

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

[Annual Evaluation Report] (Overview)

FY2021 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/areas for ODA specified by the Development Assistance Committee (DAC) of OECD]	
Implementation Period	April 1, 2021 – March 31, 2023 FY2021 budget carried over to FY2022 due to COVID-19.	
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

<FY2021> – Screening Committee - Hold 8 reviews (conducted in document review or online)

- Number of review approvals - Technical training 9 cases (18), Management training 0 cases (0), Invitation type overseas training 1 cases (10), Planned-by-Association type overseas training 0 cases (0), Industry-Academia collaborative programs 15 cases (603), Expert dispatch 3 cases (28)

<FY2022> – Screening Committee - Hold 17 reviews (conducted in writing or online)

- Number of review approvals - Technical training 65 cases (166), Management training 7 cases (134), Invitation type overseas training 12 cases (110), Planned-by-Association type overseas training 31 cases (1,491), Industry-Academia collaborative programs 0 cases (0), Expert dispatch 22 cases (158)

2. Outline of cases

(1) Training program

[1] Technical training: Number of accepting companies and participants (implemented in FY2021 and FY2022)

- 71 accepting companies, 184 participants (47 small and medium-sized companies, 125 participants) (68 companies (181) after excluding 3 companies (3) that cancelled after review approval)

[2] Management training: Number of courses and participants (implemented in FY2022)

- Held 7 times in total for Indonesia, Philippines, Vietnam, Central and South America, and all developing countries ; participants: 125 persons.

[3] Overseas training: Outline of the course and the number of participants (implemented in FY2021 and FY2022)

- Invitation type: Held 14 times in total in Bangladesh, Mongolia, India, Philippines and other locations in Southeast Asia and South Asia (in-person guidance or online); participants: 139 persons.
- Planned-by-Association type: Held 31 times in total in India and other locations in South Asia, Indonesia, Thailand and other locations in Southeast Asia, and Brazil and other locations in Central and South America (online), and in Thailand (in-person guidance); participants: 1,491 persons.

[4] Industry-Academia collaborative programs: programs, internships, and the number of participants (implemented in FY2021 and FY2022)

- Programs held: 15 cases in total, in Sierra Leone, Cambodia, Vietnam, Burkina Faso, Thailand, Myanmar and Pakistan (online, in-person guidance or hybrid format of online and partial in-person guidance); participants: 758 persons.
- Internships: Seven cases held in total, in Sierra Leone, Vietnam, Burkina Faso and Cambodia among the above locations; participants: 90 persons (including planned internships)

(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

- Over multiple fiscal years since FY2020, the number of companies using the expert dispatch program is one cases, the number of dispatched experts is one, and the number of participants receiving guidance is 3 (SMEs only).
- Over multiple fiscal years since FY2021, the number of companies using the expert dispatch program is two cases, the number of dispatched experts is two, and the number of participants receiving guidance is 26 (SMEs only).
- In FY2022, the number of companies using the expert dispatch program is 13 cases, the number of dispatched

experts is 19, and the number of participants receiving guidance is 141 (All 12 companies but one are SMEs.)

*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 Program

(1) Technical Training

- Technical training consists of general training conducted by AOTS and on-site training conducted by the accepting companies.

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

- Interim evaluation and evaluation immediately after completion were conducted for general training for 13-week, six-week and nine-day courses.

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

-In all 17 items, the evaluation goal exceeded 5.0 at the time of completion (5.1-6.1 with the full score of 7.0), which increased by 1.5-2.5 compared with the initial scores prior to training. ⇒The goals were thought to be achieved.

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

- J13W participants improved grammar by nearly eight points, with the achievement score reaching 10.07 points. J6W participants improved conversation, listening comprehension and grammar by less than three points, but the achievement score exceeded five points and the evaluation goal was reached. This shows that they improved their Japanese skills in a balanced way.

[2] On-site training

- Interim evaluation and evaluation immediately after completion were conducted for on-site training that started in FY2020 and ended within FY2021 or started in FY2022 and ended by March 2023.

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

*Accepting companies: General satisfaction level exceeded the evaluation goal of 4.0 (4.2 out of a full score of 5.0), generally showing their satisfaction.

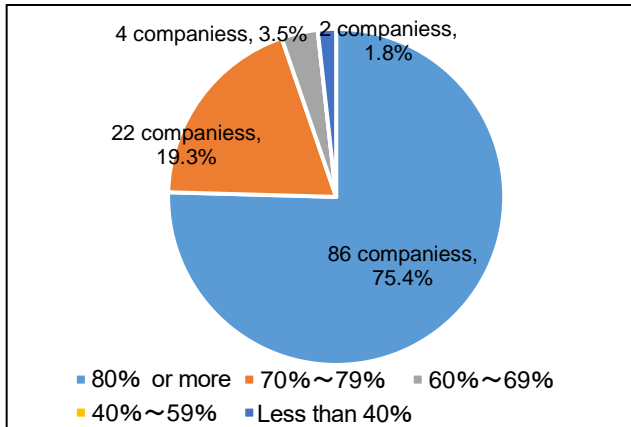
*Participants: General training was generally highly evaluated (4.2-4.6 for each item), generally showing the achievement of the goals.

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

*Over 70% of the accepting companies answered an achievement level of over 80%, and over 70% of the trainees answered an achievement level of 80% or more, generally showing the achievement of the initial goals.

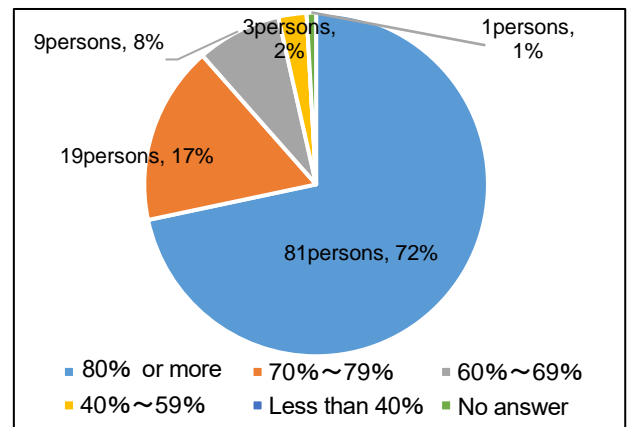
[Evaluation of goal achievement level]

(evaluator: accepting companies) n=114



[Evaluation of goal achievement level]

(evaluator: participants) n=113 (Except 1 person who did not respond)



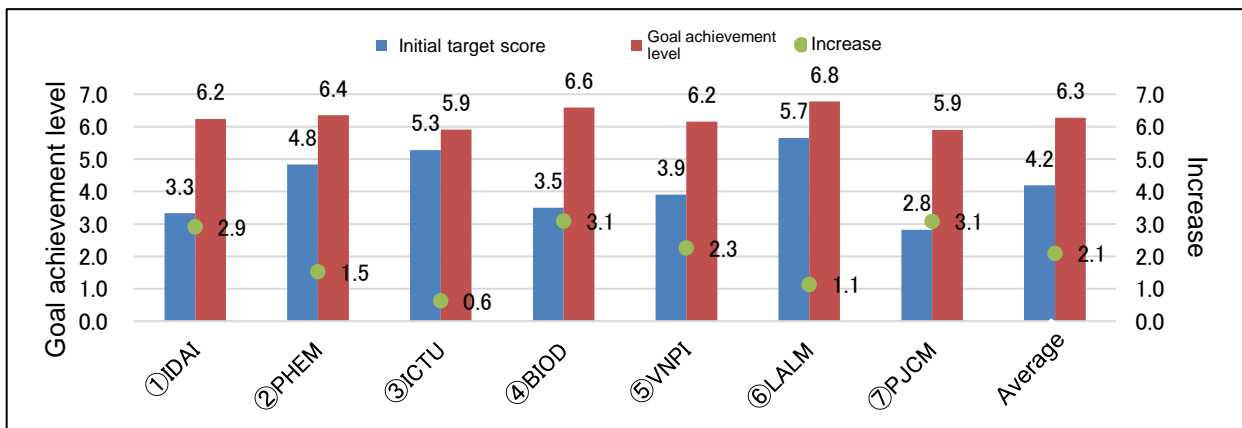
(2) Management Training

- 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 (5.9-6.8 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 (Indonesia): Program on Business Innovation through AI & IoT for Indonesia (IDAI)

This course provided many business managers' insights and experiences through company visits and lectures, so the participants were all impressed with the people-centric business management approach and the idea of adopting AI and IoT to increase people's value. This shows it was a well-developed program focused on "reasonable digital transformation adapted to address real-life workplace issues" in which Japan excels.

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

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

- Example 1 (India, normal-type): I have gained a better technical knowledge and hopefully I will be able to use it for my work. I learned about milling processes and engineering. It was very good training.

- Example 2 (India, normal-type): I was able to acquire new knowledge. I hope there will be more training like

this. I also learned about safety and 5S. I'd like to receive training in Japan to learn more.

- Example 3 (China, [Third-country OJT type]): This training gave me a good opportunity to learn about production processes. I intend to apply what I have learned at the China factory.

	
<p>Example 2 Practical training</p>	<p>Example 3 Practical training</p>

(ii)Planned-by-Association type (Evaluation of participants):

- Example (Developing countries, online): Carbon Neutrality and Digital Transformation
- Currently, global warming and CO2 reduction are imperative issues for us. I'm glad countries around the world work together to address them and have organized this training.
- The training was extremely informative as it helps us to improve productivity and increase product competitiveness in the global market.

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

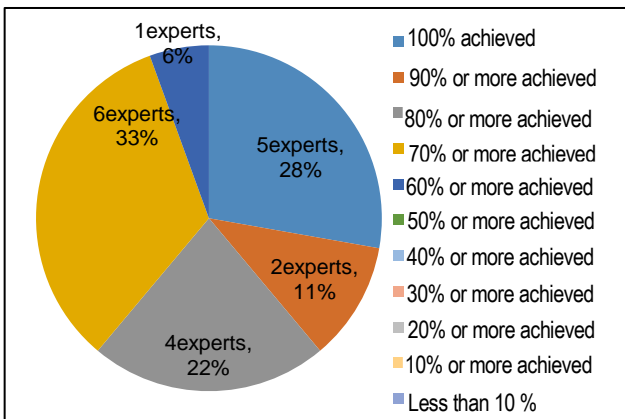
- Evaluation immediately after completion of 10 programs and internships completed by the end of March 2023 under the FY2021 budget showed that the number of students answering that they were "very highly" or "highly" interested in employment with a Japanese or Japan-affiliated company rose from 192 persons before to 260 persons after the program. (The number of students responding to the survey was 292 persons.) The number of students answering that they were "very highly" or "highly" interested in employment with the applicant company rose from 24 persons before to 38 persons after the internship. (The number of students responding to the survey was 46 persons.) These results show that the program contributed to increasing students' desire to work for Japanese or Japan-affiliated companies.

2. Expert Dispatch Program

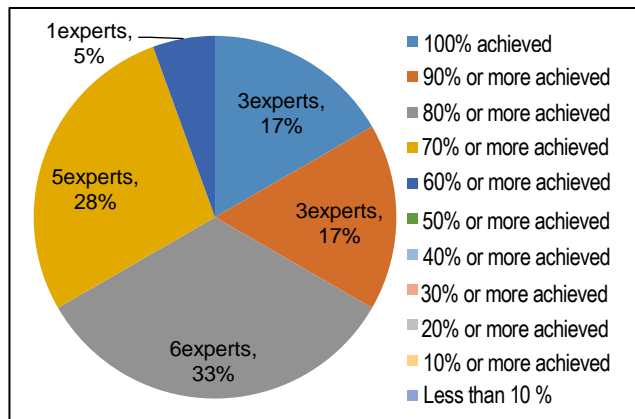
(1) Evaluation by experts (evaluation by 18 experts who had returned to Japan by March 2023)

- Goal of technical improvement: More than 90% of experts answered an achievement of 70% or more.
- Goal of human resource training: More than 90% of experts answered an achievement of 70% or more.

Goal achievement level of technical improvement n=18



Goal achievement level of human resource training=18



(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” most, then evaluated “service competitiveness improvement” next. It appears that expert guidance led to improvements in the technical abilities of companies receiving the guidance and contributed to management effects.
- The dispatching companies evaluated “technical development capabilities improvement”, “quality improvement”, “stronger relationships with companies receiving guidance” etc. as management effects. They regarded highly not only technology transfer but also enhanced networking.

Chapter 4 Ex-Post Evaluation

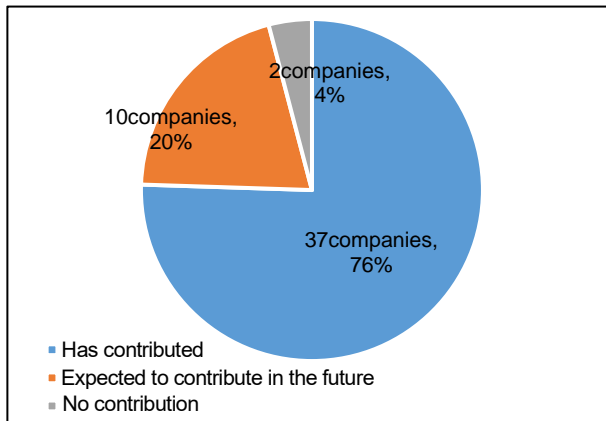
- A survey was conducted for the companies that completed the training and dispatch by the end of December, 2022 (Japanese and local companies) and the participants.

1. Training Program / Expert Dispatch Program (Appearance of results of the program, ripple effect)

(1) Training and guidance results (settlement of participants, spread of techniques and knowledge, etc.), contribution to local and Japanese companies

- 100% of technical participants continue to work for their local companies after returning to their countries. Also, all of them answered that they spread the knowledge and techniques acquired in Japan in the local companies. Thus, we think the goal of technical transfer was achieved.
- The local companies evaluated the contribution to “increase in sales,” “improvement of employee morale”, and “cost reduction.” Also, 76% answered that they contributed to the entire company, and 20% answered they were expecting contributions in the future. It appears that after returning to their home countries trainees serve as role models, having positive effects on local employees.
- Japanese companies evaluated “strengthening cooperation with local companies” and “human resources training and international awareness in Japanese companies”.

[Contribution to the local companies n=49]



<Contribution to Japanese companies (examples of comments)>

- Easier to communicate with Japanese employees.
- Able to do offshore business overseas.
- Development and expansion of supply chains (contribution to parts procurement)

[Chapter 5 Evaluation of Economic Effects]

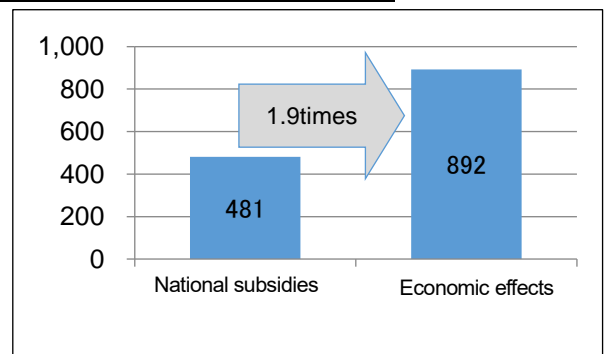
1. Evaluation of Economic Effects

(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 (up to 5 years after the completion of the training), regarding the accepting companies, the cost-effectiveness per participant was 1.76 times for technical training, 2.4 times for management training and the total amount of cost-effectiveness was 892 million yen. Estimating from this figure, the total amount of cost-effectiveness was 1.9 times the governmental subsidy, indicating sufficient cost-effectiveness.

- The accepting companies said that they had economic effects of 1.76 to 2.4 times more than they would have if they had not used the training. The training was regarded as effective in terms of quality. Businesses were directly affected by the COVID-19 pandemic in 2021, and it was assumed that more companies underestimated the economic effects due to lower production volume.

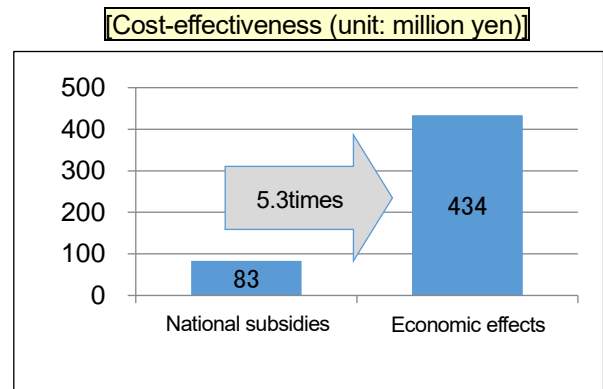
[Cost-effectiveness (unit: million yen)]



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

(2) Expert dispatch program

- According to a similar investigation to above, cost-effectiveness per dispatched expert per month was 3.15 times on average, and the total amount of economic effect was 434 million yen. The total effect was 5.3 times the amount of the government subsidy, indicating sufficient cost-effectiveness.



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

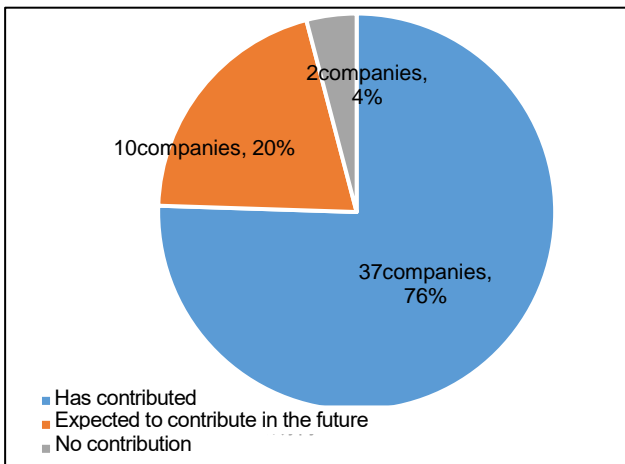
[Chapter 6 Aging Evaluation] (The results of the survey of the companies at a set period [3 years] after use of the program)

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

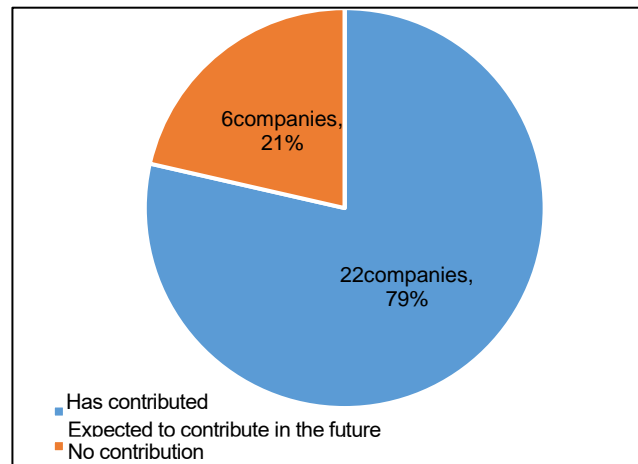
(1) Results of training and guidance, and contribution to the local and Japanese companies (Changes between FY2019 and FY2017)

- Among trainees who had returned to their home countries, 81% (after one year) and 96% (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, local companies answered that there was a contribution to "an increase in sales." Even after three years of using the program, they answered that there was a contribution to "an increase in sales" and "an improvement in employee morale." It is clear that trainees who have received guidance continue to contribute to local companies as role models for local employees.
- Japanese companies answered that there was a contribution to "strengthening cooperation with the local companies", "an increase in sales" 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.

[Contribution to the local companies after 1 year n=49]



[Contribution to the local companies after 3 year n=28]



(2) Overseas on-site survey

- Results of online surveying by outside researchers and others of six local companies (two in Philippines and one each in Indonesia, Thailand, and Vietnam) that had used the program in FY2017 and FY2019 confirms results of the training/experts dispatch program such as: (i) contributing to cost reduction and quality improvement, (ii) developing local talent that replaces Japanese expatriate staff when more companies reduce their number, (iii) expanding business globally by dividing business functions to pursue overall optimization within groups of companies, and (iv) the fact that staff who received guidance from former trainees and experts involved in AOTS program in Japan have higher levels of trust in Japan.
- To make the program even more meaningful and further expand it, the outside researchers recommended (i) using this program to strengthen and restructure Japanese companies' supply chains, (ii) adopting projects that use digital technology, and (iii) being prepared for a spread of new coronavirus strains.

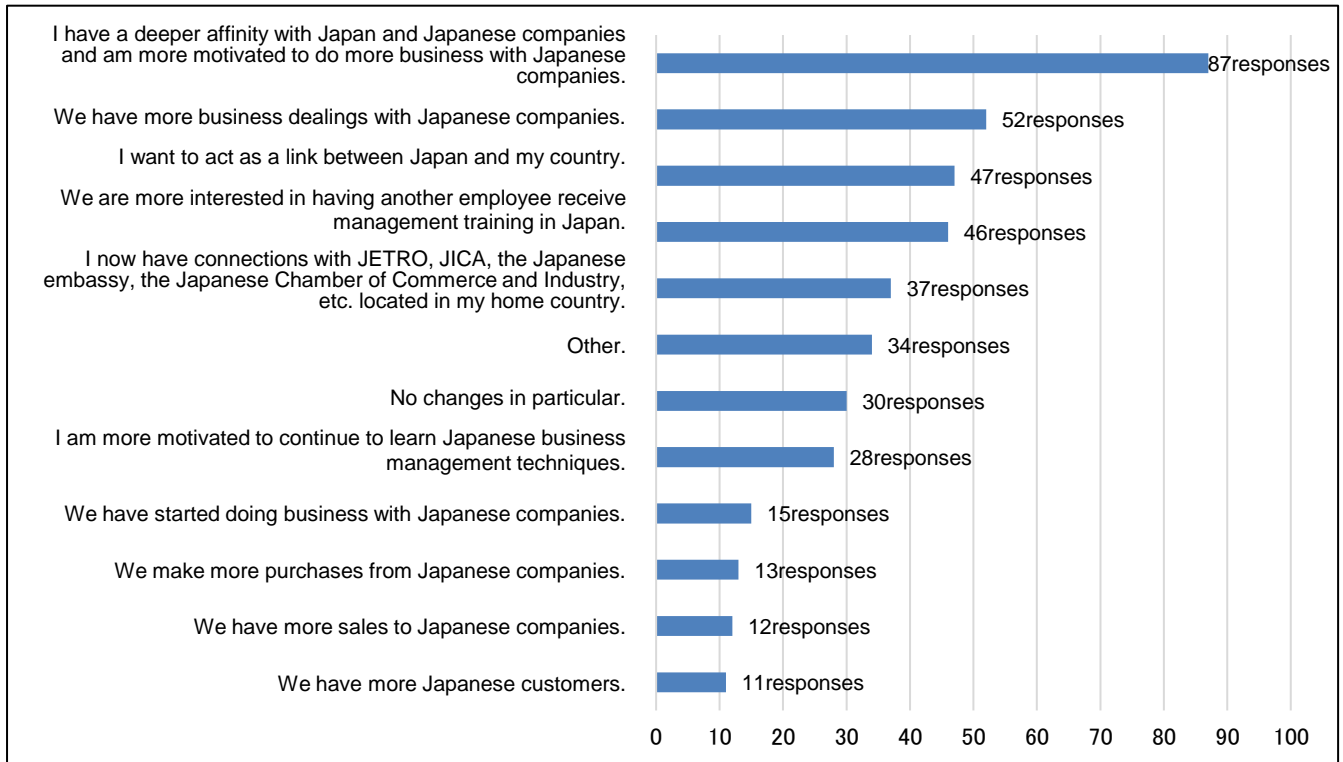
2. Training Program (Management Training)

(Questionnaire regarding the change in the situation after 3 years and overseas on-site survey)

(1) Results of the training and contribution to the affiliated companies and Japanese companies (Responses from FY2017 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, and they said, 2) I have a deeper affinity with Japan and Japanese companies and am more motivated to do more business with Japanese companies, 3) We I 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 developing Japan-savvy human resources.

[Changes made to participants' employers/companies regarding the relationships between Japan and Japanese companies by participating Management Training n=151]



(2) Overseas on-site survey

- The survey was conducted by outside researchers for five trainees from four companies in Thailand who had participated in the Program for Quality Management (PQM) and the Program for Quality Problem Solving (PQPS) in FY2017. It clearly showed that they made some results by implementing specific management approaches such as quality management methods they learned at the training after returning to their home countries. Especially, a good balance between classroom lectures and practical training (factory visits and lectures and practical exercises) was highly rated as well as the first-hand experience of learning of the Japanese values and work ethics, which is behind the Japanese-style management methods through the face-to-face training.

• In addition, they also recommended three points: (a) Promoting the use of the management training program by giving an overall description of the program, including target participants and how the program is positioned, (b) Expanding and using more advanced courses and middle management courses, and (c) Providing opportunities for former participants of sharing their knowledge and independent learning of Japanese-style management methods, as a follow-up action to the completion of courses.

[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 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 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, participants undergo a change in consciousness through the management training that leads to growth in the business performance of their own companies as they take the lead and proactively broaden the results of training while improving their leadership and incorporating Japanese-style management techniques etc., relationships with Japanese/Japanese-affiliated companies are also strengthening. 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. According to the 25th COVID-19 Survey conducted by Tokyo Shoko Research, Ltd. on December 16, 2022, 63.7% of respondents said their business activities continued to be impacted by the pandemic. Although improvements were made by 0.8 points from last year, human resources development requiring foreign travel did not work as planned because entry restrictions continued to be imposed on foreign visitors at the beginning of the year. For this reason, guidance on remote instructions and training was provided and program 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.
- The need to strengthen human resources in Japanese companies in developing countries is increasing more and more. 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.