Thematic Evaluation FY2020: Analysis of Evaluation Methodologies for Scholarship Programs

Final Report

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Japan International Cooperation Agency (JICA)

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Executive Summary

1. Introduction

Scholarship programs at the Japan International Cooperation Agency (JICA) have been expanding. However, ex-post evaluations for these programs have been conducted only to a limited extent. From the perspective of external accountability and program improvement, there is a growing need to evaluate these scholarship programs in an appropriate manner, making it necessary for us to consider evaluation methodology and evaluation criteria that take into account the characteristics of JICA scholarship programs, such as the existence of a long delay before program impacts become observable.

Against this background, this thematic evaluation study (hereinafter referred to as the "study") was conducted to review existing evaluation methodologies for scholarship programs and examine evaluation criteria and methodology used in JICA scholarship programs through case studies with the goal of making recommendations regarding future evaluations of JICA scholarship programs.

Among the various forms and items that fall under "scholarship programs" and "evaluation of scholarship programs," this study focused on the analysis of outcomes in the area of human resource development from a medium- to long-term perspective, an area where there are few prior studies and evaluations in JICA scholarship programs.

In the analysis, we constructed the following two exploratory methods and examined their effectiveness.

1) Evaluations to clarify the logic/theory in the program: This study employs Theory of Change (hereinafter referred to as the "ToC") because of its flexibility in expressing the multiplicity and hierarchy of outcomes and assumptions, which is a characteristic of JICA scholarship programs.

2) Analysis of the causal relationship between scholarship programs and their outcomes, and the contribution of scholarship program: This study employs an approach to compare the target population of the program against a non-target population (comparison group) that can serve as a *counterfactual* (i.e., a situation that would have occurred if the project had not been implemented) to understand the change (impact) brought by the program (this approach is known as *impact evaluation*). In addition, the study also verifies whether the change is occurring in accordance with the ToC model.

The following two programs were selected for the case study (pilot implementation of an outcome evaluation of JICA scholarship programs).

- Master's Degree and Internship Program of African Business Education Initiative for Youth (hereinafter referred to as the "ABE Initiative")

- Kizuna Program

2. Reviews of Existing Evaluation of Scholarship Programs

We reviewed published project evaluation reports and study reports for JICA's scholarship programs that were categorized as "Long-Term Training Program," "Japanese Grant Aid for Human Resource Development," and "Yen Loan Scholarship Program." The reports we reviewed consisted of ex-ante evaluations (83 projects), a mid-term evaluation (one project), and ex-post evaluations (eight projects). In addition, the study also reviewed scholarship program evaluations that had been conducted by other donors for study-abroad scholarship programs in which participants could earn degrees. These evaluations consisted of projects by 11 other donors, including seven governmental organizations of other donor countries, two foundations, and two international organizations. Furthermore, we conducted surveys with the Special Evaluation Office of the Belgian Development Cooperation (Belgian Evaluation Office) and the United States Agency for International Development (USAID, which were especially notable among the evaluations for carefully developing a ToC and comparing the results with the comparison group. Furthermore, a remote interview was conducted with Syspons GmbH (a consulting company), which implemented the Belgian and German evaluations included in our review.

The results of the reviews are as follows. Since all of the JICA scholarship programs for which formal ex-post evaluations have been conducted were project-based programs, they were evaluated using the Development Assistance Committee (DAC) five evaluation criteria based on the JICA ex-post evaluation framework. In contrast, all of the 15 scholarship program evaluations by other donors we reviewed focused on outcomes and impacts. Indicators were set for each evaluation in accordance with the objectives of the program. Indicators specific to JICA included those related to Japanophilia and the benefit to universities and companies in the host country (Japan).

Both the JICA and other donors, with which we conducted a survey, recognized that it was more difficult to measure the effectiveness of the scholarship program itself than in typical evaluations. They attributed it to the fact that it takes a long time for participants to use the abilities they have acquired to contribute to their workplace or development issues in their home countries. Several approaches for overcoming this challenge that some donor organizations mentioned, such as the use of comparison groups or the application of ToC, are helpful for evaluating future JICA scholarship programs because existing evaluations have rarely used an evaluation design.

3. Configuring Logic/Theory of JICA Scholarship Programs (Constructing a Theory of Change)

We identified and discussed the logic/theory of scholarship programs, which would be used as the premise of our evaluation, and presented it in the form of ToC. ToC varies to some degree depending on the organization that uses it. For this study, a ToC is defined as "a diagram to show how and why the final objective of a program occurs." In other words, a ToC is a diagram that graphically illustrates a hypothesis on the likely changes (outcomes) triggered by the implementation of a program and how

these outcomes manifest into the final outcome.

In addition to identifying the general logic/theory of scholarship programs, we also examined the logic/theory of the programs targeted for our case studies to develop a draft of the "ToC for general scholarship programs," "ToC for the ABE Initiative," and "ToC for the Kizuna Program." For these ToCs, we described not only the outcomes but also the assumptions necessary for the occurrence of each outcome. Since these assumptions are an important factor, we examined them as part of our analysis.

4. Pilot Implementation of Ex-post Evaluation of JICA Scholarship Programs (Case Studies)

(1) Pilot Evaluation of ABE Initiative's Outcomes

The objectives of the ABE Initiative are to develop industrial human resources who will be the key to Africa's growth and to develop "Navigators" for business in Africa for Japanese companies and to build a network. It accepts private-sector professionals, public-sector professionals, and education professionals into master's programs at Japanese universities, with a target of 2,800 people in total from 54 African countries between FY2014 and FY2024.

In this case study, we categorized the changes that are expected to occur due to the ABE Initiative into end-of-program, initial/mid-term, and mid-term outcomes and examined whether they have occurred based on quantitative information from a web-based survey and qualitative information collected through interviews. In addition to verifying the outcomes according to the ToC, we analyzed the causal relationship between the program and the occurrence of the outcomes by comparing participants with non-participants as participants' counterfactuals. However, the survey response rates were different between participants and non-participants, and this may have affected the comparability of the results.

The results of the analysis for each evaluation question are as follows.

- Evaluation question 1 "To what extent does the participation in the ABE Initiative lead to the outcomes identified as the end-of-program outcomes, including the improvement in ex-participants' skills, greater understanding of Japan/more positive feelings toward Japan, and an expansion of the network with other ex-participants?": The results show that the end-of-program outcomes including the acquisition of knowledge and skills, understanding of Japan, development of networks, and improvement in the positive feeling about Japan, have improved as expected.

- Evaluation question 2 "To what extent does the participation in the ABE Initiative lead to the outcomes identified as the initial/mid-term outcomes, including finding employment in fields related to one's academic area during the scholarship, finding employment at Japanese companies, starting businesses in fields related to one's academic area during the scholarship, or making use of and maintaining the skills and networks developed through the ABE Initiative?": The overall percentage of ex-participants who obtained positions in their field of study was lower than that of non-participants. On the other hand, a larger percentage of

ex-participants have jobs related to Japan, suggesting that many are building their careers through the connection with Japan that they developed in the ABE Initiative. The type of position they obtained after returning to their home country was also related to the degree to which they could use the knowledge and skills they gained through the ABE Initiative.

- Evaluation question 3 "To what extent does the participation in the ABE Initiative lead to the outcomes identified as the mid-term outcomes, including the implementation of projects, transactions, and research collaborations between ex-participants or their home organizations and Japanese organizations (government, JICA, universities, companies) (i.e., does the ABE Initiative lead to ex-participants acting as "Navigators")?": We examined the level of ex-participants' responsibility within the organization and their activities as Navigators, one of the keywords in the ABE Initiative. In terms of the level of responsibility, the percentage of people in supervisory positions and the percentage of individuals who received promotions was lower among ex-participants than among non-participants, suggesting that participation in the ABE Initiative may lead to a gap in one's career timeline in the short term. On the other hand, the number of ex-participants who were involved in the commencement, expansion, or facilitation of business projects, joint ventures, projects, and joint research projects that Japanese organizations carried out with African organizations (defined as "Navigator activities" in this analysis) was nearly twice as many as those who did not participate in the ABE Initiative, indicating that the ABE Initiative may be contributing to the development of Navigators.

- Secondary impacts on host universities and companies: The results of the web-based survey indicated that a certain degree of change took place in terms of the secondary impact on the host universities and companies that accepted ABE participants, but the number of cases that led to specific joint research projects or business development worth highlighting as good practices were small as a whole.

Based on the objectives of the ABE Initiative and the ToC we constructed, there are two main potential paths for ABE participants after returning to their home countries. One is to find a job (or return to the previous workplace) related to one's field of study and contribute to the country's development issues in the long run within the organization by applying the expertise acquired through the ABE Initiative. This path is mainly related to objective a) of the ABE Initiative. The other path is related to objective b) of the ABE Initiative, which is to use the knowledge, understanding, and network of Japan gained through the ABE Initiative to obtain a job related to Japan and contribute to Japan by deepening cooperation and relations with Japan.

The results of the analysis above suggest that the ABE Initiative contributed to the occurrence of outcomes through the latter path. The ABE Initiative is likely to contribute to the achievement of objective b) of the Initiative through participants who work in jobs related to Japan and act as Navigators, which are themselves consequences of understanding Japan and developing networks. From this perspective, the ABE Initiative will be able to promote Japanese organizations' activities in

Africa by continuing to develop and produce capable individuals.

At the same time, however, the results indicated that the changes did not manifest sufficiently in the path in which participants were expected to become active using the expertise and skills learned through the ABE Initiative. Although there is a question of which objective should be prioritized more, it seems that it is important to support participants' employment after returning to their home countries and, if they plan to return to work, to inform their employers of the objectives of the ABE Initiative so that they can be assigned to appropriate positions or tasks. In addition, as seen in the case of Rwanda, it may be necessary to consider strategically utilizing the ABE Initiative by focusing on human resource development in specific fields.

(2) Pilot Evaluation of Kizuna Program's Outcomes

The objectives of the Kizuna Program are to build mutually beneficial relationships with developing countries through the development of human resources in the mining and geothermal sectors in developing countries, with the goal of supporting development issues in the mining and geothermal sectors in developing countries while securing Japan's resources. The program accepts overseas professionals into master's or doctoral programs at Japanese universities, with a goal of having more than 200 students from all over the world between FY2014 and FY2023.

In this case study, we categorized the changes that are expected to occur due to the Kizuna Program into end-of-program, initial/mid-term, and mid-term outcomes and examined whether they have occurred based on interviews. A key difference from the examination of the impact of the ABE Initiative described in the previous section is that the data collection for the Kizuna Program was a very limited survey due to the framework of this study. Therefore, the results will be reported as part of the program's outcomes, but not as an evaluation of the entire program. The primary purpose is to obtain knowledge for a full-scale evaluation in the future.

The results of the analysis for each evaluation question are as follows.

- Evaluation question 1 "Has the participation in the Kizuna Program allowed ex-participants to achieve the outcomes identified as the end-of-program outcomes, including an improvement in their knowledge and skills in the fields of mining and geothermal development, an improvement in their knowledge and understanding of Japan's approach to these fields, more positive feelings toward Japan, and the expansion of the network with other ex-participants?": The initial set of changes expected to occur after graduation are considered to have occurred as expected for all eight ex-participants interviewed.

- Evaluation question 2 "Have the end-of-program outcomes allowed ex-participants to achieve the outcomes identified as the short-term outcomes of the program, including the application of the knowledge and skills they acquired to their work or research and the expansion and maintenance of their connections?": Short-term outcomes were applicable to most of the eight ex-participants interviewed. The end-of-program outcome, "the use of

knowledge and skills in the mining and geothermal fields by returning to work in these fields," was observed as expected. In many cases, ex-participants expanded their connections through research, reflecting that the Kizuna Program targets not only master's programs but also doctoral programs.

- Evaluation question 3 "Have the short-term outcomes allowed ex-participants to achieve the outcomes identified as mid-term outcomes, including an increase in the decision-making power and responsibility in their organizations, an increase in the number and efficiency of the projects, transactions, and research collaborations between ex-participants or their organizations and organizations in Japan, or the implementation of research collaborations /joint business projects between ex-participants?": Mid-term outcomes were confirmed to a certain degree. However, the results varied more significantly than the results for short-term outcomes. The results of the survey suggested that this outcome could further develop. Although an increase in responsibility and promotion was generally observed, this did not happen in some cases due to workplace regulations. However, even in cases where there was no such increase in decision-making power or responsibility, the results identified various examples of collaboration with Japanese organizations in which ex-participants used the networks gained through study abroad and other JICA schemes.

In general, expected outcomes have been achieved effectively among the ex-participants we interviewed. On the other hand, the interviews did not reveal the extent to which Kizuna's outcomes materialized as a whole. In addition, unlike the examination of the ABE Initiative, we did not compare the results against the situation of non-participants (i.e., individuals who were rejected or withdrew). We could only qualitatively confirm whether or not Kizuna Program triggered the changes that occurred to the interviewees. Furthermore, the parts of these programs corresponding to the long-term and final outcomes of the ToC were not included in the study.

The following is a summary of points that can be noted for future evaluation of the Kizuna Program.

- Use of ToC: The ToC for the Kizuna Program created at the beginning of the survey seems to be generally appropriate, including the setting of assumptions.

- Timing of evaluation: This study was conducted about five years after the first group of participants graduated. We believe that this would be an appropriate time to evaluate the short to mid-term outcomes of the program in future evaluations as well. Evaluation should mainly verify the following outcomes: "whether the ex-participants are using the knowledge and skills they have learned in their work and research" and "whether the joint activities between their organizations and Japanese organizations have increased or become more efficient." In addition, it would make it easier to evaluate the path leading to the final outcomes if the study also verifies outcomes that are considered to be long-term outcomes in the ToC, such as "ex-participant's workplace develops and improves technologies, products, and services related to development issues in the mining and geothermal fields"

and "ex-participant's workplace develops high-quality human resources in the mining and geothermal fields."

- Survey method: Where large-scale data collection is permitted, it may be possible to evaluate the program's overall outcomes and factors that inhibit or promote the occurrence of outcomes through a method that combines a complete enumeration survey and interviews in line with the ToC, as was done for the ABE Initiative in this study. When conducting an evaluation based on small-scale interviews (as we did for the Kizuna Program) rather than through large-scale data collection, target ex-participants should be carefully selected to ensure they are balanced in terms of countries, fields, and organizations.

5. Recommendations for Evaluation Methods for JICA Scholarship Programs

The case studies confirmed that (1) the implementation of evaluations that clarify the logic/theory of the program (use of ToC) and (2) the analysis of the causal relationship between the program and the outcome/the contribution of the program (setting of counterfactuals), which were introduced as hypothetical evaluation methods this time, are useful for measuring the impact of JICA scholarship programs that have multi-layered outcomes and require a long period of time before the final outcome is achieved. Based on the results and discussions of this study, including other points, we proposed the following evaluation and analysis methods for JICA scholarship programs.

Recommendation 1: Clarify evaluation questions

- ➢ Clarify whether the evaluation will focus on verifying outcomes, efficiency, analysis of factors, etc., or on comprehensive evaluation regarding each perspective of the DAC 6 evaluation criteria.
- ➢ Clarify whether the program is to be evaluated as a whole or as a country-specific program in a particular country.
- ➢ If the focus of the evaluation is on the verification of outcomes, clarify whether to verify expected outcomes exhaustively or specific outcomes.
- ➢ Clarify whether outcomes for ex-participants themselves or the universities and companies involved in the program are to be verified.
- ➢ Clarify the stage(s) of outcomes (from initial outcomes to long-term outcomes) to focus and verify.

Recommendation 2: Clarify the ToC and evaluate based on it

- ➢ Clarify the main elements of the ToC, such as the final objectives of the program (final outcomes), intermediate changes that are expected to lead to the final outcomes (initial and mid-term outcomes), indicators corresponding to each outcome, the achievement of each outcome (target values), the time when each outcome is expected to be achieved, and assumption, as the responsibility of the implementer when planning the program.
- ➢ Specify outcomes to be verified in line with the ToC and verify the status of the achievement

of these outcomes.

➢ If it is impractical to target non-participants, check whether a chain of changes along the ToC is occurring and understand the causal relationships shaping the program and its contribution.

➢ When conducting a process evaluation or analysis of factors, it is especially important to clarify assumptions that need to be satisfied for each change to occur and the chain of changes from inputs to outputs.

Recommendation 3: Verify outcomes and assess their effectiveness through comparisons using Counterfactuals

➢ Verify the causal relationship between the ex-participants in the program and the non-participants who have "similar" characteristics (Counterfactual).

➢ Identify and record rejected/withdrawn applicants who have the same qualifications as the successful applicants at the time of selection to identify non-participants who can be appropriate counterfactuals.

➢ Ensure that the survey can be requested to non-participants regardless of pass/fail status by making the cooperation with the survey a requirement for application.

Recommendation 4: Set appropriate indicators

➢ Set indicators based on the examples of indicators used in this study and previous similar studies.

➢ Set targets and reference values for each indicator at the time of program planning.

Recommendation 5: Analyze data using both quantitative and qualitative data

➢ Use quantitative data to grasp the status of the occurrence of impacts across the program and use qualitative data to capture the details and background of specific occurrences of impacts.

➢ Interpret the results of the analysis and make evaluative judgments based on the information from both quantitative and qualitative data.

Recommendation 6: Develop a system for verifying mid- and long-term outcomes

➢ Establish and maintain a system to manage and update contact information for ex-participants by utilizing alumni associations and networks of alumni, in addition to the JICA headquarter and overseas offices, to enable continuous tracking of ex-participants.

➢ Manage the contact information for rejected/withdrawn applicants at the time of their application so that non-participants can be surveyed.

➢ Clarify the contact person in charge of the JICA scholarship program at each university and company, consider how to update the contact information after the program ends, and establish a system to put together and accumulate information on ex-participants and the changes and results of accepting participants as an organization.

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1.1.   Background and Purpose of the Study

Scholarship programs at the Japan International Cooperation Agency (JICA) have been expanding. However, ex-post evaluations for these programs have been conducted only to a limited extent. From the perspective of external accountability and program improvement, there is a growing need to evaluate these scholarship programs in an appropriate manner, making it necessary for us to consider evaluation methodology and evaluation criteria that take into account the characteristics of JICA scholarship programs, such as the existence of a long delay before program impacts become observable.

Against this background, this thematic evaluation study (hereinafter referred to as the "study") was conducted to review existing evaluation methodologies for scholarship programs and examine evaluation criteria and methodology used in JICA scholarship programs through case studies with the goal of making recommendations regarding future evaluations of JICA scholarship programs.

Among the various forms and items that fall under "scholarship programs" and "evaluation of scholarship programs" (see Chapter 2), this study focused on the analysis of outcomes[1] in the area of human resource development from a medium- to long-term perspective, an area where there are few prior studies and evaluations in JICA scholarship programs.

In the analysis, we constructed the following two exploratory methods and examined their effectiveness.

1)   Evaluations through Theory of Change (hereinafter referred to as the "ToC") to clarify the logic/theory in the program

JICA scholarship programs often have multiple concurrent objectives (final outcome). These programs often pursue several different goals simultaneously, such as enhancing target students' capabilities, promoting the overseas expansion of Japanese companies through ex-participants, and strengthening bilateral relations between Japan and partner countries. In addition, these programs assume that various changes (initial and intermediate outcomes) would occur in stages in the period between the program implementation and the time the final outcome materializes. Furthermore, in order for such changes to occur, various preconditions or assumptions need to be met. Therefore, it is essential to clarify the logic/theory of each scholarship program and to organize and identify the final (or most important) objective of the program, requisite initial/intermediate outcomes and outputs for achieving such objective, and assumptions of such changes. Among different approaches we can use to organize logic/theory, this study employs ToC because of its flexibility in

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[1] Many terms are available to describe positive changes caused by a project, including "results," "effects," "outcomes," and "impacts." This report mainly uses "outcome," but other terms are used when they seem more natural in a given context.

expressing the multiplicity and hierarchy of outcomes and assumptions.

2) Analysis of the causal relationship between scholarship programs and their outcomes, and the contribution of scholarship programs (through the construction and use of a *counterfactual*)

Even if the outcomes to be verified are specified, such outcomes could also be affected by factors other than the program in question. It is therefore essential for evaluation to analyze the program in terms of the degree of the contribution it has made to the occurrence of outcomes. There are two major approaches to analyze causality/contribution. One is to compare the target population of the program against a non-target population (comparison group[2]) that can serve as a counterfactual (i.e., a situation that would have occurred if the project had not been implemented) to understand the change (impact) brought by the program (this approach is known as *impact evaluation*[3]). The second method carefully maps out the logic/theory of the program into a ToC model mentioned above to verify whether the change is occurring in accordance with the model. If the change occurred in accordance with the assumed logic/theory and the outcomes have been achieved, it could be said that there is a high probability that the program has contributed to the achievement of such outcomes. The first approach is more suitable for quantitative analysis, while the second approach is more compatible with qualitative analysis. This study analyzed the causality/contribution of programs primarily through the former, but the latter approach was also used where limited data availability and other factors demanded it.

1.2. Structure of the Study

This study is broadly divided into (1) a review of existing evaluations of scholarship programs (by JICA and other countries' organizations), (2) organization and construction of the logic/theory of JICA scholarship programs, (3) verification through a case (pilot implementation of an outcome evaluation of JICA scholarship programs), and (4) recommendations for future evaluation (Table1-1). (1) and (2) serve as the foundation for (3), and the results from these components are combined and summarized in (4).

The following two programs were selected for the case study based on the instructions of JICA[4] and the review in (1).

Pilot implementation of an outcome evaluation of JICA scholarship programs

- Master's Degree and Internship Program of African Business Education Initiative for Youth

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[2] A group that is not affected by an intervention. It is used for comparison with the intervention group to verify whether the intervention had an effect.
[3] For more information about the concept of impact evaluation, please see:
https://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/impact/about.html
[4] The programs were selected from those covered by the JICA Development Studies Program (see footnote 6).

(hereinafter referred to as the "ABE Initiative")

● Kizuna Program

Of these two programs, this study regarded the ABE Initiative as our main case study and attempted to design the pilot outcome evaluation in such a way that it would be robust enough to be referenced as an actual and full evaluation. At the same time, the study also aimed to acquire and develop knowledge to prepare for future outcome evaluations. On the other hand, we regarded the Kizuna Program as a small-scale study due to the resource constraints in the study. Therefore, although the results of this case study will still be reported as reference information, they are not meant to be a programmatic evaluation of the entire Kizuna Program. We intend to use the Kizuna Program case study primarily to acquire knowledge for future full-scale evaluations.

The ABE Initiative has accepted participants from 54 countries in Africa, and the Kizuna Program has accepted participants from 23 countries in multiple regions (as of 2020). Of these, Kenya and Rwanda were selected as our field study locations, and interviews were conducted in these two countries. However, with respect to interviews in Rwanda, remote interviews from Japan were conducted in place of on-site interviews due to the impact of COVID-19.

Table 1-1: Structure of the Study

Study Items	Tasks	Chapter
(1) Reviews of existing evaluations of scholarship programs	Review of JICA scholarship programs (Including an overview of the JICA scholarship programs) (Literature review)	Chapter 2
	Review of scholarship program evaluations by other donors (i.e., organizations in other countries) (Literature review and interviews with individuals related to the selected case studies)	
(2) Configuring logic/theory of JICA scholarship programs	Constructing a ToC on scholarship programs	Chapter 3
	Constructing a ToC on ABE Initiative	
	Constructing a ToC on Kizuna Program	
(3) Case studies	Pilot implementation of an outcome evaluation for ABE Initiative (Quantitative and qualitative analysis of the occurrence of outcomes and causal relationships based on web-based questionnaires and interviews)	Chapter 4
	Pilot implementation of an outcome evaluation for Kizuna Program (Qualitative analysis of the occurrence of outcomes based on interviews)	
(4) Recommendations for future evaluation	Recommendations focusing on methodologies/methods for future outcome evaluations	Chapter 5

1.3. Study Team

This study was conducted by a team of four consultants as shown in the table below.

Table 1-2: Study Team

Member	Scope of Work
Takako HARAGUCHI (i2i Communication)	Review of JICA scholarship programs Qualitative analysis for case studies
Hiroshi NISHINO (Metrics Work Consultants)	Organizing the logic/theory of JICA scholarship programs Quantitative analysis for case studies
Keiko MASAMOTO (Asia SEED)	Outlining JICA scholarship programs Conducting remote and on-site interviews for case studies
Mihoko KIKUCHI (Metrics Work Consultants)	Review of scholarship program evaluations by other countries' organizations Web-based questionnaire for case studies

1.4. Study Period

The overall study period was from September 2020 to September 2021, and the study was conducted in the following schedule:

- September to November 2020: Literature review on existing scholarship program evaluations and organizing logic/theory of JICA scholarship program

- December 2020: Creating a detailed study plan for case studies and interviews in Japan

- January to February 2021: Conducting web-based questionnaire for case study validation

- February to March 2021: Field study to verify case studies in Kenya and Rwanda (with interviews in Rwanda conducted remotely from Japan)

- April to August 2021: Interviews with people involved in evaluations of other countries' scholarship programs, compilation of study results for case studies, and recommendations for future evaluations of JICA scholarship programs

1.5. Notes on the Study

- Since the central theme of this study is the analysis of outcomes, it does not include analysis related to the evaluation of the implementation process and outputs of scholarship programs.

- As one of the case studies, the Kizuna Program, was conducted on a limited scale, the results of the case study are reported mainly for the purpose of providing knowledge and insights for full-scale evaluation in the future. It should be noted that its results are not meant to be programmatic evaluation results. In addition, it should be noted that although the Kizuna Program was selected as a case study of scholarship programs related to the JICA Development Studies Program, the result of the analysis does not represent the evaluation

of the entire Program, since it is one of its constituent programs along with the ABE Initiative.

● Due to COVID-19, remote interviews from Japan were conducted in Rwanda instead of a field study. Remote interviews were used whenever possible also in Kenya. As a result, we completed a limited number of interviews as it was difficult to make appointments for interviews with the individuals in the organizations where ex-participants worked.

● The results of the web-based questionnaire and interviews suggested that COVID-19 had a significant impact on the job search activities of ex-participants, especially among those who returned to their home countries between the latter half of 2019 and 2020. In addition, it should be noted that it is likely that COVID-19 has also constrained projects and operations in which ex-participants are involved after returning to their home countries and the development of business operation in Africa by Japanese companies.

● As described later in the report, this study compared participants and non-participants of the ABE Initiative to evaluate the outcomes of the ABE Initiative. Efforts were made to select non-participants with the same attributes as the participants as much as possible in order to make an appropriate comparison. However, the survey response rates were different between the participants and non-participants, and we cannot rule out the possibility that this may have affected the results of the analysis.

Chapter 2　Reviews of Existing Evaluation of Scholarship Programs

This chapter reviews the existing evaluations of scholarship programs by JICA and other donors.

2.1.　Evaluations of JICA Scholarship Programs

2.1.1.　Overview of JICA Scholarship Programs

(1) General Information

Based on the discussion with relevant departments of JICA, we decided to include the following types of JICA scholarship programs in the study:

- The study primarily reviews projects/programs that fall in the following categories: Long-Term Training Program, Japanese Grant Aid for Human Resource Development, and Yen Loan Scholarship Program.

- In view of the resources of this study, we exclude those yen loan projects and technical cooperation projects with a study abroad component that do not primarily focus on "obtaining a degree in Japan."

- For the same reason, non-degree programs and short-term training programs are also excluded.

The following is a summary of JICA scholarship programs that constitute the focus of the study: Long-Term Training Program, Japanese Grant Aid for Human Resource Development, and Yen Loan Scholarship Program.

Long-Term Training Program

The Long-Term Training Program,[5] which has been implemented in developing countries since 1999, is designed for individuals who are expected to play key roles in the future in government agencies, research institutions, universities, and other organizations that have important relationships with Japan, individuals who need to acquire advanced knowledge to solve development issues in their own countries, and young government officials who are expected to play important policy-making roles in the future. The goal of the program is to provide these participants with opportunities for building research and personal networks and earning degrees at Japanese universities. In addition to developing leaders who would contribute to the development of their home countries, the program also aims to develop "Japanese counterparts," including "Japanologists" and "Japanophiles." Furthermore, the participants of the Long-Term Training Program also participate in programs designed to promote

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[5] Participants of JICA's "Long-Term Training Program" refers to "participants who are accepted for a period of one year or more with the goal of acquiring comprehensive and advanced knowledge or skills that would be difficult to acquire in a program that lasts less than one year" (JICA internal regulations).

understanding of Japan under the concept of the JICA Development Studies Program.[6] The Long-Term Training Programs are implemented as individual programs under the scheme of technical cooperation, including Technical Cooperation projects.

<u>Japanese Grant Aid for Human Resource Development</u>

The Grant Aid for Human Resource Development is a grant aid program for foreign students (Japanese Grant Aid for Human Resource Development Scholarship: JDS) established in 1999 under the government's "100,000 Foreign Students Plan." In this program, talented young government officials who are expected to become leaders in the future in target countries are accepted as international students. The purpose of the program is to enable them to use their expertise acquired in Japan to play an active role in the planning and implementation of social and economic development plans and to help expand and strengthen the foundation of friendly bilateral relations with Japan after returning to their home countries.

<u>Yen Loan Scholarship Program</u>

The Yen Loan Scholarship Program is a form of Japanese ODA loan that provides yen loans for projects that involve overseas study. It supports projects that send foreign students to Japan and other countries in order to train and strengthen the capabilities of government officials, engineers, researchers, and other personnel in developing countries, and thereby to contribute to the improvement of developing countries' ability to formulate and implement economic and development policies and to upgrade their industrial technology and research capabilities. The objectives, target participants, duration, and degree levels between countries and between projects.

The characteristics of each program are summarized as follows.

Table 2-1: Summary of JICA Scholarship Programs

	Long-Term Training Program	Japanese Grant Aid for Human Resource Development	Yen Loan Scholarship Program
Implementing body	JICA	JICA	National governments
Objectives	・To develop leaders who will contribute to the development of the country in the future ・To develop "Japanese counterparts" such as "Japanologists" and "Japanophiles"	・To develop human resources for young government officials, researchers, and practitioners who have the potential to become future leaders of the 21st century in their respective fields ・To develop "Japanese	To train and strengthen the capabilities of government officials, engineers, researchers in developing countries, thereby contributing to the improvement of developing countries' ability to formulate

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[6] The JICA Development Studies Program invites to Japan leaders who are expected to support the future and development of developing countries and provides them with opportunities to learn both Japan's modern development experience, which is different from that of Europe and the United States, and the knowledge Japan has accumulated after World War II as a donor country. In the JICA Development Studies Program, JICA works with Japanese universities that support the purpose of the program, individuals from developing countries come to Japan to learn Japan's development experience (Japan's modernization experience and knowledge as a donor in the postwar period) in English, in addition to studying and conducting research in their specialized fields during their university degree programs. (https://www.jica.go.jp/jica-dsp/english/about/ku57pq00002j4x5x-att/Brochures.pdf)

	Long-Term Training Program	Japanese Grant Aid for Human Resource Development	Yen Loan Scholarship Program
		counterparts" such as "Japanologists" and "Japanophiles"	and implement economic and development policies and to upgrade their industrial technology and research capabilities
Eligible applicants	・High-level counterparts in the two JICA project areas above (government agencies, research institutes, and universities that have important relations with Japan) ・Influential individuals who will be involved in policy-making in the future	Researchers, young government officials, practitioners who have the potential to become leaders of the 21st century	*As defined in each program
Eligible country	All target countries of technical cooperation	14 countries (Uzbekistan, Laos, Vietnam, Cambodia, Mongolia, Bangladesh, Myanmar, the Philippines, Kyrgyzstan, Tajikistan, Sri Lanka, Ghana, Nepal, East Timor, Pakistan, and Bhutan) (Indonesia is included until FY2006, and China until FY2012. Starting in FY2021, JICA plans to start accepting participants from Maldives, Kenya, and El Salvador.	Countries eligible for yen loan
Eligible field	・Knowledge support: assistance in formulating national policies and systems related to legal systems, administrative systems, long-term economic planning, and educational systems ・Global issues: prevention of global warming, protection of the natural environment, AIDS, maternal and child health, etc.	Fields in which Japan offers a comparative advantage in obtaining a degree and priority fields that are essential to the economic and social development of the recipient country (to be determined by agreement with the recipient country, and will vary from country to country)	*As defined in each program
Degree	Master, Doctor	Master, Doctor	Bachelor, Master, Doctor *As defined in each program
Fees and expenses covered	・Tuition: Application fee, entrance fee, tuition ・Scholarship: An amount equal to the Japanese Government Scholarship	Tuition: Application fee, entrance fee, tuition Scholarship: An amount equal to the Japanese Government Scholarship (Other allowances are the same as those for JICA long-term	*As defined in each program

	Long-Term Training Program	Japanese Grant Aid for Human Resource Development	Yen Loan Scholarship Program
	・ Airfare (when coming to Japan and returning home) ・ Preparation expenses ・ Document mailing expenses	training program.)	
Characteristics	Long-term training in which counterparts of JICA's technical cooperation projects and persons related to cooperation programs are hosted in Japan	Program to accept foreign students through grant aid	Internationally coordinated programs, such as twinning programs and linkage programs, may be formed based on requests from governments in developing countries.
Example	ABE Initiative, Kizuna program, SDGs Global Leader, Innovative Asia, Afghanistan PEACE, etc.	Japanese Grant Aid for Human Resource Development Scholarship: JDS	Malaysia Higher Education Loan Fund Project (HELP), Indonesia Professional Human Resource Development Project (PHRDP), Mongolia-Japan Higher Engineering Education Development Project (MJEED), Egypt-Japan Education Partnership: Human Resource Development Project (EJEP)

Source: Created by the study team based on JICA documents and websites

(2) Overview of JICA Scholarship Programs included in case studies

The following is an overview of the ABE Initiative and Kizuna Program, which are reviewed through case studies in the study.

a) ABE Initiative

At the 5th Tokyo International Conference on African Development (TICAD V) held in 2013, Japan announced the ABE Initiative. Recognizing the importance of promoting human exchange between Japan and Africa and education that directly leads to employment through vocational and higher education, the Initiative provides postgraduate education and internship opportunities at Japanese companies for young people from Africa who come to Japan to study.

It was announced at TICAD VI in 2016 that the Initiative would continue. The outline of the ABE Initiative is as follows.

Table 2-2: Outline of ABE Initiative

Objective	1) Developing industrial human resources as a key to Africa's growth 2) Fostering African business or Japanese companies and building networks as "Navigators"
Period	ABE 1.0: 5 batches between FY2014 and FY2018 ABE 2.0: 3 batches between FY2016 and FY2018 ABE 3.0: 6 batches between FY2019 and FY2024
Target number of participants (for JICA)	ABE 1.0: 1,000 ABE 2.0: 600 ABE 3.0: 1,200
Country	54 countries in Africa
Participant	Private-sector professionals, public-sector professionals, and education professionals
Eligible field	ABE 1.0 and ABE 2.0: All academic fields ABE 3.0: priority fields specified by each country
Degree	Master
University	158 graduate schools in 76 universities (as of the arrival of the 5th batch)
Alumni	Kakehashi Africa (Headquartered in Nairobi, Kenya) *An organization established by volunteers from ex-participants that functions as an alumni association
Programs	・ Master's degree; internship at a company through a joint program between the Japanese government and industry (during the summer or after graduation) ・ Developing high-level industrial human resources in Africa who understand Japanese society and culture through long-term overseas study in Japan ・ Participation in gathering events and networking fairs with Japanese companies; entrepreneurship training; company tours ・ Follow-up programs after returning to home country: local networking fairs, support for some job-seeking ex-participants, monitoring, etc.

Source: Created by the study team based on JICA documents

b) Kizuna Program

For developing countries endowed with useful mineral resources, mineral resource development is a powerful growth strategy that generally yields results in a shorter period of time than cultivating and developing other industries. However, in order for developing countries to achieve sustainable development through the development and utilization of mineral resources, it is important to engage in mineral resource management in a broad range of areas, including legal systems, resource exploration, development, mine closure, security, mine pollution prevention, social and economic measures around mines, public good management, and environmental measures. Sustainable development also requires support from developed countries with a great deal of knowledge.

Against this background, JICA has started accepting foreign students through the Kizuna Program to help build mutually beneficial relationships with developing countries through human resource development in the mining sector, with the goal of supporting development issues in the mining sector of developing countries while securing Japan's resources. The outline of the program is as follows.

Table 2-3: Outline of Kizuna Program

Objective	To build mutually beneficial relationships with developing countries through the development of human resources in the mining and geothermal sectors in developing countries, with the goal of supporting development issues in the mining and geothermal sectors in developing countries while securing Japan's resources.
Period	10 batches between September 2014 and September 2023
Target number of participants	200 or more for 10 years
Country	Countries vary depending on the fiscal year FY2020 Mining: Philippines, Vietnam, Myanmar, Cambodia, Laos, Fiji, Papua New Guinea, Mongolia, Kazakhstan, Ecuador, Bolivia, Malawi, Botswana, Mozambique, Madagascar, Zambia, Tanzania, Zimbabwe, Namibia, South Africa Geothermal: Indonesia, Peru, Ecuador, Costa Rica, Kenya, Ethiopia, Djibouti
Participant	・Current government officials and technical officers in charge of mining administration (development of mining-related laws, policy planning in mining, geological survey, mineral resource management, environmental/mine safety administration, etc.) and geothermal development in governments in developing countries ・Current and prospective university faculty and researchers in the mining fields (geology, geophysics, geochemistry, exploration engineering, mining, beneficiation, smelting, etc.) and geothermal fields. ・In addition to mining, a wide range of resource fields (oil, coal, and other energy resources) are also eligible. Personnel from the private sector may also be considered.
Eligible Field	Mining and geothermal studies
Degree	Master, Doctor
University	8 universities
Programs	・Providing opportunities for visits, training, various lectures and presentations at government agencies and companies during summer and spring breaks (JICA short-term program), and internships ・As part of the research, participants are expected to participate in an overseas field survey for underground resources. JICA will pay expenses, including airfare and daily expenses (daily allowance and accommodation).

Source: Created by the study team based on JICA documents

2.1.2. Review of Evaluations of JICA Scholarship Programs

(1) Programs included in the review

This study reviewed published JICA project evaluation reports and study reports that fall under the categories of Long-Term Training Program, Japanese Grant Aid for Human Resource Development, and Yen Loan Scholarship Program. However, yen loan projects and technical cooperation projects with a study abroad component that did not mainly focus on "obtaining a degree in Japan" were excluded.

The following list shows the number of programs that meet the criteria of this study for which different stages of the programs had been evaluated (and had their results published) as of October 2020.

1) 83 programs with ex-ante evaluation: 2 programs for Long-Term Training Program (PEACE

and PEACE 2), 76 programs for Japanese Grant Aid for Human Resource Development (all programs are from JDS), 5 programs for Yen Loan Scholarship Program (EJEP, HELP 3, PHRDP 3 and PHRD 4, MJEED)

2) 1 program with evaluation during the program implementation period: 1 program for Long-Term Training Program (mid-term review of PEACE), 0 programs for Japanese Grant Aid for Human Resource Development, 0 programs for Yen Loan Scholarship Program

3) 8 programs with ex-post evaluation: 0 programs for Long-Term Training Program, 2 programs for Japanese Grant Aid for Human Resource Development (JDS. Although these are not project-specific ex-post evaluations, they are included here because their outcomes have been evaluated in the Basic Research studies (2014 and 2019) by the JICA Financial Cooperation Implementation Department), 6 programs for Yen Loan Scholarship Program (including project-specific ex-post evaluation (PHRDP 1-2, HELP 1-3) and a study by JICA Research Institute (HELP 2), which is not a project-specific ex-post evaluation but evaluates outcomes)

The findings for each scheme are as follows.

● With respect to the Long-Term Training Program, only Afghanistan PEACE, which was implemented as a technical cooperation project, seemed to have conducted ex-ante and mid-term evaluations. In line with the technical cooperation project framework, the project objectives (overall goal and project purpose) and indicators were specified in the ex-ante evaluation report for this project. Indicators for the project purpose included "Number of degree recipients" and "Degree attainment rate" (PEACE 1), "Return to work rate," "Utilization of research results by ex-participants," "Affiliations of ex-participant," and "Evaluation of ex-participant" (PEACE 2), while the indicators for overall goal included "Status of implementation of sector development strategies" (PEACE 1), "Number of policies in which ex-participants were involved," "Number of projects in which ex-participants were involved," and "status of development planning and policy formulation by target ministries" etc. (PEACE 2).

● With respect to the program of the Japanese Grant Aid for Human Resource Development, ex-ante evaluations have been conducted, but no ex-post evaluation has been planned. Only periodic monitoring has been scheduled according to the "future evaluation plan" set out in the ex-ante evaluation report. Quantitative indicators that are common in their ex-ante evaluation reports are "number of participants" and "degree acquisition rate." These reports also list common qualitative effects; they are, "acquisition of specialized knowledge that contributes to solving problem," "strengthening the functions of the relevant organization by contributing to planning and policy-making and demonstrating leadership after returning home," and "contributing to the building of mutual understanding and friendly relations between the two countries, strengthening the international competitiveness of the host university, and strengthening international intellectual networks." The details of the basic research for 2015 and 2020, which can be regarded as equivalent to ex-post evaluation, are

explained later.

● Since the Yen Loan Scholarship Programs are subject to JICA's project evaluation, ex-ante and ex-post evaluations have been conducted for this type of projects in a consistent manner (an ex-ante evaluation, or its equivalent, is conducted for all projects, including those projects that are not listed under Category 1 (i.e., projects for which ex-ante evaluations have been published)). The details of the ex-post evaluations are shown later.

Table 2-4 summarizes the results of our review of the programs in Category 3. These eight projects involved outcome evaluation, which is the object of the current study.

Table 2-4: Ex-Post Evaluations of JICA Scholarship Programs Reviewed in the Study

No	Name of Evaluation (tentative name)	Country	Name of Program	Year of Evaluation	Name of Report
1	Basic Research on JDS (2014)	multiple	Project for Human Resource Development Scholarship (JDS)	2014	International Development Center of Japan (June 2015), "JICA Basic Research: Verification of the Outcome of the Project for Human Resource Development Scholarship (JDS)"
2	Basic Research on JDS (2019)	multiple	Project for Human Resource Development Scholarship (JDS)	2019	International Development Center of Japan (February 2020) "JICA basic research factor analysis of the outcome of Japanese grant aid for human resource development scholarship (JDS)"
3	PHRDP 1 Ex-post evaluation	Indonesia	Professional Human Resource Development (PHRDP)	2000	Ex-post Evaluation Report FY 2000 "Professional Human Resource Development"
4	PHRDP 2 Ex-post evaluation	Indonesia	Professional Human Resource Development (2) (PHRDP 2)	2006	Ex-post Evaluation Report FY 2006 "Professional Human Resource Development (2)"
5	HELP Ex-post evaluation	Malaysia	Higher Education Loan Fund Project (HELP)	2004	Ex-post Evaluation Report FY 2004 "Higher Education Loan Fund Project"
6	HELP 2 Ex-post evaluation	Malaysia	Higher Education Loan Fund Project II (HELP 2)	2014	Ex-post Evaluation Report FY 2014 "Higher Education Loan Fund Project II"
7	HELP 3 Ex-post evaluation	Malaysia	Higher Education Loan Fund Project III (HELP 3)	2018	Ex-post Evaluation Report FY 2018 "Higher Education Loan Fund Project III"
8	Study by JICA Research Institute	Malaysia	Higher Education Loan Fund Project II (HELP 2)	2010	Koda, Y. & Sakata, N. (2012). The Labor Market Outcomes of Two Forms of Cross-Border Higher Education Degree Programs between Malaysia and Japan. JICA-RI Working Paper 41.

Source: Created by the study team based on individual reports

(2) Objective of JICA Scholarship Programs

In the ex-post evaluations of these JICA scholarship programs, project objectives were clearly defined as they were all project-based programs, and ex-ante evaluations were conducted. In the ex-ante

evaluation of a JICA project, project objectives are organized into two levels: direct outcome level and indirect outcome (impact) level. In addition, in the case of scholarship programs implemented under the scheme of technical cooperation projects, a project design matrix (PDM) has been prepared. The PDM is used to set the project purpose (direct outcome level) and overall goal (indirect outcome level).

The direct outcome level includes human resource development and skill acquisition. The indirect outcome (impact) level includes the contribution of the human resources who have received training in the program and the skills they acquired in solving problems and economic development. The ex-post evaluation uses existing documents to define such program objectives as more specific individual outcomes (e.g., acquisition of skills and degrees, application of acquired skills (e.g., receiving promotion after returning home), change in moral character, and development of industry and the field). Then, the evaluation verified the degree of achievement of each of these outcomes.

This study reviewed the levels of outcomes in accordance with the model shown in Figure 2-1 below.

Table 2-5: Objectives of JICA Scholarship Programs and Outcomes Verified in Ex-post Evaluation

No	Name of Evaluation (tentative name)	Project purpose (direct outcome level)	Overall goal (indirect outcome level)	Specific outcomes verified in ex-post evaluation
1	Basic Research on JDS (2014)	Project purpose: To acquire necessary expertise	Overall goal 1: To contribute to the resolution of development issues in their home country by applying acquired knowledge Overall goal 2: To play an active role in understanding Japan and strengthen the friendly relationship between the two countries	1) Degree completion rate and return to work rate of ex-participants 2) Promotion and salary increase of ex-participants 3) How ex-participants make use of the knowledge and skills they acquired 4) Satisfaction of ex-participants with the JDS program and their favorable rating of Japan 5) Contribution to solving development issues 6) Contribution to strengthening bilateral relations
2	Basic Research on JDS (2019)	Same as No.1 above	Same as No.1 above	1) Degree completion for JDS participants and acquisition of necessary knowledge and skills 2) Returning to work as a public servant by ex-participants (current rate) 3) Utilization of acquired knowledge and skills by ex-participants 4) Contribution to solving development issues (the proportion of ex-participants in manager or higher positions, the formation of a critical mass) 5) Contribution to strengthening bilateral

No	Name of Evaluation (tentative name)	Project purpose (direct outcome level)	Overall goal (indirect outcome level)	Specific outcomes verified in ex-post evaluation
				relations 6) Impact on universities in Japan
3	PHRDP 1 Ex-post evaluation	To develop human resources with more advanced knowledge and skills, especially in the civil service, and improve the capacity to formulate and implement human resource development policies through the development of organizations and infrastructure for human resource development policies	To promote economic development	1) Contribution to higher-level plans for human resource development and training (increase in the number of degree completions) 2) Changes in the personal qualities of the participants before and after their overseas study in Japan 3) Contribution to the country
4	PHRDP 2 Ex-post evaluation	To develop human resources with advanced knowledge and skills to become core personnel in governmental institutions	To contribute to the promotion of economic development	1) Number and rate of degree completion 2) Position and return to work rate of ex-participants after returning to their home countries 3) Capacity building of government officials 4) Raising the level of academic achievement 5) Promotion of decentralization 6) Improving governance 7) Gender
5	HELP Ex-post evaluation	To train engineers	To enhance the Look East Policy and to contribute to Malaysia's economic development through the dissemination of science and technology	1) Degree Completion 2) Career paths of participants after graduation (employment or continuing to a higher level of education) 3) Increase in the number of international students from Malaysia to Japan 4) Acquisition of Japanese technology, culture, work ethics, and management systems 5) Dissemination of science and technology in Malaysia
6	HELP 2 Ex-post evaluation	To develop core engineers	To contribute to Malaysia's economic development through the development of science and technology	1) Graduate, find employment, or continue to a higher level of education after acquiring capabilities required for core engineers 2) Participants find professional employment as core engineers 3) Contributing to the economic development of Malaysia through the development of science and technology
7	HELP 3 Ex-post	To develop engineers with	To contribute to the enhancement of	1) Training of engineers with advanced technology and work ethics required for

No	Name of Evaluation (tentative name)	Project purpose (direct outcome level)	Overall goal (indirect outcome level)	Specific outcomes verified in ex-post evaluation
	evaluation	advanced skills and work ethics necessary for development, research, etc.	industrial competitiveness necessary for Malaysia's economic development and the promotion of friendly relations between the two countries	development and research, etc. (Improvement in their skills and abilities) 2) Growth and expansion of engineers and manufacturing industry in Malaysia 3) Contribution to stronger industrial competitiveness 4) Contribution to the promotion of friendly bilateral relations 5) Benefit to Japanese companies in Malaysia 6) Contribution to the expansion of higher education in Malaysia by expanding local education programs 7) Long-term effects through all phases of HELP
8	Study by JICA Research Institute	Same as No. 6 above	Same as No. 6 above	1) Employment status of ex-participants 2) Salary level of ex-participants

Source: Created by the study team based on individual reports
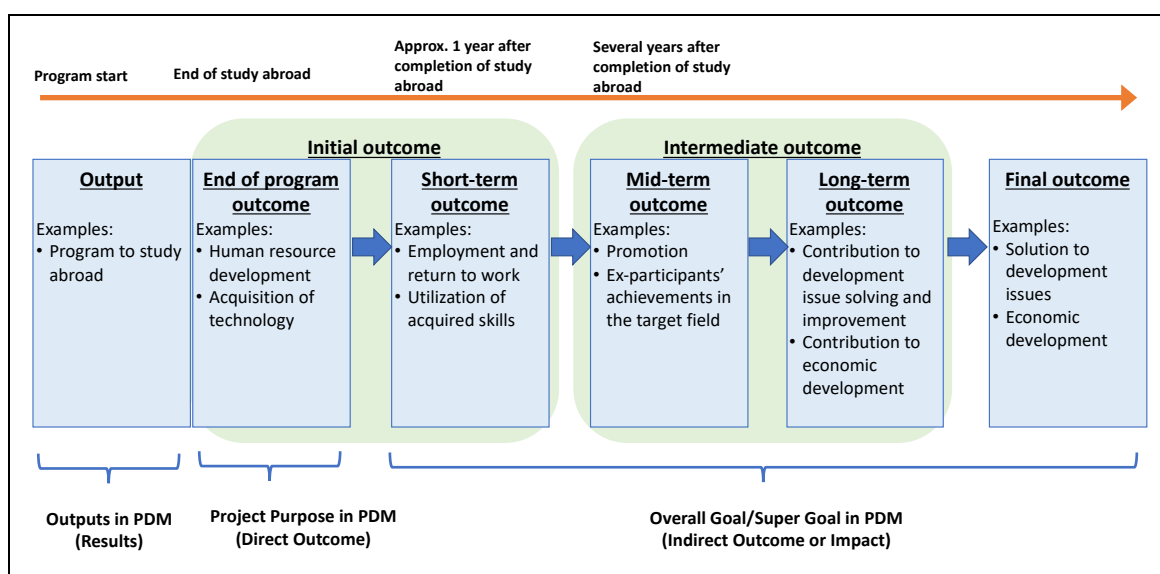
Note: The time axis in the upper part of the figure is an example.
Source: Created by the study team

Figure 2-1: Framework for Output and Outcome Levels

(3) Evaluation Criteria

Since all of the JICA scholarship programs that were formally evaluated were project-based programs, evaluation was conducted using the Development Assistance Committee (DAC) five evaluation criteria[7] based on JICA's framework for ex-post evaluation. These evaluations or studies evaluated

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[7] In line with the redefinition of the DAC 5 evaluation criteria by OECD-DAC and the addition of a new criterion (consistency), JICA will use the DAC 6 evaluation criteria in the ex-post evaluation of individual projects after FY2021.

outcomes and impacts using the outcomes listed in Table 2-5 as evaluation criteria or sub-criteria and verified the degree of achievement by assigning indicators to each of them.

These evaluations and studies used various quantitative and qualitative indicators, including those set in the ex-ante evaluation report. Many of the quantitative indicators for initial outcomes (organized as outputs in some evaluations), such as "degree acquisition rate," "employment rate," and "return to work rate," are common. The mid- to long-term outcomes include outcomes that are concerned about individual participants, such as their performance in the workplace, and those that impact their surroundings, such as the development of their organizations and related industries and their contribution to development issues. For the first type of outcomes, there are some quantitative indicators such as "promotion rate or salary increase rate" and "management position rate" (the Study by JICA Research Institute also considered "monthly income"); however, in general, the majority of indicators qualitatively measure the achievements of ex-participants. Regarding the second type of outcomes (impact on the surroundings), most of them qualitatively described how ex-participants contributed to policy-making and problem-solving, and did not use quantitative indicators such as "the number of policies in which ex-participants were involved" or "the number of projects in which ex-participants were involved," which were used in PEACE 2 (ex-ante evaluation only). Some ex-post evaluations also used national and industry macro-indicators, but they only stated that the ex-participants were included in these indicators without providing a detailed analysis. In setting indicators to measure mid- to long-term outcomes, the indicators used in the next section, "2.2 Evaluation of Scholarship Programs by Other Donors," may be helpful: "percentage of new organizations or programs created after completion," "percentage of improvements in the workplace or community," and "the existence of activities related to the Sustainable Development Goals (SDGs)."

Table 2-6: Indicators Used in Ex-post Evaluations of JICA Scholarship Programs

(Items marked with an asterisk (*) were not found in scholarship program evaluations by other donors as described in Section 2.2 below.)

Timing of occurrence	Outcome	Indicators
End of the program	Completion of the study	· Dropout rate; Degree completion rate · Percentage of participants who graduated in the minimum duration of the study program; Repeat rate (HELP)*
End of the program	Satisfaction with the scholarship program	· Degree of satisfaction
End of the program	Status of acquiring skills and knowledge	· Whether the participants acquired skills and knowledge
End of the program	Status of developing connections and networks	· Whether the participants developed connections with universities, companies, etc.
Short-term Mid-term	Contribution to personal career	· Degree of importance of skills, knowledge, and connections gained from study abroad to career development · Degree of influence of the scholarship program on career prospects and abilities · Employment rate · Sector of employment · Degree to which the skills and knowledge gained

Timing of occurrence	Outcome	Indicators
		from the study abroad experience are utilized in the workplace ・ Degree of continuity of connections made during study abroad ・ Applications of the connection ・ Promotion rate; Salary increase rate ・ Percentage of ex-participants with increased technical and managerial responsibilities ・ Monthly income at the current position (study by JICA Research Institute)* ・ Female participation rate in study abroad*
Short-term Mid-term Long-term	Contribution to the workplace and local community	・ Return to work rate ・ Percentage of managers or higher ranks ・ Availability (or not) of examples of how the skills and knowledge gained from studying abroad are used in the workplace ・ Degree completion rate in their organization* ・ Degree of influence on interest in and commitment to country-level issues and solutions ・ Examples of influence on policy ・ Publication records ・ Macro data such as value-added of target sector industries, number of engineers (HELP), decentralization index, governance index country ranking (PHRDP), etc.*
Long-term	The public's favorable rating toward the host country (Japan)	・ Japanophilia
Short-term Mid-term	Benefits to the host university*	・ Whether the university's expectations for the program have been met (HELP)*

Note: The timing of the occurrence of the outcomes in the first column is not specified in each evaluation.
Information in the column is provided on a tentative basis.
Source: Created by the study team based on individual reports

Although none of the evaluations reviewed mentioned ToC, they typically constructed a logic model (organizing outputs, outcomes, and impacts). A PDM was prepared for each of the PEACE projects as they were technical cooperation projects in which PDMs are mandatory for project management. In the JDS Basic Research (2014), the research team developed a PDM on an ex-post basis, but the report does not clearly explain how to divide each level of the outcomes vis-à-vis the PDM and the correspondence between the indicators specified in the PDM and the indicators actually studied.

(4) Data Collection Method

Among the quantitative indicators, data available by the end of the study abroad, such as the degree completion rate, were based on the data provided by JICA. These data were supplemented by the data provided by implementing agencies and interviews with implementing supporting agencies.

The majority of these evaluations collected information for qualitative indicators using Likert scales.[8]

In these evaluations, a combination of email or web-based surveys and in-person interviews was conducted in Japan and in target countries. Although all evaluations used a complete enumeration, the response rates varied, as there were many cases where contact information was not available. In all cases, multiple follow-up notifications were conducted to improve the response rate.

(5) Analysis Method

All of them used both quantitative and qualitative methods to analyze data. As for quantitative indicators, there are several cases where the degree acquisition rate was assessed without providing any basis for such assessment, but all of them reported clearly high acquisition rates. Other methods for assessing quantitative indicators included a comparison with the results of previous studies, if any, and a comparison with the average value of the applicable country.

Many questionnaire results were shown as descriptive statistics by converting the Likert scales into points (even though the statistical validity of calculating the average is sometimes questioned, this is a common practice). In addition, Radar Charts and Rankings[9] were used in these evaluations. There are also several evaluations that used regression analysis and other statistical methods to analyze the factors that influenced indicators.

The JICA Research Institute Study (HELP 2) used quantitative analysis (regression analysis) to compare the effectiveness of the program with similar programs.

Many evaluations reported good practices and process descriptions. However, many studies did not offer explicit discussion on whether such good practices were common among all ex-participants or whether they were confined to few cases.

2.1.3. Status of Evaluations of the JICA Scholarship Programs Examined in Case Studies

With regard to the ABE Initiative and Kizuna Program, which are examined in this study through case studies, evaluations on these programs used monitoring (mainly to confirm the results of acceptance and career paths after graduation) and described good practices, such as the activities of ex-participants; however, these evaluation studies did not include components that assessed the value of the projects.

The literature review and interviews with JICA's relevant departments indicated that the evaluations

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[8] A Likert scale is a method of asking respondents to select a response from several options (strongly agree, agree, neither agree disagree, disagree much, strongly disagree, etc.) representing the degree to which they agree with a statement presented in a question.

[9] In a Radar Chart, the axes drawn from the center of a regular polygon to its vertices are used to plot the results of each construct under investigation as a score (e.g., 1 to 5) to form a diagram by connecting these scores with lines. Ranking is a method in which choices for individual survey questions are shown in order of most frequently selected responses.

of the ABE Initiative and Kizuna Program had the following characteristics:

- Availability of reports on monitoring and evaluation: Unlike in other JICA projects, no ex-ante evaluation reports or monitoring reports have been produced for these programs (the Japan International Cooperation Center (JICE), to which part of the program operation was outsourced), provided a completion report for each contract period and an implementation report for each program).

- Objectives and Indicators: The program objectives (as discussed above) are defined only in general terms in JICA's internal documents and other information and public relations materials designed for external audiences. However, it appears that the stakeholders share the understanding of specific outcomes (e.g., the types of human resources in the private, government, and education sectors envisioned as "industrial human resources" and "Navigators" that are to be developed through the ABE Initiative). In addition to human resource development, which is the main objective of both programs, stakeholders of these programs also share the expectations for outcomes for each actor, such as individual participants, organizations the organizations where they currently work, their home countries, the host country (Japan), Japanese universities that have accepted participants, and companies that have accepted interns. However, no documents related to these programs clearly defined these expectations. Furthermore, it seems that these programs failed to properly define the outcomes for different timeframes (short-term, medium-term, long-term, etc.) and the structure (design) of the program to achieve them.

- Evaluation issues: The JICA's relevant departments are aware of the following issues concerning these programs.

ABE Initiative

- There is a lack of analysis on the impact of human resource development from a medium- to long-term perspective. The program has not established evaluation methodologies and criteria that can adequately handle programs that cover multiple fields in 54 African countries.

- Prior studies have examined and identified evaluation indicators that could be applied to JICA scholarship programs. However, since the ABE Initiative has additional objectives, such as industrial development and contribution to Japan's business development in Africa, it is necessary to consider methods for measuring results that match the characteristics of such programs.

Kizuna Program

- Results need to be compiled and measured.

2.1.4. Issues to be Addressed in this Study

Based on these observations, we selected the following evaluation issues concerning JICA scholarship programs to be addressed in this study. The study attempts to perform outcome evaluations of the ABE initiative and Kizuna Program by applying evaluation methods capable of addressing these issues (see Chapter 4).

- Organizing multi-layered objectives of the programs: The outcomes envisioned for each program range from short-term outcomes to long-term outcomes and are expected to produce different outcomes (or secondary effects) for different actors. This study uses the ToC approach (explained in Chapter 3) to organize them.

- Identification of the path through which various outcomes manifest: ToC analyzes factors that might influence the achievement of outcomes by envisioning not only the outcomes that are expected to be achieved but also the prior outcomes and assumptions that are necessary to achieve them.

- Programmatic outcomes beyond demonstrated good practices: Indicators will be set for each of the outcomes organized in ToC to verify the outcomes of the entire program. In addition, we will verify whether these outcomes are attributable to these scholarship programs by comparing results with the Counterfactual.

2.2. Scholarship Program Evaluations by Other Donors

In this study, the study team reviewed the methodologies used in scholarship program evaluations by other donors through a literature review and interviews and surveys with some donor organizations. The results are reported in this section.

Existing literature reviews of the evaluation methodology by other donors include "A study of methodology used in evaluations of JICA scholarship programs" (JICA, 2003) and "A study of research methodology used in evaluations of scholarship schemes for higher education" (UK Commonwealth Scholarship Commission, 2014).

The 2003 JICA study contacted several organizations in the United Kingdom, the United States, Germany, France, and the United Nations Educational, Scientific and Cultural Organization (UNESCO), but only five organizations provided information on evaluation (Table 2-7). The results of the study indicated that none of the donors had used defined evaluation methodologies for scholarship programs and that they had been still in a period of trial and error at that time.

Table 2-7: Scholarship Program Evaluations by Other Donors
Reviewed in the 2003 JICA Study

Country	Organization	Program
United States	Bureau of Educational and Cultural Affairs, Department of State (ECA)/American Council for International Education/Open Society Institute	Edmund S. Muskie/FREEDOM Support Act Graduate Fellowship Program
	ECA/Institute of International Education (IIE)	Educational Exchange Programs in Turkey
		Hubert H. Humphrey Fellowship Program
	Ford Foundation	International Fellowship Program
Germany	BMZ/InWEnt (former CDG and DSE)/Central Employment Agency	CDG and DSE Long-term Catalogue Programmes
International organization	UNESCO	UNESCO Fellowships Program

Source: Created by the study team based on "A study of methodology used in evaluations of JICA scholarship programs" (JICA, 2003)

A review by the UK Commonwealth Scholarship Commission in 2014 found that the methodology for evaluating scholarship programs was dominated by quantitative and qualitative ex-post evaluations that only examined participants, with only a few evaluations using comparison groups. In addition, the review pointed out that most of the programs used the Kirkpatrick Model,[10] which is a commonly used methodology to evaluate training programs. Although the DAC5 evaluation criteria were used by several other organizations (including AusAID, Norad, the European Union), the study stated that this was not a common practice. The study found that the following evaluation indicators had not been much examined so far: "comparison between expected and actual outcomes" (comparison between expected outcomes before study abroad and actual outcomes), "opportunity costs during the participants' study" (e.g., the absence of employees at the workplace), and "reintegration challenges after completing the study and returning home" (reemployment, returning to the community, reintegrating local connection, etc.).

2.2.1. Results of Literature Review

(1) Reviewed materials

In this study, we analyzed 16 evaluations conducted by other donors that had examined scholarship programs in which a degree is obtained. When selecting these evaluations, we considered whether or not the organization was included in the existing reviews discussed above, the availability of information regarding evaluation methodologies, and the balance between different institutional types (e.g., governmental organizations, foundations, international organizations, etc.). Other donors we reviewed consisted of seven governmental organizations, two foundations, and two international organizations, for a total of 11 organizations. The names of the organizations and programs reviewed in this study are shown in Table 2-8. In all cases. All of the evaluations reviewed were conducted

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[10] A theory proposed by Donald L. Kirkpatrick in 1975 that evaluates training effectiveness in four stages: reaction, learning, behavior, and results.

between 2012 and 2019.

In light of the recent influence of the Chinese government on scholarship programs, the Chinese Scholarship Council (CSC) was also included in the review. However, the only information we could obtain from its website was that it conducts an annual review of current participants in terms of their grades, attitudes to study, and attendance. Since the CSC did not publish any evaluation reports or similar documents, we could not ascertain whether it verified the outcomes and impacts after participants completed the scholarship program or identify the evaluation criteria and methodologies used in its evaluation. For this reason, the following analysis of evaluations is based on our review of the evaluation reports of 15 programs from 10 organizations other than CSC.

Table 2-8: Scholarship Program Evaluations by Other Donors Reviewed in the Study

Country	Organization	Program(s)	Case No. used in this study
United Kingdom	UK Commonwealth Scholarship Commission (DFID)	UK Commonwealth Scholarships	1
United States	The United States Agency for International Development (USAID)	LAC Higher Education Scholarships Program	2
		Fulbright Scholarship Support Program in Pakistan	3
		Egypt's Scholarships and Training for Egyptian Professionals Activity (STEP)	4
		USAID/Indonesia's Program to Extend Scholarships and Training to Achieve Sustainable Impacts (PRESTASI)	5
		Indonesia Graduate Training	6
	US Department of State, Bureau of Educational and Cultural Affairs (ECA)	Fulbright Foreign Student Program	7
	Ford Foundation	International Fellowship Program	8
Germany	German Academic Exchange Service (DAAD)	Bilateral SDG Graduate Schools Programme	9
		Development-Related Postgraduate Courses	10
Belgium	Belgian Development Cooperation	Belgian University Development Cooperation	11
Australia	The Australian Government Department of Foreign Affairs and Trade (DFAT)	Australia Awards Scholarships	12
Canada	The MasterCard Foundation	MasterCard Foundation Scholars Program	13
China	Chinese Scholarship Council (CSC)	The Chinese Government Scholarship Program	-
International Organization	UNESCO	UNESCO/Japan Young Researchers' Fellowship	14
	World Bank	Joint Japan/World Bank Graduate Scholarship Program (JJ/WBGS)	15

Source: Created by the study team

(2) Objectives of Scholarship Programs

We identified the objectives of the 15 scholarship programs for which we reviewed evaluation reports. All organizations cited the following as objectives: improving the knowledge, skills, abilities, and leadership of individual participants, increasing the capacity of their organizations after returning home, and developing future leaders and change-makers who can solve the problems of developing countries (and eventually the world). Objectives that were specific and exclusive to U.S. organizations included strengthening knowledge and skills for working in democratic societies, strengthening technical capacity in areas related to free trade agreements, fostering mutual cultural understanding and pro-U.S. sentiment, and promoting academic collaboration. The objectives cited by Australia's program included improving women's leadership and building networks for change, among others. The objectives of each program and the corresponding outcomes at the time of evaluation are shown in Table 2-9.

Table 2-9: Objectives of the Scholarship Program by Other Donors and Outcomes Verified through Evaluation

Case No.	Objectives	Specific outcomes verified in evaluation
1	To develop individuals who have the potential to become influential leaders, teachers, or researchers in their home countries	1) Contribution to the individual's career 2) Contribution to the workplace
2	To provide economically disadvantaged high school graduates from target countries in Latin America with opportunities for a two-year program and homestay in the United States to strengthen their knowledge and skills to become active members of democratic societies, enhance their technical skills in areas related to free trade agreements, and develop future leaders with an understanding of U.S. culture and pro-American sentiment	1) Contribution to the individual's career 2) Contribution to the workplace and community 3) Participating in the international community
3	To support participants' academic research, promote mutual understanding between Pakistan and the United States, and encourage collaboration between academic institutions and scholars in the two countries	1) Contribution to the individual's career 2) Contribution to U.S. development policy in Pakistan 3) Contribution to industry, academia, and government of Pakistan 4) Contribution to U.S. foreign policy toward Pakistan
4	To strengthen Egypt's higher education institutions, especially in STEM fields such as agriculture, environment, climate change, water management, business, science, technology, engineering, and mathematics, and enable young people, especially women, to contribute effectively to Egypt's economic growth and development	1) Contribution to U.S. development policy in Egypt 2) Contribution to the priority needs of Egypt's public, private, and academic sectors 3) Contribution to the workplace 4) Demonstrating leadership in Egypt's public, private, and academic sectors
5	PRESTASI 2: To help individuals and organizations improve their knowledge, skills, and abilities in order to contribute to Indonesia's economic growth and USAID's development objectives for Indonesia	1) Contribution to the individual's career 2) Contribution to the workplace and community

Case No.	Objectives	Specific outcomes verified in evaluation
	PRESTASI 3: To develop leadership skills of individuals and entities to achieve development objectives in key sectors	
6	To promote exchange and mutual understanding between the United States and Indonesia	1) Contribution to the individual's career and economic situation 2) Contribution to future personal development 3) Contribution to the community and workplace 4) Contribution to policy
7	To acquire the knowledge and skills to help solve local, national, and global challenges	1) Contribution to the individual's career 2) Contribution to the workplace 3) Contribution to issues at the national level 4) Contribution to the global effort of science
8	To ensure educational opportunities for disadvantaged community activists and develop the next generation of social justice leaders	1) Contribution to the individual's career 2) Higher education's contribution to social justice 3) Ex-participants' contributions to social justice
9	Details are not available	1) Provision of development-related education at the master's and doctoral levels 2) Ex-participants' contribution to the SDG-related issues
10	Details are not available	1) The Impact of studying abroad on the future of participants 2) Scholarship Results 3) The impact of study abroad on the participants' career
11	To help ex-participants solve development challenges	1) Completion of the degree program 2) Satisfied with the scholarship 3) Status of acquiring skills and knowledge 4) Status of developing personal connections and networks 5) Contribution to the personal career 6) Contribution to the workplace organization 7) Contribution to the target country
12	To enhance the leadership skills of human resources in developing countries, especially women, to contribute to their countries and build an influential network of global leaders and change-makers	1) Contribution to the individual's career 2) Developing a leadership identity 3) Contribution to women's leadership in the workplace and community 4) Contribution to government policy
13	To support the education and leadership development of talented young leaders from economically disadvantaged backgrounds	1) Academic performance 2) Contribution to the individual's career
14	To enhance capacity-building of human resources in developing countries	Case studies of research work conducted by fellows. Results after returning home were not evaluated.
15	To provide exposure to the latest techniques and knowledge through graduate studies, with the goal of encouraging and strengthening the development of human resources in developing countries	1) Contribution to the individual's abilities and career 2) Contribution to development-related fields

Note: Case numbers correspond to the case numbers in Table 2-8.
Source: Created by the study team based on each report

(3) Evaluation Criteria

All 15 evaluations we reviewed put emphasis on outcomes and impacts. Table 2-10 summarizes the outcomes, impacts, and indicators used in these evaluations. Only a few evaluations specified the contribution to or changes in the host country or the host university as one of the outcomes or impacts. In such cases, its indicators included changes in the sense of affinity and the changes in positive attitudes. No cases cited business development in the host country as an outcome, which was one of the outcomes in the ABE Initiative.

Table 2-10: Outcomes/Impacts and Indicators Used in

Scholarship Program Evaluations by Other Donors

(Items marked with an asterisk (*) were not found in the evaluations of JICA scholarship programs as described in Section 2.1 above.)

Timing of occurrence	Outcomes	Indicators
End of the program	Completion of a degree (output, in some cases)	・ Dropout rate and degree completion rate
End of the program	Scholarship program satisfaction (output, in some cases)	・ Degree of satisfaction
End of the program	Status of acquiring skills and knowledge (output, in some cases)	・ Whether and the degree to which participants acquired various skills and knowledge
End of the program	Status of developing connections and networks acquisition status (output in some cases)	・ Whether participants developed various connections with universities, companies, etc.
End of the program Short-term	Contribution to (the ex-participants') positive attitude to the (funding) country of the scholarship (outcome)	・ Changes in pro-US sentiment ・ Favorable responses to seven items: research methods, teaching methods, U.S. culture, foreign policy, economic institutions, political institutions, and philanthropy
Short-term Mid-term	Contribution to personal career (outcome)	・ Importance of skills, knowledge, and connections gained from study abroad to career development ・ Degree of influence of the scholarship program on career prospects and abilities
		・ Employment rate ・ Time it took to find a job* ・ Sector of employment ・ Size of the place of employment*
		・ The degree to which the skills and knowledge gained from the study abroad experience are applied to one's work
		・ Whether ex-participants maintain connections made during study abroad ・ Purposes for which connections are used
		・ Promotion rate and the rate of academic advancement ・ Percentage of ex-participants with greater technical and managerial responsibilities ・ Percentage of ex-participants with greater financial responsibilities ・ Academic persistence rate*

Timing of occurrence	Outcomes	Indicators
		・ Economic satisfaction*
		・ Household income*
Short-term Mid-term Long-term	Contribution to the workplace and local community (outcome)	・ Return to work rate
		・ Whether ex-participants have various decision-making authorities
		・ Percentage of managers or higher ranks
		・ Cases of how the skills and knowledge gained from studying abroad were applied to one's work
		・ Percentage of ex-participants who shared with others the skills and knowledge they gained while studying abroad
		・ Percentage who created a new organization or program after completing a degree*
		・ Percentage of cases in which improvements were made at the workplace and in the community*
		・ Percentage of social justice advocacy activities conducted in the community*
		・ Percentage of ex-participants (in case of teacher) who improved their teaching after studying abroad
Short-term Mid-term Long-term	Contribution to the target country and the world (impact)	・ Rate of returning to the home country*
		・ Level of influence on interest in and commitment to country-level issues and solutions
		・ Whether ex-participants engage in activities related to national development issues and the SDGs
		・ Sectors in which ex-participants participate (in reference to the SDGs)
		・ Cases and percentages of influences on government policy
		・ Number of writings, works, publications, etc. on social justice*
		・ Alumni organizations' contribution to social justice*
		・ Continuation rate of academic exchange with the host university or at the global level*
		・ Whether entrepreneurship is demonstrated in research or other activities (percentage, specific cases)*
		・ Publication record

Note: The timing of the occurrence of the outcomes in the first column is not specified in each evaluation.
Information in the column is provided on a tentative basis.
Source: Created by the study team based on each report

The evaluations often did not set evaluation criteria other than outcomes and impacts. If there were any, they are listed in Table 2-11 below.

Table 2-11: Evaluation Criteria Other Than Outcomes and Impacts Used by Other Donors

Relevance	Consistency with international development issues (DAAD)
	Consistency with home country policies (USAID, DAAD)
	・ Consistency with the policies of the partner country's government (DAAD) ・ Consistency with partner university policies (DAAD) ・ Consistency with beneficiary needs (DAAD)
	Collaboration/complementarity/consistency (DAAD)
Efficiency	Value for Investment: Comparing the efficiency of inputs (costs, implementation process) with other similar scholarship programs (USAID)

	ROI: The annual cost of the scholarship is calculated as the cost, and the return is calculated as the increase in the employment rate and salary as a result of the scholarship. (USAID)
	Implementation process: Appropriateness and efficiency of the selection process of participants; Effectiveness of the selection and implementation process (USAID, DAAD)
Outcomes from scholarship program implementation other than the outcomes of scholarships	・ Effectiveness of technical cooperation with the Indonesian implementing agency (USAID) ・ Effects of joint investment (USAID)
Cross-cutting issue	・ Gender (DAAD) ・ Application of ICT (DAAD) ・ Results-oriented monitoring (DAAD) ・ Comparison with other donors' programs for Indonesian students (USAID)

Source: Created by the study team

None of the 15 projects claimed to have used the DAC 5 evaluation criteria as the evaluation framework. There was one case each that used the Kirkpatrick model (USAID) and Peter Morgan's 5C model (DAAD)[11].

There were three cases where the evaluation design was carried out after explicitly developing (confirming) a ToC (USAID in Case 5, DAAD in Case 9, and Belgium in Case 11 in Table 2-8). In Case 5, there was a ToC, although it was elementary, that had been developed before and during the implementation of the program, and it was included in the evaluation terms of reference. In Case 9, the evaluation was conducted based on the ToC created at the time of program formation. In Case 11, a ToC was not developed at the time of program formation, and a detailed TOC was organized at the time of evaluation design. In all cases, the inputs, outputs, outcomes, and impacts assumed in the program were organized and used in setting indicators. On the other hand, there were no cases where assumptions were included, and there is little indication that the evaluation intended to use a ToC to analyze the promoting or inhibiting factors that affected the observed outcomes. The extent to which a ToC was used to analyze factors will be discussed later when we examine the results of interviews and surveys.

(4) Data Collection Method

Nine out of the 15 cases in which the details of the research methods were identified used a combination of three methods: literature reviews, web-based surveys, and fieldwork methods including direct interviews and focus groups[12] (one of these nine cases did not explicitly state whether it was an online survey or not). In four cases, interviews by telephone or Skype were used in addition to direct interviews in the field. In the remaining four cases, three used only literature reviews and interviews (including telephone interviews), and one used only a web-based survey.

(5) Analysis Method

Except for the UNESCO case, which qualitatively presented the participants' research without any

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[11] A methodology for analyzing the development of organizational capacity through five core capacities.
[12] Methods for obtaining information from a relatively small group of people discussing a particular topic.

quantitative analysis, all other organizations used both quantitative and qualitative analysis methods.

The methods used to analyze evaluation results can be roughly divided into two categories: those that simply show the results and those that analyze the causal relationship with the scholarship. In terms of the method for analyzing the causal relationship, the two cases, the Belgian Development Cooperation and USAID, measured the results of the scholarship by comparing the results with those of non-scholarship recipients (i.e., those who did not study abroad) and the recipients of other scholarships. In other evaluations that fall under this category, although they did not set up such a comparison group, they attempted to measure the outcomes of the scholarship by, for example, comparing the employment rate of the participants against those of other people in their countries who had similar levels of education as the participants. Other methods for analyzing causal relationships included pre- and post-study abroad comparisons. However, since there was no baseline data for any of these cases, the situation before studying abroad was also measured in the study at the time of the ex-post evaluation for comparative analysis.

In both cases where only the actual results were shown and where causal analysis was shown, the differences in the effects by the respondents' attributes were analyzed. These attributes included: gender, hometown/current address, activities offered while studying abroad, time of study abroad, place of employment, returning to the same job/finding a new job, and host universities the participants studied. These evaluations also used correlational analyses to examine relationships with the degree to which participants acquired or used skills and knowledge.

Regarding the usage of qualitative data, some of them were converted to quantitative data through coding. There were also cases where qualitative data were used to describe good practices to complement quantitative information.

In all evaluations, the results were presented as percentages of the total; however, these evaluations did not explicitly define the standards by which we can determine whether a given value constitutes a sufficient outcome.

2.2.2. Results of Interviews and Surveys

(1) Survey Respondents and Questions

Our original plan was to select one organization and conduct a remote interview or a survey (as applicable, depending on the information we collect) with this organization. Instead, we conducted a survey with the Belgian Evaluation Office (Special Evaluation Office of the Belgian Development Cooperation), which was especially notable among the evaluations for carefully developing a ToC and presenting a convincing conclusion, and USAID, which had completed evaluations of a number of scholarship programs. In addition, a remote interview was conducted with Syspons GmbH (a private consulting company based in Germany), which implemented the Belgian and German evaluations (Cases 11 and 9 in Table 2-8). The questions asked to each organization are shown in Table 2-12.

Table 2-12: Questions for Each Organization

Organization	Questions
Belgian Evaluation Office	• Background of the study on the evaluability of university cooperation and scholarship programs. What did the Special Evaluation Office perceive as challenges in the evaluation of the scholarship program compared to typical development projects? • How did the Special Evaluation Office approach/deal with the above-mentioned challenges in conducting "Impact Evaluation of the Belgian University Development Cooperation"? • Reasons for using the recipients of other scholarships and non-recipients as comparison groups. What are the pros and cons of using non-recipients as a comparison group? When is such an approach appropriate? • Intention of applying ToC. ToC is often used in organizing inputs, outputs, outcomes, and impacts, and then in setting indicators. Did you also intend to utilize ToC to analyze key factors identified in the evaluation results by sorting out assumptions for each outcome to be achieved? • In response to the results of the 2018 evaluation, what are the future policies for evaluating scholarship programs? • It takes a long time for participants to use the abilities they have acquired to contribute to their workplaces and development issues in their home countries, and factors other than the abilities of individual participants are also involved. How did you overcome these challenges evaluators often face? • Do you consider the benefits to the host university (an increase in the number and diversity of international students, etc.), business development with companies in Belgium and ex-participants' home countries, and improvement of ex-participants' perception of Belgium as outcomes of the scholarship program? If yes, how do you evaluate such outcomes? If not, what are the reasons?
Syspons GmbH	• Reasons for and implementation challenges in using non-recipients and the recipients of other scholarships as comparison groups. What are the pros and cons of impact evaluations using non-recipients as a comparison group? And when is such an approach appropriate? What were the reasons for selecting different methods to evaluate university cooperation and scholarship programs in Belgium and Germany? • Intention of applying ToC. ToC is often used in organizing inputs, outputs, outcomes, and impacts, and then in setting indicators. Did you also intend to utilize ToC to analyze key factors identified in the evaluation results by sorting out assumptions for each outcome to be achieved? • It takes a long time for participants to use the abilities they have acquired to contribute to their workplaces and development issues in their home countries, and factors other than the abilities of individual participants are also involved. How did you overcome these challenges evaluators often face?
USAID	• Does USAID use the program's scale and content to determine whether the program will be evaluated or not? Are different evaluation methods etc. used for different programs, and have these methods been formalized? • Intention of applying ToC. ToC is often used in organizing inputs, outputs, outcomes, and impacts, and then in setting indicators. Did you also intend to utilize ToC to analyze key factors identified in the evaluation results by sorting out assumptions for each outcome to be achieved? • In the evaluation of the "LAC Higher Education Scholarships Program," the impact is evaluated using non-recipients of scholarships as a comparison group. What are the advantages and disadvantages of impact evaluations using non-recipients as a comparison group? When is such a method appropriate? • You are trying to verify the return on investment (ROI) in several programs. Do you plan to further scrutinize this method and verify its effectiveness in the future? You currently calculate the ROI by using the annual cost of the scholarship as the *cost* and the increase in the employment rate and salary due to the scholarship as the *return*, for example. Have you developed a method to calculate the return by

Organization	Questions
	considering, for example, the contribution to ex-participants' organizations and communities, which is the original goal of the scholarship? ・It takes a long time for participants to use the abilities they have acquired to contribute to their workplaces and development issues in their home countries, and factors other than the abilities of individual participants are also involved. How did you overcome these challenges evaluators often face? ・Do you consider the benefits to the host university (an increase in the number and diversity of international students, etc.), business development with companies in the U.S. and ex-participants' home countries, and improvement of the ex-participants' perception of the U.S. as outcomes of the scholarship program? If yes, how do you evaluate such outcomes? If not, what are the reasons?

Source: Created by the study team

(2) Responses

Challenges in scholarship program evaluations perceived by other donors

In the evaluation of JICA scholarship programs, it is understood that it takes a long time for ex-participants to use the skills they have acquired to contribute to their workplaces and development issues in their home countries and that it is difficult to measure the effectiveness of scholarship programs themselves because factors other than the skills of individual participants are involved. The study team asked each organization how they recognized these challenges in evaluating their scholarship programs and how they overcome them.

In particular, in the case of the Belgian Evaluation Office (Case 11 in Table 2-8), the evaluability of university cooperation and the scholarship program was also examined at the same time as the evaluation itself, and the evaluation report indicated that the evaluation of the scholarship program posed more challenges than a regular project evaluation. The survey responses by the Belgian Evaluation Office cited the following three points as greater challenges in scholarship program evaluations than in regular project evaluations.

- Long-term perspective: the need to track and examine the paths of ex-participants months and years after the scholarship ends.

- Confidentiality: the need to protect ex-participants' personal data and privacy

- Need for contact information: the need for correct contact information for ex-participants (correct email addresses and phone numbers to reach them)

Furthermore, as a way to overcome these challenges, the respondents said that they not only focused on the career paths of the ex-participants, but also evaluated the partnership programs and research projects between the ex-participants and related organizations. Syspons GmbH, which actually evaluated the Belgian government's scholarship program, noted that it took a long time for ex-participants to use the abilities they had acquired to contribute to the workplace and development issues in their home countries and that factors other than the skills of individual participants were involved. Syspons GmbH, which actually conducted the evaluation of study abroad programs by the

Belgian government, recognized that it would take a long time for ex-participants to use their acquired skills to contribute to the workplace and development issues in their home countries and that these outcomes are also influenced by factors other than individual participants' skills. Syspons GmbH reported that it addressed these challenges by, among other things, comparing participants to a comparison group to eliminate other factors so that it could attempt to measure the effects of the study abroad programs themselves, using the ToC to clarify the path of changes leading to the manifestation of long-term outcomes and analyze which outcomes (i.e., short-, mid-, or long-term outcomes) had already manifested, which outcomes had not been achieved as expected, and the factors that influenced the occurrences or non-occurrences of such outcomes, analyzing those outcomes that were considered to take a long time to manifest by using analyzing cohorts[13] based on the year of graduation to take into account temporal influences. The evaluator also obtained qualitative data from each cohort through interviews and used the data in the analysis.

USAID reported that it was still working to address these challenges. It stated that a proper evaluation of the results of a scholarship program would require a long-term evaluation, but the five-year activity implementation cycle often made it impossible to plan (and finance) that far ahead. The USAID's ex-post evaluation guidance mentions measures to address the above challenges, such as planning for a long-term evaluation from the time of program formation, reviewing existing impact evaluation results, and conducting such evaluation even after the program. However, USAID stated that this was not commonly practiced in its scholarship program evaluations.

Evaluation policy of Other Donors for scholarship programs

The Belgian Evaluation Office reported that following the results of the 2018 evaluation, which is included in the review in this study, VLIR-UOS (an umbrella organization of Flemish universities to support partnerships between universities) and ARES (an umbrella organization of French-speaking universities to support partnerships between universities) have decided to systematically incorporate pre- and post-surveys in order to understand participants' career paths after completing their study abroad. The current "Monitoring and Evaluation Policy" (VLIR-UOS, 2015), which was introduced in the survey responses, states that all types of scholarship programs should be evaluated appropriately, with the goal of achieving an overall coverage rate of 75%, and that all evaluations should use the DAC 5 evaluation criteria and provide justifications if any of the evaluation criteria are not used. However, as evidenced by the fact that the cases we reviewed did not use the DAC 5 evaluation criteria (it used the impact evaluation method instead), the policy does not appear to be mandatory and is used with some flexibility.

According to USAID, it has established the USAID Evaluation Policy and Automated Directive System (ADS) 201 Program Cycle Operational Guidance as evaluation policies for all its programs but has not established an evaluation policy for scholarship programs. The decision to evaluate a particular scholarship program depends on the discretion of the mission or the implementing department that supports the program's activity. In addition, USAID developed in 2018 the "Guide

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[13] A population that has common factors and is subject to observation.

for Planning Long-Term Impact Evaluations (LTIEs) Utilizing the Expertise of the Expanding the Reach of Impact (ERIE) Program Consortium," which states that a long-term impact evaluation should be conducted when a long-term impact is assumed in ToC, when the results of cost-effectiveness analysis are important for program decision-making, when the results of a long-term impact evaluation influences decision-making, and when it is technically feasible. USAID recognizes that one or more of these are applicable to some of the scholarship programs.

USAID has also developed MEL (Monitoring, Evaluation, and Learning) guidance, which encourages USAID program divisions to incorporate both performance assessment and impact evaluations into their plans and to conduct both longitudinal and follow-up studies.

Current status of using ToC in scholarship program evaluations

The Belgian Evaluation Office reported that a ToC was used to compare the achieved outcomes with the target outcomes and to analyze the internal and external factors that influenced the achievement of the outcomes. In addition, VLIR-UOS has prepared a general ToC for each type of intervention in the university partnership and scholarship programs. These general ToCs are not meant to be a blueprint for all interventions but to provide a theoretical framework for future interventions. The above-mentioned "Monitoring and Evaluation Policy" (VLIR-UOS, 2015) provides a definition of ToC in VLIR-UOS. It states that all activities supported by VLIR-UOS are based on a clear ToC or "program theory," where the ToC describes the theory or hypothesis behind the change envisioned by the intervention and the strategy for achieving that change. The ToC explains how the process of change occurs (what and who changes), taking into account individual contexts, characteristics of actors, existing evidence on (part of) the change process, and assumption, which is seen as the most important element.

In the actual 2018 evaluation case, Syspons redeveloped a ToC during the evaluation. In the interview, Syspons said that it not only organized the series of inputs, outputs, outcomes, and impacts but also verified the assumptions. In addition, it stated that although the comparison with the comparison group showed whether or not there was an effect, it was necessary to examine why and how it occurred by using a separate method that allowed causal inference and that they used the ToC for this purpose.

USAID responded that while ToC is primarily a tool for program formulation, it can also be used as a management tool during implementation with modifications. ToC is an evidence-based articulation of what changes are envisioned to occur to bring about a certain outcome and is also seen as an evaluation framework to determine whether the outcome has been achieved. "Theory of Change Based Project Monitoring, Measurement, Learning and Adaptation: Guidance and Methodology" (USAID, 2017) describes the importance of drawing a ToC, including assumptions, and identifying "why" and "how" change is or is not occurring in ToC-based project evaluation monitoring.

Verification of impact using a comparison group

The Belgian Evaluation Office recognizes that the challenge of comparability will always exist and that it is not easy to find comparable non-participants who are also available for a survey. According

to Syspons GmbH, for the 2018 evaluation case, the Belgian Evaluation Office asked the company to use the most rigorous methods possible, so there was no need to convince the Belgian Evaluation Office to involve non-participants in the study, and, fortunately, it was able to obtain comparable non-participant data without any difficulty. Although Syspons did not make any special effort to increase the response rate among the comparison group, it succeeded in obtaining a sufficient number of responses for the evaluation because the sampling framework was large enough. Syspons also evaluated another German scholarship program included in our review (Case 9 in Table 2-8). However, it noted that it was not possible to verify the impact using a comparison group because regulatory restrictions did not allow access to contact data for non-participants who could have served as a comparison group.

USAID reported that whether or not to set up a comparison group depends on the purpose of the evaluation. In the evaluation of the "LAC Higher Education Scholarships Program" (Case 2 in Table 2-8), the objective was to determine the impact of scholarships on development compared to the absence of scholarships. Evaluations of ex-participants only would have provided interesting examples of how the scholarship has changed the lives of the participants, and this approach would also be appropriate and sufficient for some evaluation purposes. However, in order to clarify whether the success of the ex-participants was due to the scholarship or to other factors such as personal characteristics, it was essential to compare them with a comparison group. The impact evaluation of the "LAC Higher Education Scholarships Program" was not planned at the onset of the program. Fortunately, however, USAID, through the selection process of scholarship recipients, managed to identify a comparison group that differed from ex-participants only in terms of participation (or lack thereof) in the program and had access to adequate records that enabled it to track non-participants. USAID understood that in order to increase the feasibility of evaluating the long-term impact, it would be desirable for the departments in charge of program implementation to identify, early on, potential comparison groups and maintain necessary records so that they would design evaluations according to the evaluation questions they want to answer, not the feasibility of implementation.

Evaluation of benefits to host universities and companies

Evaluations of JICA scholarship programs often mention the positive and negative impacts on Japanese universities. Many of these evaluations also explicitly capture the results for relevant parties on the Japanese side, even though they are regarded as secondary effects. Furthermore, one of the objectives of the ABE Initiative is to "foster the development of Navigators who help Japanese companies do business in Africa and build a network of these Navigators." Benefits to Japanese companies is one of the outcomes explicitly evaluated in the present study. In contrast, our literature review on the scholarship program evaluations conducted by other donors indicated that none of these evaluations considered or evaluated such outcomes for universities and companies in the host country as one of their objectives. With respect to beneficiaries in the host country, only a few USAID cases mentioned the contribution to pro-U.S. sentiment. For this reason, the study team conducted surveys to examine how the Belgian Evaluation Office and USAID regarded the idea of evaluating host country benefits as part of outcomes.

The Belgian Evaluation Office responded that although the 2018 evaluation focused only on the development impact of the scholarship program, there were indeed positive effects on the Belgian side. The Belgian Evaluation Office stated that such effects should be evaluated as well.

USAID responded that it did not recognize the U.S. side's benefits as part of the outcomes for the higher education sector as a whole but stated that these were sometimes measured as outcomes in the evaluation of individual scholarship programs.

Methods for evaluating the cost-effectiveness of scholarship programs

Although the evaluations of JICA scholarship programs often examine the efficiency of the implementation process, they have not so far considered cost-effectiveness. USAID has attempted to examine the value for investment and the return on investment in several programs, but the current calculation method uses the annual cost of the scholarship as the cost and the increase in employment rate and salary due to the scholarship as the benefit. Therefore, the study team investigated whether USAID has developed a method for calculating the benefits of a scholarship program in terms of its original objective—ex-participants making contributions to their organizations and communities.

According to the response, USAID, at the time of the survey, did not have a methodology to capture and calculate the contribution of ex-participants to their organizations and communities as a benefit. USAID was developing guidelines to encourage the reporting of cost data in education projects to improve sustainability, planning and management, and overall cost-effectiveness of investments in the education sector. "Cost Analysis Guidance for USAID-funded education activity" (USAID, 2020) states that the following types of analysis should be used. The Cost-Economy Analysis, which is a type of input-level analysis, examines, "Which inputs went into which components of the program and at what price?" The Cost-Efficiency Analysis, which is a type of output-level analysis, considers, "What outputs have been achieved in relation to inputs?" This analysis is primarily concerned with the efficiency of the implementation process. The Cost-Effectiveness Analysis, which is a type of outcome-level analysis, is used to answer, "How much was accomplished for each dollar of cost?" Thus, rather than converting outcomes into monetary terms and comparing them to costs (Cost-Benefit Analysis), the focus seems to be placed on identifying interventions that are most likely to produce the outcomes for the same costs.

2.3. Summary of the Results of Reviews of Existing Evaluation of Existing Scholarship Programs

(1) Evaluation Criteria and Indicators; Methods for Data Collection and Analysis

Since all of the JICA scholarship programs for which formal ex-post evaluations have been conducted were project-based programs, they were evaluated using the DAC 5 evaluation criteria based on the JICA ex-post evaluation framework. In contrast, all of the 15 scholarship program evaluations by other donors we reviewed focused on outcomes and impacts. Even in cases where questions on relevance and efficiency were addressed, the primary purpose of the evaluation was to examine the program's effectiveness. These overseas evaluations did not use any criteria for sustainability. However, in the

case of USAID, it often emphasized the evaluation of efficiency from the perspective of "which intervention produces the most outcomes for the same cost?"

As mentioned earlier, some evaluations by other donors used outcome and impact indicators that JICA has not used. However, since most of these indicators were based on the objectives of the scholarship program,[14] there were no new outcome or impact indicators that should be broadly incorporated into JICA's scholarship program. In addition, some of the scholarship programs by other donors required participants to return to their home countries after studying abroad in order to prevent the brain drain, which occurs when international students studying in Western countries decide to stay in the host country after completing their study and to achieve the goal of contributing to the development issues of their home countries. Many evaluations by other donors used "return to home country rate" as an indicator. Indicators specific to JICA included those related to Japanophilia and the benefit to universities and companies in the host country (Japan). Our review indicated that whereas no donor organizations set a similar indicator, except for one U.S. case that used pro-U.S. sentiment as an indicator, JICA's scholarship programs almost always used pro-Japanese sentiment as an indicator, and, in some cases, the benefit to the host university or Japanese company was also used as an indicator.

In terms of data collection and analysis methods, the only significant difference between other donors and JICA was whether ToC was used or not. This point will be discussed later in the subsection, "Using ToC for Scholarship Program Evaluations." Other donors and JICA both used literature review, surveys, and interviews as study methods. The analysis methods were similar between JICA and other donors as they all presented quantitative indicators as high or low rates or percentages (but they often failed to provide any specific criteria or rationale), conducted pre- and post-evaluation comparisons using antecedent data obtained at the time of the ex-post evaluation, used descriptive statistics (by converting the Likert scales into points) to represent the level of understanding and utilization, and described good practices by distilling them from the qualitative data obtained through interviews.

(2) Responding to the Challenges of Evaluating Scholarship Program

Both the Belgium Evaluation Office and USAID, with which we conducted a survey, recognized that it was more difficult to measure the effectiveness of the scholarship program itself than in typical evaluations. They attributed it to the fact that it takes a long time for participants to use the abilities they have acquired to contribute to their workplace or development issues in their home countries. They also mentioned that the effectiveness was difficult to measure because factors other than the skills of individual students were involved. These organizations mentioned several approaches for overcoming this challenge, including: not focusing only on the career paths of ex-participants but also on partnership programs and research projects between ex-participants and related organizations; identifying the impact of the scholarship program by comparing participants to the comparison group; analyzing which effects are expected to occur by when, and what factors contributed to the effects occurring, or not occurring, as expected by using ToC; understanding the effect of time on the effectiveness of the program by analyzing the results by graduation year; and planning for long-term

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[14] For example, if the percentage of advocacy activities for social justice is used as an indicator in a case where the ex-participants aim to become catalysts for social justice.

evaluation from the time of program formation. This information is helpful for evaluating future JICA scholarship programs because existing evaluations have rarely used an evaluation design that involved the use of comparison groups or the application of ToC.

(3) Using ToC for Scholarship Program Evaluations

Several donor organizations have designed log frames and created ToCs at the time of program formation and used them during evaluation. The results of the surveys and interviews with these overseas organizations indicate that they have also implemented ToC and its components, including inputs, outputs, outcomes, impacts, and assumptions, in their scholarship programs and that this has allowed them to analyze "why" and "how" changes occurred (or did not occur).

(4) Verification of Impact Using a Comparison Group

The results of our surveys and interviews indicate that impact evaluations were conducted when it was feasible to set up a comparison group in terms of data availability and the appropriateness of making a comparison. Since it is possible to obtain examples of how a scholarship program has changed the lives of the participants in a follow-up survey of only the ex-participants, it is not always necessary, depending on the purpose of the evaluation, to set up a comparison group. However, without a comparison group, it is not possible to determine whether the outcomes obtained were due to the scholarship program or other factors, such as personal characteristics. Furthermore, if the evaluators conduct a follow-up survey only with ex-participants and report "high" or "low" rates or percentages, it remains unclear what makes them high or low because no standard or basis for it would be provided in such a survey.

Due to the difficulty of setting up comparison groups at the time of evaluation, only a few donor organizations have conducted impact evaluations for scholarship programs. USAID stated that in order to increase the feasibility of long-term impact evaluations, it is advisable to identify, early on, potential conditions or sets of attributes that can be used to define comparison groups and maintain necessary records so that the evaluators would not only be able to conduct a comparison-based evaluation but also do so by designing the evaluation according to the evaluation questions they would like to ask. This insight is helpful as it reminds us to design future evaluations by selecting a method according to the purpose of each evaluation.

Chapter 3 Configuring Logic/Theory of JICA Scholarship Programs (Constructing a Theory of Change)

Based on the review of existing evaluations in the previous chapter, this chapter identifies and discusses the logic/theory of scholarship programs, which will be used as the premise of our evaluation, and presents it in the form of Theory of Change (ToC).

3.1. Principles of ToC

3.1.1. What is ToC?

ToC varies to some degree depending on the organization that uses it. For this study, a ToC is defined as "**a diagram to show how and why the final objective of a program occurs."** In other words, a ToC is **a diagram that graphically illustrates a hypothesis on the likely changes (outcomes) triggered by the implementation of a program and how these outcomes manifest into the final outcome**. Figure 3-1 below graphically illustrates this framework.
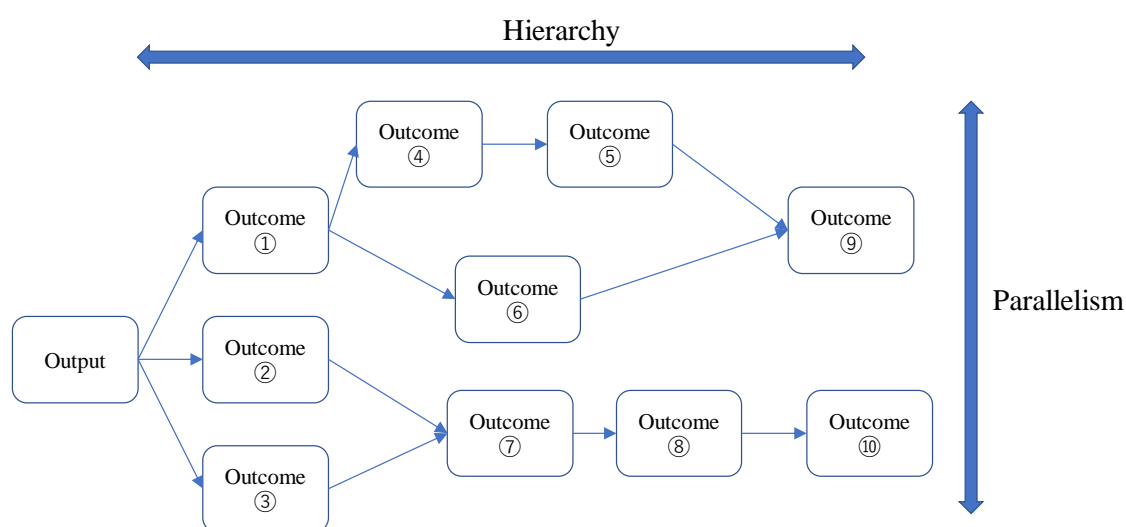
Source: Created by the study team

Figure 3-1: Conceptual diagram of ToC

3.1.2. Advantages of Constructing a ToC[15]

There are three main advantages in constructing and configuring ToC in ex-post evaluation.

1) Ex-post evaluation (verification of outcomes) is concerned about verifying whether program/project objectives have been achieved. However, it is often the case that the objectives of the project are ambiguous. In such cases, it is necessary to reconfigure program

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[15] ToC is originally a tool used for properly designing and planning programs, but here we describe its benefits from the perspective of evaluation (especially ex-post evaluation).

objectives during a pre-evaluation step. **Configuring a ToC helps clarify project objectives (i.e., items to be verified).**

2) If the program is expected to take a long time to achieve its final objective, but its evaluation must be conducted at a point in time before such objective is expected to materialize, it is necessary to evaluate the achievement of the intermediate outcomes. **Configuring a ToC helps clarify intermediate outcomes that are prerequisites to the achievement of the final outcome and the points in time in which different intermediate outcomes should be verified.**

3) Since expected outcomes are also affected by factors external to a program, it is difficult to determine the causal relationship between the program and the changes in the program by simply examining changes in the outcomes. Therefore, identifying the outcomes necessary to achieve a particular outcome and confirming the status of their occurrence **make it possible to examine the program's contribution to the achievement of that particular outcome**.[16]

In JICA, Project Design Matrix (PDM) is often used as PDM is expected to perform the same function as ToC. PDM has similarities with ToC as it clarifies objectives and the pathway to them. However, PDM has only two items that can contain outcome-level elements (Overall Goal and Project Purpose), making it difficult to sufficiently express the paths to the final objective (inability to address hierarchy). In addition, when there are multiple objectives, it is difficult to clearly express the relationships between such objectives (inability to address multiplicity). In contrast, ToC has fewer restrictions regarding how factors can be expressed than PDM. Therefore, **ToC can show the whole picture of a complex program characterized by a hierarchy of factors and the multiplicity of factors**.[17]

3.1.3. Components of ToC

Although there are variations in components included in a ToC, the following five components are common to all ToCs (when constructing a ToC, components to be included depend on the purpose of creating the ToC[18]).

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[16] For example, Figure 3-1 shows that for us to say that the program implementation has triggered Outcome 7, Outcomes 2 and 3 need to be achieved. If Outcome 7 has been achieved, the probability that the program did contribute to such achievement is likely to be high when both Outcomes 2 and 3 have also been achieved. On the other hand, if Outcome 7 has been achieved but Outcomes 2 and 3 were not achieved, it is most likely that the achievement of Outcome 7 was due to factors outside the program (i.e., the contribution of the program is low).

[17] Although the description here focuses on the contrast between ToC and PDM, ToC and PDM are not mutually exclusive. Whenever the evaluator creates a PDM, they should ideally develop and review a ToC as prerequisite information and incorporate applicable components of the ToC into the PDM, which can then be used as a management tool for the program. PDM alone cannot presenting the complete picture of a program, but this should not be considered a shortcoming because PDM is not meant to be a suitable tool for such a purpose. Rather, the problem is that PDM is often created without being supported by an explicit ToC.

[18] Although not included in this report, it is also useful to express factors outside the program that may affect a given outcome in a ToC. For example, for the outcome of "improvement of knowledge and skills," various training programs in addition to the scholarship program may also have an impact. Such factors outside the program (in this case, the existence of other training programs) can also be included in the ToC.

(a) A chain of behavioral changes the actor must undergo in order to achieve the final objective of the program

This component is the central element of a ToC. A ToC expresses a chain of changes with the actors whose behavioral changes are prerequisites for the final objective. If the objective is complex and requires multiple actors to undergo changes, it may be necessary to draw the ToC from multiple perspectives.

(b) Assumptions necessary for a chain of changes to occur

A ToC is underpinned by assumptions that must be met in order for the expected changes to occur. Assumptions can be further divided into two categories: (i) those that are expected to be met naturally (without any intervention) and (ii) those that cannot be fulfilled without direct intervention through a program.

(c) Intervention through a program to establish the condition in (b)-(ii) above.

A ToC must include program interventions/activities to be implemented to meet (b)-(ii) above.

(d) Time frame (key chronological events including the time of occurrence of outcomes)

A ToC shows which outcomes are expected to occur and at what time points.

(e) Indicators

Outcome indicators are used to determine the achievement of each outcome.

3.2.   Examination of ToC in This Study

3.2.1. Purpose of Configuring ToCs

● Clarifying the objectives of the program (corresponding to 3.1.2 (a))

Some of JICA's scholarship programs lack ex-ante evaluation or similar study. In these programs, program objectives are often unclear. In addition, scholarship programs are complex in that they have multiple objectives and involve multiple actors. For these reasons, this study has attempted to **clarify the objectives of the program and identify (and weight) the outcomes to be verified** by expressing the overall picture of the program as a set of ToCs.

● Clarifying intermediate outcomes (corresponding to 3.1.2(b))

A scholarship program is expected to require a long time before achieving the final objective. However, since this study evaluated the target programs between one and five years after participants had returned to their home countries, the study was able to only examine the intermediate outcomes, not the final outcomes, to verify the impact of these programs. Therefore, the study developed a set of ToCs to **identify the intermediate outcomes to be**

verified at the time of this study.

- Fostering a common understanding among relevant departments and personnel

  The above two points have been shared among relevant organizations so that these organizations can use this framework in their future evaluations.

3.2.2. Procedure for Developing Draft ToCs

- The study team reviewed program documents in JICA scholarship programs and extracted elements that were likely to be the objectives of these programs.

- The study team reviewed existing evaluations of JICA scholarship programs and scholarship programs by other donors and extracted elements that had been verified as the outcomes of these programs.

- The study team conducted interviews with relevant departments and personnel and confirmed the expected impacts of the programs.

- After these steps, the study team discussed and prepared draft ToCs.

3.2.3. Draft ToCs

In addition to identifying the general logic/theory of scholarship programs, the logic/theory of the programs targeted for our case studies was examined. As a result, the following three types of ToC were created. All ToCs are presented in Appendix 2.

ToC 1: Draft ToC of scholarship programs in general

The following is a description of the expected effects of programs classified as scholarship programs (including programs by both JICA and donors). It is not intended to represent any specific program but rather an abstract ToC in general terms. In addition to being used as a basis for examining the ToCs (draft) of the individual programs covered in the case studies of this study, this ToC is also intended to be used as a basis when JICA designs and evaluates individual scholarship programs in the future.

Top diagram

Outputs | **Short-term Outcomes** | **Mid-term Outcomes** — Approximately within 5 years of returning country | **Long-term Outcomes** — Approximately within 10 years of returning home country | **Final Outcomes**

At the time of program completion

Within 1 year of returning home country

Participants of the scholarship program

Completion of the program

Knowledge and skills of the participants improve.

Understanding on the host country's corporate culture and business practices/management systems of the participants improve.
Level of comprehension of each item

Positive feelings about the host country of the participants improve.
Positive feelings about Japan

Connections with the host country's organizations, students, and other international students of the participants improve.
Connections with universities, companies, etc. obtained through the program

Ex-participants obtain jobs/posts related to their field of study.
Employment rate
Reinstatement rate
% of ex-participants who continue study

Stay in a relevant position

Obtain the understanding of their boss

Employment support and job information

Ex-participants apply their knowledge and skills in their work and research.
Degree of application of knowledge and skills gained
% of ex-participants who improved the content/method of their teaching (cases of working at educational institution)

Ex-participants are employed by companies in the host country.
% of ex-participants who are employed at Japanese companies

Companies in the host country are attractive employers for ex-participants.

Many companies in the host country are eager to hire ex-participants.

There is an active entity that maintains connections and exchanges (alumni association, FB manager, JICA events, etc.)

Connections made by ex-participants are expanded and maintained.
Participation rate in alumni and friendship activities

Participants' discretion and responsibility in their work increase.
% of ex-participants in management position
% of ex-participants who are promoted after returning
% of ex-participants who have decision-making power at work

Ex-participants are aware of their role in returning the results of the scholarship program to society

There are a certain number of people in the organization who have studied in the host country

Ex-participants' workplace increases/expands business, project, joint research, etc. with organizations of the host country (government, universities, private sector).
Number of joint research projects with Japanese educational organizations
Number of projects conducted with Japanese companies

Organizations to which ex-participants belong develop systems/policies that would support the business of companies of the host country.
Systems/policies that would support the business of companies of the host country in which graduates have been involved

Companies of the host country are attractive as business partners

Joint research/joint projects are conducted among ex-participants.
Existence of global-level academic exchange/ projects
Number of papers published

Capacity of ex-participants' workplace improves (government agencies: policy planning and implementation capacity, research and education capacity, private companies:)
% of ex-participants who generated improvement at work/in the community

Ex-participants' workplace implements activities (policies/projects) related to development issues
% of ex-participants who create new organizations/policies/projects that contribute to solving development issues

Ex-participants' workplace quality human resources.

Ex-participants' workplace develops/improves technologies, products, and services.

Ex-participants' workplace increases the productivity.

Companies of the host country start/expand business in the target country.

Contribution to solving development issues in the country
SDG Indicators

Strengthening of bilateral relations
Number of foreign students from the country to Japan
Positive feelings about Japan in public opinion

Contribution to solving development issues in the region, beyond national borders
SDG Indicators

【Legend】
・Black squares and black solid arrows：
A chain of changes in the key actor that are necessary for the ultimate goal that the project aims to achieve.

・Rounded-cornered squares：
A chain of changes at the organizational level triggered by changes in key actors.

・Red squares and red arrows：
A chain of changes specific to JICA.

・Gray ovals and black dashed arrows：
A necessary assumption/precondition for the achievement of a chain of change.

・Green：Timeframe

・Red：Examples of indicators

Bottom diagram

Outputs | **Short-term Outcomes** | **Mid-term Outcomes** | **Long-term Outcomes** | **Final Outcomes**

Companies

Companies participate in the scholarship program (internship acceptance).

Companies of the host country are attractive to the talented.

Human resources with skills in the relevant field and an understanding and fondness for the host country are available.

Understanding and knowledge on foreign countries improve.

Companies obtain local connection of the (potential) target country.

Business ideas are generated.

Psychological hurdle to doing business overseas becomes lower.

Companies hire local human resources.

Workforce is diversified.

New business plan is developed.

Joint business in the target country is promoted.

Companies of the host country are attractive as business partners

Business operation system is installed in the target and host countries.

Systems/policies that would support the business by companies of the host countries are developed

Companies are revitalized.

Companies of the host country start/expand business in the target country.

【Legend】
・Black squares and black solid arrows：
A chain of changes in the key actor that are necessary for the ultimate goal that the project aims to achieve.

・Gray ovals and black dashed arrows：
A necessary assumption/precondition for the achievement of a chain of change.

Source: Created by the study team

Figure 3-2: Draft ToC of general scholarship programs

Important notes and additional information:

- The **"actors whose behavioral changes are prerequisites for the final objective" (as discussed in 3.1.3(a)) have been classified into three categories**: participants, companies, and universities. We created a secondary ToC for each category. The changes companies undergo as a result of having participants as employees are included in the ToC for participants (as an extension). On the other hand, the ToC for companies contains those changes that companies themselves generate as a result of their participation in the program, not as a result of having participants as employees.

- Direct benefits to the host country (Japan) is a unique feature of JICA scholarship programs (none of the programs by donors addressed this aspect). Such benefits are indicated in red.

- As this ToC was not intended for any specific program, we did not draw a distinction between (i) and (ii) discussed in 3.1.3(b), nor did we describe 3.1.3(c).

- For participants, it is also possible to further divide them into government employees, private-sector professionals, public-sector professionals, and education professionals. In this study, the classification by sectoral category was used only during the preliminary stage of the study and was not included in the final ToC draft because the overall picture would be obscured if too many classifications were used.

- Since details about long-term outcomes are not adequately discussed in relevant documents, it is not clear how they were assumed. Furthermore, these documents also do not discuss the

necessary conditions for long-term outcomes.

- A sample time frame is described in the ToC for participants.

- Sample indicators are also included in the ToC for participants. The actual indicators that should be used, including those for other ToCs, will be a matter for further discussion.

ToC 2: Draft ToC for the ABE Initiative

The proposed ToC for the ABE Initiative is shown in Figure 3-3 below. The ToC for the ABE Initiative has been slightly modified from the one presented below based on the results of the case study (other ToCs have not been modified). See Appendix 2 for the revised ToC.
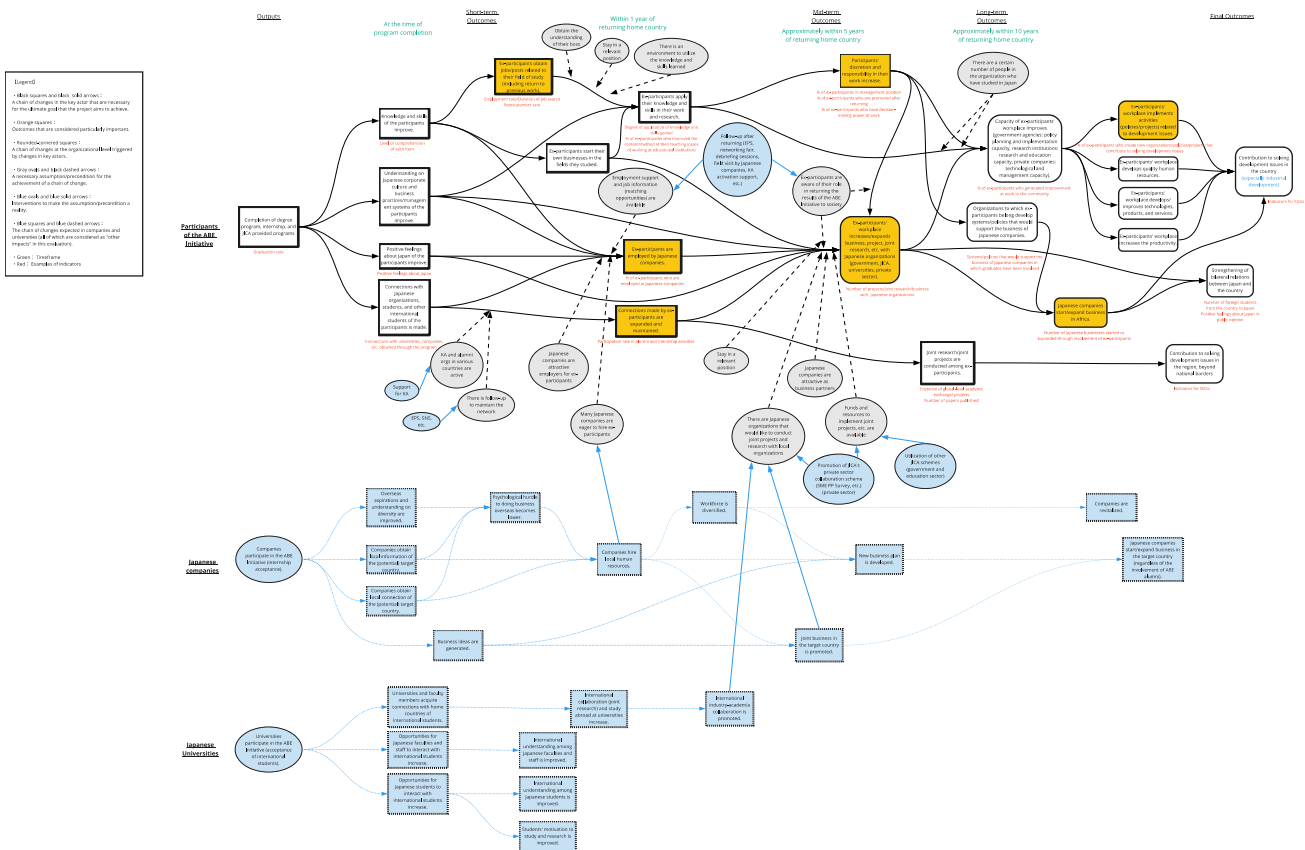
Source: Created by the study team

Figure 3-3: Draft ToC for ABE Initiative

Important notes and additional information:

- Interviews with the applicable departments for the ABE Initiative indicated that the core target of the program was its participants (i.e., international students who received the scholarship). Based on this understanding, this ToC uses this group as the "**actors whose behavioral changes are prerequisites for the final objective**" (as discussed in 3.1.3 (a)). This ToC assumes that the changes that affected companies or universities would operate in turn as factors that can facilitate changes among the participants. The ToC sees the changes

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these companies or universities undergo as "other impacts," which are assessed as secondary factors in the project evaluation.

● **Weighting of outcomes** is also important in the evaluation. In addition, it is important to discuss **the level of the outcomes that are expected to be achieved** by taking into account the number of years that have passed since participants returned to their home countries. Based on the interviews with relevant departments, we identified outcomes that are expected to be particularly important. These outcomes are indicated in orange in the draft ToC above.

ToC 3: Draft ToC for the Kizuna Program

The draft ToC for the Kizuna Program is shown in Figure 3-4 below.
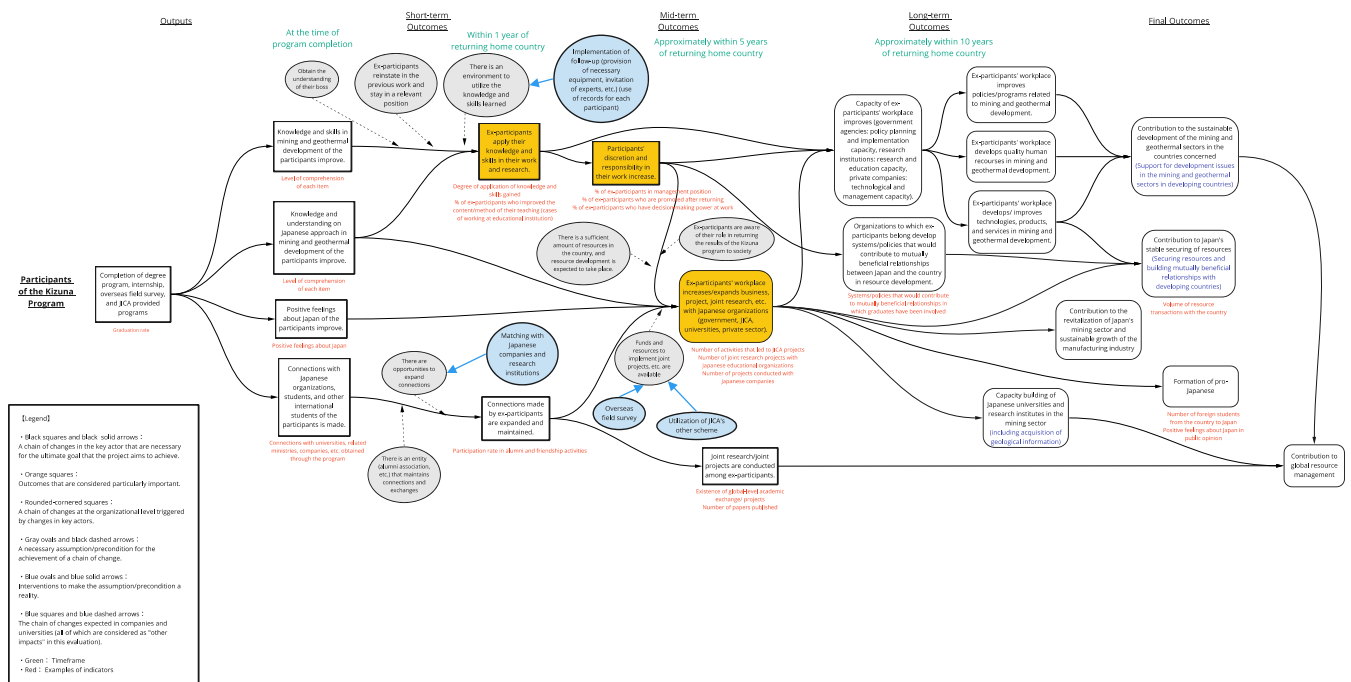
Source: Created by the study team

Figure 3-4: Draft ToC for Kizuna Program

Important notes and additional information:

● Unlike other ToCs, **the ToC for the Kizuna Program was created by including only participants.** This was based on a decision that changes in other entities were expected to occur primarily through participants.

● Compared to the ABE Initiative, the Kizuna Program focuses less on benefiting Japanese companies. Instead, its final objectives are to manage resources in participants' countries and ensure a stable global supply of resources.

Chapter 4　Pilot Implementation of Ex-post Evaluation of JICA Scholarship Programs (Case Studies)

4.1.　Pilot Evaluation of ABE Initiative's Outcomes

This section uses the results of web-based surveys and interviews to examine whether the ABE Initiative has brought the expected changes identified in the ToC. The chapter also considers the validity of the evaluation method.

4.1.1.　Evaluation Questions and Method

(1) Evaluation Questions

This study attempted to answer the following questions. In accordance with the objectives of this study, we examined whether expected outcomes were achieved following overseas study in the way predicted in the ToC. Accordingly, we did not examine the program implementation (process).

Evaluation question 1

To what extent does the participation in the ABE Initiative lead to the outcomes identified as the end-of-program outcomes, including the improvement in ex-participants' skills, greater understanding of Japan/more positive feelings toward Japan, and an expansion of the network with other ex-participants?

Evaluation question 2

To what extent does the participation in the ABE Initiative lead to the outcomes identified as the initial/mid-term outcomes, including finding employment in fields related to one's academic area during the scholarship, finding employment at Japanese companies, starting businesses in fields related to one's academic area during the scholarship, or making use of and maintaining the skills and networks developed through the ABE Initiative?

Evaluation question 3

To what extent does the participation in the ABE Initiative lead to the outcomes identified as the mid-term outcomes, including the implementation of projects, transactions, and research collaborations between ex-participants or their home organizations and Japanese organizations (government, JICA, universities, companies) (i.e., does the ABE Initiative lead to ex-participants acting as "Navigators")?

In addition, we also examined the secondary effects of the ABE Initiative on the host universities and companies registered with the ABE Initiative to the changes that have occurred.

(2) Evaluation Method

Two major approaches were used in the analysis. The first approach is to use the ToC to confirm the occurrence of each outcome and to identify the chain of changes leading to the occurrence of that outcome. This allows us to verify whether expected changes occur in line with the ToC.

The second approach is to understand the changes brought about by the program by comparing the participants of the ABE initiative with non-participants who can be their counterfactual. This approach is commonly known as impact evaluation.

Since the outcomes expected to be achieved through the ABE Initiative may be affected by factors other than the ABE Initiative, it is impossible to determine whether they are achieved through the ABE Initiative or other factors simply checking the levels of outcomes manifested among ABE Initiative participants. Since factors other than the ABE Initiative are expected to influence both participants and non-participants in the ABE Initiative, comparing participants and non-participants in the ABE Initiative would eliminate the influence of factors other than the ABE Initiative, allowing us to examine the causal relationship between the participation in the ABE Initiative and the occurrence of outcomes.

As will be discussed in detail in Subsection (3) below, this analysis compares the participants of the ABE Initiative to their counterfactual, which consists of applicants who were not accepted (those who did not pass the final selection or the one before it) and those who were accepted but later withdrew their application. In order to verify program effectiveness through such comparison, the key is comparability, that is, whether participants and non-participants have "similar" characteristics (i.e., whether non-participants can be an appropriate counterfactual to participants). In this analysis, it can be assumed that the motivation to study in Japan is the same between participants and non-participants as they both applied for the ABE Initiative selection. We also assume that there is no significant difference between them regarding academic ability and other qualities because they both advanced to the last two rounds of the selection process.[19] In addition, those who declined the offer of acceptance are also considered to have had the same qualities as those admitted to the program because they had successfully passed the selection process. Therefore, it can be considered that there are no significant differences between them except for their participation/non-participation in the ABE Initiative and that a certain degree of comparability is ensured. However, as described below, the survey response rates were different between participants and non-participants, and this may have affected the comparability of the results.

In the analysis, the results of the web-based surveys (quantitative data) described below were used to compare ex-participants and non-participants in terms of the level of achievement of each outcome. The occurrence of a positive or negative effect was determined based on the presence of statistically significant differences. In addition, interviews results (qualitative data) were used to interpret and analyze the results of the quantitative analysis.

(3) Overview and Results of the Survey

The following is an overview and results of the data collection (surveys) used in the analysis for the

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[19] Although varied in some parts between batches, the selection process for the ABE Initiative was generally as follows: (1) Publication of the General Information, (2) First screening of documents by JICA, (3) Second screening (interview) by JICA, (4) Third screening of documents by universities, (5) Fourth screening (video conference interview) by Japanese universities, (6) Final decision on successful applicants. In the last three steps of the selection process, factors not directly related to the abilities and qualifications of individual applicants, such as the match with the host university and graduate school and the balance between countries, have a significant impact.

web-based surveys and interviews.

a) Web-based Surveys

A web-based questionnaire was used to ask questions to each respondent group, i.e., ex-participants, non-participants, host universities, and registered companies of the ABE Initiative. Details are as follows.

Respondents

- Ex-participants of the ABE Initiative
  A total of 1,125 individuals consisting of 1,219 ex-participants in Batches 1 through 5, minus 31 individuals who returned home early and 63 Batch 5 participants who were still in university or on an internship at the time of this study.

- Non-participants of the ABE Initiative
  A total of 794 individuals consisting of (i) 740 applicants for the ABE Initiative who did not pass the last two rounds of the selection process for Batches 1 through 4 and (ii) 54 applicants who were accepted in Batches 1 through 5 but declined the offer of acceptance for various reasons.

- Internship companies
  332 companies registered for the ABE Initiative.

- Host universities
  Of the 129 graduate schools in 72 universities that have accepted any ABE Initiative participant in Batches 1 through 5,110 graduate schools in 54 universities that have accepted five or more participants in total.

Survey period

January 22 - February 7, 2021 (with February 28 as the deadline for responses)

Questionnaire

Questant, a web-based survey form service, was used to create the forms. The questionnaires for ABE ex-participants and non-participants were prepared in French and Arabic as well as in English so that respondents could choose the language they prefer. The questionnaires for companies and host universities were prepared in Japanese. See Appendix 5 for the actual items in these questionnaires.

Responses

The responses (the number of responses and response rate) are shown in Table 4-1. The response rate for ex-participants was 47.8%, which was 10 percentage points higher than 37.8% (392 out of 1,038 participants), the response rate in the JICE's August 2020 survey for Batches 1-4 ex-participants. As was expected, the response rate for non-participants was 14%, which was lower than the response rate

for ex-participants.[20]

The number of responses in French and Arabic was small among the ex-participants. Even though a certain number of ex-participants were native speakers of these languages, many of them responded in English, indicating that offering the survey in multiple languages had a limited effect on the response rate, at least for ex-participants. On the other hand, about 20% of non-participants answered in languages other than English. It is possible that non-participants, who have not studied abroad yet, found it more difficult to answer in English. Therefore, it was potentially relevant to a certain extent to offer the survey in multiple languages for this group.

Table 4-1: Responses to web-based surveys

	No. of questionnaires sent	No. of responses*	Response rate
Participants	1,125	538 (23, 7)	47.8%
Non-participants	794	111 (19, 2)	14.0%
Companies	332	63	19.0%
Universities	110	65	59.1%

* The numbers in parentheses are the numbers of responses in French and Arabic, respectively.
Source: Created by the study team

Table 4-2 shows the breakdown of respondents by batch for ABE Initiative participants and non-participants.

Table 4-2: Breakdown of web-based survey respondents by batch

Batch	Participants		Non-participants	
	No. of responses	% within the group	No. of responses	% within the group
Batch 1	56	10.4%	13	11.7%
Batch 2	145	27.0%	8	7.2%
Batch 3	161	29.9%	26	23.4%
Batch 4	152	28.3%	46	41.4%
Batch 5	24	4.5%	18	16.2%
Total	538		111	

Note: For percentages, totals do not equal 100% due to rounding.
Source: Created by the study team

Furthermore, we examined whether there were any differences in the attributes (gender, batch, and previous job category) in order to examine the comparability between participants and non-

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[20] For reference, in a similar evaluation by the Belgian government, the combined response rate for scholarship participants and non-participants in the web survey was 35.4% (2,168 out of 6,130 participants). The combined response rate among ABE Initiative ex-participants and non-participants was almost the same at 33.8% (649 out of 1,919 people).

participants. As shown in Table 4-3, gender (percentage of males), the percentage of Batches 4 and the 5, and the percentage of previous job category being "others" were higher among non-participants, while the percentage of Batch 2 and the percentage of previous job category being "education" was higher among ex-participants. Therefore, we controlled for these variables in our analysis so that they would not affect the results.[21]

Table 4-3: Attributes of participants and non-participants who responded to web-based surveys

Variables	Participants		Non-participants		Total		Difference
	N (1)	Mean (2)	N (3)	Mean (4)	N (5)	Mean (6)	(4)-(2) (7)
Gender(Male=1)	538	0.773	111	0.910	649	0.797	0.137***
Age	538	34.890	111	34.568	649	34.835	-0.323
Batch							
Batch 1	538	0.104	111	0.117	649	0.106	0.013
Batch 2	538	0.270	111	0.072	649	0.236	-0.197***
Batch 3	538	0.299	111	0.234	649	0.288	-0.065
Batch 4	538	0.283	111	0.414	649	0.305	0.132***
Batch 5	538	0.045	111	0.162	649	0.065	0.118***
Job category at the time of application							
Private	538	0.309	111	0.333	649	0.313	0.025
Government	538	0.446	111	0.405	649	0.439	-0.041
Education/Research	538	0.151	111	0.090	649	0.140	-0.060*
Others	538	0.039	111	0.090	649	0.048	0.051**
Students	538	0.043	111	0.045	649	0.043	0.002
Unemployed	538	0.013	111	0.036	649	0.017	0.023*
Outside Sub-Saharan Africa	538	0.112	111	0.063	649	0.013	-0.048

Note: "N" in column (1) represents the sample size (the number of valid responses). Columns (2), (4), and (6) show the mean of each variable, but for all variables except for "Age," the numbers practically represent ratios (or percentages if multiplied by 100) because they are for binary variables of 0 or 1. The notations ***, **, and * in column (7) indicate that the differences are statistically significant at the 1%, 5%, and 10% levels, respectively.
Source: Created by the study team

b) Interviews

As part of the case study of the ABE Initiative, we conducted remote interviews in Japan between December 2020 and January 2021 and interviews in Kenya and Rwanda during February and March 2021. The goals of these interviews, which were constructed based on the ToC we created and the responses to web-based surveys, were to confirm concrete cases of expected chains of changes and identify factors promoting or inhibiting these changes. In Kenya, we conducted interviews either in person or remotely, and interviews in Rwanda were conducted entirely remotely from Japan. The details are as follows.

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[21] Specifically, these variables were added as explanatory variables in the regression analysis. However, since there was no significant difference in the results with or without these variables, this report shows the results of a simple comparison without adding explanatory variables.

Table 4-4: Interviewees for the ABE Initiative

Target group	Main interview items	No. of interviewees, selection method, etc.
Participants	・ The process and factors behind the occurrence of outcomes for which the respondent answered "Yes" (meaning that they occurred) in the web-based survey ・ Factors inhibiting the occurrence of the outcomes for which the respondent answered "No" (meaning that they did not occur) ・ Changes that have occurred to them after completing the ABE Initiative, other than those asked in the web-based survey.	28 ex-participants in total a) 2 ex-participants who have been employed by Japanese companies (which were interviewed in this study) ・ From Egypt: 1 person from the private sector who currently lives in Egypt ・ From Mozambique: 1 person from the private sector who currently lives in Japan b) 26 ex-participants from the target countries of the field study ((i) participants who indicated in the web-based survey that they would be available for an interview and (ii) participants we were able to reach). ・ 18 persons from Kenya: 7 persons from the private sector, 3 persons from government organizations, 3 persons from universities, 1 person from an NGO, 2 persons from JICA, 1 freelancer, 1 person who was seeking a job ・ 8 persons from Rwanda: 4 persons from the private sector, 2 persons from government organizations, 1 person from a university, 1 person who was seeking a job
Non-participants	・ Same as ex-participants above	5 non-participants in total (respondents who (i) lived in the target countries of the field study, (ii) indicated in the web-based survey that they would be available for an interview, and (iii) respondents we were able to reach) ・ 3 persons from Kenya: 1 person from the private sector, 1 person from a university ・ 2 persons from Rwanda: 2 persons from government organizations
Planning or human resources personnel at ex-participants' home organizations	・ Expectations for the ex-participants; the degree to which they were met; unexpected impacts ・ Whether or not and how the organization engages in any business or transactions with Japan; factors involved in such business/transactions ・ Changes in the organization after accepting the ABE participants; whether or not and in what ways the organization engages with the participants	5 people in total (the study team requested the ex-participants who were living in the target countries and available for an interview to refer the study team to their organizations so that we could interview their organizations) ・ 3 persons from Kenya: 2 persons from the private sector, 1 person from a university ・ 2 persons from Rwanda: 1 person from the private sector, 1 person from a university
Relevant organizations from Japanese companies in the target countries of the field study	・ Status of expansion of Japanese companies in the target countries; the demand for human resources in the target countries ・ Advantages for people from target countries to work for and with Japanese companies	・ JETRO Kenya ・ Japanese Chamber of Commerce and Industry in Kenya
Japanese companies (headquarters)	・ Status of maintaining connections and networks with ex-participants; factors affecting such status ・ Whether or not the business was impacted by accepting and hiring	3 companies in total (selected from companies registered for the ABE Initiative to include a good balance of different company sizes, fields, etc.) ・ 1 large company

Target group	Main interview items	No. of interviewees, selection method, etc.
	interns (in the case of ABE Initiative); factors affecting such impact	・2 small and medium companies
Host universities	・Outcomes on the Abe Initiative participants; factors affecting them ・Status of maintaining connections and networks; factors affecting it ・Whether or not the university has experienced other changes; details of such changes and factors involved	Universities were selected to include a good balance of national/private universities, fields, etc.
JICA Overseas Office Japanese Embassy	・Positioning of the ABE Initiative in the study in Japan programs available in the target country ・Degree to which expectations for the ABE Initiative were met; unexpected impacts ・(JICA office) Details of follow-up programs ・(JICA office) Whether or not and in what ways, it handled unsuccessful applicants	Conducted only in the target countries of the field study ・JICA Kenya Office ・Embassy of Japan in Kenya ・JICA Rwanda Office ・Embassy of Japan in Rwanda
Others	・Expectations of ABE ex-participants, the degree to which they were met, and unexpected impacts	・Ministry of Public Service and Gender, Kenya ・Rwanda ICT Chamber ・Experts from the Rwanda ICT Innovation Ecosystem Project (JICA Technical Cooperation Project)

Source: Created by the study team

4.1.2. Results of the Analysis

This section presents the results of the analysis of the occurrence of the expected changes for each of the evaluation questions listed in 4.1.1. As described in 4.1.1, the survey response rates were different between participants and non-participants, and this may have affected the comparability of the results.

(1) Evaluation question 1: End-of-program Outcomes

The study team analyzed the knowledge and skills, understanding of Japan, development of networks, and feelings for Japan that were expected to change immediately after participating in the ABE Initiative. The results are as follows.

Knowledge and skills

In terms of knowledge and skills, we examined whether the following four skills have improved compared to the time of the application for the ABE Initiative: 1) knowledge and skills in specialized fields, 2) methodological skills such as problem-solving and project management, 3) social skills such as teamwork and intercultural understanding, and 4) Japanese language skills.[22]

As shown in Figure 4-1, about 90% of non-participants answered that their knowledge and skills in

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[22] In the web-based surveys, respondents were asked to indicate the degree of improvement in the four knowledge and skill areas compared to the time of the application for the ABE Initiative on a four-point scale (1. Very much improved, 2. Improved, 3. Minimally improved, 4. Not improved at all). In the analysis, those who answered "1. Very much improved" or "2. Improved" were given a value of 1, and those who answered other than 1 or 2 were given a value of 0.

#1, #2, and #3 improved. However, the degree of improvement was higher among the ex-participants at about 97% for #1 and #2 and about 95% for #3. About 30% of non-participants obtained a master's degree or higher through other opportunities after applying for the ABE Initiative. In interviews with non-participants who did not go on to higher levels of education after being unsuccessful in the ABE Initiative, respondents explained that their knowledge and skills improved through attending short-term training programs in their workplaces and work experience. This might suggest that these skills can be expected to improve regardless of one's participation in the ABE Initiative. At the same time, however, the results also suggest that participation in the ABE Initiative may have further enhanced such improvements. In interviews, host universities gave high marks to the knowledge and skills of the ABE participants, citing that their knowledge/skills have reached the initially expected level. Host universities also mentioned examples of participants who received excellent grades, presented at international conferences, presented at social entrepreneurship contests, and were successfully selected to participate in international competitions. Before an ex-participant joined the ABE Initiative, his supervisor at his company (a Japanese manufacturer) had expected that the study in Japan would help him to acquire skills in engineering design, design simulation, analysis, business management, presentation, and problem-solving and develop an understanding of Japanese culture in business situations. When this participant returned to the same workplace after completing the ABE Initiative, the supervisor recognized that the results exceeded initial expectations.

Quite intuitively, participation in the ABE Initiative played a significant role in improving Japanese language skills, with less than 45% of the ex-participants answering that Japanese language skills (#4) have improved, while 10% of non-participants answered the same.
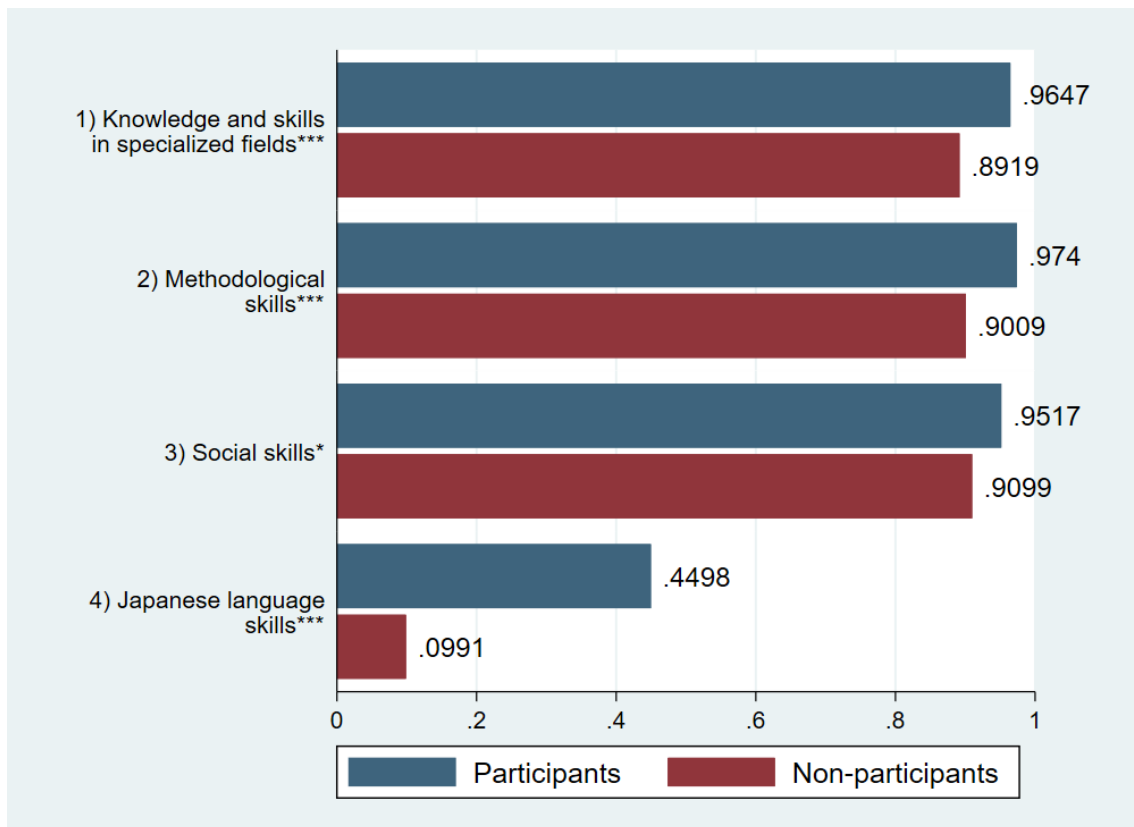
Note: The numbers indicate ratios (or percentages if multiplied by 100). The notations *** and * next to variable names indicate that the differences between participants and non-participants are statistically significant at the 1% and 10% levels, respectively.

Source: Created by the study team

Figure 4-1: Percentage of respondents who answered that their knowledge and skills had improved

Networks

The networks developed through the participation in the ABE Initiative were assessed in five categories: 1) Japanese researchers, universities, and research institutions, 2) Japanese companies, 3) Japanese government officials, 4) Japanese and international friends, and 5) alumni organizations. The survey was conducted only on ex-participants.

The results are shown in Figure 4-2. For categories #1 through #5, 82%, 73%, 33%, 98%, and 86% of the ex-participants developed a network, respectively. Although it is difficult to determine if these percentages are high or low due to the lack of reference values, the percentage of ex-participants who developed networks with Japanese government officials is relatively small. Like in the survey, the proportion of this type of networks was also small among our interviewees; most of the networks they developed were with JICA. In addition, the percentage of ex-participants who developed networks with Japanese companies was 73%, which was slightly lower than other categories. Considering that the ABE Initiative has "industrial human resource development" as part of its program name and emphasizes networking with Japanese companies, this percentage is not considered very high. However, the results of the web-based survey may be a slight underestimate since multiple ex-participants answered "No" to #1 and #2 but did not include their connections with their academic supervisors at the host university (which should be included as #1) and the companies where they

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worked as interns (which should be included as #2). Many of them developed their network with Japanese companies through internship and business networking fairs.

Note: The numbers indicate ratios (or percentages if multiplied by 100).
Source: Created by the study team

Figure 4-2: Percentage of respondents who answered that they developed a network

Understanding of Japan

The understanding of Japan was examined in three categories: 1) Japanese corporate culture and work style, 2) work ethics of Japanese companies, and 3) Japanese development experience.[23]

As shown in Figure 4-3, about 40% to 50% of non-participants improved their understanding of Japan. These individuals included those who had studied in Japan in other opportunities, those who interned at Japanese companies under the Ministry of Economy, Trade and Industry's Japan Internship Program, and those who were working for Japanese companies or in jobs related to Japan (including their participation in JICA projects). Even if they did not participate in the ABE Initiative, there would have been some opportunities to deepen their understanding of Japan through other points of contact with Japanese companies and Japanese people. On the other hand, more than 90% of the ex-participants answered that their understanding of Japan improved, indicating that their participation in the ABE Initiative significantly contributed to the deepening of their understanding of Japan.

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[23] The web-based survey used a four-point scale (1. Very much improved, 2. Improved, 3. Minimally improved, and 4. Not improve at all) to ask ex-participants how much their understanding in #1, #2, and #3 has improved compared to the time of their application for the ABE Initiative. We analyzed the results by creating a dichotomous variable by collapsing "1. Very much improved" and "2. Improved" into a value of 1 and collapsing answers other than 1 and 2 into a value of 0.
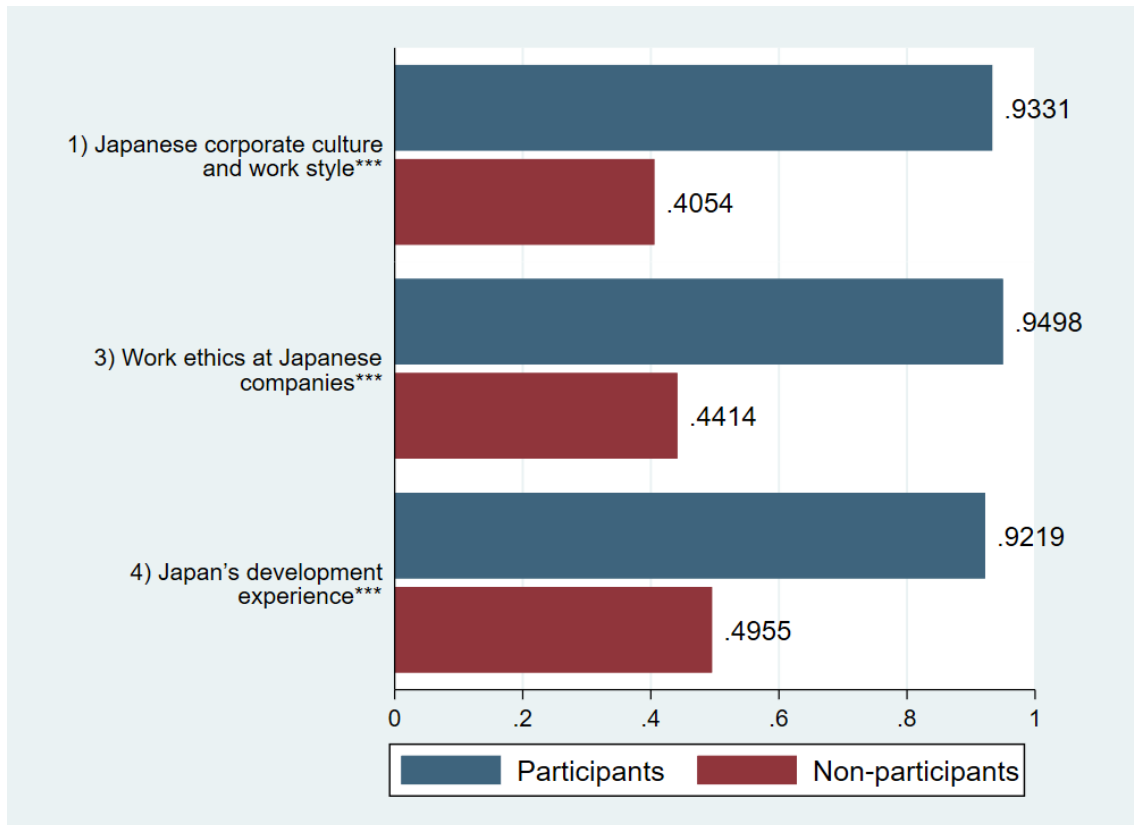
Note: The numbers indicate ratios (or percentages if multiplied by 100). The notations *** next to variable names
   indicate that the differences between participants and non-participants are statistically significant at the 1% level.
Source: Created by the study team

**Figure 4-3: Percentage of respondents who answered that their understanding of Japan
improved**

Feelings about Japan

About 11% of non-participants and 39% of the ex-participants answered that their feelings about Japan
had improved compared to the time of their application for the ABE Initiative. It should be noted that
those who had very positive feelings toward Japan from the beginning had no room for further
improvement. The percentage of the ex-participants who answered that they currently had very
positive feelings toward Japan was about 70%, which was 17% higher than the percentage of non-
participants. These results indicate that participation in the ABE Initiative has resulted in more positive
feelings toward Japan. However, some non-participants maintained high positive feelings toward
Japan due to the experience they had in Japan as temporary visitors, their love for Japanese culture,
food, and products, and their desire to apply for the ABE Initiative again if they have the opportunity.

On the other hand, it is worth noting that 18% of non-participants and about 15% of the ex-participants
(the difference was not statistically significant) answered that their feelings had worsened. Although
the web-based surveys did not ask the reason for the change in feelings, the comments of the ex-
participants whose feelings worsened can be roughly divided into the following categories: a)
dissatisfaction with the study abroad experience ("I wanted to change my major after I came to Japan,
but it was not accepted," "there was lack of opportunities to learn Japanese," "there was lack of
opportunities to understand more about Japan, such as part-time jobs and sightseeing" and "living
allowances were low," etc.), b) dissatisfaction with follow-up activities and opportunities after

returning home ("there was no opportunity to present the results of study abroad," "it would be good if there were a system to link internships to employment," "it would be good if there were regular networking events with companies after returning home,[24]" etc.), and c) the fact that they were not able to find jobs or return to work as expected ("the master's degree was not respected in my workplace and the study in Japan period was treated as a blank for two years," "no Japanese company wanted to hire me," etc.). These cases may have contributed to the worsening of feelings about Japan.
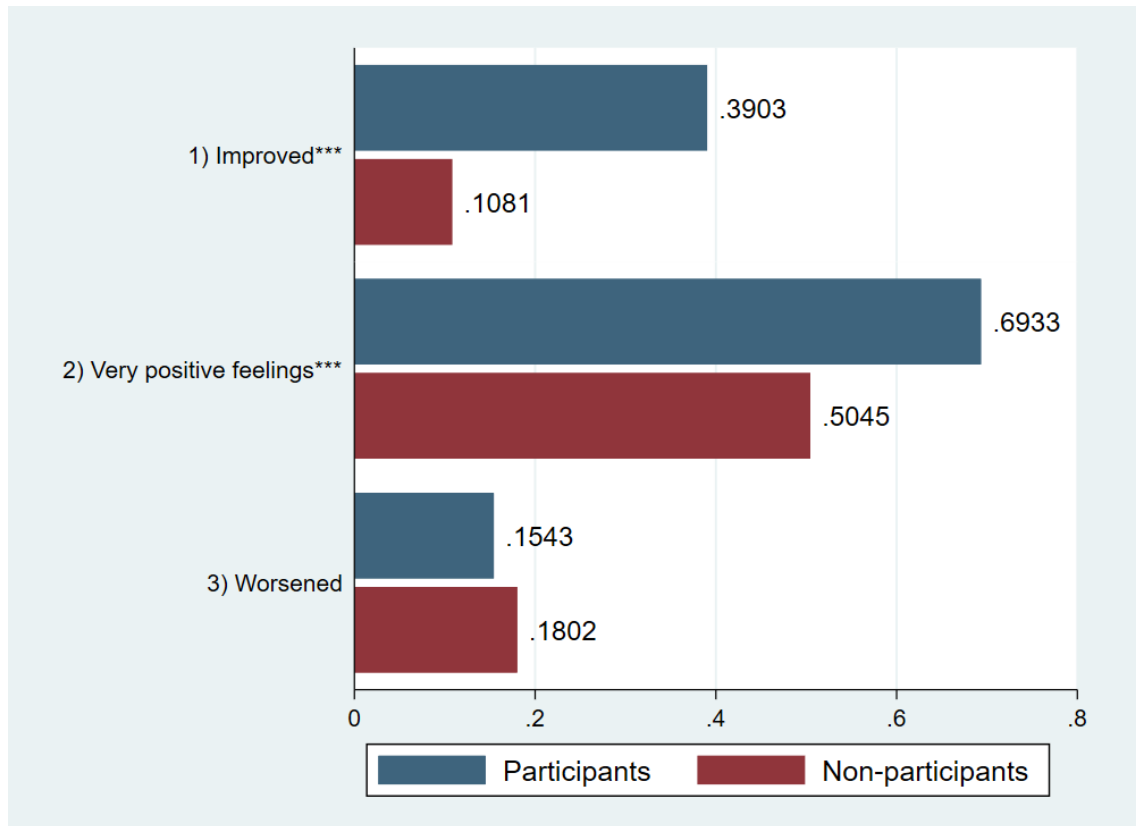
Note: The numbers indicate ratios (or percentages if multiplied by 100). The notations *** next to variable names indicate that the differences between participants and non-participants are statistically significant at the 1% level.
Source: Created by the study team

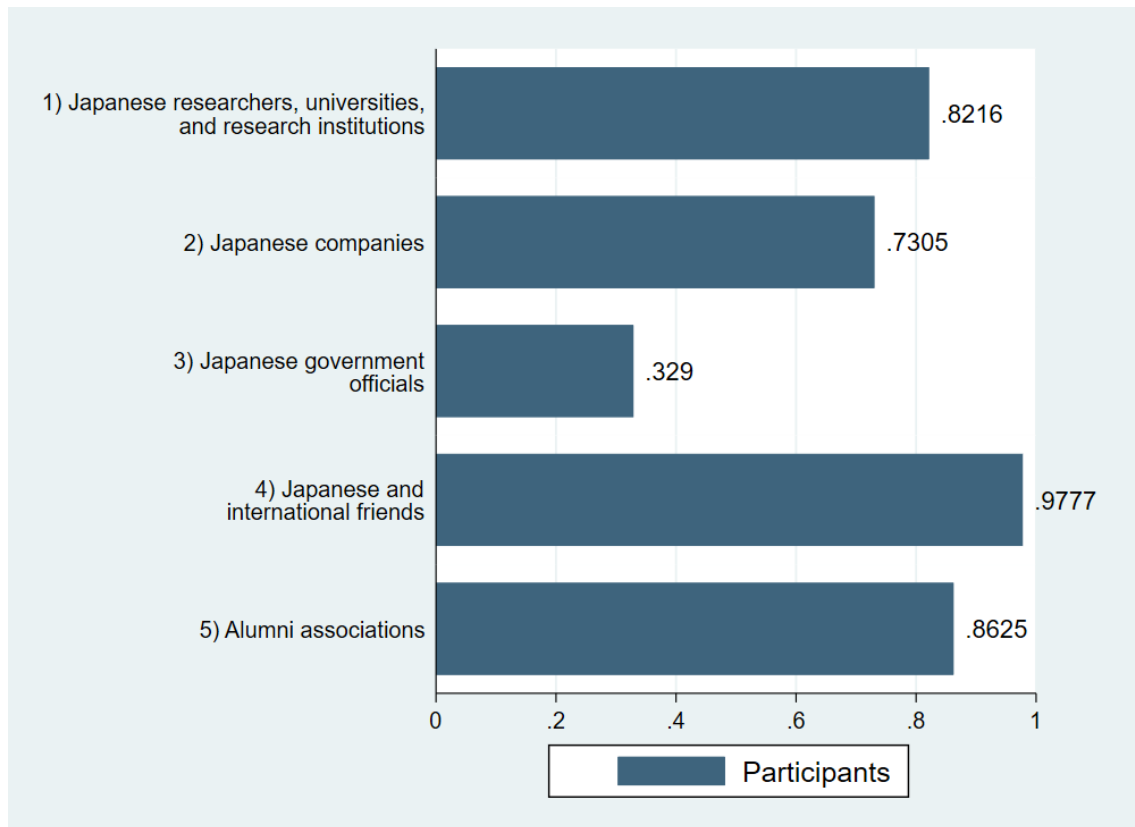**Figure 4-4: Percentage of respondents who answered that their feelings about Japan improved**

Summary of Evaluation Question 1

As mentioned above, more ex-participants answered that their skills and understanding of Japan improved than non-participants. The differences between these two groups are statistically significant. Although this result is based on a self-perception of respondents, it seems that the participation in the ABE Initiative had resulted in the expected changes in knowledge, skills, and understanding immediately after they finish the program. The results also indicated that positive feelings toward Japan were higher among ex-participants, indicating that participation in the ABE Initiative enhances such feelings. As for networks, participation in the ABE Initiative is considered to have led to a certain degree of networking, but the results are inconclusive due to the lack of reference values.

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[24] JICA holds a wide-area networking fair once a year as a program to support ex-participants after their return to home countries, but there were several comments that it would be good to have closer support in each country.

(2) Evaluation question 2: Initial/Mid-term Outcomes

Next, the study team examined the next stage of changes that are expected to ensure the changes that take place immediately after participants complete the ABE Initiative: ex-participants' jobs and the maintenance of networks after returning to their home countries, and the application of the skills gained through the ABE Initiative.

<u>Jobs after returning to one's home countries</u>

We analyzed outcomes related to the jobs of ex-participants after returning to their home countries (including reinstatement) in the following four aspects: 1) whether they obtained posts in the fields they studied (Type 1 Jobs),[25] 2) whether they obtained jobs at Japanese companies (Type 2 Jobs), 3) whether they obtained jobs related to Japan (Type 3 Jobs), and 4) whether they started a business (Type 4 Jobs).

First, Table 4-5 shows the distribution of job categories at the time of the survey for both ex-participants and non-participants as a reference.

Table 4-5: Current job categories

	Participants		Non-participants	
	No. of respondents	%	No. of respondents	%
Private sector	186	34.6%	35	31.5%
Governmental/public organizations	168	31.2%	39	35.1%
Educational/research institutes	54	10.0%	10	9.0%
Others	24	4.5%	15	13.5%
Students	64	11.9	7	6.3%
Unemployed	42	7.8%	5	4.5%
Total	538	100.00%	111	100.00%

Source: Created by the study team

The results of the analysis are shown in Figure 4-5. Regarding Type 1 Jobs, nearly 60% of non-participants answered that they had jobs in the fields they studied, but the percentage was lower for ex-participants, at around 40%. This indicates that the ABE Initiative caused its participants to pursue careers outside their academic fields.[26] Although not shown in the chart, more than 60% of the ex-

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[25] For non-participants, the survey asked a question concerning the relationship between the respondents' current job and the study field in their last academic program. For the question about whether their current jobs matched their fields of study, respondents were asked to choose their answers from three choices, "very much," "somewhat," or "not at all," where the answer "very much" was defined as "having a job in the field you studied." Adding the answer "somewhat" to the latter category did not significantly change the results.

[26] Because master's programs are more specialized than undergraduate programs, those with master's degrees may

participants who returned to the jobs they had had before the ABE Initiative answered that they had jobs in the fields they studied, suggesting that those who changed their jobs after the ABE Initiative were not necessarily employed in the same fields they studied.[27] In addition, except for the ex-participants who majored in sciences, non-participants were more likely to be employed in the fields they studied regardless of their major.

According to the interview, an ex-participant who found a job in Japan was employed by a company related to his undergraduate major rather than his research topic in the master's program (the environmental impact assessment in road projects). When he was seeking a job, the company he wanted to join was looking for "young talent who can design and can go abroad." He was successfully employed by this company because of his design experience in the undergraduate program and his internship experience at that company. Understandably, companies do not necessarily limit the qualifications for a position only to the specialized knowledge the applicant acquired in their master's program (under the ABE Initiative). In the case mentioned above, the employment decision was made based on a comprehensive assessment of the applicant's academic and professional skills and experiences, not just the ones he acquired in the Abe Initiative. Cases like this do not necessarily constitute a negative outcome as individuals can broaden their careers through their participation in the ABE Initiative. However, there is also a possibility that the ex-participants may not have had the opportunity to make use of the knowledge and skills in the fields they studied. In fact, the survey results concerning the degree to which participants make use of the acquired skills show that 98% of the ex-participants who obtained positions in their fields of study made use of their specialized skills acquired through the ABE Initiative, while only 77% of the ex-participants who did not get positions in their fields of study made use of their specialized skills. Rwanda was a special case. Rwanda focused on the country's priority area—ICT—throughout the Initiative's process, from the time of recruitment and selection of ABE participants to the follow-up work after their return to their country. As a result, most Rwandan ex-participants obtained positions in ICT fields.

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look for jobs within a narrower range of professions related to the fields they studied than those with bachelor's degrees. In fact, the proportion of the non-participants who worked in the fields they studied was smaller among individuals with master's degrees (50.9%) than those with bachelor's degrees (64.7%). On the other hand, if we exclude the non-participants with bachelor's degrees from the analysis, the difference between ex-participants and non-participants becomes slightly smaller. However, the tendency that a lower percentage of ex-participants are in posts in the fields they studied remains unchanged (with a statistically significant difference). Although there is always a possibility that bachelor's degree holders and master's degree holders view the relevance of the field they studied differently, this is unlikely to have any substantial impact on the results of the analysis.

[27] Sixty-one percent of the respondents returned to their previous workplaces, and most of them were government officials or public school teachers. Public institutions often send their employees to study abroad programs on the condition that employees will work at the organization for a certain period of time after returning to their home country.
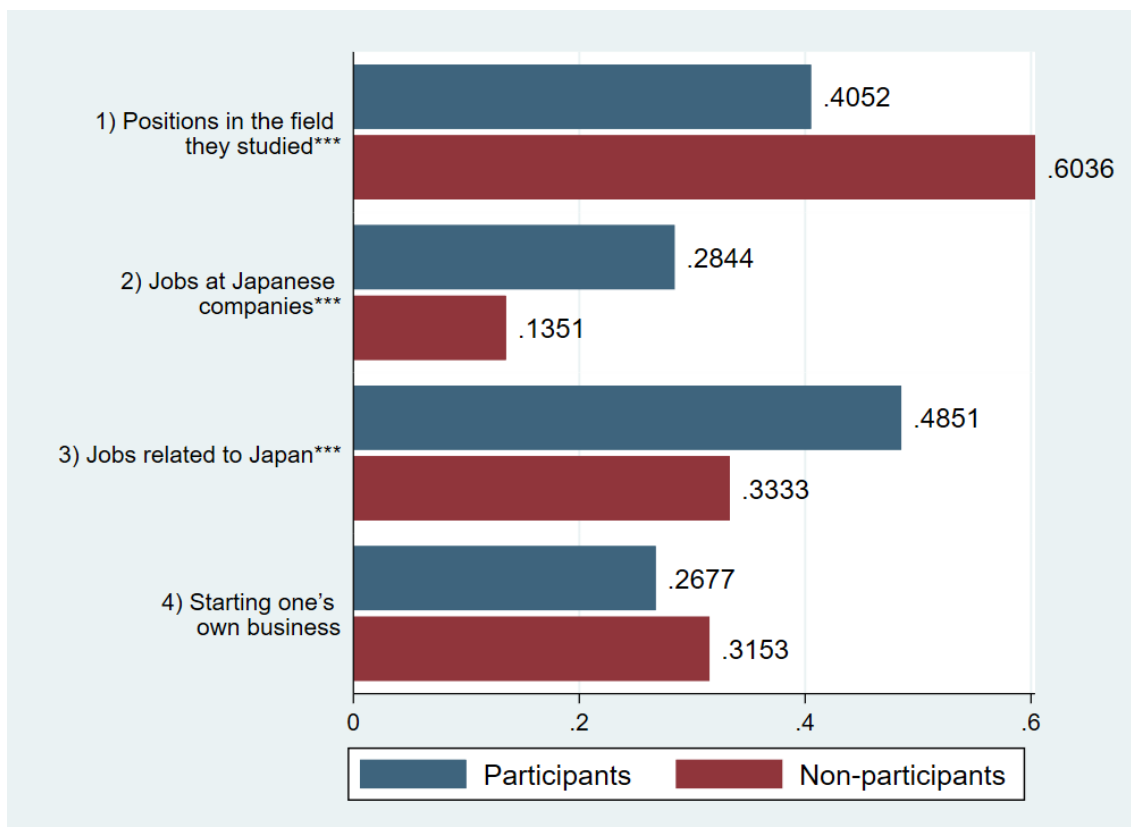
Note: The numbers indicate ratios (or percentages if multiplied by 100). The notations *** next to variable names
   indicate that the differences between participants and non-participants are statistically significant at the 1% level.
Source: Created by the study team

Figure 4-5: Percentage of respondents who obtained a job after studying abroad (after applying for the ABE Initiative)

The figures for Type 2 Jobs (jobs at Japanese companies) and Type 3 Jobs (jobs related to Japan) were about 15% higher for ex-participants than for non-participants, indicating that the participation in the ABE Initiative has helped participants acquire jobs that are closely related to Japan. Some examples of jobs at Japanese companies include: returning to work at an automobile manufacturer and being involved in the start-up of a pickup truck assembly plant (a new production line in East Africa); working on a new brand design for the business development team of a manufacturer of vehicles and industrial lubricants, contributing to the company's expansion into West African, which is primarily the ex-participant's home region; and working in the design industry and being involved in business expansion into overseas markets in Africa and Asia. Jobs related to Japan include offshore development of software for the Japanese market and business consulting for Japanese companies. However, it should be noted that some ex-participants were not able to apply for any of the job opportunities due to conflicts with the hiring schedules of Japanese companies. Some even went to recruitment agencies but had to give up on finding jobs in Japan because all jobs required Japanese language skills. Some ex-participants said that they had to return to their home country immediately after the internship (by the program's regulations) and did not have enough time to find a job.[28]

Interviews with local branches of Japanese companies in Africa as well as their head offices in Japan

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[28] ABE 3.0 (from Batch 6 starting in 2019) will provide more employment support to participants.

revealed that although understanding of Japanese culture and Japanese language could be beneficial for employers, it was not a top priority when hiring employees locally, and these companies tended to hire individuals with specialized knowledge and experience. In addition, they reported that the existence of significant gaps in salary and other conditions between employees hired at the head office in Japan and locally hired employees created a situation where participants were much more interested in getting hired at the head offices in Japan than at local branches. These findings suggest that finding jobs at Japanese companies is challenging even if participants have studied in Japan, have a master's degree, or have specialized knowledge.

As for Type 4 Jobs (starting a business), the percentage was around 30% for both ex-participants and non-participants, and the difference is not statistically significant. In field interviews, seven out of 27 ex-participants and two out of five non-participants said that they had experience starting a business. However, some started their own business as a side business because they were not able to earn enough money from one job. Some even started their own businesses unrelated to the fields they studied, such as guesthouses and game stores. We could not confirm the impact of the ABE Initiative on business startups at this time.

Maintaining networks

To investigate how participants were maintaining their networks, we examined the percentage of individuals who had contacts with the following institutions/individuals within the past three months: 1) Japanese researchers, universities, and research institutions, 2) Japanese companies, 3) Japanese government officials, 4) Japanese and international friends, and 5) alumni organizations.

As shown in Fig. 4-6, the percentage of the respondents who maintained contacts and their networks was higher among ex-participants. It should be noted that some respondents who were working for Japanese companies responded to this survey question without including their own company. This inconsistency in the interpretation of the survey question should be taken into account when interpreting the results for ex-participants. As for the networking with government officials, the low value is considered reasonable since few respondents said that they developed networks with government officials. In addition, only about one-third of ex-participants maintained contacts with alumni associations and other organizations. Some of the ex-participants who were planning to go on to doctoral programs contacted their former supervisors in their undergraduate programs and some of non-participants exchanged ideas with the university faculty about the project they were working on. Regarding networking with Japanese companies, some ex-participants communicated regularly with their internship companies to discuss research collaborations with these companies and to support companies that received (or were considering to receive) JICA's support for expanding their business overseas. They often exchanged information with their friends and alumni association members[29] through SNS. Some ex-participants said that they would like to participate in the activities of the alumni association but were not able to do so due to their busy work schedules. In the case of non-participants working for Japan-related companies, there was a certain amount of interaction with

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[29] There is an organization established by alumni volunteers called Kakehashi Africa (KA). KA provides alumni association functions, but it is still not active in some countries. However, when ex-participants heard the word "alumni association," some incorrectly associated it with the alumni association for JICA long-term training participants, a different organization administered by JICA overseas offices.

Japanese people.
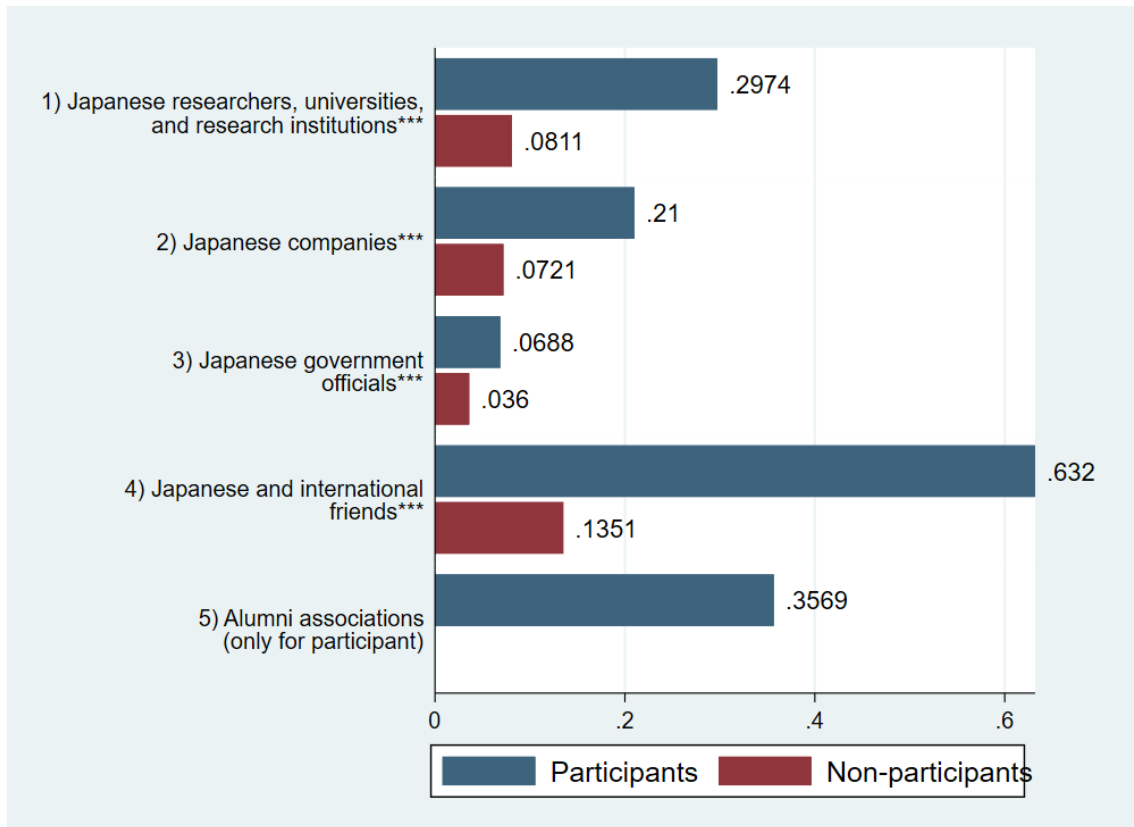
Note: The numbers indicate ratios (or percentages if multiplied by 100). The notations *** next to variable names
indicate that the differences between participants and non-participants are statistically significant at the 1% level.
Source: Created by the study team

Figure 4-6: Percentage of respondents maintaining their network

Application of Skills (ex-participants only)

The degree to which ex-participants applied the knowledge and skills acquired through the
participation in the ABE Initiative to their work, including a) knowledge and skills in specialized fields,
b) methodological skills such as problem-solving and project management, c) social skills such as
teamwork and intercultural understanding, and d) Japanese language skills, was high, at around 90%
for a), b), and c). The degree to which Japanese language skills were used was about 25%.

On the other hand, the extent to which ex-participants made use of the acquired skills depended on the
occupation and career after returning to the home country. As mentioned above, the percentage of ex-
participants who used the expertise and skills gained through the ABE Initiative was about 20
percentage points higher among those who obtained a job in their field of study than among those who
did not. Interviews with Japanese trading companies that have re-employed (reinstated) ex-participants
at their local offices also indicated that the internal evaluation of ex-participants was very satisfactory,
as they understood the Japanese way of completing tasks and were using their MBA-backed
knowledge obtained through the ABE Initiative to lead negotiations with the local Ministry of Energy.
In addition, 37% of the ex-participants who had Japan-related jobs were using their Japanese language
skills. As expected, this was significantly higher than the percentage among the ex-participants who
did not have Japan-related jobs (7%). If the program were to expect ex-participants to make use of the

knowledge and skills gained through the ABE Initiative, it would be necessary not only to assist participants in acquiring knowledge and strengthen their mastery of it during the program, but also to help them find a position where they can make use of such knowledge and skills in their career after returning to their home countries. In the "Feelings about Japan" section above, we discussed the case of an ex-participant who had returned to work (at a Japan-related company) but left the company because the company did not sufficiently appreciate the master's degree he earned through his study in Japan. In this particular case, the ToC assumptions for using the knowledge and skills acquired, including "support of supervisors," "staying in a related position," and "environment to make use of the knowledge and skills learned," did not materialize. As a result, the ex-participant was not able to make good use of his skills. (Although cases like this are not very common, it is important to remember that such instances can negatively affect the feeling toward Japan among participants).

Note: The numbers indicate ratios (or percentages if multiplied by 100).
Source: Created by the study team

Figure 4-7: Percentage of respondents who answered they were using the skills gained from studying abroad

Summary of Evaluation Question 2

The overall percentage of ex-participants who obtained positions in their field of study was lower than that of non-participants. Although this may not be an expected career path from the perspective of making use of the specialized knowledge and skills acquired through the ABE Initiative, it can be viewed as an expansion of their career options. On the other hand, a larger percentage of ex-participants have jobs related to Japan, suggesting that many are building their careers through the

connection with Japan that they developed in the ABE Initiative, rather than through their specialized knowledge and skills in the field they studied.

(3) Evaluation Question 3: Mid-term Outcomes

As a further stage of change, it is expected that ex-participants will be appointed to positions with higher responsibilities and make contributions through their organizations. In addition, ex-participants are expected to use their connection with Japan to play the role of Navigators who would assist the efforts of Japanese companies, JICA, Japanese universities, etc. in expanding into Africa. The following sections examine these points.

Position with significant responsibility

In this section, we examine whether ex-participants hold positions with significant responsibility in terms of 1) whether they are in supervisory positions where they supervise and manage other employees (regardless of the number of employees they supervise), 2) whether they are in decision-making positions,[30] and 3) whether they have been promoted.[31]

The results of the analysis are shown in Figure 4-8. In all three areas, the percentage was lower among ex-participants than among non-participants. As for #1, nearly half of non-participants were in supervisory positions, while only 40% of ex-participants were in supervisory positions. As for #2, 73% of ex-participants had positions with decision-making authority at some level. However, this figure is lower than that of non-participants (not a statistically significant difference). Promotion (#3) was also lower among ex-participants than non-participants, by about 17 points. These patterns are also present when we look at only Batches 1 and 2 participants, who have been back in their countries for several years by the time they took the survey. Looking only at respondents who returned to the same job they had when they applied for the ABE Initiative, the difference between ex-participants and non-participants narrowed down slightly, but the percentage was still lower among ex-participants. The same pattern was observed concerning promotion (#3), but the difference between the two groups was particularly large in this dimension. This suggests the influence of a blank period due to study abroad. However, interviews with ex-participants and some of their supervisors revealed organizational factors that were not related to their participation in the ABE Initiative, such as lack of promotion due to organizational rules or lack of available posts even for capable employees.[32]

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[30] The survey asked about the four levels of decision-making authority: whole organization (highest level), departments and sections, teams, and individual projects (lowest level). Those who answered that they had decision-making authority at any of level are defined as "in a position to make decisions."

[31] A promotion is defined as a person indicating that he or she is in a higher position at the time of responding to the survey compared to the time they applied for the ABE Initiative.

[32] When we compared the percentage of non-participants who studied abroad through opportunities other than the ABE Initiative with that of those who did not, the percentage of those who studied abroad was smaller than those who did not in #1, #2, and #3. In addition to the ABE Initiative, being away from the workplace for a certain period of time can be a disadvantage in terms of whether or not an employee is appointed to a position with significant responsibility. In the Indonesia Graduate Training (Case No. 6 in Table 2-8) reviewed in Section 2.2 of this report, a subgroup analysis was performed between participants who received their degrees in Indonesia and those who studied in the United States. The results showed that the percentage of people who held positions with significant responsibility was lower among the participants who had studied in the United States than among those who had obtained degrees in Indonesia (their home country). The latter group participated in the program on the recommendation of their workplace, and some of them stayed at their jobs or continued to work during the scholarship program.
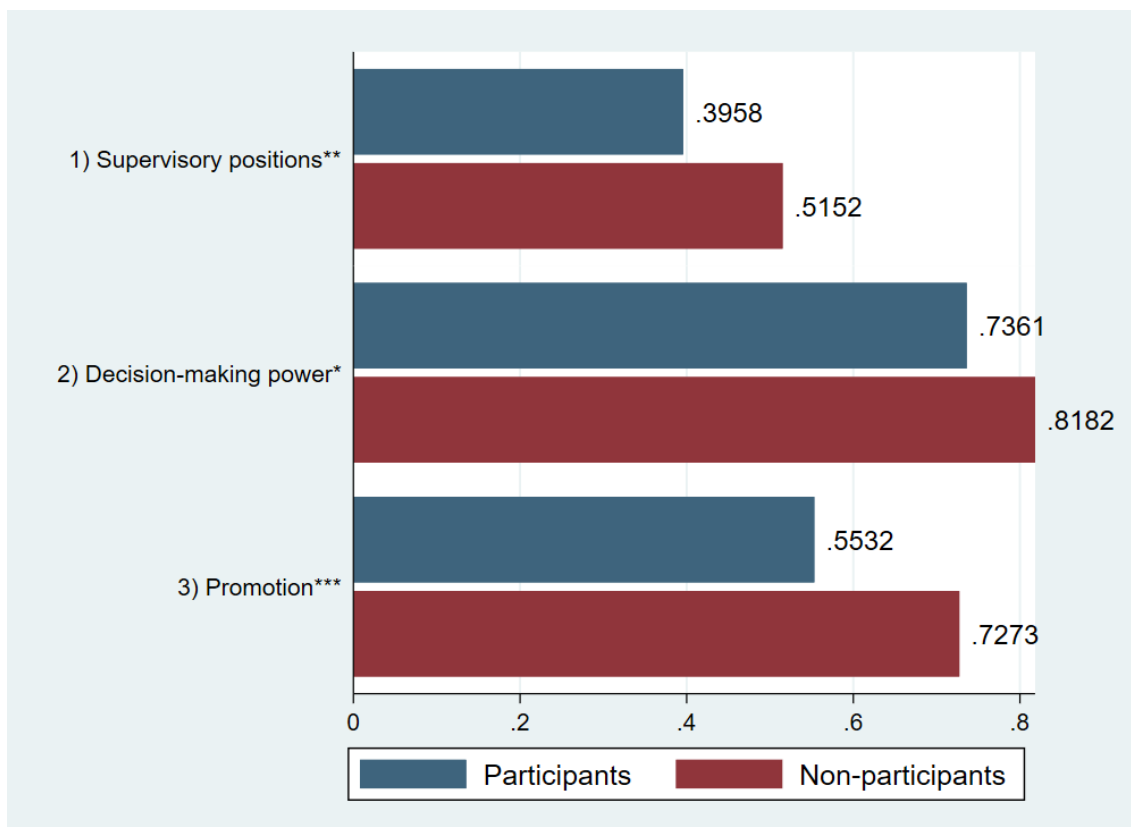
Note: The numbers indicate ratios (or percentages if multiplied by 100). The notations ***and **next to variable
names indicate that the differences between participants and non-participants are statistically significant at the 1%
and 5% levels, respectively.
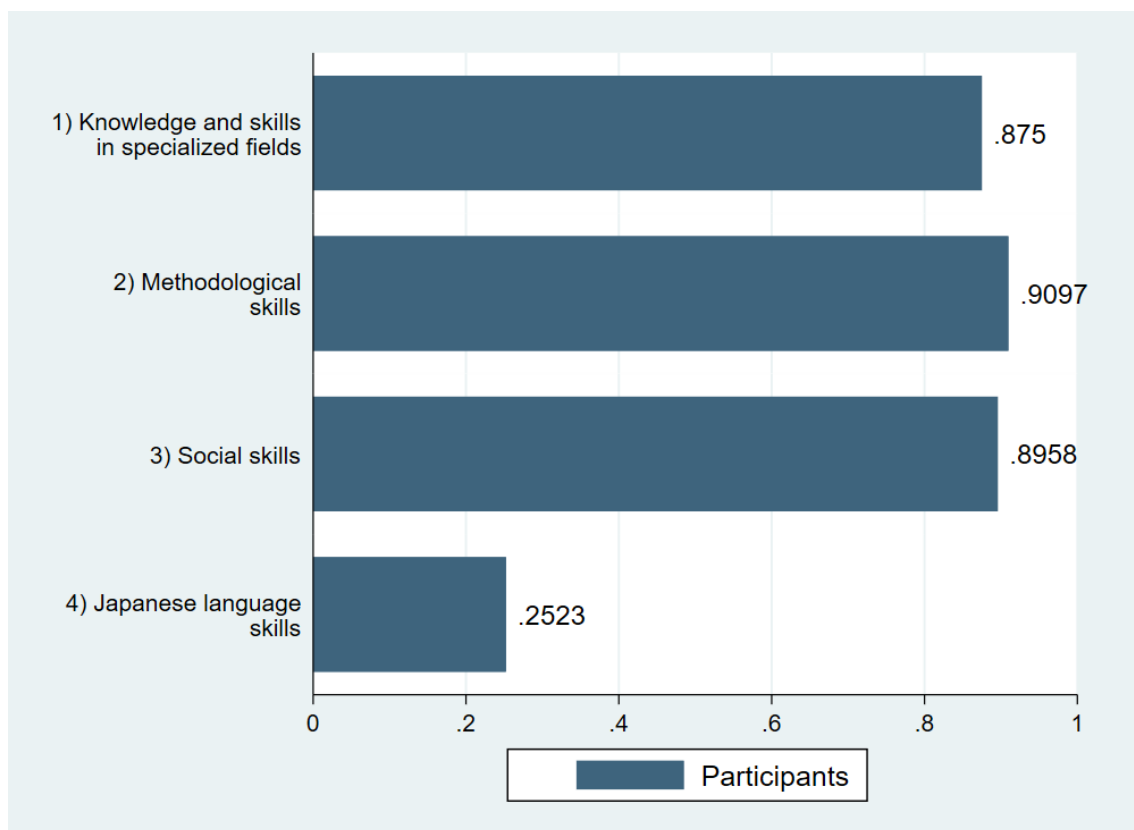Source: Created by the study team

**Figure 4-8: Percentage of respondents who answered that they were in positions with
significant responsibility**

The percentage of ex-participants holding positions with significant responsibility (discussed above)
and the percentage of those in posts in the fields they studied (discussed in (2) Evaluation question 2)
were both lower than non-participants. To examine this finding in detail, the study team conducted
two types of subgroup analysis[33]: 1) by job category at the time of application (i.e., private-sector
professionals, public-sector professionals, and education professionals) and 2) by batch.[34]

The results of the analysis by job category are shown in Figure 4-9.[35] Regarding decision-making
power, the percentage of ex-participants was uniformly lower than that of non-participants across job

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[33] We divided the sample into subgroups and examined how the percentages of ex-participants and non-participants
differ within each subgroup. Since analysis by subgroups made the sample size of each subgroup smaller, the results of
the analysis should be understood as reference information to show the trend based on a limited-size sample.

[34] In addition to these, a subgroup analysis was also performed by region (sub-Saharan Africa vs. the rest), but we
omitted the results from this report since no noteworthy results were obtained.

[35] The analysis classified the respondents according to their category before participating in the ABE Initiative (e.g.,
those who had worked for government institutions before they participated in the ABE Initiative but moved to the
private sector after the ABE Initiative were classified as public-sector professionals). Private-sector professionals are
those who had worked in the private sector (including business owners) and those who were self-employed; public-
sector professionals are those who worked for government institutions (including public corporations); and education
professionals are those who worked for educational and research institutions (excluding students). Others, such as those
who worked for NGOs and international organizations, students, and unemployed individuals, were excluded from this
analysis.

categories except for education professionals.[36] However, the difference between ex-participants and non-participants among private-sector professionals was significantly larger, while the difference was smaller among public-sector professionals. One of the reasons for such a difference by job category may be the influence of their job and career choices after returning to their home courtiers. Although not shown in the graphs, the percentage of ex-participants who did not return to their original jobs or organizations after returning home was around 28% among public-sector professionals, while it was around 45% among private-sector professionals. This suggests that private-sector professionals are more likely than public-sector professionals to change jobs or organizations after returning to their home countries and that such career changes may have an impact on their promotions.[37]
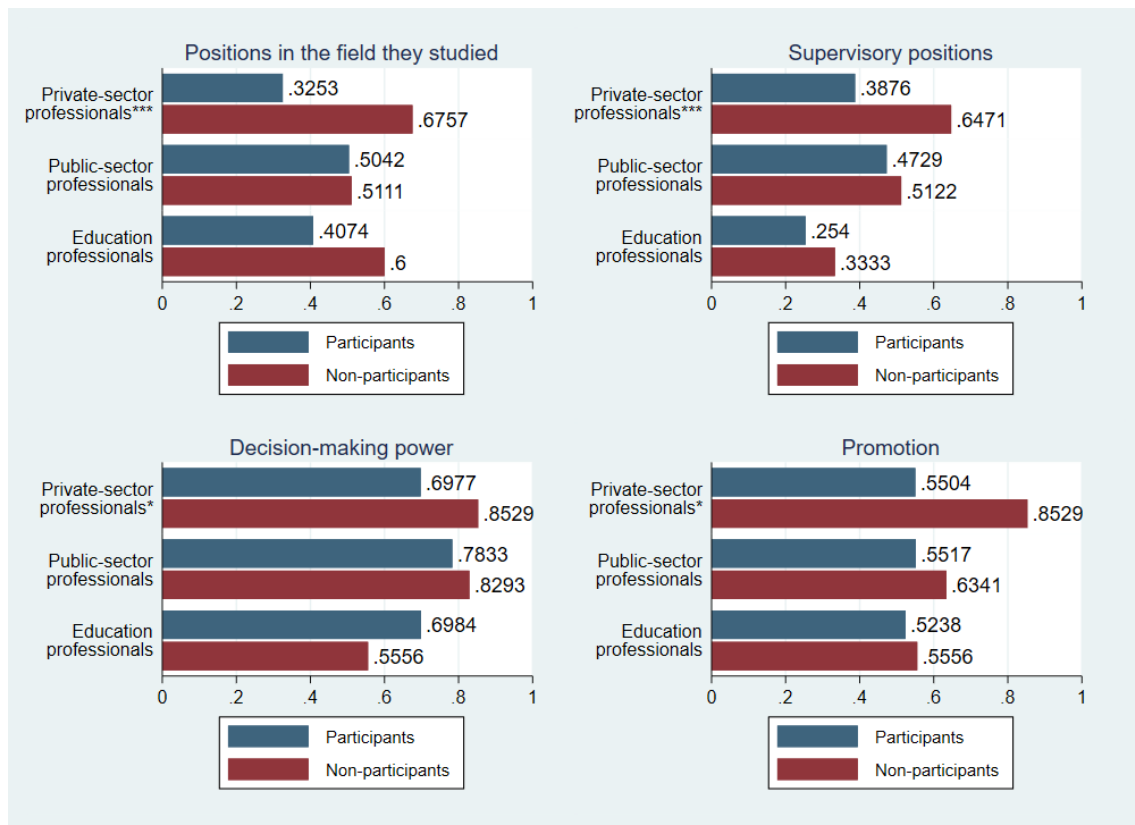
Note: The numbers indicate ratios (or percentages if multiplied by 100). The notations *** and * next to variable names indicate that the differences between participants and non-participants are statistically significant at the 1% and 10% levels, respectively.
Source: Created by the study team

Figure 4-9: Analysis results by job category at the time of application

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[36] Even among public-sector professionals, although the differences are smaller than other job categories, the percentages of people with supervisory positions, decision-making power, and promotions were higher among non-participants. An explanation is found in the evaluation report of Case Study 3, "Fulbright Scholarship Support Program in Pakistan," reviewed in Section 2.2. According to interviews mentioned in the report, promotion in the civil service sector, in particular, does not depend solely on the degree the employee has but is influenced to a larger degree by other factors, such as the tenure of employment. This was also true for ABE ex-participants, whose length of tenure was shorter than that of non-participants.

[37] In terms of decision-making power, ex-participants had greater authority than non-participants in education professionals. This may be due to the fact that the role of a degree is assumed to be higher in educational and research fields than in other fields, and a certain amount of discretion is ensured in the selection of teaching methods. In fact, in the interviews in Kenya and Rwanda, several ex-participants said that they had decision-making power and have adopted the teaching methods they learned in Japan.

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As described in (2) Evaluation Question 2 above, the percentage of ex-participants who were employed by Japanese companies was higher than non-participants. A study on the careers of international students at Japanese companies noted that there was a significant difference between career aspirations of international students who joined Japanese companies and the career image that Japanese companies seek from international students. It also pointed out that Japanese companies would allocate human resources from a long-term perspective based on the logic of the organization rather than the aspirations of individual employees."[38] The data we obtained from this study also confirm that the percentage of employees of Japanese companies who are in positions with significant responsibility is lower than those who are not employed by Japanese companies. These points suggest that the ABE Initiative's emphasis on the promotion of employment at Japanese companies may have also affected the relatively low percentages of ex-participants in positions with significant responsibility among private-sector professionals.

The results of the analysis by batch are shown in Figure 4-10. Although there are some exceptions, for both ex-participants and non-participants, the percentage of people who had positions with significant responsibility tended to be higher in older batches than in more recent batches. Therefore, it is expected that the percentages will increase over time. However, our data do not show that the gap between ex-participants and non-participants has become narrower in older batches such as Batches 1 and 2. Therefore, the possibility that ex-participants will catch up with non-participants (i.e., the difference between ex-participants and non-participants will become narrower) over time is not readily apparent, at least in a period of five years or so.

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[38] Moriya (2012)
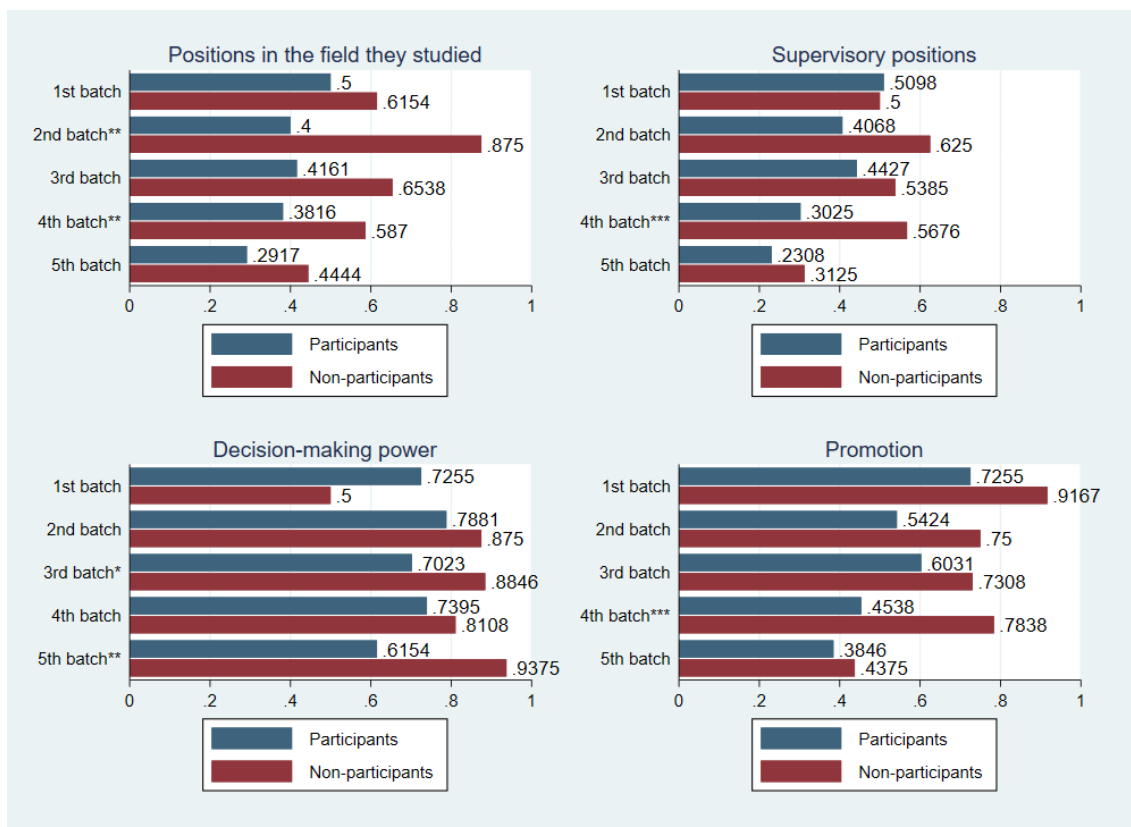
Note: The numbers indicate ratios (or percentages if multiplied by 100). The notations *** and * next to variable names indicate that the differences between participants and non-participants are statistically significant at the 1% and 10% levels, respectively.

Source: Created by the study team

Figure 4-10: Results by batch

Navigator (joint projects with Japanese organizations, etc.)

Next, the study team examined whether ex-participants are playing the role of "Navigators," which is one of the keywords of the ABE Initiative. A Navigator is defined as an ex-participant who is involved in the commencement, expansion, or facilitation of the businesses, joint projects, and research collaborations that Japanese organizations (Japanese companies, Japanese research institutions, Japanese government (including JICA and JETRO)) carry out with African organizations.

The results of the analysis are shown in Figure 4-11. About half of the ex-participants served as Navigators, which was twice as many as non-participant Navigators. This indicated that the ABE Initiative made a significant contribution to the development of Navigators. The most common types of activity were "supporting Japanese companies to expand into Africa and develop their business" (117 ex-participants), "participation in JICA and Japanese ODA projects" (61 ex-participants), "activities as ABE alumni" (34 ex-participants), "employment at Japanese companies (including those who have already retired)" (26 ex-participants), "research collaborations or projects with academic supervisors or host universities" (17 ex-participants), and "having their own Japan-related business (actual or planned)" (seven ex-participants). Specific examples are summarized in Box 4-1 (specific examples of "employment at Japanese companies" are not included since they have already been mentioned earlier). In the survey of the companies registered for the ABE Initiative, the most frequently cited mode of engagement with ex-participants was "as a provider of local information,"

which was cited by about half of the companies (48%). This indicates that many ex-participants support Japanese companies by providing local information.

The survey results confirmed a chain of changes from earlier outcomes, such as employment with Japanese companies or organizations involved in Japan-related work, making use of learned knowledge, etc., and making use of connections, that lead to such active involvement. Most of the ex-participants agreed that internships (75%) and networking fairs (74%) were the most important factors that facilitated the collaborations mentioned above (multiple responses). This was also confirmed in interviews with companies. For example, a Japanese company that expanded into Rwanda as a result of accepting interns had no connection with Africa before accepting ABE students. As another factor that facilitated their involvement as Navigators, some of the ex-participants said in their interview that they were aware of the role ABE participants were expected to play—to use what they learn in the program to make positive contributions to society. These individuals were actively involved in several joint activities.

On the other hand, in terms of factors that hinder such collaboration, interviews with universities indicated that the time difference between African countries and Japan, as well as differences in the level of researchers and the laboratory equipment they use, created bottlenecks for research collaborations. In the survey, most of the ex-participants who have not been able to play the role of Navigators cited the lack of information about companies planning to enter the market (60%) and the lack of Japanese companies (54%) as obstacles. Relatively few respondents cited the following factors: low competitiveness of Japanese companies (20%), mismatch of fields (21%), and barriers of Japanese language and culture (31%) (multiple responses). Interviews indicated that the large enterprises already operating in African countries did not intend to collaborate with individual ex-participants because these companies already had local contacts and local employees. (The reason for accepting the internship is to achieve the goal of "making the company better known to people overseas"). One of the small and medium-sized enterprises (SMEs) that expanded into Africa as a result of an ABE intern it hired reported, "The ABE Initiative helps us develop personal connections with local businesses in Africa. Since many of them are not trying to build large businesses, I think the ABE Initiative is a good starting point to establish relationships with these small-scale businesses that do not attract the attention of large trading companies."
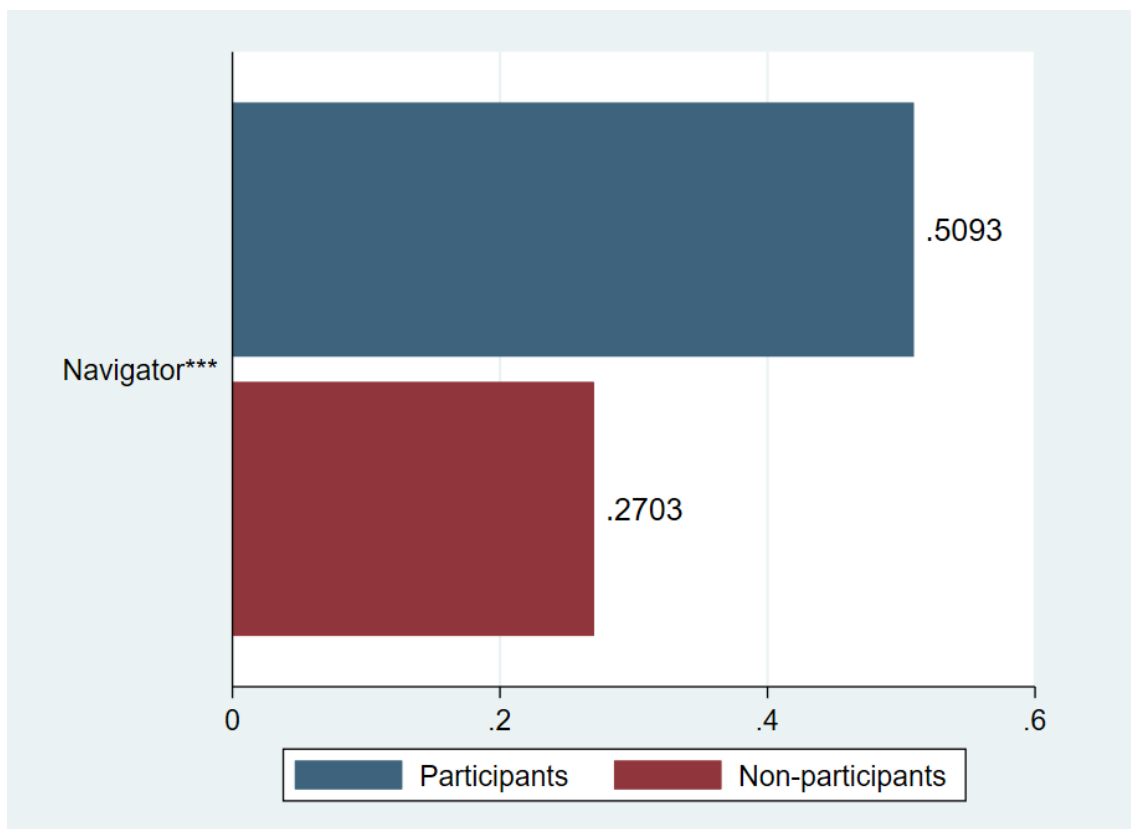
Figure 4-11: Percentage of respondents who answered that they were playing the navigator role (i.e., started or expanded joint activities with Japanese organizations)

Box 4-1: Examples of Navigator Activities

The examples for "support for Japanese companies to expand into Africa and develop their business" identified from the survey responses and interviews are: sharing of local information, reference to related organizations and resource persons during the initial review stage of a business project, assessment of specific business plans, and support for procedures at the time of expansion, such as the ones for bringing in equipment and registration. The responses are very detailed and specific, indicating that they actually work closely with Japanese companies.

In the case of "participation in JICA and Japanese ODA projects," there are cases in which ex-participants support their host universities and internship companies to win JICA and Japanese ODA projects in their home countries. For example, ex-participants who studied at Obihiro University of Agriculture and Veterinary Medicine participated in a JICA Partnership Program for tick extermination and tick-borne disease control in which Makerere University served as the counterpart.

Examples for "research collaborations and projects with academic supervisors or host universities" included cases in which ex-participants published papers on their research in journals with their academic supervisors, started their own businesses in collaboration with their academic supervisors, Japanese companies, and friends, and played a part in concluding cooperation agreements between their home

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universities and host universities in Japan.

As for "having their own Japan-related business," there are some examples such as importing automobiles and automobile parts from Japan and selling them in East African countries after returning to his home country, setting up an e-marketing business to become an international base for sales and marketing of products manufactured by Japanese companies in Nigeria, and setting up a business with Japanese partners to handle imports and exports between Japan and African countries.

A participant from the Democratic Republic of Congo who studied at Nagasaki University's Graduate School of Tropical Medicine and Global Health is now working as a member of Rwanda's domestic COVID-19 response team. This person is in charge of data analysis in the laboratory, and the team is receiving technical and financial support from JICA. In this example, the expertise acquired in the ABE Initiative is used to support COVID-19 measures, while JICA provides support to enable such activities.

Summary of Evaluation Question 3

As mentioned above, the percentage of ex-participants who held positions of significant responsibility was lower than non-participants. In general, the gap caused by studying abroad can potentially delay the timing of promotions.[39] The results of this study actually suggest that participation in the ABE Initiative may create a gap in the career. In addition, considering the results that many ex-participants have jobs not linked to the field they studied and that (although not shown in graphs) participation in the ABE Initiative seems to have encouraged career changes across job categories (e.g., the private sector, the public sector, and education), it is possible to view a change in their specialty or field (by taking a job not related to their study field) as having an impact on their career paths. The possibility of such career changes is particularly evident in the results for private-sector professionals, who tend to build their careers by making use of other resources (e.g., relationship with Japan) gained through their participation in the ABE Initiative rather than knowledge and skills in the field of study.[40] However, there are also organizational factors unrelated to the gap created by studying abroad, such as the lack of a promotion system due to organizational rules or lack of available positions even for capable employees. In any case, although there is a possibility of catching up after a certain period of time, the fact that there was no clear indication of such a trend in our analysis by batch suggests that ex-participants may be at a disadvantage in career advancement, at least within a period of four or five

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[39] However, the Belgian case (Table 2-8, Case No. 11), which, like the ABE Initiative, was designed for master's program or higher, shows that ex-participants' decision-making authority and positions were higher immediately after the completion of study abroad compared to non-participants, although the difference was not statistically significant. In order to understand why the results were different between the Belgian case and our present study (on the ABE Initiative), we need a detailed analysis of the target groups and program content; however, this Belgian case offers valuable points of reference as we attempt more thorough examinations of the impact of study abroad on promotion.
[40] For example, Wallace (1999) conducted a 10-year follow-up survey of 48 graduates (from 10 different countries) who had participated in a study abroad program at Pomona College from 1984 to 1986. The results of the survey showed that 59% of the respondents indicated that their participation in the study abroad program had changed the way they thought about their future careers. Specifically, they said that studying abroad had changed their criteria for choosing a job and given them a wider range of choices, which had influenced the way they developed their careers. On the other hand, Case Study 6 (Indonesia Graduate Training, a study abroad program for working adults like the ABE Initiative) reviewed in Section 2.2 of this report showed that the percentage of participants' job categories (private, government, education) did not change much before and after studying abroad, indicating that studying abroad did not encourage career changes. Therefore, it can be inferred that the ABE Initiative promoted career changes not only because of the change in specialization and field of study but also because of the unique goal of the ABE Initiative to promote collaboration with Japanese companies.

years. For this reason, it is necessary to continue monitoring on a long-term basis.

On the other hand, the analysis shows the possibility that the ABE Initiative has made a significant contribution to the development and creation of Navigators, which is one of the objectives of the ABE Initiative. More than half of the ex-participants play the role of Navigators and engage with Japan in various ways, indicating possible contribution to the expansion of Japanese organizations into Africa, the expansion of their activities, and the deepening of the relationship between Africa and Japan.

(4) Reference: Long-term Outcomes

In the ABE Initiative, ex-participants are expected to contribute to development issues in their countries through various activities in the long run. Expected long-term outcomes also include a broad range of contributions ex-participants make to the development issues of the African region through joint projects and research collaborations with fellow ex-participants and the development of systems that can facilitate the activities of Japanese companies in the region. At the time of this analysis, these changes might not have occurred yet, and there are some limitations in the survey as described below. However, the results of analyzing these long-term outcomes are presented below for a reference purpose.

Contribution to national development issues, joint projects among ex-participants, support for Japanese companies

The results of the analysis are shown in Figure 4-12. The percentage of respondents who answered that their organization contributed in any form to the country's development agenda (#1) was 28% among ex-participants, which was about 10 percentage points lower than non-participants (38%). We observed a similar pattern when analyzing the data by batch and by job category. This may be because individuals who hold positions with significant responsibilities are likely than individuals who do not to make greater contributions to the development issues; as we saw in Figure 4-8, the percentage of individuals who hold positions with significant responsibilities is lower among ex-participants.

The specific contributions cited in the survey and interviews are broadly divided into the following categories: a) cases in which participants, as governmental organization employees, contribute to systems related to national development issues (e.g., working for the National Institute for Disaster Risk Management and Mitigation and being involved in the revision of the Disaster Risk Management Act; working for the Energy Agency and participating in the development of the national 10-year energy strategy; using expertise in their research field to participate in the revision of the national irrigation policy by the Ministry of Agriculture while studying in Japan) and b) cases in which participants work for Japanese companies and contribute to their home country's development issues using the technologies of these companies (e.g., a business that aims to increase the profits of retailers in the e-commerce market by solving the problem of last-mile logistics in Africa through the introduction of smart lockers, and a business that provides small-scale solar power generation systems designed for the local climate, topography, and electricity demand to major facilities and households in unelectrified areas at low prices).

Other examples include: a ministry official who was involved in a rural village electrification project

in cooperation with a Japanese company; a local government official who applied his knowledge and skills in agricultural engineering he learned while studying abroad to set up a new soil conservation and water management project, which resulted in the expansion of a water reservoir and irrigation areas; and an official in the veterinary service department of the Ministry of Agriculture who conducted a rabies prevention awareness campaign after realizing that little resource had been invested in rabies control despite the fact that it was an important cause of mortality; an ex-participant who observed first-hand that the Japanese economy was supported by SMEs returned to his home country and became involved in an NGO that promotes SMEs for economic development; a university employee who started an entrepreneurship program for students in cooperation with a government agency to address the issue of youth unemployment. In addition, in the interviews related to Rwanda, it was confirmed that universities accepted many ABE participants in the country's ICT field with the expectation that they would "solve social issues by using ICT" and participate in other JICA programs. Interviewees reported that the ex-participants were involved in software development related to public services in Rwanda and working with universities and JICA Partnership Program to develop local human resources in ICT.

It should be noted that some of the interviewed ex-participants and non-participants who answered yes to this survey question believed that carrying out their usual tasks in their governmental organizations would count as a contribution to development agenda. Although the question was intended to measure the outcome concerning whether or not ex-participants used what they learned abroad to make a difference (i.e., whether or not they were involved in the creation of new systems or projects), the text of the question was written ambiguously such that it could capture various situations, including not just public-sector professionals but also private-sector and education professionals ("Have you or your organization initiated projects, programs, policies, etc. related to development issues in your country?"). This may have affected the accuracy of some of the responses.

Regarding joint projects among ex-participants, 22% of the respondents among ex-participants (121 persons) answered that they conducted some kind of joint projects or research collaborations with other ex-participants. Specifically, 69 individuals (57%) mentioned joint business projects, 52 individuals (43%) mentioned development-related projects, and 27 individuals (22%) mentioned research collaborations (multiple responses).

No significant differences were found between private, government, and education professionals, although the percentage for such collaborative endeavors tended to be higher among those who worked for international organizations or NGOs. In addition, no significant differences were observed between different batches. Several interviewees reported that they explored the possibility of conducting joint projects with fellow participants, but there were no cases that led to actual projects.

In addition, about 16% of the respondents among ex-participants answered that they developed systems to support the business of Japanese companies. However, when the study team checked the descriptive answers in the survey that specifically asked about the details of these systems, we found that they did not develop systems but were instead engaged in projects outside of their employment to promote the business of Japanese companies. One ex-participant answered that this person's organization developed systems for public-private partnerships (PPP) and special economic zones that were also relevant to Japanese businesses, but his response did not clarify whether he was directly

involved in these activities.
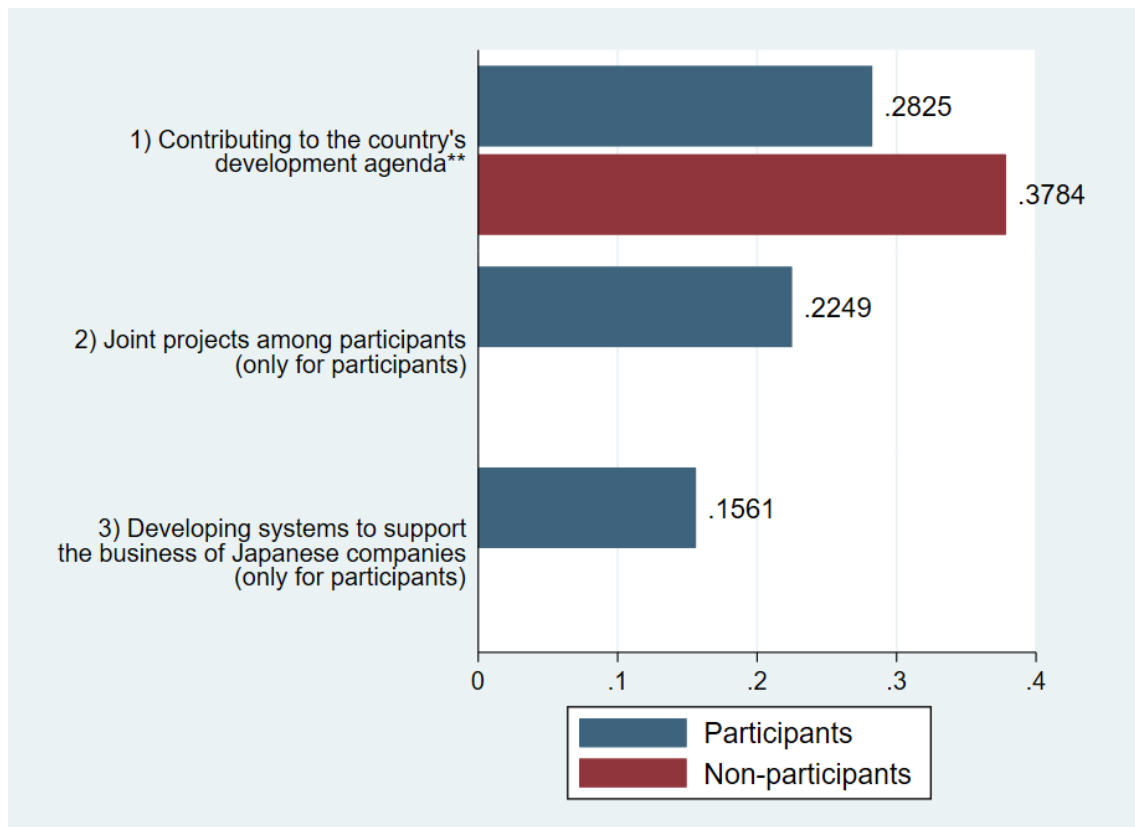
Note: The numbers indicate ratios (or percentages if multiplied by 100). The notation ** next to a variable name
  indicates that the difference between participants and non-participants is statistically significant at the 5% level.
Source: Created by the study team

**Figure 4-12: Long-term outcomes (% of respondents who answered that they carried out
relevant activities #1, #2, and #3)**

Summary of the long-term outcomes

As mentioned above, the percentage of respondents who reported that their organization made some
kind of contribution to improving or solving the country's development issues was lower among ex-
participants than among non-participants. Considering the results of the analysis, which shows that
the percentage of people with higher responsibilities was lower among ex-participants than among
non-participants, it is likely that participation in the ABE Initiative slows down their career
development in the short term and reduces the opportunities for them to play an active role through
their organizations. Regarding the extent to which ex-participants were involved in joint projects with
other ex-participants or efforts to develop a system to assist Japanese companies, a certain number of
ex-participants reported that they had engaged in these activities. However, it is difficult to determine
whether this number is large or small.

Another limitation is that the ABE Initiative targets a wide range of professionals (private-sector,
public-sector, and education professionals) and fields of study, making it difficult to grasp the long-
term contributions of the Initiative through a single survey question. Since we learned that the intention
of interview questions and what the respondents intended to convey in their answers sometimes did
not align with each other in the field interviews, the quantitative analysis provided above should be

understood only as reference information.

(5) Secondary Impacts: Host Universities and Companies

<u>Impact on host universities</u>

We examined the secondary impact on the universities that accepted the participants of the ABE Initiative in terms of the dimensions listed in Figure 4-13 below. Many universities reported that the ABE Initiative promoted international understanding among their faculty members and students (#1 and #2), indicating that the Initiative not only has helped international students develop a better understanding of Japan but also strengthened the mutual understanding with host universities. The interviews with the university also indicated that the participants of the ABE Initiative had contributed to the internationalization of their university. Universities reported that they already had international students from Asian countries, but the ABE Initiative participants from African countries helped expand the breadth of cross-cultural communication on their campus. It was also mentioned that the ABE participants in seminars and classes helped broaden international perspectives for other students. In terms of language, universities mentioned that the ABE participants could not speak Japanese, so other students did their best to respond in English.

However, universities reported that not much change had occurred regarding research, such as joint research projects or collaboration with African educational institutions. Many master's programs that said that they could not conduct joint research projects reported that this occurred when their ABE graduates went on to doctoral programs outside of the ABE Initiative. Many graduate programs commented that it was difficult to develop research collaborations with their master's students, who are the target of the ABE Initiative. No examples of collaborative research with master's students in the ABE Initiative were reported during interviews. Interviewees attributed this to the seven-hour time difference between Africa and Japan and to the fact that the ABE students had not been trained in research in the first place (at least to the same level as researchers in Japan). Thus, efforts such as supporting the ABE participants to go on to doctoral programs would be necessary to increase the program's impact on the research activities of universities. However, there were some cases where ex-participants engaged in the JICA Partnership Program by the university as a research assistant in their country.

Other impacts included the greater reputation of Japanese universities in Africa as a result of hosting the ABE participants (as shown by the increasing number of self-financed students choosing to come to Japan from Africa) and a recent increase in the number of Japanese students who wanted to learn English as a result of accepting more ABE participants.
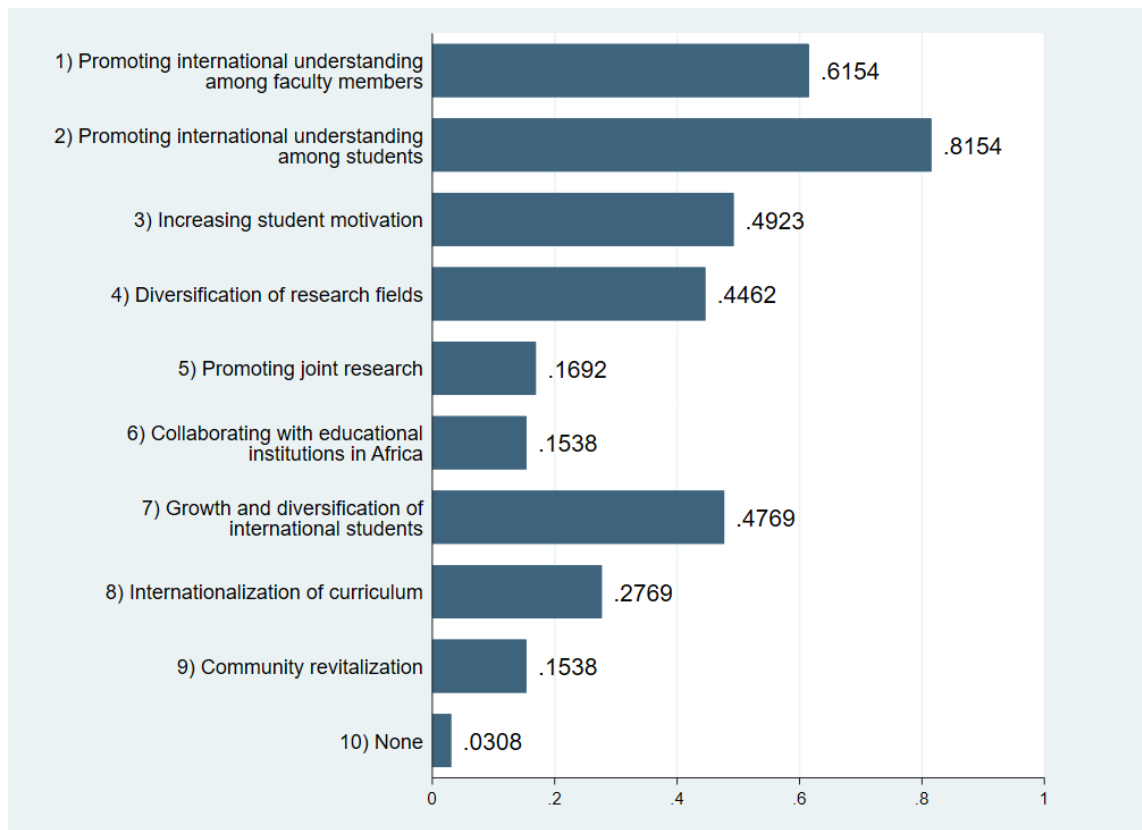
Note: The numbers indicate ratios (or percentages if multiplied by 100).
Source: Created by the study team

Figure 4-13: Impact on the host universities (% of respondents who answered that changes took place in different aspects)

Impact on internship companies

We examined the companies accepting interns in terms of the following secondary impacts: A) direct impact of accepting interns, B) current relationship with interns, and C) business expansion in Africa through ABE participants (including non-interns).

Companies answered that they experienced benefits in one or more of the areas shown in Figure 4-14 for Secondary Impact A, and no companies answered that they did not experience any benefit. More than half of the responses chose the following three benefits: promoting overseas awareness and understanding of diversity (#1), developing connections (#3), and creating business ideas (#4). However, even #3, which was the most frequently selected answer, was around selected by 54% of the respondents, suggesting that the effects of accepting interns varied from company to company. Some interviewees said that accepting interns during the summer and after graduation helped globalize the company and raise motivation toward doing business in Africa. Other interviewees said that it was a good opportunity for administrative staff at the head office in Japan who had never been to Africa to get a feel for the country from which the intern came. SMEs that were conducting a demonstration survey in Rwanda said that they gained local information (#2) and connections (#3) by hiring ex-participants as local staff. However, no large companies that already had business in Africa reported that they experienced these benefits through interns. As for creating business ideas (#4), all three

companies interviewed said that they came up with new ideas for new products and marketing methods for Africa through discussions with employees and interns during the program.
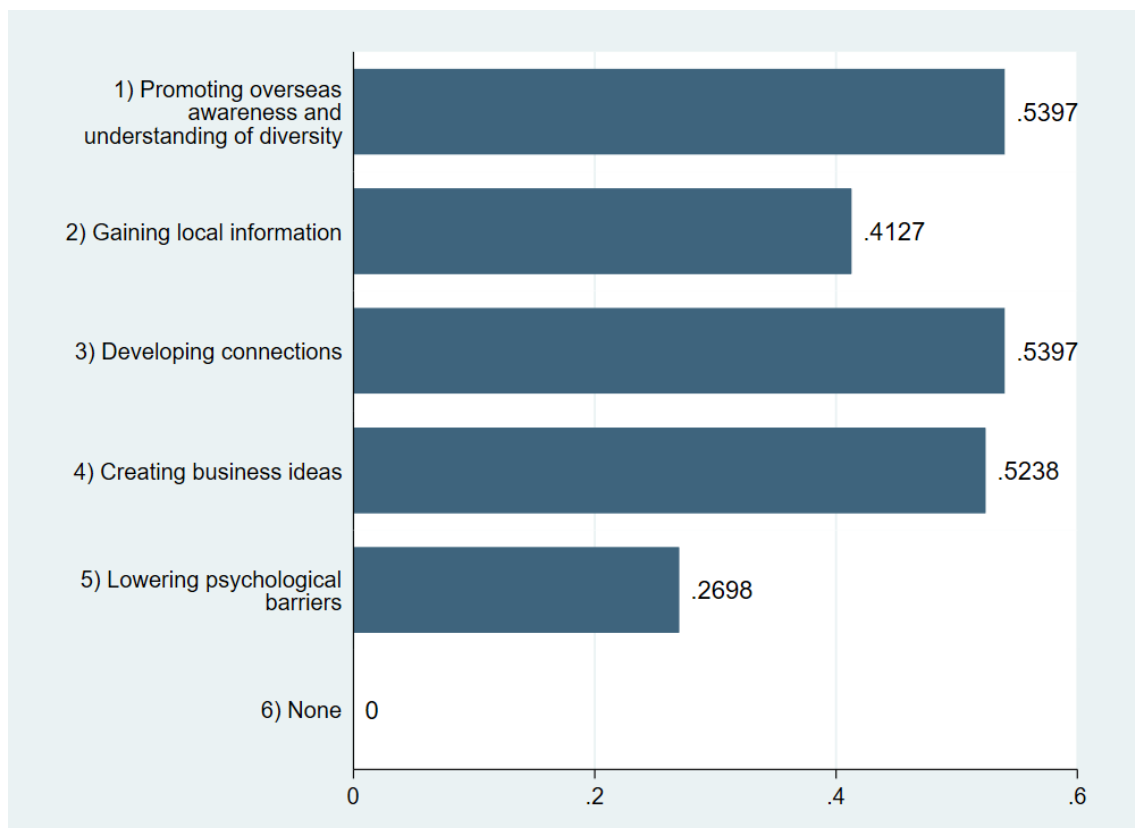
Note: The numbers indicate ratios (or percentages if multiplied by 100).
Source: Created by the study team

Figure 4-14: Impacts on internship companies (% of respondents who answered that there was a change)

Regarding Secondary Impact B (relationship with the interns), 26% of the respondents reported that it actually led to the hiring of the interns afterward. In addition, about 50% of the respondents selected "relationships as an information provider" (#3), and 25% selected "relationships as a business partner" (#4). These results are consistent with the survey results of ex-participants, which show that there are a certain number of people who have played the role of "Navigators." However, 15% of the companies have not had involvement with their former interns after the internship ended. One of the three companies we interviewed—a large company with overseas group companies—has so far hired only two ABE ex-participants (but these two individuals had been working for a group company before coming to Japan) and has not been in contact with other ex-participants. However, the company said that it was sometimes contacted by former interns who wanted to work at an overseas group company (although the company has not hired any of these individuals). In addition, one SME accepted interns and later hired two of them as full-time employees. Another company has not yet hired any ex-participants but said that it might do so in the future. Regarding #3, one company has implemented three projects in Rwanda after receiving interns: two projects sponsored by JICA and one project subsidized by METI (Ministry of Economy, Trade, and Industry). All three projects worked with ex-participants by hiring them as external staff or local staff. The company said that ex-participants were

making effective use of their basic know-how to take the lead in disseminating the company's technology in Rwanda. Regarding #4, the companies we interviewed that were considering expanding into the local market were interested in ex-participants not as their employees but more as their future partners in joint businesses or local branches to sell new products targeting Africa. On the other hand, a large company that already had business in Africa said that it would be highly unlikely for it to do joint business with individual ABE ex-participants in the future. These responses seem to indicate that the collaboration with ABE ex-participants is more likely to occur in the case of companies that have not entered the African market (but are considering to do so) or SMEs that want to expand in overseas markets through their excellent technologies. In fact, some companies interviewed said that the internship program was an extremely useful scheme for small-scale businesses as it enabled them to connect with individual ABE ex-participants.
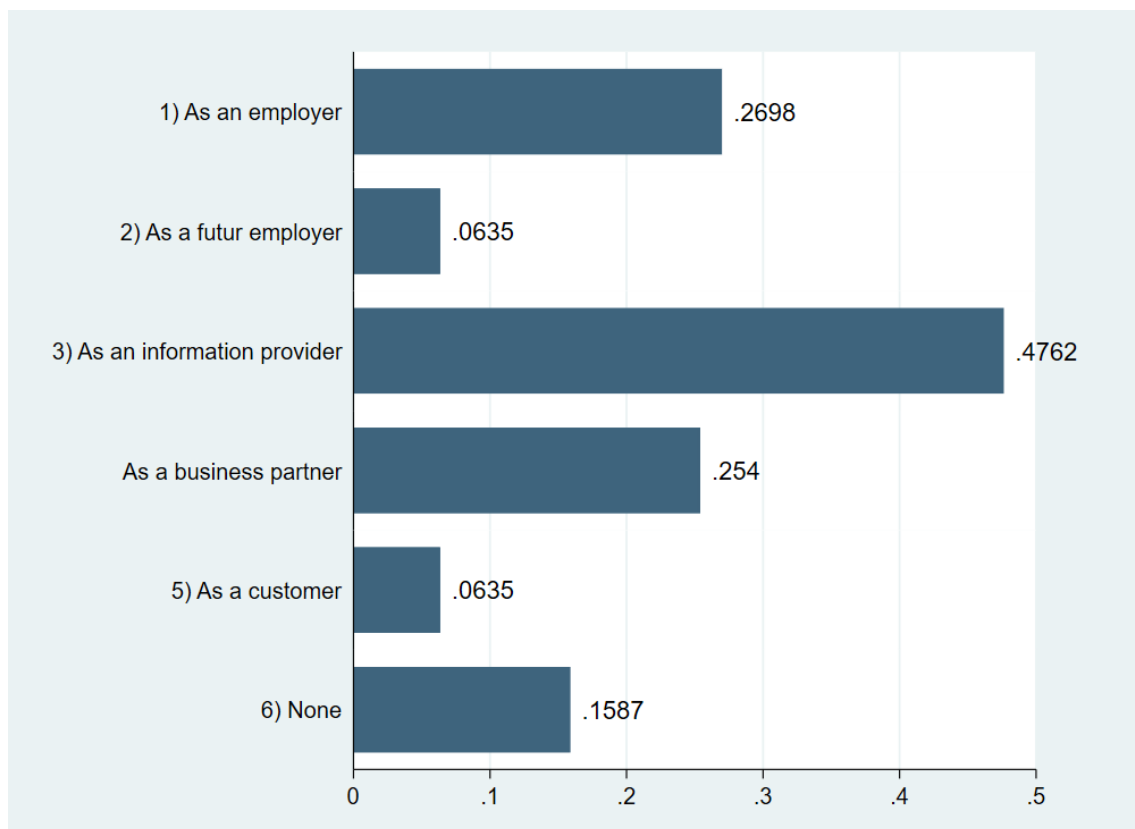
Note: The numbers indicate ratios (or percentages if multiplied by 100).
Source: Created by the study team

Figure 4-15: Percentage of respondents who answered that they had a relationship with the ex-participants

Regarding Secondary Impact C (business expansion through ABE ex-participants (including non-interns)), the number of respondents who said that business expansion occurred as a result of their relationship with ex-participants was small, with less than 10% in each dimension (#6 is not included here because it is not a measurement of business expansion) (Figure 4-16). Thus, although several notable cases are worth highlighting as good practices, the results of the web-based survey suggested that such cases are rare as a whole.
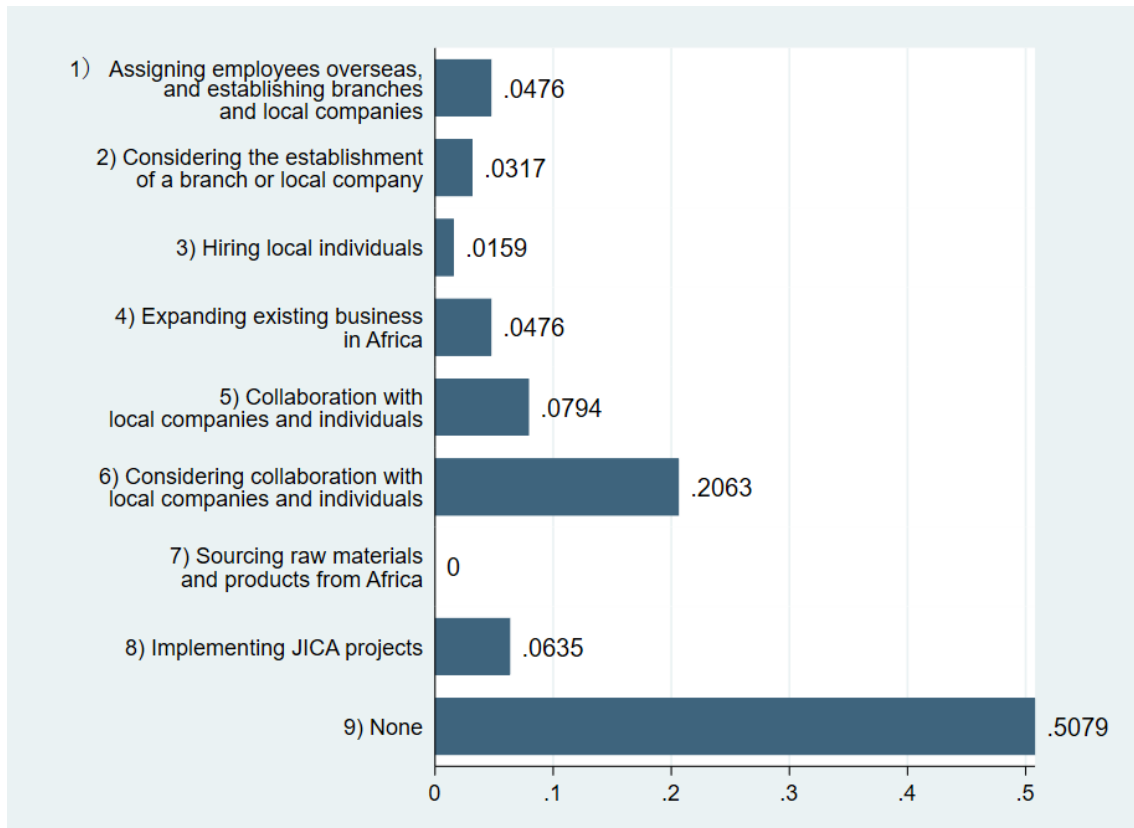
Note: The numbers indicate ratios (or percentages if multiplied by 100).
Source: Created by the study team

Figure 4-16: Percentage of respondents who answered that their business expanded due to ABE participants

As another example of these impacts, some of the companies interviewed said that as a result of serving as host companies of ABE interns for several years, they began to receive media coverage, increasing the chances for the public to get to know the company.

4.1.3. Overall Summary of ABE Initiative's Outcomes

(1) Summary of Results

In this section, we categorized the changes that are expected to occur due to the ABE Initiative into end-of-program, initial/mid-term, and mid-term outcomes and examined whether they have occurred.

The results show that the end-of-program outcomes defined for Evaluation Question 1, including the acquisition of knowledge and skills, understanding of Japan, development of networks, and improvement in the positive feeling about Japan, have improved as expected.

Among the initial/mid-term outcomes defined for Evaluation Question 2, the percentage of individuals who obtained a post in their field of study was lower among ex-participants than among non-participants. However, the percentage of individuals who obtained Japan-related jobs was higher among ex-participants than among non-ex-participants, indicating that many ex-participants tended to build their careers after returning to their home countries through their connection to Japan. The type of position they obtained after returning to their home country was also related to the degree to which

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they could use the knowledge and skills they gained through the ABE Initiative.

For the mid-term outcome for Evaluation Question 3, we examined the level of ex-participants' responsibility within the organization and their activities as Navigators, one of the keywords in the ABE Initiative. In terms of the level of responsibility, the percentage of people in supervisory positions and the percentage of individuals who received promotions was lower among ex-participants than among non-participants, suggesting that participation in the ABE Initiative may lead to a gap in one's career timeline in the short term and encourage ex-participants to pursue careers in fields other than those in which they had previously specialized or studied through the program, which may delay promotions compared to those who do not study abroad. In addition, a higher percentage of ex-participants work for Japanese companies, which may indicate a possibility that they are more strongly influenced by the characteristics of career development in Japanese companies (e.g., allocating human resources from a long-term perspective). Therefore, it is necessary to monitor their career advancement over a longer period of time. On the other hand, the number of ex-participants who were involved in the commencement, expansion, or facilitation of business projects, joint ventures, projects, and joint research projects that Japanese organizations carried out with African organizations (defined as "Navigator activities" in this analysis) was nearly twice as many as those who did not participate in the ABE Initiative, indicating that the ABE Initiative contributed to the development of Navigators.

In addition, the results of the web-based survey indicated that a certain degree of change took place in terms of the secondary impact on the host universities and companies that accepted ABE participants, but the number of cases that led to specific joint research projects or business development worth highlighting as good practices was small as a whole.

(2) Discussion of the results

The objectives of the ABE Initiative are a) "to develop industrial human resources who will be the key to Africa's growth" and b) to develop Navigators for business in Africa for Japanese companies and to build a network. Based on these objectives, there are two main potential paths for ABE participants after returning to their home countries. One is to find a job (or return to the previous workplace) related to one's field of study and contribute to the country's development issues in the long run within the organization by applying the expertise acquired through the ABE Initiative. This path is mainly related to Objective A of the ABE Initiative. The other path is related to objective b of the ABE Initiative, which is to use the knowledge, understanding, and network of Japan gained through the ABE Initiative to obtain a job related to Japan and contribute to Japan by deepening cooperation and relations with Japan.

The results of the analysis above suggest that the ABE Initiative contributed to the occurrence of outcomes through the latter path. The ABE Initiative is likely to contribute to the achievement of Objective B of the Initiative through participants who work in jobs related to Japan and act as Navigators, which are themselves consequences of understanding Japan and developing networks. From this perspective, the ABE Initiative will be able to promote Japanese organizations' activities in Africa by continuing to develop and produce capable individuals.

At the same time, however, the results indicated that the changes did not manifest sufficiently in the

path in which participants were expected to become active using the expertise and skills learned through the ABE Initiative. Although there is a question of which objective should be prioritized more, it seems that it is important to support participants' employment after returning to their home countries and, if they plan to return to work, to inform their employers of the objectives of the ABE Initiative so that they can be assigned to appropriate positions or tasks. In addition, as seen in the case of Rwanda, it may be necessary to consider strategically utilizing the ABE Initiative by focusing on human resource development in specific fields. In addition, civil servants are subject to promotion requirements, such as a minimum number of years of continuous employment in one job grade, and some countries have promotion systems solely based on seniority (without skipping) (JDS preparatory study report for Kenya and Ghana, 2019 and 2020). The same is true for Japanese companies. Japanese companies also have seniority-based promotion systems where promotion and salary raises are determined by years of employment. If participants (applicants) wish to return to their jobs after they finish study abroad, JICA can confirm with them as early as in the selection stage to make sure that their participation in the study abroad program will not create a gap in their incumbency after returning to their home country.

In any event, among the objectives a) and b) above, a) could not be sufficiently confirmed in the mid-term, which was the time span this study could observe at the moment. Therefore, longer-term monitoring will be necessary.

(3) Reflections on Evaluation Method

Lastly, this section elaborates the insights we gained from this pilot evaluation from three perspectives: a) implementation of the evaluation using ToC, b) verification of the Initiative's impact through comparison with non-participants, and c) use of both quantitative and qualitative data.

<u>Implementation of the evaluation using ToC</u>

The study team believes that it was appropriate to conduct the evaluation using ToC because there had been no ex-ante evaluation of the ABE Initiative, and no clear outcomes had been set for the Initiative. Given this situation, it was advantageous to use ToC to map out and clarify the outcomes the ABE Initiative tried to achieve while also incorporating the opinions of JICA. In addition, by organizing the chain of outcomes from the short-term to the mid-term and long-term, we gained insight into what was being achieved, to what extent, and how, for the program as a whole, rather than identifying the status of achievement of each outcome in a piecemeal fashion.

Furthermore, we were able to obtain valuable information in the survey by identifying those who were showing the changes expected in the ToC and those who were not based on the results of the web-based surveys and by conducting interviews with each of these individuals.

One of the challenges we encountered was that it was difficult to grasp the variety of activities and contributions in one (or a few) question(s) for the outcomes classified as mid-term to long-term outcomes in the ToC (e.g., activities as Navigators, ex-participants' contributions to development issues in home countries, development of systems to support the business of Japanese companies). The questions were designed in such a way that they could capture various forms of activities and

contributions, resulting in less specific wording, which might have been interpreted slightly differently by different respondents. This issue is unique to the ABE Initiative, which differs from scholarship programs that offer specialized fields such as the Kizuna Program. In future evaluation efforts for programs like the ABE Initiative, it would be useful to set up several patterns of expected pathways after returning to their home countries, such as careers and long-term outcomes, and include questions that would enable us to identify changes in each pathway[41].

Verifying impacts by comparing participants with a counterfactual

The study team believes that it was appropriate to verify the Initiative's impact by comparing ex-participants with their counterfactuals (non-participants). The outcomes that are expected to change as a result of the ABE Initiative may also be affected by factors other than the ABE Initiative (e.g., knowledge enhancement through other training opportunities, collaboration with Japanese organizations through contacts with Japan other than the ABE Initiative, etc.). Therefore, it is difficult to distinguish the impact of the ABE Initiative from the impact of other factors simply by checking the outcome levels of ex-participants. In fact, a previous JDS evaluation (JICA/International Development Center of Japan, 2015) gave (seemed to give) a positive evaluation, stating that "59.4% of the JDS ex-participants were in a position to make decisions." In the current evaluation, however, 73.7% of the ex-participant respondents were in a position to make decisions. Although this figure might appear very high, the figure for the non-participant respondents was even higher than that of the ex-participants (80%), implying that the ABE initiative is counterproductive in increasing the number of people in decision-making positions. In order to avoid such potential misinterpretation (i.e., interpreting 73.7% as being high), it is important to compare the results with those of non-participants, as in this evaluation.

As discussed in 4.1.1 (2), it was also necessary to identify the non-beneficiaries of the program who were "similar" to the beneficiaries of the program. It is relatively easy to identify such "similar" individuals in a scholarship program like the ABE Initiative. Given that application requirements are usually set for the JICA scholarship programs, it is possible to identify a group of individuals who meet the minimum qualifications and are motivated, as applicants generally have these qualities. Moreover, it is relatively easy to identify non-participants who have reached a certain level of the selection process because the selection process is relatively explicit, and records are often kept. Records from the selection process also allow us to identify and set aside those applicants who are almost qualified so that such individuals can be used in future evaluations as a useful comparison

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[41] For example, the ToC in this study set changes that represent contributions to development issues, such as "ex-participant's organization implements activities related to development issues," "ex-participant's organization develops quality human resources," and "ex-participant's organization develops or improves technologies, products, or services." However, the only question included in the web-based survey to ask about the outcome that could be verified in the mid-term was: "Have you or your organization initiated projects, programs, policies, etc. related to development issues in your country?" In the future, when long-term outcomes are to be examined, expected changes should be specified according to the nature of the organization (government, private-sector, or education/research institutions). Then, different sets of questions should be prepared for each type of organization. Alternatively, common questions can be used for all job categories, but the definition for "contribution" for each category can be added as a supplementary explanation. The following is an example of such supplementary explanations. For public-sector professionals: contribution to the initiation of policies, measures, and/or projects related to development issues. For private-sector professionals: contribution to the development and improvement of technologies, products, and/or services to solve social issues in the home country. For education professionals: contribution to the initiation, expansion, and/or quality improvement of human resource development and research related to development issues in the home country.

group.

One of the challenges was the low response rate of non-participants. As shown in Table 4-1, the response rate of the ex-participants was 48.4%, while that of non-participants was 14.4%. Although the number of responses from non-participants was 111, which is large enough for statistical analysis, we cannot deny the possibility of sampling bias. In addition, this also limits our ability to analyze non-participants by dividing them into subgroups, such as by batch. Although it is probably not effective to keep sending reminders for the survey to non-participants, it is necessary to find ways to increase the response rate from this group to improve the quality of the analysis. One possible solution is to include in the application requirements that participants must respond to future surveys whether they pass or fail the selection process.

<u>Use of both quantitative and qualitative data</u>

The case study of the ABE Initiative was analyzed by combining a quantitative survey using a web questionnaire and qualitative interviews. One of the advantages of quantitative research is that it allows us to grasp the overall trend of the program. In the past, results were often presented in the form of good practices, but the value of a program as a whole would be determined differently depending on whether such practices are prevalent or limited. Therefore, it is important to use quantitative data to understand the extent to which the program's impact materializes as a whole. In contrast, quantitative data do not readily reveal specific examples of the impact and their context. Therefore, we believe that we were able to add depth to our analysis by using qualitative data.

The remainder of this section summarizes the results of country-specific analysis for Kenya and Rwanda, respectively.

Box 4-2: Evaluation Results by Country - Kenya

The summary of the respondents is as follows. Sixty-five out of 147 Kenyan ex-participants (excluding early returners) in Batches 1 through 5 responded to the web-based survey (12.1% of all target countries). The respondents consisted of 51 males and 14 females, and their current occupations included private companies (20 respondents), government organizations (25 respondents), educational institutions (seven respondents), and unemployed (13 respondents).

The study team interviewed 18 of the Kenyan ex-participants, and we also interviewed the supervisors of three of the Kenyan ex-participants. In addition, 11 of the applicants from Kenya who were rejected or withdrew responded to the web-based survey (9.6% of all target countries). They consisted of 11 males and 0 females, and their current occupation included the private sector (five respondents), government organizations (three respondents), others (two respondents), and unemployed (one respondent). Two of them were interviewed.

In the web-based survey, the number of ex-participants who answered, "I am working in a job/post related to the field I studied," was low, at 40%. This can be viewed as a positive result of the ABE Initiative, but it may not be a desirable result from the perspective of making use of the expertise and skills gained through the ABE Initiative. We could not identify the limiting factors because all interviewees but one unemployed person answered that they were working in jobs/posts related to the field they studied.

The percentage of the Kenyan ex-participants who answered "yes" to the question "I am using the knowledge and skills I gained in Japan in my current job" was higher than the overall average among all countries. In particular, the percentage of those who used the knowledge, methodologies, and social skills they gained in Japan in their current positions was high. In the interviews with their supervisors conducted in Kenya, there were cases where the internship experience (e.g., experience with the Japanese manufacturing system) had been put to use in the current position. There were also cases where the professional knowledge and skills acquired in Japan were used to adopt new methodologies or achieve positive results, such as solving or improving long-standing problems. On the other hand, there were cases where the knowledge and skills acquired in Japan had not been put to use in their current jobs. For example, one of the ex-participants returned to work at a Japan-related company in Kenya but left the company due to a lack of appreciation within the organization regarding the master's degree he earned by studying in Japan.

According to the web-based survey, 48% of the ex-participants who responded were working for Japanese companies or other companies related to Japan, which was the same as the overall average (49%). Nine out of the 18 ex-participants interviewed in Kenya answered that they were working or used to work for a local Japanese company (or a Japan-related organization). In addition, 12 out of 18 ex-participants answered that they had thought about working for a Japanese company. Interviews with Japanese companies in Kenya revealed that although understanding Japanese culture and the Japanese language is an advantage for employers, people with specialized knowledge and experience are more valued by Japanese companies in Kenya. There is also a significant difference in salary and benefits between being hired at the head office in Japan and being hired locally. As most ex-participants

understand this, they are interested in getting hired at the head office in Japan, while they are not much interested in getting hired locally. Some ex-participants said in the interview that they could not apply for any of the employment opportunities because their schedule did not align with the recruitment schedule of Japanese companies. Some ex-participants also had to give up on finding a job in Japan even though they visited recruitment agencies because they were always required to have high Japanese language skills. Since there are more Japanese companies in Kenya than in many other countries, a certain number of ex-participants (about 30) have found jobs at Japanese companies. However, as seen above, it is not easy to find a job in Japanese companies in Kenya or Japan, even if they have studied in Japan and have a master's degree.

The percentage of Kenyan ex-participants acting as Navigators (and involved in activities with Japanese people and organizations) was 54%, which was slightly higher than the percentage among all ex-participants who responded to the survey (51%). The interviews revealed that five out of 18 ex-participants (not including those working for Japanese companies) had been involved in Japanese organizations through research collaborations or project support. Their activities as Navigators outside of their work at their place of employment included working for Japanese companies participating in a JICA scheme (SDGs Business Supporting Surveys) and supporting local projects by Japanese NGOs. However, some ex-participants cited insufficient information and funding for joint projects as reasons for obstacles.

As the overall trend, the percentage of individuals in Kenya who "work in a job/post related to the field of study" was higher among rejected or withdrawn applicants. However, the percentages of the rejected or withdrawn applicants who "are working for a Japanese company or related to Japan" and "are involved in activities with Japanese people or organizations" were lower than those of ex-participants (27% and 18%, respectively). In the interviews, none of the rejected or withdrawn applicants had been involved in Japanese organizations, except for one rejected applicant who was working for a local Japanese company.

Kenya is a large feeder country and sends a large number of ABE participants to Japan every year. As a result, the number of Kenyan participants is large in the Initiative, and they study in diverse fields. Although JICA Kenya provides various services, including networking and matching opportunities with Japanese companies, individual consultation services for ABE ex-participants, and public relations activities, it is likely to be more difficult in Kenya to provide careful follow-up services to each ABE ex-participant than in smaller feeder countries, and it is difficult to establish a support system like the one in Rwanda (see below).

Survey results - Kenya

Ex-participants

Main outcomes	Percentage of ex-participants who answered "yes"	
	Kenya (65 people)	All target countries (538 people)
I have a job/post related to my field of study.	40%	41%
I am using the following knowledge and skills I gained in Japan in my current position. ・Knowledge of the field ・Methodological skills ・Social skills ・Japanese language skills	96% 98% 90% 15%	88% 91% 90% 25%
My workplace is a Japanese company or related to Japan.	47%	49%
I have been involved in activities with Japanese or Japanese organizations.	54%	51%

Applicants who were rejected or withdrew

Main outcomes	Percentage of applicants who were rejected or withdrew who answered "yes"	
	Kenya (11 people)	All target countries (111 people)
I have a job/post related to my field of study.	73%	60%
I am using the following knowledge and skills I gained in Japan in my current position. ・Knowledge of the field ・Methodological skills ・Social skills ・Japanese language skills	N/A N/A N/A N/A	N/A N/A N/A N/A
My workplace is a Japanese company or related to Japan.	27%	33%
I have been involved in activities with Japanese or Japanese organizations.	18%	27%

Box 4-3: Evaluation Results by Country - Rwanda

The summary of the respondents is as follows. Nineteen out of 41 Rwandan ex-participants in Batches 1 through 5 responded to the web-based survey. The respondents consisted of 16 males and three females, and their current occupations included private companies (13 respondents), government organizations (three respondents), an educational institution (one respondent), and unemployed (two respondents).

The study team interviewed eight of the Rwandan ex-participants, and we also interviewed the supervisors of two of the Rwandan ex-participants. In addition, three of the applicants from Rwanda who were rejected or withdrew responded to the web-based survey. They consisted of three males. There were no female respondents in this group. Their current occupations included private sector (one respondent) and government organizations (two respondents). Two of them were interviewed.

The results indicated that the key outcomes had materialized. For all outcomes, the percentage of Rwandan ex-participants who answered "yes" to the survey questions was higher than that for all target countries. In particular, the percentage of Rwandan ex-participants using the knowledge and skills they gained in Japan in their current positions was high. There were cases in which Rwandan ex-participants were employed by companies with which the host university or the internship company had a cooperative relationship and cases in which faculty members of public higher-education institutions involved in JICA technical cooperation projects studied abroad through the ABE Initiative. Although there were no ex-participants who answered the survey who were carrying out their work in Japanese, several respondents said that they used the little Japanese they knew when they had opportunities to meet Japanese people, such as customers or people related to JICA projects and that it contributed to building smooth relationships.

The percentage of Rwandan ex-participants acting as Navigators (and involved in activities with Japanese people and organizations) was 53%, which was slightly higher than the percentage among ex-participants who responded to the survey (51%). The activities included software development for Japanese clients, research and facilitation to expand the market for Japanese companies, involvement in JICA projects, sending out Rwandan students and interns through a cooperation agreement between the Rwandan university where he is working and the Japanese university where he studied, facilitating a Japanese non-profit organization's support for young entrepreneurs in Rwanda, and presenting a paper co-authored with his supervisor. Some of the activities have been conducted as part of their duties at their workplaces, while others have been conducted as individuals outside of the company, which had nothing to do with Japan. According to the JICA Rwanda office, 26 of the ex-participants, including those who did not respond to the survey, were collaborating or contributing in some way with Japanese companies or organizations. All interviewees (i.e., supervisors of ex-participants, internship companies, Japanese Embassy, the ICT Chamber of Commerce and Industry of Rwanda, JICA office, and JICA project staff) said that the ABE Initiative was successful in building and developing relationships with Japan and that the participants' activities in these relationships met or exceeded their expectations. In particular, they mentioned that Japanese companies that had no previous connection to Africa were now

expanding into Rwanda through the SDGs business support project and that the ex-participants were involved in the launch of the JICA Partnership Program.

Many of the rejected or withdrew applicants also said that they were working in jobs/posts related to their field of study. However, none of them had Japan-related jobs. There was one case in which an ex-participant was personally involved in activities with Japanese organizations based on the experience of interacting with Japanese universities as a student.

One of the unique factors that facilitated outcomes to materialize in Rwanda is that the ABE Initiative is part of JICA's ICT support for Rwanda. JICA has focused on the ICT field, which is the country's priority area for national development and with which JICA already had a multi-layered cooperative relationship. Many participants have been sent to universities that already had a cooperative relationship with JICA and the Rwandan industry (the ICT Chamber of Commerce). The participants have been able to intern at Japanese companies with which JICA already had a cooperative relationship and were even able to find jobs at the cooperating Rwandan companies. In addition, the JICA Rwanda office has been conducting follow-up activities such as annual follow-up surveys to monitor ex-participants and encourage them to participate in activities. Because Rwanda is not a large feeder country for the ABE Initiative, the number of participants is small. However, the small number of participants has resulted in strong ties between JICA, the Rwandan government (the Rwanda Development Board, Embassy of Japan), Rwandan industry, host universities, and participants. As a result, there are many events between Rwanda and Japan, private sector business activities, and ODA-related projects in which current and ex-participants are used.

Survey results - Rwanda

Main outcomes	Percentage of ex-participants who answered "yes"	
	Rwanda （19 people）	All target countries （538 people）
I have a job/post related to my field of study.	68%	41%
I am using the following knowledge and skills I gained in Japan in my current position. ・Knowledge of the field ・Methodological skills ・Social skills ・Japanese language skills	 100% 100% 94% 41%	 88% 91% 90% 25%
My workplace is a Japanese company or related to Japan.	53%	49%
I have been involved in activities with Japanese or Japanese organizations.	53%	51%

4.2. Pilot Evaluation of Kizuna Program's Outcomes

This section uses interview results to examine whether the Kizuna Program has brought the expected changes (outcomes) identified in the ToC. In the ToC, outcomes are broadly divided into short-term (up to approximately one year after returning to the home country), mid-term (up to approximately five years after returning to the home country, and long-term outcomes. However, since this year (2021) marks the fifth year since the Batch 1 participants had returned to their home countries, we examine up to the mid-term outcomes.

A key difference from the examination of the impact of the ABE Initiative described in the previous section is that the data collection for the Kizuna Program was a very limited survey due to the framework of this study. As described in Chapter 1, the data collection for the Kizuna Program had to be scaled down because only limited resources could be allocated to this study. Therefore, the results will be reported as part of the program's outcomes, but not as an evaluation of the entire program. The primary purpose is to obtain knowledge for a full-scale evaluation in the future.

4.2.1. Evaluation Questions and Method

(1) Evaluation Questions

This study attempted to answer the following questions. In accordance with the objectives of this survey, we examined whether expected results were achieved following overseas studies. Thus, we did not review the program implementation (process). The following areas of examination are called "evaluation questions" for convenience, but, as mentioned above, we are not evaluating the entire program.

Evaluation question 1

Has the participation in the Kizuna Program allowed ex-participants to achieve the outcomes identified as the end-of-program outcomes, including an improvement in their knowledge and skills in the fields of mining and geothermal development, an improvement in their knowledge and understanding of Japan's approach to these fields, more positive feelings toward Japan, and the expansion of the network with other ex-participants?

Evaluation question 2

Have the end-of-program outcomes allowed ex-participants to achieve the outcomes identified as the short-term outcomes of the program, including the application of the knowledge and skills they acquired to their work or research and the expansion and maintenance of their connections?

Evaluation question 3

Have the short-term outcomes allowed ex-participants to achieve the outcomes identified as mid-term outcomes, including an increase in the decision-making power and responsibility in their organizations, an increase in the number and efficiency of the projects, transactions, and research collaborations between ex-participants or their organizations and organizations in Japan, or the implementation of research collaborations /joint business projects between ex-participants?

(2) Evaluation Method and Outline of the Survey

The study team collected information through semi-structured interviews[42] with relevant people. We conducted remote interviews in Japan from December 2020 to January 2021 and field interviews in Kenya and Rwanda from February to March 2021. Interviews in Kenya were conducted either in person or remotely, and interviews in Rwanda were conducted remotely from Japan. Interviewees were selected from ex-participants, universities, and host companies of internship programs recognized as successful, based on recommendations from JICA. In addition, ex-participants from Kenya and Rwanda, which were selected as the target countries for the ABE Initiative field research, were included.

Table 4-6: Interviewees for the Kizuna Program

Target group	Main areas of questions	No. of interviewees, selection method, etc.
Ex-participants	・Their achievement so far ・Status of maintaining connections/ networks with other ex-participants and relevant local organizations ・Status of research collaborations with other ex-participants ・Other changes and factors affecting these outcomes	Of the 58 Kizuna ex-participants who have returned to their home countries by 2020: a) Individuals who seemed to have experienced the program's impacts: three individuals (recommended by JICA): ・Mozambique (Doctor's program): One university faculty member ・Myanmar (master's program): One individual from a government organization ・Zambia (master's program): One individual from a government organization b) Five ex-participants in the target countries of the ABE Initiative study: ・Kenya (master's program): Two individuals the private sector ・Kenya (doctor's program): One individual from the private sector ・Rwanda (master's program): Two individuals from government organizations
Universities	・Outcomes of the participants and the factors behind outcomes ・Status of maintaining connections/networks and the factors affecting it	One university that has accepted a large number of Kizuna participants where impacts seemed to have materialized (recommended by JICA)
Japanese companies (headquarters)	・Status of maintaining connections/networks with ex-participants and factors affecting it ・Whether or not there was an impact on the business by accepting interns and the factors affecting it	One company (recommended by JICA) in which impacts seemed to have materialized.
JICA Overseas Office Japanese Embassy (interviewed	・How the Kizuna Program is viewed within the context of other study in Japan programs available in the target country ・Degree to which expectations for	Data collection took place only in the target country of the field study: ・JICA Kenya Office ・Embassy of Japan in Kenya ・JICA Rwanda Office

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[42] A type of interview using a list of questions that address only major areas of investigation rather than preparing detailed questions like those found in a questionnaire.

Target group	Main areas of questions	No. of interviewees, selection method, etc.
on the same day as the interviews for the ABE Initiative)	the Kizuna Program were met, unexpected impacts ・(JICA office) Details of follow-up programs	・Embassy of Japan in Rwanda

Source: Created by the study team

The following points should be noted regarding the investigation of the Rwandan ex-participants of the Kizuna Program.

Rwanda has sent participants to the Kizuna Program only in Batch 1, and there have been three Rwandan participants in the program so far. All of them are also ex-participants of Batch 1 of the ABE Initiative. This is because three ABE Initiative candidates who fit the purpose of the Kizuna Program were initially accepted and registered within the framework of the ABE Initiative and were later registered as Kizuna participants. Therefore, these three ex-participants were included in this survey as beneficiaries of both the ABE Initiative and the Kizuna Program.

During 2013-2014, when the three ex-participants were being accepted into the program, Rwanda was conducting a development study on geothermal energy, "The project for preparation of electricity development plan for sustainable geothermal energy development in Rwanda" (2013-2015). The three ex-participants were members of the Rwanda Energy Group of the Ministry of Infrastructure, which was implementing the development study, and they studied in Japan as geothermal human resources in the framework of the Kizuna Program. During their stay in Japan, the study concluded that there was a high resource risk in geothermal development in Rwanda, and JICA did not immediately become actively involved in the geothermal development field in Rwanda. Based on this background, the study team confirmed the occurrence of outcomes in terms of whether the ex-participants were contributing to the objectives of the Kizuna Program in the broad field of resources and energy, which includes electric power and mineral resources.

4.2.2. Results of the Analysis

(1) Evaluation Question 1: End-of-program Outcomes

We obtained the following results for the question, "Have ex-participants improved their knowledge and skills in the field of mining and geothermal development, increased their knowledge and understanding of Japan's approach to the field, increased their positive feelings toward Japan, and expanded their networks as a result of participating in Kizuna Program?"

<u>Knowledge and skills in the field of mining and geothermal development</u>

All eight interviewees obtained their master's or doctoral degrees in the field of mining and geothermal development. During their studies, they acquired knowledge and skills related to their field through classes and guidance from their supervisors and gained practical training by participating in internships and gaining experience in using software programs. According to the interview with the university, they acquired logical thinking skills while writing their thesis and experimental skills using analytical instruments, and their supervisors evaluated that they had reached the required level upon graduation.

Knowledge and understanding of Japan's approach to the mining and geothermal development sectors

They deepened their knowledge and understanding of the Japanese mining and geothermal development sectors by participating in JICA Development Studies Program and JICA's short-term programs or internships. An interviewee in one of the university interviews reported that since university classes do not cover economic aspects, Japanese-style company management, international relations, etc., it seemed that by participating in the short-term program, Kizuna participants were able to experience lectures that dealt with business models and acquire practical knowledge.

Feelings toward Japan

Feelings toward Japan improved among all participants.

Connections with Japanese organizations, Japanese students, and other international students

All eight interviewees acquired connections with either Japanese organizations/students or other students during their stay in Japan. The connections with universities were mainly through their academic supervisors. The connections with Japanese organizations and students were through JICA and internship. The connections with other students were through students in the same laboratory.

Summary of the end-of-program outcomes for Evaluation Question 1

The initial set of changes expected to occur after graduation, "improvement of ex-participants' knowledge and skills in the field of mining and geothermal development," "improvement of their knowledge and understanding of Japan's approach to the field," "improvement of their positive feelings toward Japan," and "expansion of their networks" are considered to have occurred as expected for all eight ex-participants interviewed.

(2) Evaluation Question 2: Short-term Outcomes

We obtained the following results for the evaluation question "As a result of the outcomes at the end of the program, have ex-participants applied the knowledge and skills they learned to their jobs or research or expanded and maintained their connections?"

Application of knowledge and skills to jobs and research

After returning to their home countries, all eight interviewees returned to the same workplaces where they had worked before coming to Japan and made use of the skills, knowledge, and experience they gained in Japan. After returning to work, one of them was transferred to a department in a different field (power transmission) from the one he studied in Japan (geothermal). In this case, the participant was using general methodologies and the experience of working with Japanese people. Regarding the assumption of "having an environment to use the knowledge and skills they learned," seven ex-participants (including one person who was assigned to a project directly related to his own research and another person who changed the job from the geothermal field to the mineral resource exploration field but said that the knowledge and software he used in the geothermal field were still useful) answered that they had an environment to use the knowledge and skills they learned. Assumptions,

"general methodology" and "the experience of working with Japanese people," were applicable to all eight ex-participants. As for facilitating factors, it was confirmed that ToC assumptions, "participants obtain the support of their supervisors," "ex-participants return to and remain in their original workplaces," and "there is an environment to use the knowledge and skills learned," were met. This may be because the Kizuna Program targets "those who have the desire to contribute to the mining and geothermal development in their home countries" in specific fields, which makes it easier for the participants to obtain the support of their supervisors and an environment where they can use their knowledge and skills. In addition, the Kizuna Program is a program in which participants are expected to return to their original workplaces after returning to their home countries. There are many cases in which participants are required to return to their workplaces and work for several years as a condition for studying abroad.

On the other hand, ToC assumptions, "support by supervisors," "follow-ups," and "returning to and remaining in their workplace," did not apply to one ex-participant mentioned above who was transferred to the power transmission field. However, "support by supervisors" and "follow-ups" do not seem to be essential factors since the transfer might still have occurred even if these assumptions had been met.

The Kizuna Program provides follow-up support to ex-participants after they return to their home countries, such as providing necessary equipment and allowing them to invite experts, depending on individual circumstances. However, none of the ex-participants interviewed have taken advantage of these opportunities, so it is impossible to determine whether or not follow-up support has been effective in promoting the program. Neither JICA offices in Kenya nor Rwanda provide any follow-up support specifically for Kizuna ex-participants on the use of knowledge and skills.

Expansion and maintenance of the connections gained

All eight interviewees have continued to expand and maintain their networks with their host universities, internship companies, JICA, Japanese and international students, and alumni organizations after returning to their home countries. Kenyan ex-participants continued to communicate with their host universities to promote partnerships with local companies for research purposes.

In some countries, JICA offices hold alumni reunions, and JICA's technical cooperation projects have been conducted at their universities. Therefore, factors assumed in the ToC, such as "there is an organization (alumni association, etc.) that maintains connections and exchanges" and "there are opportunities to expand connections," have potentially promoted the occurrence of the outcome. On the other hand, "matching with Japanese companies and research institutions" was not observed.

Summary of short-term outcomes in Evaluation Question 2

Short-term outcomes, "applying the knowledge and skills learned to work and research" and "expanding and maintaining connections," were applicable to most of the eight ex-participants interviewed. The end-of-program outcome, "the use of knowledge and skills in the mining and geothermal fields by returning to work in these fields," was observed as expected.

In many cases, ex-participants expanded their connections through research, reflecting that the Kizuna

Program targets not only master's programs but also doctoral programs.

(3) Evaluation Question 3: Mid-term Outcomes

We obtained the following results for the evaluation question concerning the mid-term outcome, "Have ex-participants experienced an increase in their decision making power and responsibility in their organization, an increase in the number and efficiency of business projects, transactions, and research collaborations between ex-participant or the participants' organizations and organizations in Japan, or research collaborations and joint projects among the participants?", which was defined as a consequence of the short-term outcome of the Kizuna Program,

Increase in ex-participants' decision-making power and responsibility in their organizations

Five out of eight ex-participants interviewed reported that their decision-making power or responsibility in their organization had increased. The ex-participants who responded that their positions remained the same attributed it to a job change, promotion rules at their current workplace, and the influence of the COVID-19 as reasons. Although this is difficult to confirm due to the small number of ex-participants in the study, these results seem to suggest that the application of knowledge and skills learned to their jobs does not directly lead to an increase in decision-making power and responsibility, just as we saw in the ABE Initiative survey.

Increase in the number and efficiency of joint projects, transactions, research collaborations, etc. between ex-participants' organizations and Japanese organizations

Six of the eight interviewees have been involved in joint projects, transactions, or research collaborations with Japanese organizations since their return to their home countries; some were involved in JICA grant aid projects as implementing agencies; some were conducting joint research projects with their supervisors funded by the Japan Student Services Organization (JASSO); some were helping their supervisors conduct studies in their home countries; some were supporting data collection; and some co-authored papers for the World Geothermal Congress with their supervisors. In addition, there were some cases where the host university visited the ex-participant's home university after he went back to his home country and held seminars and workshops because his home university and the host university had a signed MOU in place. These cases show that ex-participants are making use of the knowledge and skills they gained during their study abroad and their knowledge, understanding, and networks regarding Japan's approach to the mining and geothermal sectors.

The ToC assumption, "Participants are aware of their role in returning the results of this program to society," which we defined as one of the facilitating factors, was applicable to all ex-participants. The assumption, "funds and resources to implement joint projects, etc., can be secured," was applicable to JASSO, JICA projects (not in the field of geothermal energy), and other funds. The case of "Overseas field research" was not observed, but the host university interviewed feels that the research program had a significant synergistic effect because their academic supervisors were able to accompany the field research. Although there were no cases of research collaborations or similar efforts at the university at the time of the interview, it provided an opportunity for the partner country to become interested in Japanese research, potentially creating research collaborations and joint projects in the

future.

In contrast, the ToC assumption, "there are sufficient resources in the country, and there are prospects for resource development," was not fully applicable in the geothermal field in Rwanda. As mentioned earlier, JICA is not actively involved in geothermal development in Rwanda due to the high resource risk shown in a JICA study (although some ex-participants did not rule it out). In addition, there were still no Japanese companies willing to collaborate with Rwanda in the mining sector, according to one of the ex-participants who changed jobs from the geothermal sector. However, all of the Rwandan ex-participants were working for government organizations. From the perspective of making contributions to the natural resources and energy sectors, the fact that Rwandan government organizations now have knowledgeable and skilled employees who are familiar with Japan should be viewed as a positive outcome. Both ex-participants and the JICA office commented that the presence of people who could speak Japanese and understood how Japanese people work in the counterpart organizations significantly contributed to the smooth launch and progress of the project.

A large Japanese company already doing business in Africa reported that the internship program created an opportunity for the Kizuna participants to come up with interesting business ideas from a perspective different from that of Japanese people, but in reality, it would be difficult to carry out such business. This company is not currently considering partnering with or carrying out any joint business projects with local companies in Africa.

Implementation of research collaborations and joint projects among ex-participants

None of the eight interviewees mentioned any examples of research collaborations or joint projects between ex-participants. At this point, it seems that they are only exchanging information with other ex-participants. However, one ex-participant provided information about gemstones in Zambia in response to an inquiry from another ex-participant. He said that the program had created a good network for sharing knowledge and finding the right people when he wants to do business.

Summary of the mid-term outcomes for Evaluation Question 3

Mid-term outcomes, "an increase in ex-participants' decision-making power and responsibility in their organizations," "an increase in the number and efficiency of business projects, transactions, and research collaborations between the ex-participant or the participants' organizations and organizations in Japan," and "implementation of research collaborations and joint projects among the ex-participants," were confirmed to a certain degree. However, the results varied more significantly than the results for short-term outcomes. The results of the survey suggested that this outcome could further develop. Although an increase in responsibility and promotion was generally observed, this did not happen in some cases due to workplace regulations. However, even in cases where there was no such increase in decision-making power or responsibility, the results identified various examples of collaboration with Japanese organizations in which ex-participants used the networks gained through study abroad and other JICA schemes. There were also cases, such as in Rwanda, where the program did not contribute in exactly the same field as initially expected due to changes in the needs related to mining and geothermal development. However, in terms of contributing to the promotion of resources and energy in the country, it is likely that mid-term outcomes have been achieved according to the ToC.

4.2.3. Overall Summary of Kizuna Program's Outcomes

(1) Summary of Survey Results

In general, expected outcomes have been achieved effectively among the ex-participants we interviewed. End-of-program outcomes, such as skills and positive feelings toward Japan, have improved as expected. In addition, most ex-participants are working in positions in the fields they studied and using the knowledge and skills they acquired. Although we can only speculate due to the small number of respondents, the fact that the situation we observed for the Abe Initiative—less than 50% of the ex-participants working in the same field of study—did not occur in the Kizuna Program might have been due to the characteristics of Kizuna. In other words, the fact that the Kizuna Program targets doctoral students who conduct more advanced and specialized research and the fact that the field of study is specified can encourage participants to work in the field in which they have studied and further promote research activities with Japanese organizations. These aspects have potentially lead to the occurrence of collaboration-based outcomes including "joint projects, transactions, research collaborations, etc. between their organizations and Japanese organizations."

(2) Reflection on Evaluation Method

This section discusses what was revealed or not revealed in the survey concerning the results of the Kizuna Program and what we might need to ensure that an analysis maintains a certain level of quality in the evaluation, including the availability of data.

<u>Things small-scale interviews were capable of revealing</u>

This survey was capable of finding that the outcomes and assumptions set out in the ToC were applicable to ex-participants in multiple countries (Africa and Asia), organizations (universities, government organizations, and private companies), research fields (mining, coal, and geothermal[43]), and master and doctoral programs. The interviews also helped us identify the details of each case. Since some of the eight interviewees represented cases in which expected changes associated with some of the mid-term outcomes did not materialize, we were able to obtain examples of factors inhibiting as well as facilitating these outcomes. In addition, these eight ex-participants consisted of two groups: a) ex-participants who were recommended by the relevant organizations of the Kizuna Program as individuals who were likely to have achieved these results, and b) ex-participants from Kenya and Rwanda, which are the target countries of the ABE Initiative. Although the study team did not know whether or not the outcomes had occurred until interviews were conducted, these interviews confirmed that outcomes had occurred even among the ex-participants in the second group.

<u>Things small-scale interviews were not capable of revealing</u>

Interviews did not reveal the extent to which Kizuna's outcomes materialized as a whole (although this was in line with our expectation since this part of the study was designed as qualitative interviews targeting a limited number of individuals). In addition, unlike the examination of the Abe Initiative,

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[43] JICA classifies research fields for the Kizuna Program into mining, coal, geothermal, and oil/natural gas. Except for the oil/natural gas field, each field was represented by at least one ex-participant in our interviews.

we did not compare the results against the situation of non-participants (i.e., individuals who were rejected or withdrew). We could only qualitatively confirm whether or not Kizuna Program triggered the changes that occurred to the interviewees.

Furthermore, the parts of these programs corresponding to the long-term and final outcomes of the ToC were not included in the study. In particular, it is considered too early to confirm the final outcomes, including "Contribution to Japan's stable resource security (securing Japan's resources and building mutually beneficial relationships with developing countries)," "Contribution to the promotion of Japan's mining sector and sustainable growth of the manufacturing industry," and "Contribution to global resource management," about five years after the completion of Batch 1.

As mentioned earlier, the Rwandan Kizuna ex-participants were also ex-participants of the ABE Initiative, so we obtained some information on the implementation status of the activities related to development issues by distributing and collecting responses to a web-based survey as part of the ABE Initiative survey and incorporating this topic in the interview. Two of the ex-participants in Rwanda belonged to government agencies. As part of their work, they were involved in tasks related to development issues, such as mining development and power development. One of them was applying the knowledge and skills he learned during his study in Japan and conducting new activities (introducing open-source software he learned during his internship and promoting research activities and journal publications in his department). These activities are examples of one of the long-term outcomes in the ToC of Kizuna Program: "Ex-participant's workplace develops and improves technologies, products, and services in the field of mining and geothermal development." Although this outcome was initially classified as a long-term outcome, it can also be regarded as a short- to mid-term outcome that can be achieved relatively quickly in the case of ex-participants who would return to their previous work. Thus, we believe that our decision to include this outcome as an interview question helped us add additional clarity to the situation of other respondents at the midpoint along their path to the final outcome.

Implications for future evaluation

Based on the above discussion, the following is a summary of points that can be noted for future evaluation of the Kizuna Program.

- Use of ToC: The ToC for the Kizuna Program created at the beginning of the survey seems to be generally appropriate, including the setting of assumptions.

- Timing of evaluation: This study was conducted about five years after the first group of participants graduated. We believe that this would be an appropriate time to evaluate the short to mid-term outcomes of the program in future evaluations as well. Evaluation should mainly verify the following outcomes: "whether the ex-participants are using the knowledge and skills they have learned in their work and research" and "whether the joint activities between their organizations and Japanese organizations have increased or become more efficient." In addition, it would make it easier to evaluate the path leading to the final outcomes if the study also verifies outcomes that are considered to be long-term outcomes in the ToC, such as "ex-participant's workplace develops and improves technologies, products, and services related to development issues in the mining and geothermal fields"

and "ex-participant's workplace develops high-quality human resources in the mining and geothermal fields."

- Survey method: Where large-scale data collection is permitted, it may be possible to evaluate the program's overall outcomes and factors that inhibit or promote the occurrence of outcomes through a method that combines a complete enumeration survey and interviews in line with the ToC, as was done for the ABE Initiative in this study. When conducting an evaluation based on small-scale interviews (as we did for the Kizuna Program) rather than through large-scale data collection, target ex-participants should be carefully selected to ensure they are balanced in terms of countries, fields, and organizations.

Chapter 5 Recommendations for Evaluation Methods for JICA Scholarship Programs

Based on the reviews of scholarship program evaluations in Chapter 2 and the case studies in Chapter 4, this chapter provides recommendations and discussions on methods for evaluating and analyzing scholarship programs.

> **Recommendation 1: Clarify evaluation questions**
> - ➤ Clarify whether the evaluation will focus on verifying outcomes, efficiency, analysis of factors, etc., or on comprehensive evaluation regarding each perspective of the DAC 6 evaluation criteria.
> - ➤ Clarify whether the program is to be evaluated as a whole or as a country-specific program in a particular country.
> - ➤ If the focus of the evaluation is on the verification of outcomes, clarify whether to verify expected outcomes exhaustively or specific outcomes.
> - ➤ Clarify whether outcomes for ex-participants themselves or the universities and companies involved in the program are to be verified.
> - ➤ Clarify the stage(s) of outcomes (from initial outcomes to long-term outcomes) to focus and verify.

The evaluation method to use depends on the evaluation question. Therefore, the first step in considering evaluation methods and criteria is to clarify the evaluation question by identifying the precise object of examination in the evaluation. As reviewed in Chapter 2, in many evaluations for scholarship programs, including this study, the primary objective is to verify the outcomes of the program (verification of impact). However, the evaluation can also be conducted to verify the appropriateness of the program implementation process (process evaluation) and its efficiency (which are outside the scope of this study). Furthermore, the evaluation can also focus on the analysis of factors, examining which aspects of the scholarship program have helped achieve the outcomes and how additional inputs, including follow-ups, have affected the achievement of the outcomes. [44] Whether or not to use the DAC 6 evaluation criteria also depends on the evaluation questions. If the objective is to make a comprehensive assessment in terms of each evaluation criterion, it is appropriate to use the DAC 6 evaluation criteria. If the focus is on verifying outcomes, as in this study, only the effectiveness and impact will be verified, not all six criteria.

It is also possible to evaluate the program in a country as an individual country program rather than an overarching scholarship program in multiple countries. Rwanda, which is the target country of this

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[44] When conducting analysis of factors, it is assumed that the impacts have been verified conducted before the analysis. This type of analysis is to identify factors that trigger or do not trigger a specific impact. Therefore, it is logically impossible to conduct analysis of factors without verifying the existence of an impact (i.e., without understanding whether an impact has occurred or not).

study, has strategically incorporated the ABE Initiative as part of its support for ICT in Rwanda. If the objective is to verify such efforts at the national level, it would be beneficial to consider the scholarship program as a country-specific program and include it in the evaluation.[45]

Even when the evaluation question is set on the verification of outcomes, as in this study, a decision must also be made on whether to verify all expected outcomes comprehensively or focus the analysis on specific outcomes. In this study, even the earliest batch of ex-participants has been back to their home country for only about five years, so the verification is limited to the mid-term outcomes. However, if the objective is to verify the long-term outcomes, it is necessary to evaluate when the outcomes are expected to occur. Whether to verify the outcomes for ex-participants themselves or the outcomes for the universities and companies related to the program also depends on the evaluation questions.

As another approach to evaluating scholarship programs, the evaluation of scholarship programs based on the JICA Development Studies Program can be conducted. We would still need to set up evaluation questions according to what is to be evaluated (process, the outcome in general, the outcome of a specific type or period, etc.) just like we do for other types of evaluation described above. However, such evaluations would require a cross-sectional analysis of scholarship programs, rather than an analysis of individual scholarship programs as we did in this study. In addition to analyzing overall trends of the JICA Development Studies Program, case studies of good practices may be possible.

As described above, the evaluation questions for scholarship programs vary. Since the appropriate evaluation method depends on the evaluation question, identifying the objective of the evaluation, i.e., what the evaluator intends to clarify, is the priority when considering the evaluation method and criteria. These points are not technical issues in terms of evaluation techniques but practical issues that should be decided by the organization that plans the evaluation and use its results. It is important to have a clear consensus on the evaluation questions among the various actors involved in the JICA's scholarship program, such as regional departments, sectoral departments, domestic offices, and overseas offices.

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[45] However, if verification were to be conducted at the individual country level, quantitative analysis may not be possible for countries with a small number of ex-participants due to sample size limitations. In such cases, qualitative evaluation based on small-scale interviews is likely to be performed. Therefore, it is important to ensure that the interviewees are selected based on the purpose of the evaluation (country, field, affiliation, etc.). The same consideration should be made when evaluating small-scale scholarship programs (i.e., with relatively small number of recipients).

> **Recommendation 2: Clarify the ToC and evaluate based on it**
> ➢ Clarify the main elements of the ToC, such as the final objectives of the program (final outcomes), intermediate changes that are expected to lead to the final outcomes (initial and mid-term outcomes), indicators corresponding to each outcome, the achievement of each outcome (target values), the time when each outcome is expected to be achieved, and assumption, as the responsibility of the implementer when planning the program.
> ➢ Specify outcomes to be verified in line with the ToC and verify the status of the achievement of these outcomes.
> ➢ If it is impractical to target non-participants, check whether a chain of changes along the ToC is occurring and understand the causal relationships shaping the program and its contribution.
> ➢ When conducting a process evaluation or analysis of factors, it is especially important to clarify assumptions that need to be satisfied for each change to occur and the chain of changes from inputs to outputs.

In this study, the outcomes expected to be achieved through the program were sorted in the form of a set of ToC, and the impact was verified in accordance with this ToC. Unlike general JICA projects, JICA scholarship programs are often not accompanied by ex-ante evaluations, and the objectives of the program are not clearly defined. In such cases, using a set of ToC to clarify the outcomes that the program aims to achieve will be beneficial in identifying the outcomes to be verified in the evaluation and in verifying what has been achieved in the program as a whole and to what extent.

Even if a survey of the comparison group cannot be conducted due to the limitations of the study and the causal relationships shaping the program and its contribution cannot be analyzed through comparison with non-participants, the contribution of this program can be grasped to some degree if the occurrence of outcomes along the ToC can be confirmed. Even though our case study for the Kizuna Program was conducted only through small-scale interviews, the causal relationship between the program and outcomes could be qualitatively confirmed by examining the occurrence of outcomes according to the ToC (although the results are confined to the participants of the study).

Furthermore, it would be beneficial to use the ToC not only for outcome verification but also for process evaluation and factor analysis. While this study focused on precisely delineating the chain of outcomes, it is possible to verify whether the program has been implemented as expected by precisely delineating the chain of changes from inputs to outputs. In addition, clarifying the set of assumptions that need to be met for the chain of change to be established and incorporating it as an element in the ToC will contribute to analyzing factors for the achievement or non-achievement of outcomes. Reviews for other donors, such as the Belgian government and USAID, also mention this type of application of ToC.

In this study, ToCs were created on an ex-post basis, but ideally, the ToC should be created at the planning stage as part of the program plan. It is important, as part of the responsibility of the program

implementer, to set in advance the key elements of the ToC, such as the final outcome, which is the final objective of the program, the intermediate changes expected before the final outcome (initial and mid-term outcomes), the indicators corresponding to each outcome, the level of achievement (target value) for each outcome, and the time when each outcome is expected to be achieved, to ensure smooth post-impact evaluation.[46]

One of the points to note when creating a set of ToC is that scholarship programs require a long period of time to achieve their final outcomes. Therefore, it is important to organize the intermediate outcomes leading to the long-term objectives and clarify the expected paths to achieving the final outcomes. One of the characteristics of JICA scholarship programs (especially the ABE Initiative) is that they also have an important objective to benefit Japanese companies. This is a unique characteristic not seen in the other donors' programs. It is necessary to clarify how scholarship programs are expected to achieve these objectives and the pathways through which this occurs. Some other donors have created general ToCs for each type of intervention in university cooperation and scholarship programs, providing a theoretical framework for future interventions. In the current study, the study team has created a set of ToC that is likely to be generally applicable to scholarship programs (see Appendix 2 for a modified version of the ToC based on the results of this study). It would be useful to use this as a base for creating ToCs for individual programs, customizing them to suit the objectives and characteristics of each program.

This study created a sample PDM for scholarship programs (Appendix 4), in addition to a set of ToC, for reference. A PDM usually organizes project outcomes into two levels: the project purpose and overall goal. Since the project purpose of technical cooperation projects is defined as the objective to be achieved at the project completion, the outcomes labeled "end-of-program outcomes" in this study fall under this category. The short-, mid-, and long-term outcomes are all categorized within a single level, under the overall goal. In addition, since the overall goal is usually defined as a set of goals to be achieved in three to five years after completing a project, goals up to the mid-term outcomes of a scholarship program would be included as part of the overall goal if we follow this definition. In a PDM, the final outcome may be set as the "super goal" if necessary. Even if we add the super goal as the third level and try to express outcomes in these three levels (i.e., the project purpose, overall goal, and super goal), a PDM is not capable of expressing various changes and their assumptions at each level, as specified in the ToC, in a way that shows the connections between them. Although the PDM is a project management tool, it is not necessarily a suitable tool to show the whole picture of the project behind it. For this reason, it is recommended that the ToC be drawn first to organize the outcomes, even if a PDM is to be created for a scholarship program.

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[46] Configuring the ToC in advance not only helps the evaluation process but also helps improve the quality of program planning and implementation and the communication among relevant parties. It is also useful to indicate the risk factors that may prevent the expected changes from occurring in the ToC prepared at the time of planning. Taking this study as an example, if the risk factor is clearly stated as "a gap due to study abroad may affect the career adversely," it would be possible to formulate a plan that takes such points into consideration.

In this study, the non-participants of the ABE Initiative (those who failed the final selection and the one before it, and those who passed but later withdrew) are considered not to be significantly different from the ex-participants in other respects except for their non-participation in the ABE Initiative ("similar" in nature). As described in 4.1.3 under "Reflections on Evaluation Method" for the ABE Initiative, since the outcomes expected to be triggered by the scholarship program may vary depending on factors other than the program, simply confirming the outcome level of the target individuals of the program may lead to incorrect interpretations. Therefore, comparisons with non-participants are important in verifying the causal relationship between the program and the outcomes. There have been several scholarship programs by other donors in other countries in which the project evaluation examined the impact of their programs by using non-participants as the comparison group. However, there are no such cases in the evaluation of JICA scholarship programs, and this study is likely to be the first study to verify the impact of JICA scholarship programs by explicitly comparing participants with non-participants.

In this evaluation, although there was some reluctance at first among related departments of JICA to ask non-participants to cooperate in the survey, we did not encounter any major problems during the study. As mentioned in 4.1.3, it is relatively easy to identify a group of people among the applicants of a scholarship program who are likely to be appropriate comparison targets, and it is also possible to set up more appropriate comparison targets by identifying in advance those who were rejected by a narrow margin in the selection process.

One of the potential challenges is the low survey response rate among non-participants. The difference in the survey response rate between participants and non-participants may affect the comparability of the results. However, this can be addressed by making participation in the survey mandatory as part of the application requirements, whether the applicant is accepted or rejected. In addition, if a survey of non-participants is conducted in a program where such a requirement is not specified, it is important to explain when requesting people to take part in the survey that the evaluation is intended to cover both ex-participants and non-participants so that non-participants who receive the request would not

be confused.[47]

This recommendation, which proposes to compare ex-participants and non-participants, is based on the specific purpose of the study (to verify whether the participation/non-participation in the project would affect outcomes (impact)). If a different evaluation question is used, it is necessary to set up an appropriate counterfactual for it and make a comparison.[48]

Recommendation 4: Set appropriate indicators

➢ Set indicators based on the examples of indicators used in this study and previous similar studies.

➢ Set targets and reference values for each indicator at the time of program planning.

Evaluations of JICA scholarship programs and those of other donors have already established and measured various outcome indicators. Types of indicators are mostly the same between the two groups of evaluations, and there are no new indicators that should be broadly incorporated into the evaluation of JICA scholarship programs. Therefore, it is likely that future evaluations will be able to set indicators by referring to existing examples (Table 2-6 and Table 2-10) and the examples of indicators shown in our ToC (Appendix 2). In addition, we created a summary of such indicators and presented it in Appendix 3 as the "Draft of JICA Indicator Reference and Typical Lessons Learned in Technical Cooperation Projects (scholarship program)." In any event, it is important to set indicators that match the outcomes to be verified.

One of the challenges is the setting of target values and criteria for judgment. Both JICA and other donors have found several cases in which the evaluation provided only high or low rates or percentages for quantitative indicators in the evaluation without any specific criteria or basis for judgment. In this study's case study for the ABE Initiative, the same indicators (e.g., the percentage of ex-participants engaged in joint activities with Japanese organizations) used for ex-participants were measured for non-participants, and the measured values were compared with those of ex-participants. It is desirable to set the target values in advance (preferably at the time of program planning) among relevant departments.[49] In case this is not practical, it is possible to set criteria (e.g., high or low) depending on the level of outcomes expected to be achieved at the time of evaluation in accordance with the ToC (for example, setting 100% as the expected level of achievement for end-of-program and short-term outcome indicators if the measurement takes place about five years after the participants completed the program, and setting 50% for mid-term outcome indicators). Thus, it is important to remember that

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[47] Other points to be considered when conducting a survey with rejected applicants include the need to avoid creating unnecessary expectations about the possibility of future support.

[48] For example, if the evaluation question is whether one scholarship program is relatively more effective than another, it is necessary to compare the participants of the program in question with the participants of a different, counterfactual program.

[49] Survey subjects will also change based on the target value set. For example, if the expectation is that the percentage of ex-participants who completed the scholarship program who would go on to work in the field they studied would be higher than that of typical master's degree holders in Japan or the target country, obtaining such general data should be part of the evaluation (such comparison was not made in this survey).

the type of indicator to be measured and the targets to be achieved depend on how much time has passed since the end of the study abroad program at the time of measurement.

Recommendation 5: Analyze data using both quantitative and qualitative data

> ➤ Use quantitative data to grasp the status of the occurrence of impacts across the program and use qualitative data to capture the details and background of specific occurrences of impacts.
> ➤ Interpret the results of the analysis and make evaluative judgments based on the information from both quantitative and qualitative data.

The case study of the ABE Initiative was analyzed using both quantitative data from web-based surveys and qualitative data from interviews. One of the advantages of quantitative data is that they allow us to grasp the overall trend of the program. In past surveys, the results of programs were often presented in a way that focused on good practices that deserved special mention, but it is possible to understand whether such practices are common or limited to a small number of cases by using quantitative data. On the other hand, for specific cases that are not clear from the quantitative data and for the background that led to changes, qualitative data can add depth to the analysis and enable appropriate interpretation of the results. This type of analysis that combines both quantitative and qualitative data is likely to be beneficial for evaluations.

Recommendation 6: Develop a system for verifying mid- and long-term outcomes

> ➤ Establish and maintain a system to manage and update contact information for ex-participants by utilizing alumni associations and networks of alumni, in addition to the JICA headquarter and overseas offices, to enable continuous tracking of ex-participants.
> ➤ Manage the contact information for rejected/withdrawn applicants at the time of their application so that non-participants can be surveyed.
> ➤ Clarify the contact person in charge of the JICA scholarship program at each university and company, consider how to update the contact information after the program ends, and establish a system to put together and accumulate information on ex-participants and the changes and results of accepting participants as an organization.

To verify the status of the mid- and long-term outcomes of the scholarship program, it is necessary to establish a system that allows the evaluator to continue conducting surveys of relevant parties after the completion of the program.

This study conducted web-based surveys and interviews with ex-participants, non-participants, host universities, and internship companies. Regarding the survey of ex-participants, in both case studies, the contact information was maintained and updated by JICA, which was assisted by the follow-up work provided by JICE (which was commissioned to support program implementation). This made it possible to contact them efficiently. Even so, many ex-participants did not respond to the request for

updating their information, and some commented that mid- and long-term tracking would be a future challenge. It is important to strengthen the mid- and long-term information management and manage the system by using alumni associations and networks of ex-participants through SNS and other channels, in addition to the JICA headquarters and overseas offices. For non-participants, it may be difficult to update their information, but at least the contact information at the time of application should be compiled and managed centrally at the JICA headquarter.

In the survey of universities, the study team contacted the department in each university or graduate school in charge of accepting international students. However, since universities or graduate programs often did not have sufficient information about the program, they had trouble identifying individuals who could respond to the survey about the outcomes and changes related to the acceptance of participants. In this study, information was also collected from the academic supervisors through the main contact person. However, considering that faculty members may move to different divisions or institutions, it is necessary to establish a system that allows each university to collect and accumulate, on an organizational basis, information on participants it accepts and the outcomes and changes that occurred at the university as a result of accepting participants. Similarly, at companies, it is necessary to clarify who (which department) in the company should be contacted to collect information about accepted interns, as the department in charge of accepting international students may not be the same as the department that accepts them as interns. In addition, as in the case of universities, since employees may move to different departments/companies or their contact information may change (in this study, the contact information was known because the program was in progress and interns were still being accepted), it is necessary to consider how to update contact information and establish, on an organizational basis, a system to accumulate information on mid- and long-term outcomes.[50]

Recommendation 7: Incorporate measures to improve the survey response rate
  ➢ Take measures such as the first contact from JICA, reminders at the right time, promoting survey participation through the alumni association, and creating a multilingual questionnaire.
  ➢ Avoid asking the same subjects to take the same survey multiple times in a short period of time.

The primary data-collection method in evaluation studies of scholarship programs is likely to be a questionnaire survey such as the one conducted in this study. When conducting a survey, it is important to find ways to improve the response rate. The web-based survey in this study was designed to increase the response rate through such measures as the first contact from JICA, reminders sent at the right time,[51] promoting survey participation through the alumni association, and creating a multilingual

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[50] Another point to consider when surveying universities or companies is that it is difficult to focus only on ex-participants in a specific JICA program, as many of them also accept international students from other donors, privately funded students, and other JICA programs.
[51] The study team analyzed the patterns in which responses were returned in the first half of the survey period. We sent out and sent a reminder just before the weekend because there were many responses on weekends.

response form.[52] These efforts helped us achieve a higher response rate than in similar surveys in the past. In addition, some respondents expressed dissatisfaction with the fact that similar surveys were conducted multiple times.[53] Thus, avoiding redundant surveys is also likely to contribute to a higher response rate.

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[52] A multilingual questionnaire forms may be effective in increasing the response rate, especially among non-participants.

[53] In addition to the web-based questionnaire in this study, ex-participants were also the subject of questionnaires surveys administered by alumni associations of the host universities, JICA offices, JICE, and other organizations.

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Appendix 2 Theory of Change (ToC) for Scholarship Programs for Overseas Study (Draft)

ToC1: ToC for scholarship programs for overseas study in general (draft)

This ToC identifies and organizes the outcomes/impacts that can be expected to occur through scholarship programs for overseas study (including both JICA and other donors). It is not intended to represent a specific program, but rather an abstract in general terms. It is expected to be used as a basis for JICA to design and evaluate individual scholarship programs in the future. This is the same ToC as the one presented in Chapter 3 of this report. It consists of the following three (sub-) ToCs.

1) ToC for participants of scholarship programs: Changes caused by the participants

2) ToC for companies: Changes caused by companies participating in scholarship programs that accept interns

3) ToC for universities: Changes caused by universities accepting the participants

4) Simplified ToC (an illustrative example)

ToC2: ToC for the ABE Initiative (draft)

The ToC developed based on the results of the literature review and interviews in Japan, as presented in Chapter 3 of this report, was revised based on the results of the web-based survey and interviews in participants' home countries.

ToC3: ToC for the Kizuna Program (draft)

This is the same ToC as the one shown in Chapter 3 of this report. It was developed based on the results of the literature review and interviews in Japan. The ToC was confirmed as valid through the results of the web-based survey and interviews in participants' home countries.

ToC1: ToC for scholarship programs for overseas study in general (draft)   1) Participants of scholarship programs

Outputs

Short-term Outcomes

Mid-term Outcomes

Long-term Outcomes

Final Outcomes

At the time of program completion

Within 1 year of returning home country

Approximately within 5 years of returning home country

Approximately within 10 years of returning home country

Knowledge and skills of the participants improve.
Graduation rate

Ex-participants obtain jobs/posts related to their field of study.
Employment rate
Duration of job search
Reinstatement rate
% of ex-participants who continue study

Stay in a relevant position

Understanding on the host country's corporate culture and business practices/management systems of the participants improve.
Level of comprehension of each item

Ex-participants apply their knowledge and skills in their work and research.
Degree of application of knowledge and skills gained
% of ex-participants who improved the content/method of their teaching (cases of working at educational institution)

Obtain the understanding of their boss

Participants' discretion and responsibility in their work increase.
% of ex-participants in management position
% of ex-participants who are promoted after returning
% of ex-participants who have decision-making power at work

There are a certain number of people in the organization who have studied in the host country

Ex-participants' workplace implements activities (policies/projects) related to development issues.
% of ex-participants who create new organizations/policies/projects that contribute to solving development issues

Participants of the scholarship program

Completion of the program

Positive feelings about the host country of the participants improve.
Positive feelings about Japan

Employment support and job information

Ex-participants are employed by companies in the host country.
% of ex-participants who are employed at Japanese companies

Ex-participants are aware of their role in returning the results of the scholarship program to society

Capacity of ex-participants' workplace improves (government agencies: policy planning and implementation capacity, research institutions: research and education capacity, private companies:
% of ex-participants who generated improvement at work/in the community

Ex-participants' workplace develops quality human resources.

Contribution to solving development issues in the country
SDG Indicators

Connections with the host country's organizations, students, and other international students of the participants is made.
Connections with universities, companies, etc. obtained through the program

Companies in the host country are attractive employers for ex-participants

Ex-participants' workplace increases/expands business, project, joint research, etc. with organizations of the host country (government, universities, private sector).
Number of joint research projects with Japanese educational organizations
Number of projects conducted with Japanese companies

Ex-participants' workplace develops/ improves technologies, products, and services.

Ex-participants' workplace increases the productivity.

Strengthening of bilateral relations
Number of foreign students from the country to Japan
Positive feelings about Japan in public opinion

Many companies in the host country are eager to hire ex-participants

Organizations to which ex-participants belong develop systems/policies that would support the business of companies of the host country.
Systems/policies that would support the business of companies of the host country in which graduates have been involved

There is an active entity that maintains connections and exchanges (alumni association, FB manager, JICA events, etc.)

Connections made by ex-participants are expanded and maintained.
Participation rate in alumni and friendship activities

Companies of the host country are attractive as business partners

Companies of the host country start/expand business in the target country.

Joint research/joint projects are conducted among ex-participants.
Existence of global-level academic exchange/ projects
Number of papers published

Contribution to solving development issues in the region, beyond national borders
SDG Indicators

【Legend】

・Black squares and black solid arrows：
A chain of changes in the key actor that are necessary for the ultimate goal that the project aims to achieve.

・Rounded-cornered squares：
A chain of changes at the organizational level triggered by changes in key actors.

・Red squares and red arrows:
A chain of changes specific to JICA.

・Gray ovals and black dashed arrows：
A necessary assumption/precondition for the achievement of a chain of change.

・Green： Timeframe

・Red： Examples of indicators

ToC1: ToC for scholarship programs for overseas study in general (draft)　2) Companies

Outputs　　　Short-term Outcomes　　　Mid-term Outcomes　　　Long-term Outcomes　　　Final Outcomes

Companies of the host country are attractive to the talented.

Human resources with skills in the relevant field and an understanding and fondness for the host country are available.

Psychological hurdle to doing business overseas becomes lower.

Companies hire local human resources.

Understanding and knowledge on foreign countries improve.

Companies

Companies participate in the scholarship program (internship acceptance).

Companies obtain local connection of the (potential) target country.

Business ideas are generated.

Workforce is diversified.

New business plan is developed.

Business operation system is installed in the target and host countries.

Joint business in the target country is promoted.

Companies of the host country are attractive as business partners

Companies are revitalized.

Companies of the host country start/expand business in the target country.

Systems/policies that would support the business by companies of the host countries are developed

【Legend】

・Black squares and black solid arrows：
A chain of changes in the key actor that are necessary for the ultimate goal that the project aims to achieve.

・Gray ovals and black dashed arrows：
A necessary assumption/precondition for the achievement of a chain of change.

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ToC1: ToC for scholarship programs for overseas study in general (draft)   3) Universities

Outputs   Short-term Outcomes   Mid-term Outcomes   Long-term Outcomes   Final Outcomes

Universities

Universities participate in the scholarship program (acceptance of international students).

Universities and faculty members acquire connections with home countries of international students.

Student selection method is diversified.

Opportunities for Japanese students to interact with international students increase.

Opportunities for Japanese faculties and staff to interact with international students increase.

International collaboration (joint research) and study abroad at universities increase.

International understanding among Japanese students is improved.

International understanding among Japanese faculties and staff is improved.

Students' motivation to study and research is improved.

International industry-academia collaboration is promoted.

Number of international students increases.

A certain number of international students are expected to enroll every year

Interaction with local universities is increased.

Expansion of courses taught in English

Improvement of syllabus and curriculum

Establishment of diverse study abroad programs (joint degree programs, etc.)

Increase in international academic exchange

Internationalization of Japanese students

Internationalization of Japanese faculties and staff

Research funds are secured.

Research capacities at universities increase.

Internationalization of universities

Improvement of educational capacity

Enhanced international competitiveness of universities

Stable university management

【Legend】

・Black squares and black solid arrows：
A chain of changes in the key actor that are necessary for the ultimate goal that the project aims to achieve.

・Gray ovals and black dashed arrows：
A necessary assumption/precondition for the achievement of a chain of change.

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ToC1: ToC for scholarship programs for overseas study in general (draft) Simplified Image

* Note: This simplified version is an illustrative example of a ToC. Any ToC to be used in actual program planning and evaluation should be more detailed.

Outputs

Short-term Outcomes

Mid-term Outcomes

Long-term Outcomes

Final Outcomes

At the time of program completion

Within 1 year of returning home country

Within 5 year of returning home country

Approximately within 10 years of returning home country

Employment support and job

Stay in a relevant position

Obtain the Understanding of their boss

There are a certain number of people in the organization who have studied in Japan

Ex-participants are aware of their role in returning the results of the scholarship program to society

There is an active entity that maintains connections and exchanges (alumni association, FB manager, JICA events, etc.)

Knowledge and skills of the participants improve.

Understanding on Japanese corporate culture and business practices/management systems of the participants improve.

Positive feelings about Japan of the participants improve.

Connections with Japanese organizations, students, and other international students of the participants is made.

Completion of the program

Ex-participants obtain jobs/posts related to their field of study or ex-participants are employed by companies in Japan

Connections made by ex-participants are expanded and maintained.

Ex-participants apply their knowledge and skills in their work and research.

Ex-participants' discretion and responsibility in their work increase.

Ex- participants' workplace increases/expands business, project, joint research, etc. with organizations of the host country (government, universities, private sector).

Capacity of ex-participants' workplace improves

Ex-participants' workplace implements activities related to development issues.

Ex-participants' workplace develops quality human resources.

Ex-participants' workplace develops/improves technologies, products, and services.

Ex- participants' workplace increases the productivity.

Contribution to solving development issues in the country

Strengthening of bilateral relations

Legend：
Black squares and black solid arrows＝A chain of changes in the key actor that are necessary for the ultimate goal that the project aims to achieve.
Rounded- cornered squares＝A chain of changes at the organizational level triggered by changes in key actors.
Gray ovals and black dashed arrows＝A necessary assumption/precondition for the achievement of a chain of change.
Italic＝Time frame

ToC2: ToC for the ABE Initiative (draft) (Revised version after survey)

ToC3: ToC for the Kizuna Program (draft)

Outputs

Short-term Outcomes

Mid-term Outcomes

Long-term Outcomes

Final Outcomes

At the time of program completion

Within 1 year of returning home country

Approximately within 5 years of returning home country

Approximately within 10 years of returning home country

Obtain the understanding of their boss

Ex-participants reinstate in the previous work and stay in a relevant position

There is an environment to utilize the knowledge and skills learned

Implementation of follow-up (provision of necessary equipment, invitation of experts, etc.) (use of records for each participant)

Knowledge and skills in mining and geothermal development of the participants improve.

Level of comprehension of each item

Ex-participants apply their knowledge and skills in their work and research.

Degree of application of knowledge and skills gained
% of ex-participants who improved the content/method of their teaching (cases of working at educational institution)

Participants' discretion and responsibility in their work increase.

% of ex-participants in management position
% of ex-participants who are promoted after returning
% of ex-participants who have decision-making power at work

Capacity of ex-participants' workplace improves (government agencies: policy planning and implementation capacity, research institutions: research and education capacity, private companies: technological and management capacity).

Ex-participants' workplace improves policies/programs related to mining and geothermal development.

Ex-participants' workplace develops quality human recourses in mining and geothermal development.

Contribution to the sustainable development of the mining and geothermal sectors in the countries concerned
(Support for development issues in the mining and geothermal sectors in developing countries)

Knowledge and understanding on Japanese approach in mining and geothermal development of the participants improve.

Level of comprehension of each item

There is a sufficient amount of resources in the country, and resource development is expected to take place.

Ex-participants are aware of their role in returning the results of the Kizuna program to society

Ex-participants' workplace develops/ improves technologies, products, and services in mining and geothermal development.

Positive feelings about Japan of the participants improve.

Positive feelings about Japan

Completion of degree program, internship, overseas field survey, and JICA provided programs

Graduation rate

Ex-participants' workplace increases/expands business, project, joint research, etc. with Japanese organizations (government, JICA, universities, private sector).

Number of activities that led to JICA projects
Number of joint research projects with Japanese educational organizations
Number of projects conducted with Japanese companies

Organizations to which ex-participants belong develop systems/policies that would contribute to mutually beneficial relationships between Japan and the country in resource development.

Systems/policies that would contribute to mutually beneficial relationships in which graduates have been involved

Contribution to Japan's stable securing of resources
(Securing resources and building mutually beneficial relationships with developing countries)

Volume of resource transactions with the country

Participants of the Kizuna Program

Matching with Japanese companies and research institutions

Funds and resources to implement joint projects, etc. are available

Contribution to the revitalization of Japan's mining sector and sustainable growth of the manufacturing industry

There are opportunities to expand connections

Connections with Japanese organizations, students, and other international students of the participants is made.

Connections with universities, related ministries, companies, etc. obtained through the program

Connections made by ex-participants are expanded and maintained.

Participation rate in alumni and friendship activities

Overseas field survey

Utilization of JICA's other scheme

Formation of pro-Japanese

Number of foreign students from the country to Japan
Positive feelings about Japan in public opinion

Capacity building of Japanese universities and research institutes in the mining sector
(including acquisition of geological information)

There is an entity (alumni association, etc.) that maintains connections and exchanges

Joint research/joint projects are conducted among ex-participants.

Existence of global-level academic exchange/ projects
Number of papers published

Contribution to global resource management

【Legend】

・Black squares and black solid arrows：
A chain of changes in the key actor that are necessary for the ultimate goal that the project aims to achieve.

・Orange squares：
Outcomes that are considered particularly important.

・Rounded-cornered squares：
A chain of changes at the organizational level triggered by changes in key actors.

・Gray ovals and black dashed arrows：
A necessary assumption/precondition for the achievement of a chain of change.

・Blue ovals and blue solid arrows：
Interventions to make the assumption/precondition a reality.

・Blue squares and blue dashed arrows：
The chain of changes expected in companies and universities (all of which are considered as "other impacts" in this evaluation).

・Green：Timeframe
・Red：Examples of indicators

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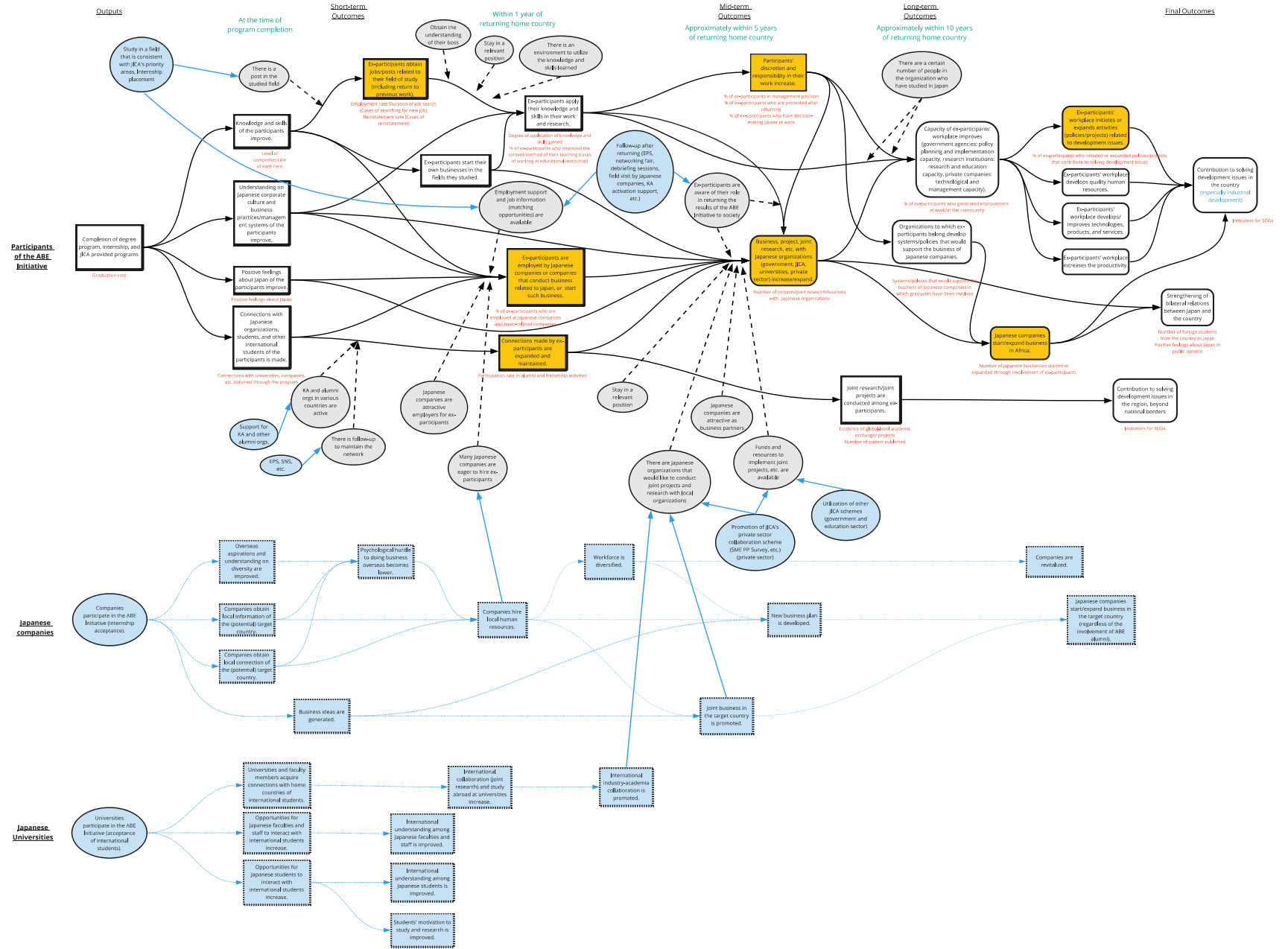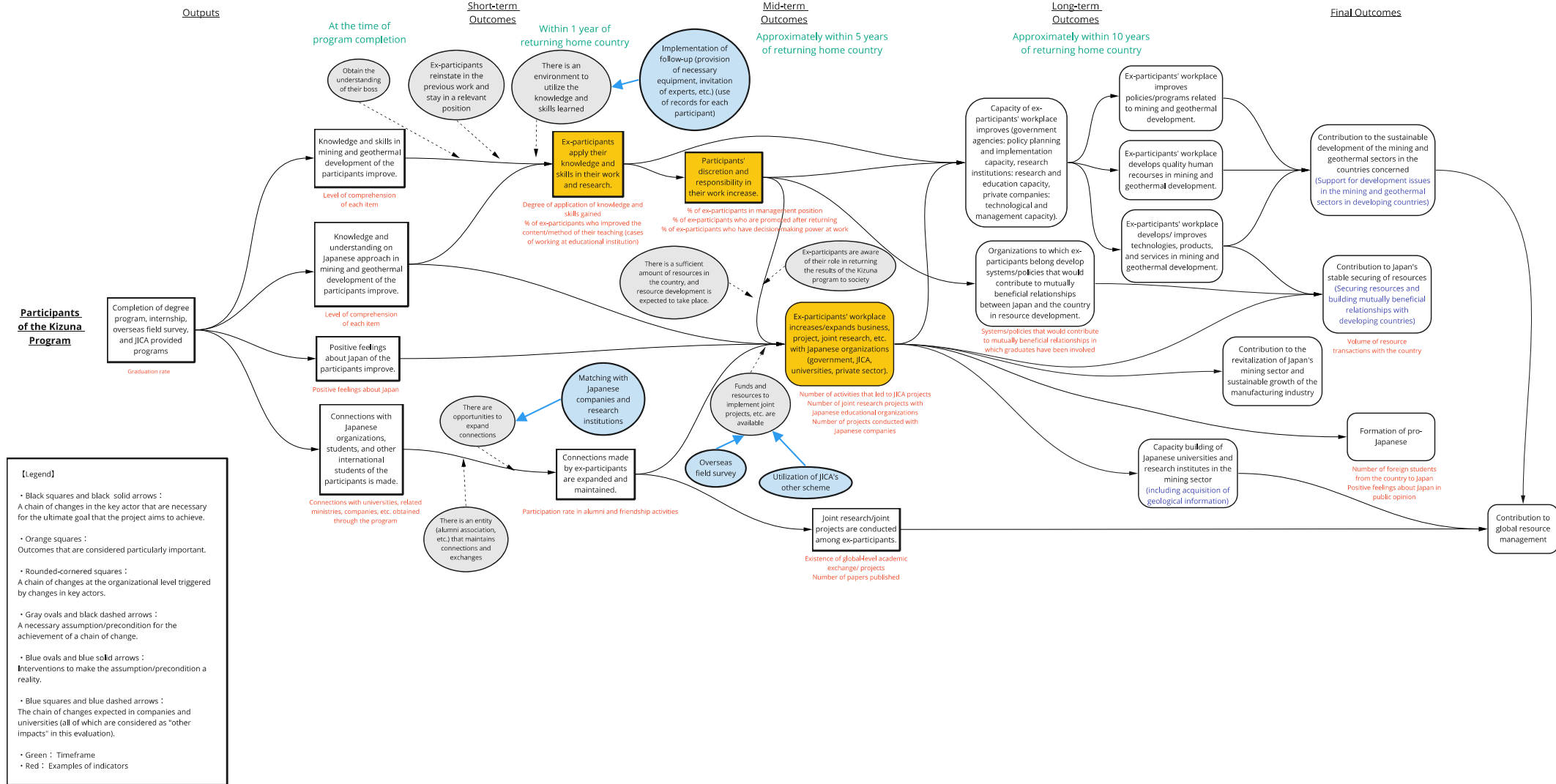
Appendix 3　Draft of JICA Indicator Reference and Typical Lessons Learned in Technical Cooperation Projects (scholarship programs)

The study team reviewed the current status of JICA's existing references in the field of higher education and scholarship programs to prepare the draft of "JICA Indicator Reference and Typical Lessons Learned in Technical Cooperation Projects (scholarship programs)."

In the field of higher education, the "Systemic Diagram of Development Issues," which serves as a framework for the "JICA Indicator Reference and Typical Lessons Learned in Technical Cooperation Projects," is included in the "Systemic Diagram of Development Issues for Higher Education" in "Effective Approaches to Development Issues (Higher Education)" (September 2003). The outline is as follows, but there is no development strategic objective to which scholarship programs precisely apply (study abroad is mentioned as an activity only under the mid-term objective 2-1).

- Development strategic objective 1: Improving educational activities
  - Mid-term objective 1-1: Responding to diverse educational needs through diversification of higher education institutions
  - Mid-term objective 1-2: Improving the quality of educational activities
  - Mid-term objective 1-3: Increasing the number of women/vulnerable people enrolled in school
- Development strategic objective 2: Strengthening of research functions
  - Mid-term objective 2-1: Training and capacity building of researchers (study abroad is listed as an example of a project under this goal)
  - Mid-term objective 2-2: Improving the environment for strengthening research functions
- Development strategic objective 3: Promoting the social contribution
  - Mid-term objective 3-1: Supporting community development activities
  - Mid-term objective 3-2: Strengthening collaboration with industry (internships for current students (not necessarily study abroad) are listed as an example of project activities under this goal)
- Development strategic objective 4: Improving Management
  - Mid-term objective 4-1: Developing a legislative, institutional, and financial framework
  - Mid-term objective 4-2: Strengthening of management and administrative functions
  - Mid-term objective 4-3: Financial Improvement
  - Mid-term objective 4-4: Quality Assurance

In addition, "Research Report on the Standardization of Evaluation Indicators for Higher Education Cooperation Projects" (2012) proposes an individual systematic diagram of objectives and indicators based on case studies, and projects with scholarship program components are included in the analysis. However, the overall focus of the analysis is on projects that aim to strengthen the capacity of specific higher education institutions, and it says that "long-term training projects that provide degree-level training opportunities mainly for university faculty members as part of strengthening inter-university networks and partnerships are included in the analysis, while training projects targeting a wider range of government officials (JDS and some yen loan projects) are not included" (p.46). In other words, it excludes scholarship programs, which are the subject of this study.

JICA Indicator Reference and Typical Lessons Learned in Technical Cooperation Projects (scholarship programs) <u>Model "Long-term Training Program"</u>

Development strategic objective	Mid-term objective	Indicators at a program goal level	Mid-term sub-target	Overall goals/Project purposes and indicator examples	Methods/ Policies for setting indicators	Typical lessons learned	Example of project purpose (image of projects)	Reference projects
Country assistance policy	Development thematic issue level to which the cooperation program corresponds	Relevance to target years/ indicators in sectoral/regional development plans of recipient country	Thematic issue level to be solved in individual projects	To . . . (outcome) By/through . . . (output) Thereby contributing to (impact) Indicator examples	Considerations and important points in setting indicators	Write lessons and risks to be necessarily used or reflected in implementing projects corresponding to the "mid-term sub-targets" from the perspectives of: 1) planning stages, and 2) management.		Project information with good practices
As there is no issue-specific guideline for "scholarship program," no development strategy objective has been set.

There is no development strategy objective that can be accurately positioned for scholarship programs in the Systematic Diagram of Development Issues described in the Effective Approaches to Development Issues (Higher Education). | Same on the left | Same on the left | Same on the left | (Sample Description)*1 To develop human resources who have acquired relevant knowledge and skills (Outcome at the time of completion) by providing opportunities for research and human network building at Japanese universities (Output), and (1) to play an active role in related fields using the acquired skills and knowledge and (2) increase joint activities with Japanese organizations (Short- and mid-term Outcomes), thereby contributing to (1) the improvement and resolution of development issues in target countries and (2) the fostering of bilateral relations. (Impact/Long-term Outcomes).

(Example of a standard indicator) 1. Examples of Impact (Long-term Outcome) Indicators (*2) (Basic) (1) 1) Percentage of ex-participants who have started or expanded projects, activities, policies, etc. that contribute to development issues (1) 2) Indicators that show the resolution or improvement of development issues in the target country (SDGs, etc.) (2) 1) Number of foreign students from target countries to Japan | (Overall) Since some of the long-term training programs cover multiple countries and fields, it is important to set indicators and target values so that the results of the programs can be analyzed across multiple countries and fields. The examples of standard indicators shown on the left can be aggregated and compared by country or by field.

(Overall) The type of indicator to be measured and the target value to be achieved depend on the timing of the measurement (e.g., if it is about 5 years after the end of the study abroad, 100% of the project completion and the short-term outcome indicators and 50% of the mid-term outcome indicator are expected

(Overall) The examples of standard indicators shown on the left, except for some long-term outcome indicators, measure the changes that have occurred in the direct beneficiaries of ex-participants after studying abroad. Apart from these, changes in | 1) Planning stage In order to increase the effectiveness of the program in the future, it would be effective to incorporate a monitoring system, such as career path after return, turnover status, and whether ex-participants have utilized what they gained, into the program before the start of the project, as well as to institutionalize the building of a network among the participants, and to utilize the knowledge and information they have gained (b).

2) Management · In the scholarship program, it is recommended that the implementing agency collaborates with employers in the expected sector after studying abroad to understand the demand for human resources in the sector, share information on the ex-participants, and provide opportunities for job matching. (c) | Same as the description example | (a) Professional Human Resource Development Project (Indonesia)

(b) Professional Human Resource Development Project (Ⅱ) (Indonesia)

(c) Higher Education Loan Fund Project(III) (Malaysia) |

Development strategic objective	Mid-term objective	Indicators at a program goal level	Mid-term sub-target	Overall goals/Project purposes and indicator examples	Methods/ Policies for setting indicators	Typical lessons learned	Example of project purpose (image of projects)	Reference projects
				(1) 1) Percentage of ex-participants whose organizations have developed high quality human resources (1) 2) Percentage of ex-participants whose organization has developed or improved technologies, products, or services (2) 1) Number of Japanese companies that have expanded their business in the country through direct or indirect involvement of ex-participants (2) 2) Change in pro-Japanese sentiment 2. Examples of Outcome (end-of-program, short to mid-term outcomes) indicators (Basic) (1) 1) (End-of-program) Degree completion rate (1) 2) (End-of-program) Percentage of ex-participants who have acquired various skills and knowledge (fields of study/research, methodological skills, social skills, Japanese language skills, etc.) (1) 3) (Short-term) Employment and return-to-work rate (1) 4) (Short-term) Percentage of ex-participants who use the skills and knowledge acquired through study abroad in their work (2) 1) (End-of-program) Percentage of ex-participants who have obtained connections with universities and companies, etc. (2) 2) (Short to mid-term) Percentage of ex-participants who have maintained the connections gained through study abroad (2) 3) (Mid-term) Percentage of alumni who have started or expanded joint activities with Japanese organizations (subsidized) (1) 1) Percentage of ex-participants who have expanded their managerial positions, promotion rates, and decision-making power	Japanese universities that have accepted participants (increase in joint research, internationalization of universities, improvement of educational capabilities, etc.) and changes in companies that have accepted them as interns (employment of foreign human resources, promotion of business with foreign countries, etc.) may be set as secondary outcomes. (*1) In this reference, project effects are organized into two levels: outcomes (project purpose) and impact (overall goal). In the case of scholarship programs, the project purpose corresponds to the outcome at the end of the program, and the impact level includes all short, mid, and long-term outcomes. Here, the short and mid-term outcome levels have been added for clarification. (*2) As for the long-term outcomes, since the time has passed since the study abroad ended, it is recommended that the "percentage of ex-participants whose study abroad experience contributed to each change" be included in the survey to verify the contribution of study abroad.	・ In the area of human resource development in the public sector, it is important to create an environment where the ex-participants can work in a satisfactory work environment. It will be difficult to improve the facilities, equipment, salaries, and other benefits in the public sector. However, it is important from the perspective of long-term national benefits to prevent brain drain and to maintain and improve their morale. For this reason, it may be effective to develop follow-up measures from the perspective of those who have completed the programs, such as offering career counseling services. (a)		

Appendix 4 Draft Project Design Matrix (PDM) for JICA Scholarship Programs

<div align="right">Version ●, Date</div>

Project Title	
Project Period	
Target group	
Implementing Agency	

Project summary	Indicators	Means of verification	Important assumption
Super goal ・1) Development issues in related fields are improved and resolved. ・2) Bilateral relations are fostered.	(After 10 years of after completion of study abroad) ・1-1) Indicators of improvement and resolution of development issues in target countries (SDGs, etc.) ・1-2) Percentage of ex-participants who have started or expanded projects, activities, or policies that contribute to development issues. ・2-1) Number of participants from target countries to Japan ・2-2) Changes in pro-Japanese sentiment	・1) Questionnaire for ex-participants ・2-1) Data from JICA, Japanese Embassy, JASSO, etc. ・2-2) Public opinion survey data on Japan, questionnaires to Diet members, etc.	
Overall goal ・1) Ex-participants are active in related fields ・2) Joint activities between ex-participants and Japanese organizations are increasing.	(Approximately 1-5 years after completion of study abroad) ・1-1) Employment rate and return to work rate ・1-2) Percentage of ex-participants who have used the skills and knowledge gained from their study abroad in their work ・2-1) Percentage of ex-participants who have maintained the connections they made while studying abroad ・2-2) Percentage of ex-participants who have started or expanded joint activities with Japanese organizations	・1-1) JICA monitoring data ・2) Questionnaire for ex-participants	The organization has a certain number of international students who have studied in Japan (assumption of 2).
Project purpose Human resources who have acquired relevant knowledge and skills are trained.	(At the end of the program) ・1) Degree acquisition rate ・2) Percentage of ex-participants who acquired various knowledge and skills (e.g., a field of study/research, methodological skills, social skills, Japanese language skills)	・1) JICA monitoring data ・2) Questionnaire for ex-participants	Ex-participants stay in related positions. Understanding from superiors There is an entity (alumni association, etc.) that maintains the connection.
Output Research and networking opportunities at Japanese universities are provided.	(At the end of the program) Number of participants accepted, number of ex-participants completed, number of participants in various programs, etc. as necessary	JICA monitoring data	
Activities (Individual actions related to the implementation of scholarship programs)	Inputs (Omitted)		

Note: In the PDM of technical cooperation projects, the project purpose is defined as the outcome that is expected to be achieved through the project implementation by the time the project is completed, so the outcomes of the scholarship programs that are organized as outcomes at the end of the program are described.

Appendix 5 Final Version of the Questionnaire (ABE Initiative)

１． **For ABE ex-participants**

Questionnaire for Ex-Participants of the ABE Initiative

About this questionnaire

This questionnaire is to evaluate the outcomes of the ABE Initiative so far and to obtain lessons for further improvement of the Initiative.

Participants' anonymity and private information will be protected. Please feel free to express your feelings and opinions. The results of the questionnaire will be included in the evaluation report to be published on the JICA website, and a preliminary result will be sent to those who have cooperated with this questionnaire around March 2021.

Preparation in advance
The survey will take approximately 30minutes. The session will not be disconnected due to a timeout, so your answers will be maintained unless you close your browser, but there is no function to save your answers on the web. Questions marked with "*" are required answers. If you would like to go back to the previous page and make corrections, please click the "Back" button to return to the previous page.

Thank you for taking the time to complete this questionnaire.

JICA Study Team

SECTION 1: Basic Information

1. Please write your name. If you do not wish to answer the question, please leave it blank.

2. Please write your contact email address. If you do not wish to answer the question, please leave it blank.

3. Please select your sex.
   1) Male
   2) Female

4. Please write your age.

5. What batch were you in?
   1) 1st batch (Arrived in 2014)
   2) 2nd batch (Arrived in 2015)
   3) 3rd batch (Arrived in 2016)
   4) 4th batch (Arrived in 2017)
   5) 5th batch (Arrived in 2018)

6. When did you finish the ABE Initiative program? (If you did a post-graduation internship, select the year you finished it)
   1) Within 2016
   2) Within 2017
   3) Within 2018
   4) Within 2019
   5) Within 2020

7. Please select your previous workplace/organization before participating in the ABE Initiative.
   1) Local company (Excluding a personally owned company)
   2) Japanese company in Japan
   3) Japanese company in home country/third country (including local branch or company of a Japanese corporation)
   4) Japanese branch of foreign (other than Japanese) companies
   5) Country office of Japanese governmental organization or administrative agency such as JICA and JETRO
   6) Foreign (other than Japanese) company in home country/third country
   7) Self-employed/freelance
   8) Own business and employ others
   9) Governmental Institution (Ministry, local government, public corporation, etc.)
   10) Educational/research institute (University, etc./ Not as a student)
   11) NGO
   12) International organization
   13) Student
   14) Unemployed
   15) Others

1.	**For ABE ex-participants**

8.   Please select your home country.
    1)   Algeria
    2)   Angola
    3)   Benin
    4)   Botswana
    5)   Burkina Faso
    6)   Burundi
    7)   Cameroon
    8)   Cape Verde
    9)   Central African Republic
    10)   Chad
    11)   Comoros
    12)   Côte d'Ivoire
    13)   Democratic Republic of the Congo
    14)   Djibouti
    15)   Egypt
    16)   Equatorial Guinea
    17)   Eritrea
    18)   Eswatini (Swaziland)
    19)   Ethiopia
    20)   Gabon
    21)   Gambia
    22)   Ghana
    23)   Guinea
    24)   Guinea-Bissau
    25)   Kenya
    26)   Lesotho
    27)   Liberia
    28)   Libya
    29)   Madagascar
    30)   Malawi
    31)   Mali
    32)   Mauritania
    33)   Mauritius
    34)   Morocco
    35)   Mozambique
    36)   Namibia
    37)   Niger
    38)   Nigeria
    39)   Republic of the Congo
    40)   Rwanda
    41)   Sao Tome and Principe
    42)   Senegal
    43)   Seychelles
    44)   Sierra Leone
    45)   Somalia
    46)   South Africa
    47)   South Sudan
    48)   Sudan
    49)   Tanzania
    50)   Togo
    51)   Tunisia
    52)   Uganda
    53)   Zambia
    54)   Zimbabwe

9.   Which country do you live in now?
    1)   Your home country
    2)   Japan
    3)   Others (Please specify the country name:)

SECTION 2: Your Experience in the ABE Initiative

10.   What university did you study at during the ABE Initiative program? Please select the first letter of the name of
       the university.

1.	**For ABE ex-participants**

1) A
2) C
3) D
4) E
5) F
6) G
7) H
8) I
9) J
10) K
11) M
12) N
13) O
14) R
15) S
16) T
17) U
18) W
19) Y

11. Please select the University where you studied in the ABE Initiative.
1) Akita University
2) Ashikaga University (Former Ashikaga Institute of Technology)
3) Chuo University
4) Doshisha University
5) Ehime University
6) Gunma University
7) Hiroshima University
8) Hokkaido University
9) Hosei University
10) International Christian University
11) International University of Japan
12) Japan Advanced Institute of Science and Technology
13) Kagawa University
14) Kanazawa University
15) Kansai University
16) Keio University
17) Kobe Institute of Computing | Graduate School of Information Technology
18) Kobe University
19) Kochi University
20) Kogakuin University
21) Kumamoto University
22) Kwansei Gakuin University
23) Kyoto Institute of Technology
24) Kyoto University
25) Kyushu Institute of Technology
26) Kyushu University
27) Meiji University
28) Mie University
29) Miyagi University
30) Nagaoka University of Technology
31) Nagoya University
32) Nagoya University of Commerce and Business
33) Nagasaki University
34) Nagoya Institute of Technology
35) Niigata University
36) Obihiro University of Agriculture and Veterinary Medicine
37) Okayama University
38) Osaka University
39) Reitaku University
40) Rikkyo University
41) Ritsumeikan Asia Pacific University
42) Ritsumeikan University
43) Ryukoku University
44) Saga University
45) Saitama University
46) Shibaura Institute of Technology

47) Shimane University
48) Sophia University
49) Tohoku University
50) Tokushima University
51) Tokyo Institute of Technology
52) Tokyo University of Agriculture
53) Tokyo University of Agriculture and Technology
54) Tokyo University of Information Sciences
55) Tokyo University of Marine Science and Technology
56) Tottori University
57) Toyo University
58) Toyohashi University of Technology
59) United Nations University
60) University of Fukui
61) University of Kitakyushu
62) University of Miyazaki
63) University of the Ryukyus
64) University of Tokyo
65) University of Tsukuba
66) Utsunomiya University
67) Waseda University
68) Yamagata University
69) Yamaguchi University
70) Yokohama City University
71) Yokohama National University

12. Please select the field you studied in the ABE Initiative.
1) Economics and Management
2) Engineering
3) ICT
4) Agriculture
5) Science
6) Politics and Public Policy
7) Medicine/Health
8) Others (   )

13. Did you undergo an internship during the ABE Initiative?
1) Yes, <u>both</u> a summer internship and a post-graduation internship
2) Yes, only a <u>summer</u> internship
3) Yes, only a <u>post-graduation</u> internship
4) No internship

14. How long was the <u>summer</u> internship? (If you had a summer internship more than once, please select the total duration of all summer internship experiences)
1) Less than a week
2) A week or more, less than 2 weeks
3) 2 weeks or more, less than a month
4) A month or more, less than 3 months
5) 3 months or more, less than 6 months
6) 6 months or more

15. How long was the <u>post-graduation</u> internship? (If you experienced a post-graduation internship at several companies, please select the total duration of all post-graduation internship experiences)
1) Less than a week
2) A week or more, less than 2 weeks
3) 2 weeks or more, less than a month
4) A month or more, less than 3 months
5) 3 months or more, less than 6 months
6) 6 months or more

16.

Knowledge and Skills	How would you rate your current level of the following knowledge and skills compared to the level when you applied to	Was the ABE Initiative useful in improving your knowledge/skills?	Which component of the ABE Initiative was <u>the most</u> useful in improving your knowledge/skills?

1. For ABE ex-participants

	the ABE Initiative program?		
Knowledge, skills, and technical expertise in your field of study	1) Very much improved 2) Improved 3) Little improved 4) Not improved at all	1) Very useful 2) Useful 3) Not useful 4) Not useful at all	1) Degree program at the university 2) Internship 3) JICA provided program other than degree program at the university and internship
Methodological skills (e.g. learning and working methodology, problem solving or project management capacities)	1) Very much improved 2) Improved 3) Little improved 4) Not improved at all	1) Very useful 2) Useful 3) Not useful 4) Not useful at all	1) Degree program at the university 2) Internship 3) JICA provided program other than degree program at the university and internship
Social skills (e.g. skills to work in team, intercultural skills)	1) Very much improved 2) Improved 3) Little improved 4) Not improved at all	1) Very useful 2) Useful 3) Not useful 4) Not useful at all	1) Degree program at the university 2) Internship 3) JICA provided program other than degree program at the university and internship
Japanese language skills	1) Very much improved 2) Improved 3) Little improved 4) Not improved at all	1) Very useful 2) Useful 3) Not useful 4) Not useful at all	1) Degree program at the university 2) Internship 3) JICA provided program other than degree program at the university and internship

17.

Connections/Networks	Did you gain the following connections/networks in the ABE Initiative?	Which component of the ABE Initiative was the most useful in gaining the connection/network?
Connection/network with Japanese academia (researchers, universities, research institutions, etc.)	Yes/No	1) Degree program at the university 2) Internship JICA provided program other than degree program at the university and internship
Connection/network with Japanese private companies	Yes/No	1) Degree program at the university 2) Internship 3) JICA provided program other than degree program at the university and internship
Connection/network with Japanese governmental organizations (Ministry, local government, public corporation etc.) /officials	Yes/No	1) Degree program at the university 2) Internship 3) JICA provided program other than degree program at the university and internship
Japanese/international friends including other students of the ABE Initiative	Yes/No	1) Degree program at the university 2) Internship 3) JICA provided program other than degree program at the university and internship
Connection/network with alumni association of JICA program and/or Kakehashi Africa	Yes/No	1) Degree program at the university 2) Internship 3) JICA provided program other than degree program at the university and internship

18.

Understanding about Japan	How much do you understand about the following topics?	Was the ABE Initiative useful in gaining the understanding?	Which component of the ABE Initiative was the most useful in gaining the understanding?
Understanding on	1) Very much	1) Very useful	1) Degree program at

Japanese corporate culture and business practices/management systems	2) Much 3) Not much 4) Not at all	2) Useful 3) Not useful 4) Not useful at all	the university 2) Internship 3) JICA provided program other than degree program at the university and internship
Work ethics in Japanese companies	1) Very much 2) Much 3) Not much 4) Not at all	1) Very useful 2) Useful 3) Not useful 4) Not useful at all	1) Degree program at the university 2) Internship 3) JICA provided program other than degree program at the university and internship
Understanding on Japanese development experience	1) Very much 2) Much 3) Not much 4) Not at all	1) Very useful 2) Useful 3) Not useful 4) Not useful at all	1) Degree program at the university 2) Internship 3) JICA provided program other than degree program at the university and internship

19. Please select your feelings about Japan both at the time of application to the ABE Initiative and currently.

	Very positive	Positive	Neutral	Negative	Very negative
At the time of application to the ABE Initiative					
Current					

SECTION 3: Your Career Development

20. Please select your current employment status.
    1) Employed (Full-time permanent)
    2) Employed (Full-time temporary)
    3) Employed (Part-time)
    4) Self-employed/freelance
    5) Own business(es) and employ others
    6) Student in Japan
    7) Student in home country/third country
    8) Unemployed
    9) Others

21. Please select your current workplace/organization.
    1) Local company
    2) Japanese company in Japan
    3) Japanese company in home country/third country (including local branch or company of a Japanese corporation)
    4) Japanese branch of foreign (other than Japanese) companies
    5) Country office of Japanese governmental organization or administrative agency such as JICA and JETRO
    6) Foreign (other than Japanese) company in home country/third country
    7) Governmental Institution (Ministry, local government, public corporation, etc.)
    8) Educational/research institute (University, etc./ Not as a student)
    9) NGO
    10) International organization
    11) Others

22. Please write the name of your current workplace/organization. If you do not wish to answer the question, please leave it blank.

23. Have you returned to your previous workplace/organization after completing the ABE Initiative program?
    1) Yes
    2) No

24. Did you get your current job through a connection/network related to the ABE Initiative program?
    1) Yes

1.	**For ABE ex-participants**

2)   No

25.   How long did it take to obtain the initial employment <u>after completing</u> the ABE Initiative program?
1)   Received a job offer during the ABE Initiative
2)   Within a month
3)   Within 3 months
4)   Within 6 months
5)   Within a year
6)   More than a year

26.   Is your current workplace/organization related to Japan?
1)   Yes, there are Japanese employees
2)   Yes, we are doing business with Japanese companies
3)   Yes, we have relationship with Japanese governmental institutions (including JICA)
4)   Yes, we have relationship with Japanese educational/research institutes
5)   No
6)   Others (   )

27.   Have you worked at a Japanese company <u>since completing</u> the ABE Initiative program?
1)   Yes
2)   No

28.   Is your current job related to Japan?
1)   Yes, there are Japanese employees
2)   Yes, we are doing business with Japanese companies
3)   Yes, we have relationship with Japanese governmental institutions (including JICA)
4)   Yes, we have relationship with Japanese educational/research institutes
5)   No
6)   Others (   )

29.   Have you worked at a Japanese company <u>since completing</u> the ABE Initiative program?
1)   Yes
2)   No

30.   Have you started up your own business <u>since completing</u> the ABE Initiative program?
1)   Yes
2)   No

31.   Please select <u>the most</u> significant reason for being unemployed.
1)   Difficult to find a job in the field of your expertise
2)   Did not learn sufficient knowledge and skills through the ABE Initiative
3)   Employers did not value the degree highly
4)   Health and/or family circumstances
5)   Others

32.   Did you have an inclination to work at a Japanese company <u>after completing</u> the ABE Initiative program?
1)   Yes
2)   No

33.   Have you searched for a job at a Japanese company <u>since completing</u> the ABE Initiative program?
1)   Yes
2)   No

34.   Please select <u>all</u> among the following items supported by JICA/JICE that helped you obtain a job at a Japanese company.
1)   Internship
2)   Debriefing sessions upon returning to your country
3)   Networking fair
4)   Monitoring of ex-participants after returning to home countries
5)   Employment consulting
6)   Field visit by Japanese companies
7)   Participation in other JICA projects (SDGs Business Supporting Surveys, etc.)
8)   Others
9)   None of the above applies

35.   Please select <u>all</u> among the following items that you think are bottlenecks to obtain a job at a Japanese company or the reason that you do not have an inclination to work at a Japanese company.

1.	**For ABE ex-participants**

    1) Low number of Japanese companies operating in Africa
    2) Low competitiveness of Japanese companies operating in Africa
    3) Lack of information about employment in Japanese companies
    4) Mismatch between your expertise and the expertise needed by Japanese companies
    5) Mismatch with desired position and offered position
    6) Mismatch with desired salary and offered salary
    7) Cultural and/or language barrier
    8) Others

36. Is your current job related to what you studied in the ABE Initiative?
    1) Yes, very much
    2) Yes, to some extent
    3) No

37. Please select all the reasons among the following for not working in the field related to your study in the ABE Initiative program.
    1) Difficult to find a job in the field
    2) Did not learn relevant knowledge and skills
    3) Employers did not value the degree highly
    4) Earning potential in the field was too low
    5) Personnel changes (assignment transfer) within the organization
    6) Changed careers
    7) Others

38. Do you apply what you gained through the ABE Initiative in your current job? Select from "Utilize on a daily basis/Utilize whenever needed", "Sometimes", "Slightly", or "Not at all".

	Items	Utilize on a daily basis/whenever needed	Sometimes	Slightly	Not at all
1)	Knowledge, skills, and technical expertise in your field of study	(1)	(2)	(3)	(4)
2)	Methodological skills (e.g. learning and working methodology, problem solving or project management capacities)	(1)	(2)	(3)	(4)
3)	Social skills (e.g. skills to work in team, intercultural skills)	(1)	(2)	(3)	(4)
4)	Japanese language skills	(1)	(2)	(3)	(4)
5)	Connection/network with Japanese academia (researchers, universities, research institutions, etc.)	(1)	(2)	(3)	(4)
6)	Connection/network with Japanese private companies	(1)	(2)	(3)	(4)
7)	Connection/network with Japanese governmental organizations (Ministry, local government, public corporation etc.) /officials	(1)	(2)	(3)	(4)
8)	Connection/network with Japanese/international friends including other students of the ABE Initiative	(1)	(2)	(3)	(4)
9)	Connection/network with alumni association of JICA program and/or Kakehashi Africa	(1)	(2)	(3)	(4)
10)	Understanding on Japanese corporate culture and business practices/management systems	(1)	(2)	(3)	(4)
11)	Work ethics	(1)	(2)	(3)	(4)
12)	Understanding on Japanese development experience	(1)	(2)	(3)	(4)

39. Please select all the reasons among the following for not or only slightly applying what you gained through the ABE Initiative in your current job.

1) Unable to get my boss's understanding
2) Resources (staff, budget, equipment, etc.) needed to apply are unavailable
3) Unable to apply them in my current position/job
4) Others

40. Please specify the reason if you chose "Others" in the question above.

41. Are you currently in a supervisory/management position in your workplace/organization?
1) Yes
2) No

42. How many employees do you supervise?
1) 1-9 employees
2) 10-19 employees
3) 20-49 employees
4) 50-99 employees
5) More than 100 employers

43. How would you compare your current position in your workplace/organization with the position you held before participating in the ABE Initiative?
1) Lower
2) About the same
3) Higher
4) Much higher

44. Please select the level of decision-making power you currently hold in your workplace/organization.
1) Decision-making power (on operational issues such as deadlines or managing tasks/personnel/budgetary issues, etc.) in the project(s)/program(s) I'm in charge
2) Decision-making power (on operational issues such as deadlines or managing tasks/personnel/budgetary issues, etc.) in the team/unit I belong to
3) Decision-making power (on operational issues such as deadlines or managing tasks/personnel/budgetary issues, etc.) in the division/department I belong to
4) Decision-making power (on operational issues such as deadlines or managing tasks/personnel/budgetary issues, etc.) in the entire organization I belong to
5) No decision-making power at any given level in my organization

45. Have you made any of the following contributions to your current workplace/organization after completing the ABE Initiative program? Please select all that apply.
1) I improved management systems and/or procedures
2) I applied new methodologies in carrying out my work
3) I mentored my colleagues
4) I improved teaching methods for my students
5) I contributed to the development/improvement of technology, products, and services of my organization
6) I contributed to increased productivity in my organization
7) Others (   )
8) None of the above applies

46. Were things that you gained through the ABE Initiative useful in the contribution you made to your workplace/organization?
1) Yes
2) No

SECTION 4: Continuation of connection gained through the ABE Initiative

47. Please select all of the connections you currently have.
1) Connection with Japanese academia (researchers, universities, research institutions, etc.)
2) Connection with Japanese private companies (including employment by a Japanese company)
3) Connection with Japanese governmental organizations (Ministry, local government, public corporation etc.) /officials
4) Connection with Japanese/international friends including other participants of the ABE Initiative
5) Connection with alumni association of JICA program and/or Kakehashi Africa
6) None
7) Others (   )

48. When was the last time you contacted the following person(s)/organization(s)?

	Within a month	Within 3 months	Within 6 months	Within a year	More than a year ago

Japanese academia (researchers, universities, research institutions, etc.)				
Japanese private companies				
Japanese governmental organizations (Ministry, local government, public corporation etc.) /officials				
Japanese/international friends including other students of the ABE Initiative				
Alumni association of JICA program and/or Kakehashi Africa				

49. Please select <u>all</u> the reasons for the discontinuation of the relationship.
    1) Too busy with my current job
    2) There is no benefit to be gained from the connection
    3) There is no good way/opportunity to keep contact
    4) Do not know their contact information
    5) Others (   )

50. <u>After completing</u> the ABE Initiative program, have you had any involvement with Japanese people/organizations/companies (including government organizations, JICA, Universities, private companies) in starting/expanding any business, project, joint research, etc. with African organizations or in improving any existing activities of such kind?
    <u>* Involvement here includes relationships such as employment, business, joint research, JICA project, provision of local information, introduction of local resource persons, etc.</u>
    1) Yes
    2) No

51. Please describe your involvement with the Japanese people/organizations/companies for each case. If you have more than one case, please fill in Case 2 and Case 3. If there is no more than one case, please leave them blank.

Case 1	
Case 2	
Case 3	

52. Please select <u>all</u> among the following items provided by JICA/JICE that helped you collaborate with Japanese people/organizations/companies.
    1) Internship
    2) Debriefing sessions upon returning to your country
    3) Networking fair
    4) Field visit by Japanese companies
    5) Other JICA schemes (SDGs Business Supporting Surveys, etc.)
    6) Others
    7) None of the above applies

53. Please select <u>all</u> among the following items that you think are bottlenecks to collaborate with Japanese people/organizations/companies.
    1) Low number of Japanese companies operating in Africa
    2) Low competitiveness of Japanese companies operating in Africa
    3) Lack of information about Japanese people/organizations/companies that seek for collaboration in Africa
    4) Lack of necessary resources (finance, equipment, etc.) for collaboration
    5) Mismatch between your expertise and the expertise needed by Japanese people/organizations/companies
    6) Cultural and/or language barrier
    7) Others

54. <u>After completing</u> the ABE Initiative program, have you/your organization initiated any business, project, joint research, etc. with other ABE alumni in your country or other countries?
    1) Yes
    2) No

55. Please select <u>all</u> the items you/your organization initiated with other ABE alumni.
    1) Business
    2) Joint research
    3) Development project
    4) Others (   )

1.	**For ABE ex-participants**

56. <u>After completing</u> the ABE Initiative program, have you/your organization initiated any project/program, policy, etc. relevant to the development issues of your home country?
    1) Yes
    2) No

57. Please describe the contents in detail for each project/program, policy, etc. relevant to the development issues of your home country that you/your organization initiated. If you have more than one case, please fill in Case 2 and Case 3. If there is no more than one case, please leave them blank.

Case 1	
Case 2	
Case 3	

58. <u>After completing</u> the ABE Initiative program, have you/your organization developed systems and policies that would support the business of Japanese companies?
    1) Yes
    2) No

59. Please describe the contents of the systems and policies that you/your organization developed and <u>how</u> they would support the business of Japanese companies. If you have more than one case, please fill in Case 2 and Case 3. If there is no more than one case, please leave them blank.

Case 1	
Case 2	
Case 3	

60. If you have any comments about the ABE Initiative, please feel free to share them.

<u>SECTION 5: Availability for an interview</u>

For those who live in Kenya or Rwanda

After receiving responses to this questionnaire, we plan to visit Nairobi, Kenia and Kigali, Rwanda in February–March 2021 to meet in person with former ABE participants and their organizations (either in charge of planning or in charge of business with Japan) to get more detailed feedback.

* Please note that depending on the prevalence of COVID-19, we may have to give up the trip and switch to remote interviews from Japan.

Each interview will take about an hour and will mainly involve the following.
· Interviews with former participants: a more detailed explanation of the responses to this questionnaire
· Interviews with former participants' organizations: attitudes toward business promotion with Japan, the current state of relations with Japan, and the role of former ABE participants in those relations

If you could help us with these interviews, please indicate below how you would like to be contacted (email, phone, WhatsApp, etc.).

Are you available for an interview?
1) Yes
2) No

Please provide us your contact information for setting up an interview.

This is the end of the questionnaire. Thank you for your cooperation.

2.	**For the non-ABE participants (comparison group)**

Questionnaire for Previous Applicants of the ABE Initiative

About this questionnaire

This questionnaire is to evaluate outcomes of the ABE Initiative so far and to obtain lessons for further improvement of the Initiative.

All information that is collected in this questionnaire will be treated confidentially, and it will be used only for evaluating outcomes of the ABE Initiative and for its improvement. Please feel free to express your feelings and opinions. The results of the questionnaire will be included in the evaluation report to be published on the JICA website.

Preparation in advance
The survey will take approximately 30 minutes. The session will not be disconnected due to a timeout, so your answers will be maintained unless you close your browser, but there is no function to save your answers on the web. Questions marked with "*" are required answers. If you would like to go back to the previous page and make corrections, please click the "Back" button to return to the previous page.

Thank you for taking time to complete this questionnaire.

JICA Study Team

SECTION 1: Basic Information

1. Please write your name. If you do not wish to answer the question, please leave it blank.

2. Please write your contact email address. If you do not wish to answer the question, please leave it blank.

3. Please select your sex.
   1) Male
   2) Female

4. Please write your age.

5. Which batch of the ABE Initiative did you apply to? If you applied to more than once, please select the batch you applied to the first time (For all subsequent questions asking about "after applying to the ABE Initiative," please answer with information from the time of your <u>first</u> application).
   1) 1st batch (In 2013)
   2) 2nd batch (In 2014)
   3) 3rd batch (In 2015)
   4) 4th batch (In 2016)
   5) 5th batch (In 2017)

6. Please select your workplace/organization <u>at the time of applying to</u> the ABE Initiative program.
   1) Local company (Excluding a personally owned company)
   2) Japanese company in Japan
   3) Japanese company in home country/third country (including local branch or company of a Japanese corporation)
   4) Japanese branch of foreign (other than Japanese) companies
   5) Country office of Japanese governmental organization or administrative agency such as JICA and JETRO
   6) Foreign (other than Japanese) company in home country/third country
   7) Self-employed/freelance
   8) Own business and employ others
   9) Governmental Institution (Ministry, local government, public corporation etc.)
   10) Educational/research institute (University, etc./ Not as a student)
   11) NGO
   12) International organization
   13) Student
   14) Unemployed
   15) Others

7. Please select your home country.
   1) Algeria
   2) Angola
   3) Benin
   4) Botswana
   5) Burkina Faso
   6) Burundi
   7) Cameroon

2.	**For the non-ABE participants (comparison group)**

8) Cape Verde
9) Central African Republic
10) Chad
11) Comoros
12) Côte d'Ivoire
13) Democratic Republic of the Congo
14) Djibouti
15) Egypt
16) Equatorial Guinea
17) Eritrea
18) Eswatini (Swaziland)
19) Ethiopia
20) Gabon
21) Gambia
22) Ghana
23) Guinea
24) Guinea-Bissau
25) Kenya
26) Lesotho
27) Liberia
28) Libya
29) Madagascar
30) Malawi
31) Mali
32) Mauritania
33) Mauritius
34) Morocco
35) Mozambique
36) Namibia
37) Niger
38) Nigeria
39) Republic of the Congo
40) Rwanda
41) Sao Tome and Principe
42) Senegal
43) Seychelles
44) Sierra Leone
45) Somalia
46) South Africa
47) South Sudan
48) Sudan
49) Tanzania
50) Togo
51) Tunisia
52) Uganda
53) Zambia
54) Zimbabwe

8. Which country do you live in now?
1) Your home country
2) Japan
3) Others (Please specify the country name:)

<u>SECTION 2: Academic Development</u>

9. Please select your highest level of education.
1) Bachelor's Degree
2) Master's Degree
3) Ph.D.
4) Other (   )

10. Please select the field you studied in pursuit of your highest level of education.
1) Economics and Management
2) Engineering
3) ICT
4) Agriculture

2．For the non-ABE participants (comparison group)

    5)   Science
    6)   Politics and Public Policy
    7)   Medicine/Health
    8)   Others (   )

11.   Did you pursue your highest level of education in your home country or abroad?
    1)   In my home country
    2)   Abroad

12.   In which country did you pursue your highest level of education?

13.   Did you obtain your highest level of degree <u>after applying to</u> the ABE Initiative?
    1)   Yes
    2)   No

14.   Did you receive any scholarship(s) while pursuing your highest level of education?
    1)   Yes
    2)   No

15.   Please write the name of the scholarship and the sponsoring organization/country.

16.

Knowledge and Skills	How would you rate your current level of the following knowledge and skills compared to the level when you applied to the ABE Initiative program?
Knowledge, skills, and technical expertise in your field of study	5) Very much improved 6) Improved 7) Little improved 8) Not improved at all
Methodological skills (e.g. learning and working methodology, problem solving or project management capacities)	1) Very much improved 2) Improved 3) Little improved 4) Not improved at all
Social skills (e.g. skills to work in team, intercultural skills)	5) Very much improved 6) Improved 7) Little improved 8) Not improved at all
Japanese language skills	5) Very much improved 6) Improved 7) Little improved 8) Not improved at all

17.

Understanding about Japan	How much do you understand about the following topics?
Understanding on Japanese corporate culture and business practices/management systems	5) Very much 6) Much 7) Not much 8) Not at all
Work ethics in Japanese companies	5) Very much 6) Much 7) Not much 8) Not at all
Understanding on Japanese development experience	5) Very much 6) Much 7) Not much 8) Not at all

18.   Please select your feelings about Japan both at the time of application to the ABE Initiative and currently.

	Very positive	Positive	Neutral	Negative	Very negative
At the time of application to the ABE Initiative					
Current					

SECTION 3: Career Development

2.	**For the non-ABE participants (comparison group)**

19. Please select your current employment status.
    1) Employed (Full-time permanent)
    2) Employed (Full-time temporary)
    3) Employed (Part-time)
    4) Self-employed/freelance
    5) Own business(es) and employ others
    6) Student in Japan
    7) Student in home country/third country
    8) Unemployed
    9) Others

20. Have you changed or quit your workplace/organization <u>since you applied to</u> the ABE Initiative program?
    1) Yes
    2) No

21. How long did it take to obtain employment again after you changed/quit your job?
    1) Within a month
    2) Within 3 months
    3) Within 6 months
    4) Within a year
    5) More than a year

22. Please select your current workplace/organization.
    1) Local company
    2) Japanese company in Japan
    3) Japanese company in home country/third country (including local branch or company of a Japanese corporation)
    4) Japanese branch of foreign (other than Japanese) companies
    5) Country office of Japanese governmental organization or administrative agency such as JICA and JETRO
    6) Foreign (other than Japanese) company in home country/third country
    7) Governmental Institution (Ministry, local government, public corporation, etc.)
    8) Educational/research institute (University, etc./ Not as a student)
    9) NGO
    10) International organization
    11) Others

23. Please write the name of your current workplace/organization. If you do not wish to answer the question, please leave it blank.

24. Is your current workplace/organization related to Japan?
    1) Yes, there are Japanese employees
    2) Yes, we are doing business with Japanese companies
    3) Yes, we have relationship with Japanese governmental institutions (including JICA)
    4) Yes, we have relationship with Japanese educational/research institutes
    5) No
    6) Others (   )

25. Is your current job related to Japan?
    1) Yes, there are Japanese employees
    2) Yes, we are doing business with Japanese companies
    3) Yes, we have relationship with Japanese governmental institutions (including JICA)
    4) Yes, we have relationship with Japanese educational/research institutes
    5) No
    6) Others (   )

26. Have you worked at a Japanese company <u>since applying to</u> the ABE Initiative program?
    1) Yes
    2) No

27. Have you started up your own business <u>since applying to</u> the ABE Initiative program?
    1) Yes
    2) No

28. Please select <u>the most</u> significant reason for being unemployed.
    1) Difficult to find a job in the field of your expertise
    2) Did not learn sufficient knowledge and skills at university

2.	**For the non-ABE participants (comparison group)**

3) Employers did not value the degree highly
4) Health and/or family circumstances
5) Others

29. Did you have an inclination to work at a Japanese company after completing your studies?
1) Yes
2) No

30. Have you searched for a job at a Japanese company since completing your studies?
1) Yes
2) No

31. Please select <u>all</u> among the following items that you think are bottlenecks to obtain a job at a Japanese company or the reason that you do not have an inclination to work at a Japanese company.
1) Low number of Japanese companies operating in Africa
2) Low competitiveness of Japanese companies operating in Africa
3) Lack of information about employment in Japanese companies
4) Mismatch between your expertise and the expertise needed by Japanese companies
5) Mismatch with desired position and offered position
6) Mismatch with desired salary and offered salary
7) Cultural and/or language barrier
8) Others

32. Is your current job related to what you studied in your highest level of education?
1) Yes, very much
2) Yes, to some extent
3) No

33. Please select <u>all</u> the reasons among the following for not working in the field related to your study.
1) Difficult to find a job in the field
2) Did not learn relevant knowledge and skills
3) Employers did not value the degree highly
4) Earning potential in the field was too low
5) Personnel changes (assignment transfer) within the organization
6) Changed careers
7) Others

34. Are you currently in a supervisory/management position in your workplace/ organization?
1) Yes
2) No

35. How many employees do you supervise?
1) 1-9 employees
2) 10-19 employees
3) 20-49 employees
4) 50-99 employees
5) More than 100 employers

36. How would you compare your current position in your workplace/organization with the position you held when you applied to the ABE Initiative program?
1) Lower
2) About the same
3) Higher
4) Much higher

37. Please select the level of decision-making power you currently hold in your workplace/organization.
1) Decision-making power (on operational issues such as deadlines or managing tasks/personnel/budgetary issues, etc.) in the project(s)/program(s) I'm in charge
2) Decision-making power (on operational issues such as deadlines or managing tasks/personnel/budgetary issues, etc.) in the team/unit I belong to
3) Decision-making power (on operational issues such as deadlines or managing tasks/personnel/budgetary issues, etc.) in the division/department I belong to
4) Decision-making power (on operational issues such as deadlines or managing tasks/personnel/budgetary issues, etc.) in the entire organization I belong to
5) No decision-making power at any given level in my organization

38. Have you made any of the following contributions to your current workplace/organization <u>since applying to the</u>

2．**For the non-ABE participants (comparison group)**

ABE Initiative? Please select <u>all</u> that apply.
1) I improved management systems and/or procedures
2) I applied new methodologies in carrying out my work
3) I mentored my colleagues
4) I improved teaching methods for my students
5) I contributed to the development/improvement of technology, products, and services of my organization
6) I contributed to increased productivity in my organization
7) Others (   )
8) None of the above applies

39. Please select <u>all</u> of the connections you currently have.
1) Connection with Japanese academia (researchers, universities, research institutions, etc.)
2) Connection with Japanese private companies (including the case employed by a Japanese company)
3) Connection with Japanese governmental organizations (Ministry, local government, public corporation etc.) /officials
4) Connection with Japanese/international friends
5) None
6) Others (   )

40. When was the last time you contacted the following person(s)/organization(s)?

	Within a month	Within 3 months	Within 6 months	Within a year	More than a year ago
Japanese academia (researchers, universities, research institutions, etc.)					
Japanese private companies					
Japanese governmental organizations (Ministry, local government, public corporation etc.) /officials					
Japanese/international friends					

41. <u>After applying to </u>the ABE Initiative program, have you had any involvement with Japanese people/organizations/companies (including government organizations, JICA, Universities, private companies) in starting/expanding any business, project, joint research, etc. with African organizations or in improving any existing activities of such kind?
<u>* Involvement here includes relationships such as employment, business, joint research, JICA project, provision of local information, introduction of local resource persons, etc.</u>
1) Yes
2) No

42. Please describe your involvement with Japanese people/organizations/companies for each case. If you have more than one case, please fill in Case 2 and Case 3. If there is no more than one case, please leave them blank.

Case 1	
Case 2	
Case 3	

43. <u>After applying to </u>the ABE Initiative, have you/your organization initiated any project/program, policy, etc. relevant to the development issues of your home country?
1) Yes
2) No

44. Please describe the contents in detail for each of the project/program, policy, etc. relevant to the development issues of your home country that you/your organization initiated. If you have more than one case, please fill in Case 2 and Case 3. If there is no more than one case, please leave them blank.

Case 1	
Case 2	
Case 3	

<u>SECTION 4: Availability for an interview</u>

For those who live in Kenya or Rwanda

After receiving responses to this questionnaire, we plan to visit Nairobi, Kenia and Kigali, Rwanda in February–March 2021 to meet in person with previous applicants of the ABE Initiative.
* Please note that depending on the prevalence of COVID-19, we may have to give up the trip and switch to remote interviews from Japan.

2.	**For the non-ABE participants (comparison group)**

Interview will take about an hour and will mainly ask a more detailed explanation of the responses to this questionnaire.

If you could help us with an interview, please indicate below how you would like to be contacted (email, phone, WhatsApp, etc.).

Are you available for an interview?
1) Yes
2) No

Please provide us your contact information for setting up an interview.

This is the end of the questionnaire. Thank you for your cooperation.

３．	**For registered Japanese companies of the ABE Initiative**

Questionnaire for registered Japanese companies of the ABE Initiative

About this questionnaire

We would like to express our sincere gratitude to your continued support for our work in the Japan International Cooperation Agency (JICA). JICA has been conducting comprehensive and cross-sectional evaluations and analyses of its development cooperation projects in order to ensure their effectiveness. This time, JICA is conducting a study on the scholarship program for young leaders who can promote the development and solution of issues in their home countries. In addition to the follow-up survey of the participants who have returned to their home countries and the collection of case studies of their achievements, JICA is conducting a study to examine and analyze the evaluation methods to analyze the impact of the program from various perspectives.

As a part of the above survey activities, we would like to ask your company, which is cooperating in accepting participants of ABE Initiative, for your opinion by filling out this web-based questionnaire.

The results of the questionnaire will be used in the thematic evaluation report to be published on the JICA website and will not be used for any other purpose. Unless you permit us to use the data for other purposes, we will use the data in a way that does not identify your company or the name of the respondent, and we will handle the data carefully.

Preparation in advance

The survey will take approximately 20 minutes. The session will not be disconnected due to a timeout, so your answers will be maintained unless you close your browser, but there is no function to save your answers on the web. If necessary, please prepare your answers in advance by checking the PDF file of the questionnaire sent to you as an email attachment. If you would like to go back to the previous page and make corrections, please click the "Back" button to return to the previous page.

Section 1: Basic Information

1. Please enter your company name and the name of the department in charge of accepting ABE Initiative interns.

2. Please select the number of employees in your company.
   1) 1～9 employees
   2) 10～19 employees
   3) 20～49 employees
   4) 50～99 employees
   5) 100～299 employees
   6) 300～999 employees
   7) More than 1000 employees

3. Please select your company's sector.
   1) Manufacturing
   2) Wholesale and retail trade
   3) Information and communication industry
   4) Service industry
   5) Academic research, professional and technical services
   6) Construction
   7) Agriculture and forestry
   8) Electricity, gas, heat supply, and water supply
   9) Real estate and goods leasing
   10) Transportation and postal services
   11) Living-related services and entertainment
   12) Others (Please specify:)

4. Does your company (including group companies) currently have any foreign employees (including part-time employees)?
   1) Yes
   2) No(→Please go to Section 2)

5. Please select the current number of foreign employees (including part-time employees) in your company (including group companies).
   1) 1～5 employees
   2) 5～19 employees
   3) 20～49 employees
   4) 50～99 employees

3.	For registered Japanese companies of the ABE Initiative

5) 100〜299 employees
6) More than 300 employees
7) I do not know.

6. Do you have any African national employees (including group companies and part-time employees) among the foreign national employees who you answered above? In this survey, Africa is defined as the following countries: Algeria, Angola, Uganda, Egypt, Eswatini (Swaziland), Ethiopia, Eritrea, Ghana, Cape Verde, Gabon, Cameroon, Gambia, Guinea, Guinea-Bissau, Kenya, Cote d'Ivoire, Comoros, Republic of Congo, and the Congo Democratic Republic, Sao Tome and Principe, Zambia, Sierra Leone, Djibouti, Zimbabwe, Sudan, Equatorial Guinea, Seychelles, Senegal, Somalia, Tanzania, Chad, Central Africa, Tunisia, Togo, Nigeria, Namibia, Niger, Burkina Faso, Burundi, Benin, Botswana, Madagascar, Malawi, Mali, South Africa, South Sudan, Mauritius, Mauritania, Mozambique, Morocco, Libya, Liberia, Rwanda, Lesotho (in Japanese alphabetical order of country name).
1) Yes
2) No (→Please go to Section 2)
3) I do not know. (→Please go to Section 2)

7. Please select the number of employees (including part-time employees) of African nationality in your company (including group companies) at present.
1) 1〜5 employees
2) 5〜19 employees
3) 20〜49 employees
4) 50〜99 employees
5) 100〜299 employees
6) More than 300 employees
7) I do not know.

8. Do you have any current employees of African nationality who are from the ABE Initiative (including group companies and part-time employees)?
1) Yes
2) No (→Please go to Section 2)
3) I do not know. (→Please go to Section 2)

9. Please enter the current number of employees from the ABE Initiative. (If you do not know, please enter 0)

10. Do you have any of the ABE Initiative employees listed above who have interned at your company before joining?
1) Yes
2) No (→Please go to Section 2)
3) I do not know. (→Please go to Section 2)

11. Please enter the number of employees from ABE Initiative who have interned at your company before joining the company. (If you do not know, please enter 0)

Section 2: Status of Business Expansion Overseas before Registration for the ABE Initiative

12. Please select the year in which your company became a registered company of the ABE Initiative (from FY2020 onwards, it was changed to "Registered Company of JICA Internship Program for JICA Scholarship Programs").
1) FY 2014
2) FY 2015
3) FY 2016
4) FY 2017
5) FY 2018
6) FY 2019
7) FY 2020
8) I do not know.

13. Did you already have an operation overseas before you became a registered company of the ABE Initiative?
1) Yes, we had expanded into the region including Africa. (→Please go to Question 15)
2) Yes, we had expanded outside of Africa. (→Please go to Question 15)
3) No

14. Please tell us the status of your consideration of business overseas before registering for the ABE Initiative.
1) Specific consideration of overseas expansion.
2) Had not yet considered overseas expansion in detail, but was interested in it
3) Had no interest in expanding overseas.

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4) I do not know.

15. At the time of registration for the ABE Initiative, did your company (including group companies) have any foreign employees (including part-time employees)?
    1) Yes
    2) No （→Please go to Section 3)
    3) I do not know （→Please go to Section 3)

16. Please select the number of foreign employees (including part-time employees) in your company (including group companies) at the time of registration for the ABE Initiative.
    1) 1〜5 employees
    2) 5〜19 employees
    3) 20〜49 employees
    4) 50〜99 employees
    5) 100〜299 employees
    6) More than 300 employees
    7) I do not know

17. Did you have any African national employees (including group companies and part-time employees) among your foreign employees at the time of registration for the ABE Initiative? The survey defines Africa as the following countries:
    Algeria, Angola, Uganda, Egypt, Eswatini (Swaziland), Ethiopia, Eritrea, Ghana, Cape Verde, Gabon, Cameroon, Gambia, Guinea, Guinea-Bissau, Kenya, Cote d'Ivoire, Comoros, Republic of Congo, and the Congo Democratic Republic, Sao Tome and Principe, Zambia, Sierra Leone, Djibouti, Zimbabwe, Sudan, Equatorial Guinea, Seychelles, Senegal, Somalia, Tanzania, Chad, Central Africa, Tunisia, Togo, Nigeria, Namibia, Niger, Burkina Faso, Burundi, Benin, Botswana, Madagascar, Malawi, Mali, South Africa, South Sudan, Mauritius, Mauritania, Mozambique, Morocco, Libya, Liberia, Rwanda, Lesotho (in Japanese alphabetical order of country name).
    1) Yes
    2) No （→Please go to Section 3)
    3) I do not know （→Please go to Section 3)

18. Please select the number of employees of African nationality (including part-time employees) in your company (including group companies) at the time of registration for the ABE Initiative.
    1) 1〜5 employees
    2) 5〜19 employees
    3) 20〜49 employees
    4) 50〜99 employees
    5) 100〜299 employees
    6) More than 300 employees
    7) I do not know.

<u>Section 3: Experience of Hosting ABE Initiative Interns</u>

19. Please select all reasons for your interest in accepting ABE Initiative participants as interns.
    1) To get ideas for developing new products and services for Africa
    2) To get ideas for expanding an existing business in Africa
    3) To build a network with African personnel to be hired in the future
    4) To accept interns recommended by the company, its local subsidiaries, or partner companies
    5) To find business partners in Africa
    6) To establish connections with governmental organizations in Africa
    7) To obtain information on systems, policies, business practices, etc. related to African business
    8) To improve the company's overseas awareness and understanding of diversity
    9) To diversify internal human resources
    10) To lower the psychological barrier to entering the African market
    11) To be a part of CSR projects
    12) Others(   )

The ABE Initiative offers two internships: a summer internship during the implementation of the program and a post-graduation internship at the end of the program. Below we will ask about each internship.

20. Have you ever accepted ABE Initiative participants for <u>summer</u> internships?
    1) Yes
    2) No （→Please go to Question 24)

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21. Please enter the number of times you have accepted <u>summer</u> internships in the past.

22. Please enter the number of people you have accepted for the <u>summer</u> internship so far.

23. Please let us know the average length of one summer internship.
    1)   Less than 1 week
    2)   More than 1 week but less than 2 weeks
    3)   More than 2 weeks but less than 1 month
    4)   1 month to less than 2 months
    5)   More than 2 months

24. Do you have any experience in accepting ABE Initiative participants upon post-graduation internship?
    1)   Yes
    2)   No (→If you have only hosted a summer internship, go to Section 4; if you have hosted neither a summer internship nor post-graduation internship, go to Question 28.)

25. Please enter the number of times you have accepted internships upon <u>post-graduation</u> so far.

26. Please enter the number of people you have accepted for <u>post-graduation</u> internship so far.

27. Please let us know the average length of one post-graduation internship. (→<u>After your answer, please go to Section 4</u>)
    1)   Less than one week
    2)   1 week to less than 1 month
    3)   1 month to less than 3 months
    4)   3 months to less than 6 months
    5)   6 months to less than 1 year
    6)   More than 1 year

28. Please select all reasons why you have not yet accepted interns. (→After your answer, please go to Question 38.)
    1)   Difficulty in matching interns' expertise, research fields, and skills with your business
    2)   Difficulty in matching due to a mismatch between the intern's country of origin and the company's country of (planned) business development
    3)   Difficulty in matching due to a mismatch between the intern's attributes (private-sector professionals, public-sector professionals, and education professionals) and the company's needs
    4)   Difficulties in matching due to the timing of internship acceptance
    5)   Difficulties in matching interns based on their personalities and characteristics
    6)   Lack of preparation for accepting interns (clarification of objectives, acceptance and training system, etc.)
    7)   Others (   )

<u>Section 4: Changes after Accepting Interns</u>

29. Please select all of the following items that you were able to gain from accepting interns.
    1)   Ideas for developing new products and services for Africa (→Please go to Question 31)
    2)   Ideas for expanding an existing business in Africa (→Please go to Question 31)
    3)   Human network with African human resources that will lead to employment (→Please go to Question 31)
    4)   Enhancement of knowledge and skills of African human resources who are already employed (→Please go to Question 31)
    5)   Human network with business partners in Africa (→Please go to Question 31)
    6)   Networking with African governmental organizations, etc. (→Please go to Question 31)
    7)   Information on institutions, policies, and business practices in Africa that will contribute to the promotion of your business (→Please go to Question 31)
    8)   Increasing the company's overseas awareness and understanding of diversity (→Please go to Question 31)
    9)   Diversification of internal human resources (→Please go to Question 31)
    10)   Lowering the psychological barrier to entry into Africa (→Please go to Question 31)
    11)   Enhancement of CSR projects (→Please go to Question 31)
    12)   Nothing in particular was gained (→Please go to Question 30)
    13)   Others (Please specify:)(→Please go to Question 31)

30. Please select all possible reasons why you did not gain anything from accepting interns.
    1)   Mismatch between interns' expertise, research fields, and skills and the company's business

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2) Lack of specialized knowledge and skills of interns
3) Mismatch between the country of origin of the intern and the country where the company plans to develop its business
4) Mismatch between the intern's attributes (private-sector professionals, public-sector professionals, and education professionals) and the company's needs
5) Difficulty in linguistically communicating with interns
6) Lack of understanding of Japanese business practices among interns
7) Lack of network of interns in the region
8) Personality and character of interns
9) Lack of preparation to accept interns (clarification of objectives, acceptance and training system, etc.)
10) Others (   )

31. Please select all items that apply to your current relationship with ABE interns after the internship.
1) I used to employ them as employees in Japan. (→Please go to Question 33)
2) I currently employ them as employees in Japan. (→Please go to Question 33)
3) I am planning to employ them as employees in Japan. (→Please go to Question 33)
4) I used to employ them as local employees. (→Please go to Question 33)
5) I currently employ them as local employees. (→Please go to Question 33)
6) I am planning to employ them as local employees. (→Please go to Question 33)
7) I used to employ them as local employees and continued to do so. (→Please go to Question 33)
8) I continue to employ them because they were local employees. (→Please go to Question 33)
9) I was/am in contact with them as local information providers. (→Please go to Question 32)
10) I was/am in contact with them as local business partners. (→Please go to Question 32)
11) I have contacted them as local customers. (→Please go to Question 32)
12) I have no contact with them after the internship. (→Please go to Question 34)
13) Others (   )

32. Please tell us when was the last time you made contact about each of the following items.

	Within 1 month	Within 3 months	Within 6 months	Within 1 year	More than 1 year ago
I was/am contacting them as local information providers.					
I was/am in contact with them as local business partners.					
I was/am contacting them as local customers.					

33. Please select all items that led to the hiring of ABE interns.
1) High level of professional knowledge and skills useful for the job
2) Language skills
3) Communication skills
4) Understanding of Japanese corporate culture and business practices
5) Favorable impression of Japan
6) Extensive personal network useful for business
7) Abundance of local information on Africa useful for business
8) Others (   )

34. Please tell us about the progress of your business in Africa after accepting ABE interns.
1) Dispatched (new or additional) staff to Africa
2) Hired local staff other than interns
3) Considering establishing (new or additional) branch office or local corporation in Africa
4) Established (new or additional) branch or local company in Africa
5) Expanded the existing business in Africa (production volume, sales volume, trading volume, etc.)
6) Considering (new or additional) alliances (agency contracts, joint ventures, investments, etc.) with local companies and human resources in Africa
7) Achieved (new or additional) alliances (agency contracts, joint ventures, investments, etc.) with local companies and human resources in Africa
8) Newly procured raw materials or local products from Africa
9) Led to implementation of JICA projects (SMEs and SDGs business support projects, etc.)
10) There was no change triggered by the acceptance (→Please go to Question 37)
11) Other (Please specify:)

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35.　Are interns or other ABE Initiative participants (current or former) involved in any of the activities you selected above? The term "involved" includes direct employment or business partnerships, as well as indirect involvement, such as providing information or introducing contacts necessary for change.

	Yes	No
Dispatched (new or additional) staff to Africa		
Hired local staff other than interns		
Considering establishing (new or additional) branch office or local corporation in Africa		
Established (new or additional) branch or local company in Africa		
Expanded the existing business in Africa (production volume, sales volume, trading volume, etc.)		
Considering (new or additional) alliances (agency contracts, joint ventures, investments, etc.) with local companies and human resources in Africa		
Achieved (new or additional) alliances (agency contracts, joint ventures, investments, etc.) with local companies and human resources in Africa		
Newly procured raw materials or local products from Africa		
Led to implementation of JICA projects (SMEs and SDGs business support projects, etc.)		
Others		

36.　Please specify the role ABE ex-participants played in each matter. (→Please go to Question 38)

	Descriptive answer
Dispatched (new or additional) staff to Africa	
Hired local staff other than interns	
Considering establishing (new or additional) branch office or local corporation in Africa	
Established (new or additional) branch or local company in Africa	
Expanded the existing business in Africa (production volume, sales volume, trading volume, etc.)	
Considering (new or additional) alliances (agency contracts, joint ventures, investments, etc.) with local companies and human resources in Africa	
Achieved (new or additional) alliances (agency contracts, joint ventures, investments, etc.) with local companies and human resources in Africa	
Newly procured raw materials or local products from Africa	
Led to implementation of JICA projects (SMEs and SDGs business support projects, etc.)	
Others	

37.　Please select all of the following reasons why the acceptance of ABE interns did not lead to any change in your company.
  1)　From the experience of accepting interns, I judged that it would be difficult to expand into Africa for the time being and that I should not do so.
  2)　New African business or expansion of existing African business has not been realized within the company.
  3)　There is a shortage of local human resources that we would like to hire or partner with.
  4)　There is a lack of local information only from interns and their connections.
  5)　There are systems, policies, or business practices in the country that restrict business.
  6)　There was no impact of accepting ABE interns because there was already sufficient information and resources to expand business in Africa.
  7)　Others (Please specify:

38.　Please select all items that you know among the following that are being done to build relationships and develop business between ABE Initiative ex-participants and Japanese companies.
  1)　Holding a debriefing session (→Please go to Question 39)
  2)　Conducting networking fairs (→Please go to Question 39)
  3)　Conducting wide-area networking sessions (→Please go to Question 39)
  4)　Support for Japanese companies to visit the region (→Please go to Question 39)
  5)　Other JICA projects such as SMEs and SDGs business support projects (→Please go to Question 39)
  6)　Provision of information on African business by Kakehashi Africa (a network organization of ABE Initiative ex-participants) (→Please go to Question 39)

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7) None that I know of (→Please go to Question 42)

8) Others (   ) (→Please go to Question 39)

39. Please select all items that you have participated in or have experienced among the items you answered above.
    1) Holding a debriefing session (→Please go to Question 40)
    2) Conducting networking fairs (→Please go to Question 40)
    3) Conducting wide-area networking sessions (→Please go to Question 40)
    4) Support for Japanese companies to visit the region (→Please go to Question 40)
    5) Other JICA projects such as SMEs and SDGs business support projects (→Please go to Question 40)
    6) Provision of information on African business by Kakehashi Africa (a network organization of ABE Initiative ex-participants) (→Please go to Question 40)
    7) None (→Please go to Question 42)
    8) Others (   ) (→Please go to Question 40)

40. Has your participation or experience in any of the items listed above been useful in advancing your company's business in Africa?

	Yes	No
Debriefing session	(→Please go to Question 41)	(→Please go to Question 42)
Networking fairs	(→Please go to Question 41)	(→Please go to Question 42)
Wide-area networking sessions	(→Please go to Question 41)	(→Please go to Question 42)
Support for Japanese companies to visit the region	(→Please go to Question 41)	(→Please go to Question 42)
Other JICA projects such as SMEs and SDGs business support projects	(→Please go to Question 41)	(→Please go to Question 42)
Provision of information on African business by Kakehashi Africa	(→Please go to Question 41)	(→Please go to Question 42)
Others	(→Please go to Question 41)	(→Please go to Question 42)

41. Please tell us in what ways the items listed above have been useful in advancing your company's business in Africa.

	Descriptive answer
Debriefing session	
Networking fairs	
Wide-area networking sessions	
Support for Japanese companies to visit the region	
Other JICA projects such as SMEs and SDGs business support projects	
Provision of information on African business by Kakehashi Africa	
Others	

42. Have you received any business support or collaboration from ABE ex-participants working in government or other public institutions?
    1) Yes
    2) No (→If you are currently employing ABE participants, please go to Question 44. If not, please go to Question 46.)

43. Please tell us about a specific case where you received support or collaboration from an ABE ex-participants working in a government or public institution.

Section 5: Comparison between ABE Ex-participants and Other Local Human Resources

44. Does your company also employ non-ABE participants who are from the same country as the ABE Initiative participants?
    1) Yes
    2) No (→Please go to Question 46)

45. Please select all the things in which ABE participants are superior to the non-ABE participants.
    1) Low turnover rate

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2) High level of professional knowledge and skills useful for the job
3) Language skills
4) Communication skills
5) Understanding of Japanese corporate culture and business practices
6) Favorable feeling about Japan
7) Extent of a personal network useful for business
8) I do not know
9) Others (   )
10) There is no advantage for ABE participants compared to non-ABE participants.

46. If you have any opinions about the ABE Initiative, please feel free to share them with us.

This is the end of the questionnaire. Thank you for your cooperation.

4．For host universities of ABE Initiative

Questionnaire for host universities of the ABE Initiative

About this questionnaire

We would like to express our sincere gratitude to your continued support for our work in the Japan International Cooperation Agency (JICA). JICA has been conducting comprehensive and cross-sectional evaluations and analyses of its development cooperation projects in order to ensure their effectiveness. This time, JICA is conducting a study on the scholarship program for young leaders who can promote the development and solution of issues in their home countries. In addition to the follow-up survey of the participants who have returned to their home countries and the collection of case studies of their achievements, JICA is conducting a study to examine and analyze the evaluation methods to analyze the impact of the program from various perspectives.

As a part of the above survey activities, we would like to ask your university, which is cooperating in accepting participants of the ABE Initiative, for your opinion by filling out this web-based questionnaire.

The results of the questionnaire will be used in the thematic evaluation report to be published on the JICA website and will not be used for any other purpose. Unless you permit us to use the data for other purposes, we will use the data in a way that does not identify your university or the name of the respondent, and we will handle the data carefully.

Preparation in advance

The survey will take approximately 10minutes. The session will not be disconnected due to a timeout, so your answers will be maintained unless you close your browser, but there is no function to save your answers on the web. If necessary, please prepare your answers in advance by checking the PDF file of the questionnaire sent to you as an email attachment. If you would like to go back to the previous page and make corrections, please click the "Back" button to return to the previous page.

Section 1: Basic Information

1. Please enter the name of your university, faculty, and course.

2. Please tell us the total number of international students currently enrolled in your graduate school's master's program (including short-term/exchange students), the total number of international students enrolled through JICA programs, and the number of ABE participants among them. We would like you to write down the exact number as much as possible, but if you do not know the exact number, a rough estimate is fine.

3. Please select all reasons why you decided to accept ABE participants at your graduate school.
   1) To promote international understanding among faculty members
   2) To promote international understanding among students
   3) To improve students' motivation for learning and research
   4) To promote the diversification of research fields among faculty members and students
   5) To promote joint research of faculty members and students with African countries
   6) To promote cooperation between universities and graduate schools in African countries
   7) To increase the number of foreign students / to diversify foreign students
   8) To promote the internationalization of the curriculum
   9) To develop human resources in African countries
   10) To promote regional vitalization (industry-academia-government collaboration, collaboration with local governments, etc.)
   11) Others (   )

Section 2: Changes after Accepting ABE Participant

4. Please select all items that apply to the changes that have resulted from the acceptance of ABE participants in your graduate school.
   1) Promotion of international understanding among faculty members
   2) Promotion of international understanding among students
   3) Improvement of students' motivation for learning and research
   4) Diversification of research fields among faculty members and students
   5) Promotion of joint research by faculty members and students with African countries
   6) Promotion of cooperation between universities and graduate schools and educational institutions in African countries (planning joint symposiums, development of joint degree programs, etc.)
   7) Increase the number/diversification of international students afterward
   8) Internationalization of the curriculum

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     9)   Revitalization of the region (industry-academia-government collaboration, collaboration with local governments, etc.)

    10) There is no change through the acceptance of ABE participants

    11) Others (   )

5. Please tell us about specific examples of changes you have experienced as a result of accepting ABE participants. (An answer column will appear for each item you selected in Question 4)

6. In your graduate school, after ABE participants finished their study abroad, did you set up joint research projects with them or with other researchers through ABE participants' networks?
    1)   Yes
    2)   No (→Please go to Question 13)

7. Please enter the number of joint research projects you have launched.

8. Please tell us the factors that may have facilitated the implementation of the joint research.

9. Did you write any papers through the above collaborative research?
    1)   Yes
    2)   No (→Please go to Question 11)

10. Please enter the number of papers you have written.

11. Have you made any conference presentations on your collaborative research?
    1)   Yes
    2)   No (→Please go to Question 15)

12. Please enter the number of conference presentations. (→Please go to Question 15)

13. Do you think there is a possibility of such joint research in the future?
    1)   Yes (→Please go to Question 15)
    2)   No

14. Please tell us why you think it is difficult to set up a joint research project.

15. Please select all that apply to the way you maintain relationships with ABE ex-participants.
    1)   I contact them as a joint research partner
    2)   I contact them to implement or explore the possibility of collaboration between the university or graduate school and their current organization.
    3)   I contact them as a former academic advisor to keep in touch with each other's current status.
    4)   Not in direct contact, but maintaining connections through SNS, etc.
    5)   I do not maintain a relationship with them.
    6)   Others (   )

16. Please tell us the most recent time you made the above contact.
    1)   Within 1 month
    2)   Within 3 months
    3)   Within 6 months
    4)   Within 1 year
    5)   More than 1 year ago

17. If you have any opinions about the ABE Initiative, please feel free to share them with us.

<div align="center">This is the end of the questionnaire. Thank you for your cooperation.</div>