solution?
- They gave us a lot of information about screw testing and how important it is, and about screw manufacturers. I was able to know more about what's happening in the global screw industry. The training was very useful.
- Example 2 (Africa: online): Essential Skills for Data Analysis and Machine Learning
- This training course was very interesting. It was about a theme that is now very important around the world. The training will bring great benefits to my career. The online live lecture materials and e-learning text were very well written and easy to understand. It was also easy to go over the e-learning exercises.
- We had to do E-learning for two hours every day. It was hard.

<p>Example 1 Q&A session</p>	<p>Example 2 Live lecture</p>

(4) Industry-Academia collaborative programs (evaluation by participants)

- Evaluation immediately after completion of eight programs and internships completed by the end of March 2023 under the FY2022 budget showed that the number of students answering that they were "very highly" or "highly" interested in employment with a Japanese or Japan-affiliated company rose from 143 persons before to 172 persons after the program. (The number of students responding to the survey was 208 persons.) The number of students answering that they were "very highly" or "highly" interested in employment with the applicant company rose from 16 persons before to 26 persons after the internship. (The number of students responding to the survey was 28 persons.) These results show that the program contributed to increasing students' desire to work for Japanese or Japan-affiliated companies.

2. Expert Dispatch Program

(1) Evaluation by experts (evaluation by three experts who had returned to Japan by March 2023)

- Goal of technical improvement: Two experts answered an achievement of about 50%. One expert answered an achievement of about 20%.
- Goal of human resource training: One expert answered an achievement of about 50%. Two experts answered an achievement of about 30%.

The participants acquired basic technical skills and learned how to work (e.g. understand PDCA, visualization). It is however believed that the evaluation was due to the fact that (i) considering the training duration, the goals were set too high and (ii) the participants had to be taught basics such as time management, rule compliance and team building.

(2) Management effects for companies receiving guidance and dispatching companies, changes in employees of companies receiving guidance

- The companies receiving guidance evaluated "quality improvement" and "technical improvement." The experts' guidance contributed to technical improvement and management effects.
- The dispatching companies evaluated "stronger relationships with companies receiving guidance," "quality improvement" and "technical development capabilities improvement." They saw the effects of enhanced networking as well as direct effects such as quality improvement and technical transfer.

[Chapter 4 Ex-Post Evaluation]

- In the Industry-Academia collaborative programs, a survey was conducted for companies that had completed programs and internships about a year before to find out the hiring of program participants, the difference between new employees who were program participants and who were not, and the effects of hiring program participants.

1. Industry-Academia collaborative programs (Hiring of program participants)

- In the Industry-Academia collaborative programs, a survey was conducted for four applicant companies about six programs and internships completed by the end of December 2021. All companies responded to the survey. Regarding the hiring of program participants, it was confirmed that 55 of the program participants attending from the programs conducted by four companies had already been hired by Japanese or Japan-affiliated companies. Three companies that had hired program participants by themselves or within their group companies were asked about the difference between new employees who were program participants and who were not. One of the companies said they did not know the difference because they did not have anyone to compare with. The other two companies said, "Program participants more quickly acquired the work knowledge associated with the programs." and "Program participants had a better understanding about businesses and career path choices through the programs and internships, and they were more motivated to work." The survey showed that participation in the programs contributed to the participants' acquisition of work knowledge and their motivation to work harder.

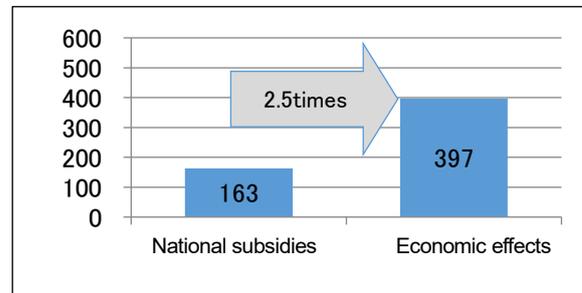
[Chapter 5 Evaluation of Economic Effects]

(1) Receiving Training Program

*When we investigated the cost that companies needed to bear by conducting similar training without using the program and the economic effects obtained through this training, regarding the accepting companies, the cost-effectiveness per participant was 1.82 times for technical training, 2.44 times for management training and the total amount of cost-effectiveness was 397 million yen. The total amount of cost-effectiveness was 2.5 times the governmental subsidy, indicating sufficient cost-effectiveness. As mentioned earlier, the accepting companies said that they had economic effects of 1.82 to 2.44 times more than they would have if they

had not used the training. The training was regarded as effective in terms of quality.

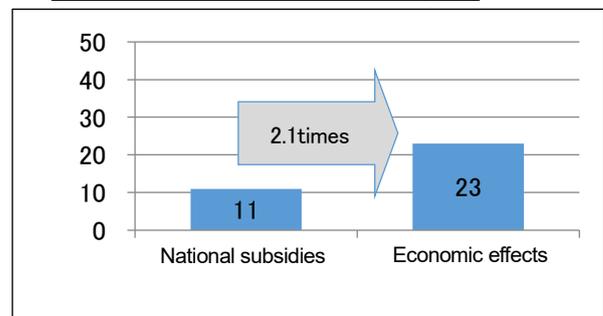
[Cost-effectiveness (unit: million yen)]



(2) Expert Dispatch Program

*According to a similar investigation to above, cost-effectiveness per dispatched expert per month was 2.92 times on average, and the total amount of economic effect was 23 million yen. The total effect was 2.1 times the amount of the government subsidy, indicating sufficient cost-effectiveness.

[Cost-effectiveness (unit: million yen)]



(Cost-effectiveness = estimated economic effect/national subsidy)

[Chapter 6 Aging Evaluation]

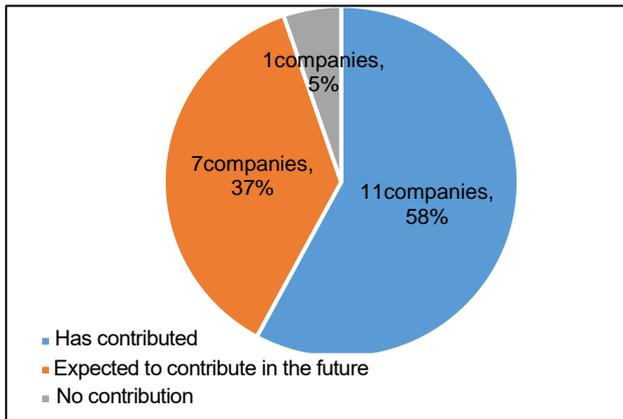
(The results of the survey of the companies at a set period [3 years] after use of the program)

1. Training Program (Technical Training) / Expert Dispatch Program (Results of the questionnaire and on-site survey)

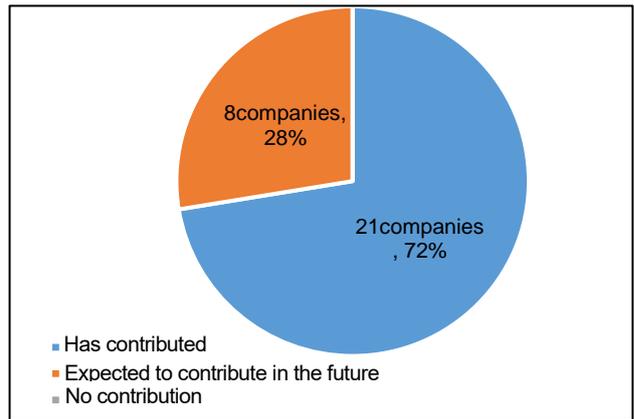
(1) Results of training and guidance, and contribution to the local and Japanese companies (Changes between FY2020 and FY2018)

- Among trainees who had returned to their home countries, 80% (after one year) and 81.8% (after three years) answered, "the skills and knowledge learned have had a ripple effect on my company and related sections," indicating that the results of training in Japan are being realized gradually.
- After one year of using the program, 58% of local companies cited contributions to "an improvement in employee morale" as the top contribution among others. After three years of using the program, 72% said contributions to "an increase in sales," "an improvement in employee morale" and "an increase in business partners and market share" were highly rated.
- Japanese companies answered that there was a contribution to "strengthening cooperation with the local companies" and "human resource training and improving international awareness". These results can be said to show that globalization of Japanese companies also is being promoted through use of this program. Some answers given also concerned management directly, such as "an increase in sales" and "an increase in domestic customers."

[Contribution to the local companies after 1 years n=19]



[Contribution to the local companies after 3 years n=29]



(2) Overseas on-site survey

- The survey was conducted by outside researchers for four local subsidiaries in Thailand that had used the program in FY2018 and FY2020 confirms that (i) It is imperative and increasingly important to develop local talent when the number of Japanese expatriate staff is reducing. (ii) It is more important to strengthen local subsidiaries' production functions in order to deal with potential supply chain disruptions. (iii) Former AOTS training participants are now management members of local subsidiaries and autonomously carry out business activities, and they are also heavily involved in the establishment and management of group companies in ASEAN. The framework for developing a role model in Japan and transferring it to local subsidiaries in Asia for them to subsequently follow it has reached a turning point. (iv) There are no Japanese role models, and local subsidiaries are more often expected to take action autonomously.
- To make the program even more meaningful, strengthen and restructure Japanese companies' supply chains and deal with global issues such as climate change as global situations have been increasingly fluid, the outside researchers recommended (i) prioritizing projects that are beneficial to economic security and risk diversification, (ii) prioritizing projects that are beneficial to strengthening local subsidiaries' functions (support provided by Japanese expatriate staff to local subsidiaries) and (iii) increasing 13-week Japanese language training courses (J13W).

2. Training Program (Management Training) (Questionnaire and overseas on-site survey on changes in the situation after 3 years)

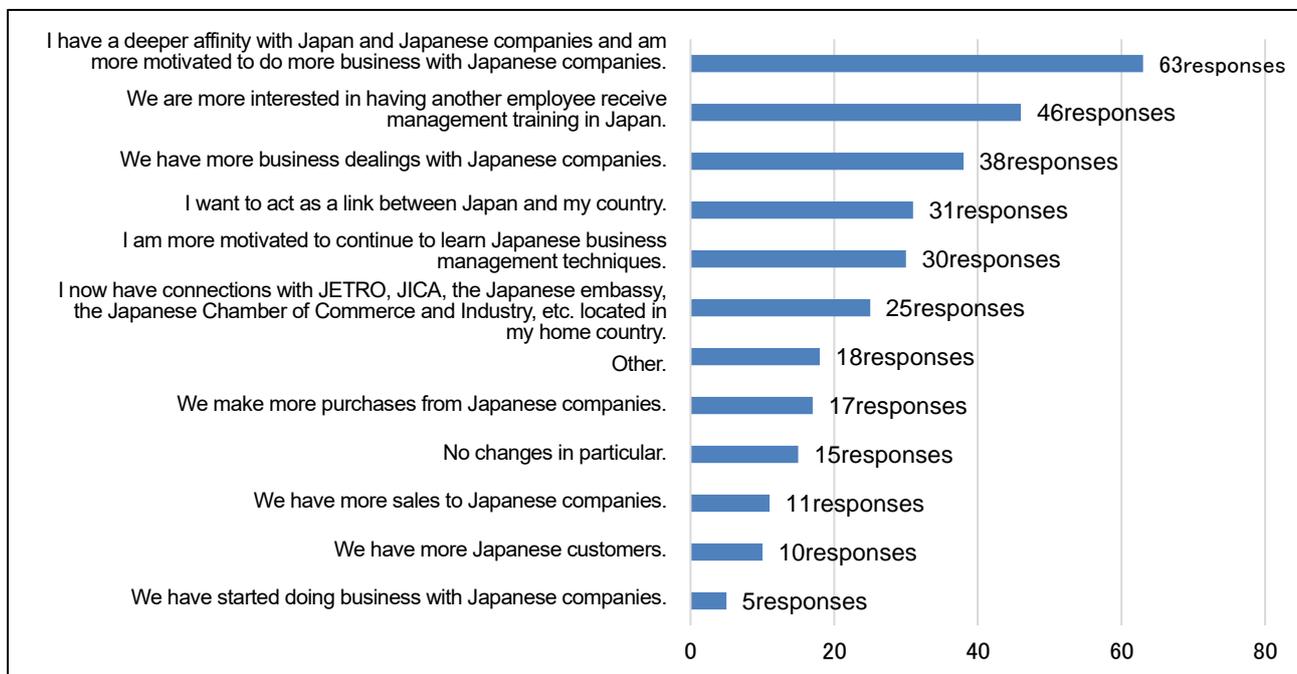
(1) Results of the training and contribution to companies they belong and Japanese/Japanese-affiliated companies

(Responses from FY2018 participants)

- The proportion of Japanese companies dealing with participants' employers is increasing, which reflects the fact that AOTS Management Training helps to strengthen business relationships between local companies and Japanese companies.
- Many participants chose answers of the followings: 1) participation in Management Training changed their relationships with Japan and Japanese companies, 2) I have a deeper affinity with Japan and Japanese companies and am more motivated to do more business with Japanese companies, 3) We have more business dealings with Japanese companies, and 4) I want to act as a link between Japan and my country. This shows the features of Management Training, such as helping participants to acquire skills and knowledge at the training and developing

the base for business expansion of local Japanese companies and the developing Japan-savvy human resources.

Changes made participants' employers/companies regarding the relationships between Japan and Japanese companies by participating Management Training n=121



(2) Overseas on-site survey

- The survey was conducted by outside researchers for seven trainees (from Egypt) who had participated in the Program on Corporate Management for Africa (AFPM), the Program on Production Management (Monozukuri) for Africa (AFPM) and the Program on Top Corporate Management for Africa (AFTP) conducted in FY2018. It clearly showed that they made some results by implementing specific management approaches such as 5S activities they learned at the training after returning to their home countries.
- Based on the high evaluation from the participants, it was recommended that the current content of a two-week program of general lectures and learning about the goal image through company visits should be maintained for beginners in kaizen activities.

Chapter 7 Summary

- According to the results of the aging evaluation, we could verify that effects manifest 3 years after use of the program.
- Regarding technical training and expert dispatch, it was confirmed that the participants of companies that used the AOTS program and participants receiving guidance were trying to widely spread the acquired knowledge and techniques. Over the last 3 years, the companies that used the AOTS program have established the techniques transferred to their workplaces, strengthened integrated management as a group both inside and outside the country, and are showing the effects of the use of the program by improving their sales and profit.
- Regarding Management Training, the participants deepened their understanding of Japan by 1) gaining a change in mindset, 2) improving their leadership skills, 3) introducing Japanese management techniques, and 4) actively spreading the results of the training to improve their company's performance.

- This provided them the better business relationship with Japanese companies such as growing commerce with them. The influence by the training spreads out far beyond of their company section and now reach to their company-wide and even to the other companies.
- The survey shows that a slight recovery has been made from the impact of the COVID-19 pandemic, as compared with FY2021. For this reason, guidance on remote instructions and training was provided and project PR activities were carried out. More and more companies have adopted hybrid training that combines direct instructions given locally and remote instructions using ICT tools. However, it is very often said that it is difficult to communicate key points or the subtle nuances of words or expressions if training is conducted online. Now that border control measures have been relaxed and foreign travel has become easier, the need for face-to-face training (training in Japan and expert dispatch programs) is increasing.
- To coincide with the TICAD8 that took place in August 2022, more efforts were made to organize training programs for Africa (planned-by-association type) and to enhance program PR activities targeted at Japanese companies operating in Africa, for the purpose of contributing to the expansion of HR interactions between Africa and Japan. As a result, 18 overseas training programs for Africa (invitation type), 25 overseas training programs (planned-by-association type), three Industry-Academia collaborative programs and one expert dispatch program were held, with the number of participants reaching approximately 2,500. Although the number of Japanese companies operating in Africa is still limited, the region is attracting increasing attention for further business expansion due to its growing population and markets and the establishment of the African Continental Free Trade Area. However, unlike East Asia or Southeast Asia where economic development was achieved based on the flying geese model centered around the manufacturing industry, new businesses have been created one after another by leapfrogging in Africa, such as innovations using digital technologies and smartphones and solutions to social issues using such innovations. Japanese companies are also expected to enter the medical and healthcare industry and the primary industry. By identifying needs that are different from those of conventional manufacturing companies and implementing a program that can be flexibly adapted to such needs, AOTS is committed to offering human resources development support for Japanese companies in their operations in Africa.
- It is appropriate for AOTS to continue this program with a mid-to long-term perspective in the future, and we think it will improve the level of industrial techniques in the target countries as well as contribute to their economy.