

***The Relationship between Intercultural Communication Competence and Perceived Challenges and Its Effect on the Perceived Success of International Students in Japan***

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**Abstract**

The number of international students in Japanese higher education institutions (HEIs) has increased significantly in recent years. Aside from Japanese-medium instruction (JMI), English-medium instruction (EMI) has been introduced to the country's HEIs to attract more diverse student groups. Intercultural communication competence (ICC) plays an essential role in improving the on-campus experiences of international students. This study investigated the relationship between students' ICC and perceived challenges and its effect on the perceived success of studying in Japan. We surveyed 113 international students enrolled in a Japanese postgraduate program. Results suggested that in the non-Chinese (N=38) and Chinese (N=35) EMI student groups, ICC negatively and positively affected their perceived challenges, respectively. In comparison, ICC had a less positive effect on the perceived challenges of the JMI student group (N=40). These findings indicated that most non-Chinese EMI students perceived that they were in the high-ICC and low-challenge balance, while most Chinese EMI students were in the high-ICC and high-challenge balance. Although JMI students possessed excellent Japanese language proficiency, most perceived themselves to be in the low-ICC and high-challenge balance category. Overall, the level of students' perceived success decreased in the following order: high-ICC and high-challenge, high-ICC and low-challenge, low-ICC and high-challenge, and low-ICC and low-challenge. In particular, the high-ICC and high-challenge categories led to the highest perceived success. Although international students studying in Japan are highly homogeneous in terms of geographical origins, their ICC and perceptions of challenges show great diversity.

Keywords: English-Medium Instruction (EMI), International Students, Intercultural Communication Competence (ICC), Student Success, On-Campus Experiences, Japan

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## **Introduction**

In addition to traditional Japanese-medium instruction (JMI), Japanese higher education institutions (HEIs) have introduced English-medium instruction (EMI) as a strategy to attract more international students. The number of international students studying in Japanese HEIs has increased dramatically since 2015, and this group is currently dominated by students from Asian countries and regions. International students, who comprise a highly homogeneous group, account for the majority of the population of EMI students in Japan (Shimauchi, 2018). However, only a few studies have investigated international students' EMI experiences in Japan, especially at the graduate level (Rakhshandehroo & Ivanova, 2020). For example, Rose et al. (2020) examined the relationship between undergraduate Japanese students' English language proficiency and their learning success in EMI classes. Sarwari and Wahab (2016) explored the relationship between postgraduate international students' English language proficiency and intercultural communication competence (ICC) in Malaysia. Hanada's (2019) research suggested that studying abroad can affect Japanese undergraduate students' ICC. Nevertheless, there remains a lack of discussion on international graduate students' ICC in relation to their learning experiences in Japan.

Therefore, the current study investigates the relationship between international graduate students' ICC and perceived challenges and its effect on their perceived success in studying in Japan. The following research questions are addressed in this work: (1) What is the relationship between international graduate students' ICC and their perceived challenges? and (2) What kind of effect does the ICC–challenge balance have on international graduate students' perceived success?

## **Literature Review**

In light of the increased pressure to shrink high school graduates' population and the lack of competitiveness with other countries' academic rankings, the Japanese government has introduced and promoted EMI at universities as a solution to attract more international students (Hashimoto, 2018). In 2009, the well-funded Global 30 (G30) Project was launched by Japan's Ministry of Education, Culture, Sports, Science, and Technology (MEXT), which aggressively established the inclusion of EMI into designated HEIs (Rose & McKinley, 2018). Since then, EMI courses have been integrated into existing JMI courses (Rakhshandehroo & Ivanova, 2020). Government initiatives have prompted HEIs to establish their own EMI projects on a significant scale. Data show that 36% and 16.2% of Japanese universities have implemented EMI courses and full-degree English-taught programs (ETPs) at the graduate level, respectively (MEXT, 2019).

As mentioned previously, the number of international students studying in Japanese HEIs has increased dramatically. According to statistics published by the Japan Student Services Organization (JASSO, 2019), the main characteristic of international students in Japan is that over 90% come from Asia, while only around 5% come from Europe and North America. Thus, on-campus English is "Asian-accented" and dominated by the "Asian variety" (Haswell, 2017). A previous research has identified language and cultural challenges as the two primary issues that students often experience in their EMI programs and courses (Ishikura, 2015).

In a multicultural EMI class, international students experience confused English varieties, a sense of inadequacy, and other negative feelings when using the English language (Haswell,

2017; Murata et al., 2019). It appears that English linguistic challenges are the most frequently cited issues when discussing EMI challenges in the Japanese context. The limited language proficiency of students, professors, and staff can cause linguistic issues for international students (Aizawa & Rose, 2019; Rakhshandehroo & Ivanova, 2020). Furthermore, students' insufficient English language proficiency results in anxiety and frustration, as they cannot participate in or contribute to classroom discussions (Murata et al., 2019).

Cultural issues are also often discussed as an EMI concern regarding international students' learning experiences in Japan. EMI settings create isolation between Japanese and international students, especially those enrolled in full-degree ETPs (Shimauchi, 2017). International students tend to form groups based on their nationality, language, ethnicity, or educational backgrounds (Heigham, 2018). Such isolation makes it difficult for them to make friends with Japanese students (Rakhshandehroo & Ivanova, 2020). Thus, the lack of interaction between international and Japanese students results in the segregation and isolation of international students during their study period (Bradford, 2016; Kunioishi & Nakakoji, 2018; Morita, 2012; Shimauchi, 2017).

Another culture-related challenge involves the different teaching and learning styles applied in EMI courses (Jon & Kim, 2011; Tsuneyoshi, 2005). Students in EMI classrooms tend to sit quietly in accordance with the "culturally conditioned classroom behavior" (Bradford, 2016). The passive one-way lecture style may be an unpleasant experience for international students, and it can be quite challenging for non-native English-speaking students to listen to the lecture for a long period without pause (Heigham, 2018; Horie, 2017). Compared to their home education, international students may experience classroom interactions differently in EMI/ETPs. Asian students are used to the discussion-based classroom style, while Western students find that such an approach lacks the "American style" (Jon & Kim, 2011). The above linguistic and cultural issues are common topics discussed in many previous studies in this field.

### **Challenge in Flow Theory**

For international students, EMI is a unique experience of studying abroad that is filled with opportunities to improve oneself through various challenges. However, this experience also requires individual students to develop their ability to fix different problems. From this perspective, activities related to studying abroad are in line with Csikszentmihalyi's specific definition of "challenge" in flow theory, in which "challenge" is "any activities contains a bunch of opportunities for action" (Csikszentmihalyi, 1990, p. 50). Flow mood is not necessarily caused by all related activities, but tensions between skills and challenges in the flow mood force people to improve their abilities in order to perform certain activities (Gjesteland & Vos, 2019).

Furthermore, despite content learning rather than language learning outcomes being the priority in EMI/ETPs (Carty & Susser, 2014), Csikszentmihalyi's flow theory has been tested in foreign or second language learning (Egbert, 2004). Several foreign language scholars have reported that studying abroad can positively influence second language learning and intercultural competence (Salisbury et al., 2013). In the current study, EMI offers a unique learning environment in which to investigate the relationship between ICC and students' perceived challenges.

Based on the definition of “challenge” in flow theory, some specific concerns raised in previous research can be extracted and transformed. Six related items extracted from previous studies were thus divided into language- and culture-related challenge categories in this study (see Table 1).

<b>Category</b>	<b>Challenge (difficulty or issues)</b>	<b>Challenge (flow theory)</b>
Language-related	“Non-native English speaking students have difficulty in coping with content presented in English” (Bradford, 2013).	To work harder to improve language proficiency
	Speaking English with anxiety and frustration results in their failure to participate or contribute to the discussion (Murata, Iino, & Konakahara, 2019).	To improve communication skills so that they communicate effectively with other students
	Insufficient academic skills are exhibited, such as written English skills, essay organization skills, etc. (Aizawa & Rose, 2019).	To look for extra academic support to overcome academic disadvantages
Culture-related	EMI courses’ different teaching and learning styles (Jon & Kim, 2011; Tsuneyoshi, 2005).	To change the past learning style to adjust to the different learning environment/learning styles
	It is challenging for non-native English-speaking students to listen to the lecture for a long time without pause (Horie, 2017).	To pay extra effort to understand the learning materials
	EMI creates isolation among student groups (Shimauchi, 2018). International students tend to form groups based on their nationality, language, ethnic, or educational backgrounds (Heigham, 2018).	To make friends with students from other countries to establish social connections in the host country

Table 1: Transformed Challenges

Although there is no universal definition of ICC or communicative competence, ICC commonly refers to the use of a foreign language to properly communicate with others from different cultural backgrounds in ways that value the relationship between language and culture (Byram, 2012). ICC is also defined as “a complex of abilities need to perform effectively and appropriately when interacting with others who are linguistically and culturally different from oneself” (Fantini, 2006, p. 12). Research concerned with intercultural communication is critical of many globalization theories, but people involved in intercultural communication can hardly interact as well as they want (Matveev, 2002). In the 1970s, two Japanese scholars, Masao Kunihiro and Mitsuko Saito, recognized that effective

intercultural communication is more important than foreign language proficiency (Martin et al., 2012).

Thus far, no definite assessment tool has been established to measure ICC. According to Fantini (2012), there are approximately 100 kinds of tools to assess the ICC with numerous descriptive items. In the current study, Matveev’s (2002) integrated ICC model was applied as a feasible assessment tool. This is an overview model combining the overseas performance model, intercultural adjustment model, and the ICC model, which dominate discussions in the intercultural communication literature (Matveev, 2002). Each model contains different identified critical factors in intercultural communication with varying situations or dimensions. The integrated ICC model examines an individual’s ICC from four dimensions: interpersonal skills, team effectiveness, cultural uncertainty, and cultural empathy.

### **International Students’ Success**

Smith (2020) identified eight factors—divided into academic and non-academic types—that affect international students’ success. The academic factors include language challenges, culture-related learning differences, exclusion from group discussions, academic support issues, and adjustment to a new education system, while the non-academic factors include social issues, cultural adjustment, and finances (Smith, 2020). In the current study, six factors were included as indicators of international students’ success, as shown in Table 2.

<b>Category</b>	<b>Factor</b>
Academic	Language challenges
	Exclusion from group discussion
	Adjustment to culture-related learning differences
	Academic support issues
Non-academic	Cultural adjustment
	Social issues

Table 2: Factors Influencing the Success of International Students

### **Research Method and Participants**

The chosen site was a national postgraduate university in Japan consisting of three schools. International students can obtain their degree by only taking EMI courses and writing the English thesis or dissertation, or by taking JMI courses and writing the Japanese thesis or dissertation. As of May 1, 2020, the total number of international students was 530, of whom 348 were Chinese, accounting for 65.7% of the total population. The data collection lasted from January 19 to 23, 2021. A total of 113 international graduate student respondents, who were studying at the above university from three different schools, were recruited. Data were gathered through an online survey hosted in Google Forms. The questionnaire data were collected by sending mass e-mails to students’ on-campus email addresses. The total international student group response rate was 21.32% (the Chinese international student group’s response rate was 21.55%). The composition of the participants is presented in Table 3.

Category	Item	Frequency	Percentage
Gender	Male	67	59.29%
	Female	46	40.71%
Grade	Master students	70	61.95%
	Doctoral students	43	38.05%
Age	Under 30 years old	91	80.53%
	30 years old and above	22	19.47%
Medium of instruction	English	73	64.60%
	Japanese	40	35.40%

Table 3: The Composition of Participants

## Instrument

Thus far, no definite assessment tool has been established to measure ICC. According to Fantini (2012), there are approximately 100 kinds of tools to assess the ICC with numerous descriptive items. In the current study, Matveev's (2002) integrated ICC model was applied as a feasible assessment tool. This is an overview model combining the overseas performance, intercultural adjustment, and ICC models, which dominate discussions in the intercultural communication literature (Matveev, 2002). Each model contains different identified critical factors in intercultural communication with varying situations or dimensions. The integrated ICC model examines an individual's ICC from four dimensions: interpersonal skills, team effectiveness, cultural uncertainty, and cultural empathy.

### Research Method and Participants

The questionnaire (see Appendix), which had Chinese and English versions, contained four sections. The first section included four demographic questions, and the second section included 11 items adapted from Matveev's (2002) Intercultural Communication Competence Questionnaire (ICCQ), which was used to measure participants' ICC. The third section included six questions adapted from previous research to measure international graduate students' levels of perceived challenges (Aizawa & Rose, 2019; Bradford, 2013; Heigham, 2018; Horie, 2017; Jon & Kim, 2011; Shimauchi, 2018; Tsuneyoshi, 2005). The fourth section included six questions adapted from Smith's (2020) work on international student success, which were used to measure students' levels of perceived success. All items in the 23-item combined questionnaire were answered using a 5-point Likert-type scale ranging from 1 ("strongly disagree") to 5 ("strongly agree").

## Data Analysis

Data analysis was performed using IBM SPSS 26 to determine the results of each objective. The Cronbach's alpha values of the adapted questionnaires were initially measured to determine their reliability. The Cronbach's alpha values of the adapted ICCQ, the adapted perceived challenge questionnaire, and the perceived success questionnaire were 0.875, 0.800, and 0.805, respectively, all of which indicated good reliability.

## The Relationship between International Students' ICC and Their Perceived Challenges

A bivariate correlation test was used to determine the correlation between the students' ICC and perceived challenge. Table 4 illustrates the bivariate correlation test results of the non-Chinese EMI learning group (N=38). As can be seen, a strong negative correlation was found between the interpersonal skill factor and the perceived communication challenge ( $p < 0.05$ ) and academic support challenge ( $p < 0.01$ ), while a statistically significant negative correlation was found between the cultural uncertainty factor and perceived communication challenge ( $p < 0.01$ ). Furthermore, strong negative correlations were found between the cultural uncertainty factor and the perceived academic support challenge ( $p < 0.05$ ) and the perceived social activity challenge ( $p < 0.05$ ). Thus, in the non-Chinese EMI student group, ICC factors negatively affected the students' perceived challenges.

	Language	Communication	Learning style	Learning effort	Academic support	Social activity
Interpersonal skill	-0.076	-0.341*	-0.259	-0.051	-0.434**	-0.221
Team effectiveness	0.137	0.012	-0.013	-0.156	-0.275	0.076
Cultural uncertainty	-0.287	-0.422**	-0.071	-0.115	-0.364*	-0.333*
Cultural empathy	-0.203	-0.301	0.216	0.159	-0.167	0.122

Table 4: Pearson Correlations between the Factors of ICC and Perceived Challenges in the Non-Chinese EMI Group (N=38)

Table 5 illustrates the bivariate correlation test results of the Chinese EMI learning group (N=35). Both four ICC factors were statistically positive for the perceived challenge of English language learning ( $p < 0.01$ ). Meanwhile, interpersonal skill and cultural empathy factors were statistically positive for the perceived challenge of learning style and social activity ( $p < 0.05$ ). Moreover, team effectiveness was statistically positive for the perceived challenge of communication and learning style ( $p < 0.01$ ). Thus, in the Chinese EMI student group, ICC factors positively affected their perceived challenges.

	Language	Communication	Learning style	Learning effort	Academic support	Social activity
Interpersonal skill	0.436**	0.277	0.425*	-0.007	0.119	0.310
Team effectiveness	0.556**	0.473**	0.506**	0.180	0.242	0.259
Cultural uncertainty	0.587**	0.273	0.296	0.113	0.145	0.312
Cultural empathy	0.486**	0.325	0.237	0.053	0.133	0.337*

Table 5: Pearson Correlations between the Factors of ICC and Perceived Challenges in the Chinese EMI Group (N=35)

Table 6 illustrates the bivariate correlation test results of the Chinese JMI learning group (N=40). In this group, ICC factors were barely statistically significant for the perceived challenges. Only cultural uncertainty was statistically significant for the perceived

communication challenge ( $p < 0.05$ ). Furthermore, cultural empathy was statistically significant for the perceived communication challenge ( $p < 0.01$ ). Thus, ICC had a less positive effect on the JMI student group's perceived challenges.

	Language	Communication	Learning style	Learning effort	Academic support	Social activity
Interpersonal skill	-0.146	0.091	0.125	-0.086	0.008	0.200
Team effectiveness	0.264	0.106	0.090	0.056	0.097	0.142
Cultural uncertainty	0.117	0.365*	0.062	0.098	-0.008	0.156
Cultural empathy	0.140	0.405**	-0.028	-0.164	-0.220	0.043

Table 6. Pearson Correlations between the Factors of ICC and Perceived Challenges in the Chinese JMI Group (N=40)

### The Effects of ICC–Challenge Balance on Students' Perceived Challenges

Based on the collected data, the levels of ICC and perceived challenges of each international student were calculated. The mean score of 113 students' ICC was 3.78, while the perceived challenge was 3.92. The mean scores were respectively used as the horizontal and vertical coordinates to obtain the overall quadrant distribution of the students' ICC and perceived challenges. The quadrant distributions of 113 international students' ICC levels and the perceived challenge levels are shown in Figure 1.

As can be seen, the high-ICC and high-challenge (H-H) and low-ICC and high-challenge (L-H) quadrants had the most number of individuals (31 each). The Chinese EMI learning students had the majority in the H-H quadrant (15 individuals), while the Chinese JMI learning students had the majority in the L-H quadrant (15 individuals). At the same time, 18 of 24 non-Chinese EMI learning students were in the high-ICC and low-challenge (H-L) quadrant.

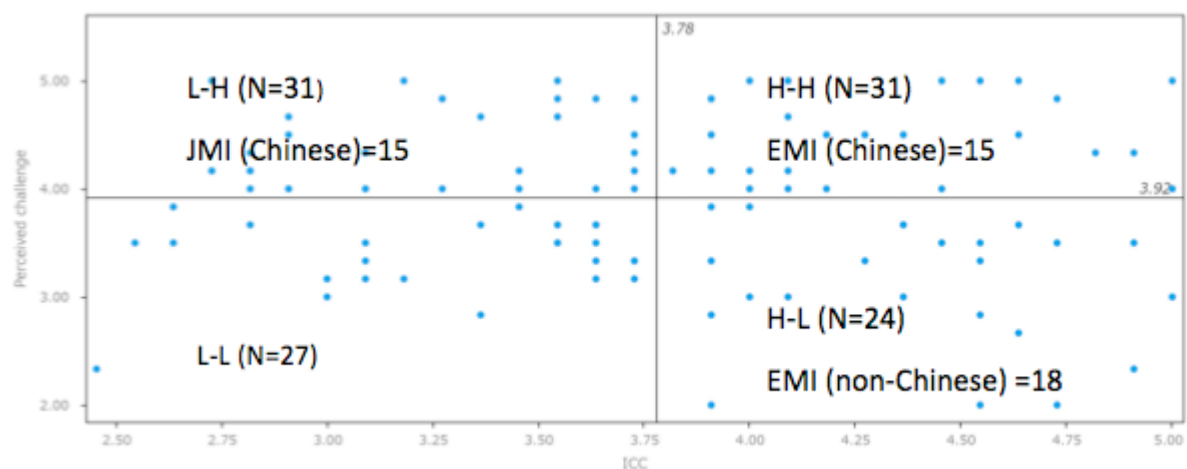


Figure 1: Quadrant Distributions of the Levels of ICC Level and Perceived Challenges among 113 International Students



After exporting the different ICC–challenge and the corresponding perceived success values of each individual (N=113) as the box plots (Figure 2), it can be seen that the degree of perceived success gradually decreased in the following order: H-H, H-L, L-H, L-L, H-H, H-L, and the L-L subgroups, which showed less fluctuation. Students in the L-H subgroup had a more severe perceived success range compared to the H-H, H-L, and the L-L subgroups. Furthermore, students in the L-H subgroup had a lower level of perceived success, while students in the L-L subgroup had a higher level of perceived success than those from the H-H, H-L, and the L-H subgroups.

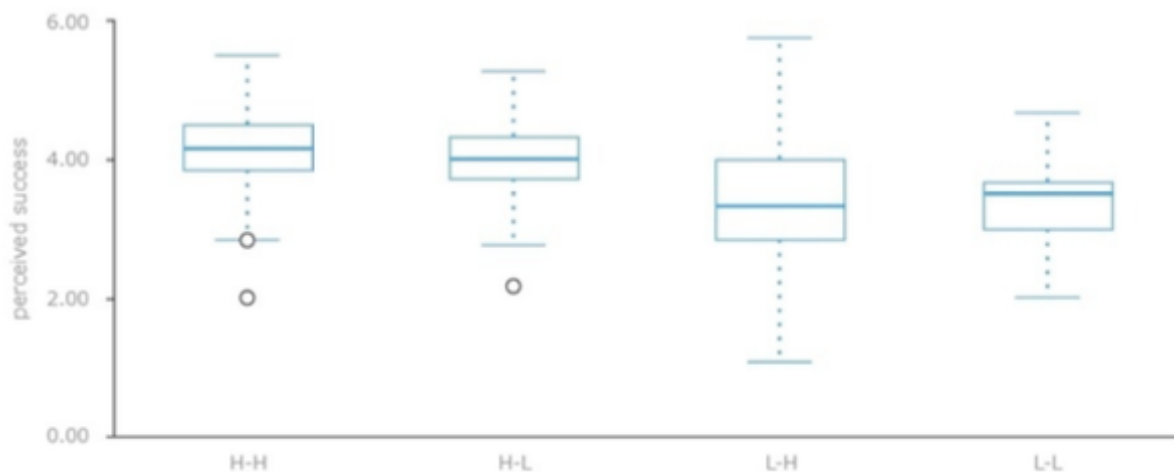


Figure 2: Different ICC–Challenge Balances in All the Student Groups’ Perceived Levels of Success

## Conclusion

This study investigated the relationship between international students’ levels of ICC and perceived challenges and its effect on their perceived success in studying in Japan. Based on the questionnaire responses from 113 international students, the findings suggested that ICC factors negatively affected the perceived challenges in the non-Chinese EMI student group. Meanwhile, the ICC factors positively affected the perceived challenges of both the Chinese EMI and Chinese JMI student groups, although the effect was less in the latter group.

Furthermore, the findings suggest that most non-Chinese EMI students perceived themselves to be in the high-ICC and low-challenge balance, while most Chinese EMI students perceived themselves to be in the high-ICC and high-challenge balance. Although the JMI student group had excellent Japanese language proficiency compared to the EMI student group, most of the JMI students perceived themselves to be in the low-ICC and high-challenge balance categories.

Overall, international students’ perceived success decreased in the following order: high-ICC and high-challenge, high-ICC and low-challenge, low-ICC and high-challenge, and low-ICC and low-challenge. The high-ICC and high-challenge categories led to the highest perceived success. Although international students studying in Japan are highly homogeneous in terms of geographical origins, their ICC factors and perceptions of challenges show great diversity.

## **Limitations and Further Study**

While this study offers some implications for further research regarding international student groups' ICC levels, it still has some limitations.

First, the current study focused on the relationship between international students' ICC levels and their perceived challenges, thereby regarding ICC as an essential factor influencing students' on-campus lives. However, the effects of language proficiency should also be considered and compared.

Second, although 113 international students were involved in this study, over 60% came from China. Thus, their preferences for cognition may have led to biased analysis results. For this reason, the results cannot be generalized to other international student groups.

Finally, although this study investigated the effects of the balance between the level of skill–challenge balance on students' perceived success, success is self-reported in this study. However, given that individuals differ in their understanding of their success levels, this could lead to possibly biased results.

## Appendix

Questionnaire of intercultural communication competence (ICC), perceived challenge, and success in students' learning experiences at JAIST

Gender: M/F Grade: M1 M2 D1 D2 D3 Postgraduate/researcher

Age: 20–24 25–29 30–34 35–39 40–above

School: Information Science Material Science Knowledge Science

Length of stay in Japan: Less than one year 12–24 months 25–48 months More than four years

Instructions: Please read the 23 listed items carefully and choose the closest one in each question based on your own learning experiences in your graduate program. Please answer all the questionnaire items on a 5-point Likert scale as follows: Strongly disagree-1 Disagree-2 Neutral-3 Agree-4 Strongly agree-5

1. I can establish a good relationship with people from other countries.
2. I can listen actively to people from other countries (such as in a lab seminar or in the class group discussion).
3. I can deal with and manage cultural uncertainties well when I get along with other people who come from other countries. (Note: "Cultural uncertainty" refers to cultural ambiguities and sociocultural differences, such as different beliefs, customs, and values.)
4. I feel comfortable when discussing/studying/interacting together with people from different countries.
5. I can be flexible in interacting and working with people from different countries when it comes to getting together with them.
6. I can engage in meaningful dialogues with people from other countries in the same way as with people from my home country.
7. I can develop closer relationships with persons from other countries in school/lab/class like I make friends with my own country.
8. When I am assigned to a multicultural team, I can treat others equally without any relevance to the members' national origins.
9. I can learn as much about Japanese culture as possible.
10. I can be flexible with different communication/interaction styles when working with people from other countries.
11. I can be flexible when working with people from different cultures, as I am aware of differences in values and beliefs among cultures.
12. I need to work harder to improve my language proficiency to satisfy the degree/credit completion requirements.
13. I need to improve my communication skills to communicate effectively with other international students during group discussions/seminars.
14. I need to change my past learning style to adjust to the different learning environment/learning style in JAIST.
15. I need to pay extra effort to understand the learning materials exactly.
16. I need to actively look for extra academic support to overcome my academic disadvantages (such as language barriers, learning style differences, etc.) while studying at JAIST.
17. I need to actively expand my own social network, including making friends with other countries' people, to increase my social activities during my studies abroad at JAIST.

18. I have achieved significant improvement in both academic English writing and oral English communication.
19. I have effective and meaningful communication/interaction experiences with other international students.
20. I have adjusted myself to learning environments (such as teaching style, learning style, exam, academic tasks, etc.) at JAIST.
21. I received enough academic support from JAIST or outside JAIST to complete my study program.
22. I have adjusted myself to Japanese culture well.
23. During my graduate program in Japan, I built my social network and maintained enough social contact with family, friends, and the outside world.

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