

## **Evaluating Impact of Pre-Departure Training on Study Abroad Outcomes by Adapting Kirkpatrick's Evaluation Framework**

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### **Abstract:**

Study abroad outcomes are complex and not easy to obtain. In the midst of these challenges, evaluation of pre-departure training for study abroad is needed, yet little is researched. How can we evaluate the effectiveness of pre-departure training when study abroad outcomes are intricate? In this study, by employing Kirkpatrick's training evaluation model and designing pre-departure training to promote training transfer, we evaluated training impact on study abroad outcomes. For evaluation, we employed both qualitative and quantitative measures, such as the Intercultural Development Inventory (IDI), showcase portfolios, and surveys. The findings suggested that training designed for training transfer enhanced attainment of our study abroad outcomes. Furthermore, our attempt indicates that Kirkpatrick's model is an applicable framework to evaluate pre-departure training for study abroad outcomes.

**Key words:** Intercultural competence, Instructional design, Outcome assessment, Showcase portfolios, Training transfer

## **INTRODUCTION**

In the field of study abroad, merely sending students overseas is not enough for intercultural learning, and intentional intervention is considered important (Jackson, 2020; Vande Berg et al. 2012). It has been reported that students who are studying abroad have limited meaningful interaction with local students (Jackson & Oguro, 2017) and even when intercultural contact increases, one's bias may enlarge due to unpleasant experiences (Yashiro et al. 2009). Intentional interventions, such as pre-departure training, support sojourners' learning abroad, yet Halenko & Jones (2017) claim that its research is still undeveloped. To evaluate pre-departure training, we need to know its impact on study abroad (SA) outcomes. However, outcomes in international education are, as Deardorff (2015) defines, developmental, experiential, and complex in nature, and not straightforward to assess. How can we know if training is effective when SA

outcomes are complex? Is there any model or framework to be used? Blair (2017, p.122) reports, “there simply is no single instrument, method, or assessment moment that allows us to capture the complexity of the data.” Our study focuses on this critical issue from the viewpoints of training evaluation and discusses evaluation framework of pre-departure training.

### **Training evaluation model and training transfer**

In the field of training evaluation, Kirkpatrick’s evaluation model has been the de facto standard and the model consists of four phases in evaluating: Level 1: *reaction*, Level 2: *learning*, Level 3: *behavior*, Level 4: *results* (Suzuki, 2015). Kirkpatrick & Kirkpatrick (2009) explains importance in an evaluation design to identify a few *critical behaviors*, which are “specific, observable, measurable behaviors the training graduates should perform” that will likely lead to expected results, emphasizing the criticality of bridging training to behavioral change *after* training. In the research of training transfer, positive training transfer is “the extent to which the learning that results from training experience transfers to the job and leads to meaningful changes in work performance” (Baldwin et al., 2009, pp. 41-42).

### **Training evaluation model for pre-departure training**

A study by Cutting et al. (2020a) employed Kirkpatrick’s model to evaluate the effectiveness of pre-departure training design for study abroad focusing on training transfer in Level 3 (behavior). They first found training transfer was *not* occurring after their initial pre-departure training, so they redesigned training to focus on training transfer utilizing Kirkpatrick’s model. Through monitoring participants’ daily reflections while abroad, the study suggested that transfer-focused training impacted training transfer (Cutting et al., 2020a). However, the study did not examine if training led to SA outcomes.

## **RESEARCH DESIGN & METHODS**

Although pre-departure training is considered integral, it lacks evaluation research. Evaluating its impact is especially difficult when SA outcomes are experiential and complex. This research targets pre-departure training designed to enhance training transfer by Cutting et al. (2020a) and evaluates training impact on SA outcomes using Kirkpatrick’s model.

Our research question is as follows:

***RQ:*** Does pre-departure training designed to enhance training transfer bring out expected SA outcomes?

### **Pre-departure training for study abroad**

The study abroad program in this research is operated by a Japanese private university which sends a group of Japanese students to a US institution for 2 months to take credit bearing classes. The program aims to prepare students to work in a global society according to the mission of the institution. To maximize study abroad experiences, pre-departure training (7 weeks, 14 class hours) as well as re-entry sessions (3 times-monthly, 6 class hours) are offered. The participants are required to have completed an intermediate English course offered at the institution and their English levels range from TOEFL ITP 460 to 500.

### **Adapting Kirkpatrick’s model to design training evaluation**

We designed pre-departure training evaluation by following the flow of Kirkpatrick & Kirkpatrick (2019). According to Kirkpatrick's model, analysis starts from refining Level 4 (results), which is often an organizational impact such as ROI, after identifying organizational needs. This study focuses on evaluating training effectiveness on *SA outcomes* after training, thus adapting Level 4 for our educational context.

We first set SA outcomes considering the needs of the program. Then we identified critical behaviors in study abroad (Level 3) which are expected to lead to these outcomes. As learning goals in training (Level 2), we identified required knowledge, skills, and attitudes. This evaluation scheme is exhibited by adding our own study abroad context and using the ADDIE model in ID in Figure 1.

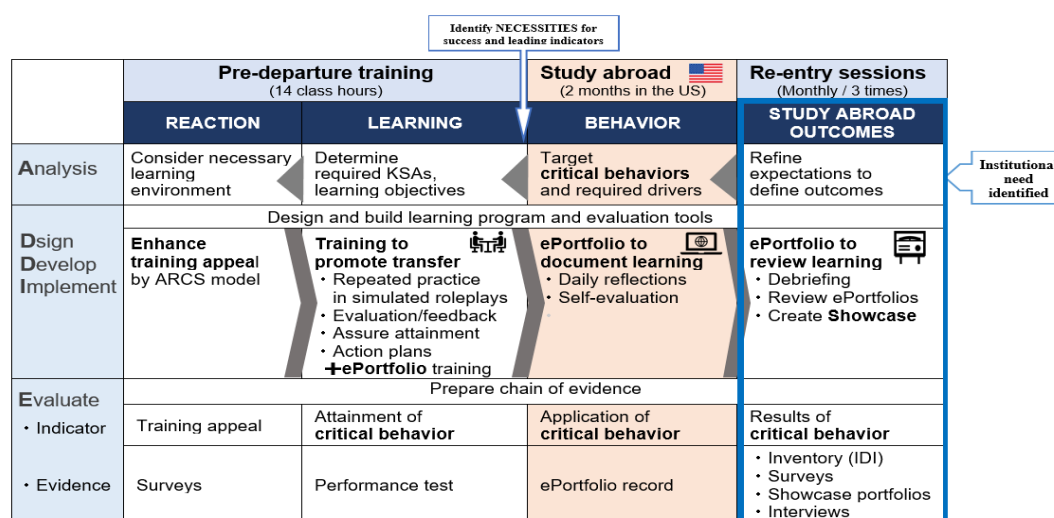


Figure 1. Application of Kirkpatrick & Kirkpatrick (2009) in designing pre-departure training evaluation

### Study abroad (SA) outcomes

To optimize students' learning in SA, our pre-departure training created goals for *intercultural communication*, *English communication*, and *perspective taking*. As mentioned earlier, preparing students to broaden perspectives instead of enlarging biases and enhance meaningful intercultural interactions are critical for maximizing the SA environment. Thus, *perspective taking* goal requires suspending one's own judgement of others and seeking others' viewpoints (Cutting et al., 2020b) to broaden perspectives as well as having meaningful interactions with local people. This goal was refined through previous research (Cutting, et al., 2020b) and employs the theory of DMIC (Developmental Model of Intercultural Competence) by Bennet (1986), which explains people's perspective shifts from ethnocentric views to more ethnorelative views in intercultural competence (Hammer, 2011).

Based on these, SA outcomes of perspective taking are set as follows:

**SA outcomes:** *Perspective development by suspending one's judgement and seeking others' perspectives.*

### Critical behavior (CB) for SA outcomes

To enhance attainment of SA outcomes, pre-departure training aims that *student possess the knowledge, attitude, skills, and English ability to attempt to broaden their perspectives* and has sub-goals in knowledge, attitudes, and skills (Cutting et al., 2020b). Among these, we selected a sub-goal as a *critical*

*behavior* in Level 3. Following Cutting et al. (2020a; 2020b), we selected the following sub-goal to monitor for training transfer and in this research, we call it *critical behavior* using Kirkpatrick's term:

**CB:** *Students can ask questions in English about culture, such as cultural differences and surprises.*

Pre-departure training was designed to enhance training transfer and assured the attainment of the goal by all participants by providing performance tests repeatedly through roleplays in simulated settings (Cutting et al., 2020a; 2020b). ePortfolio systems are used throughout the program to enhance, document, and evaluate students' learning (Cutting et al., 2020b).

### Methodologies: Evaluation of SA outcomes

To evaluate the impact of pre-departure training on study abroad outcomes, we use Intercultural Development Inventory (IDI), surveys, and showcase portfolios. The methodologies are listed in Table 1.

Table 1. SA (study abroad) outcomes and evaluation methods

	Explanation	Evaluation tools	Methodologies
<b>SA outcomes</b>	<i>Perspective development by suspending one's judgement of others and seeking others' viewpoints.</i>	IDI (Inventory)	Measured pre/post increase -compared with a controlled group
		Showcase portfolios	Analyzed if CB led to SA outcomes -compared with a controlled group
		Surveys	Analyzed perceived impact of training CB
		Interviews	Analyzed personal changes after SA

### IDI (Intercultural Development Inventory)

To evaluate SA outcomes, we employed *The Intercultural Development Inventory* (IDI), since IDI has been created based on the DMIS theory which provided foundation for our goal. IDI is a 50-item questionnaire to assess developmental stages in people's worldviews towards differences. To see our training impact, we compared the results with a control group who took the previous training. The previous training had the same goal, but training did not focus on training transfer without assuring the attainment of the critical behavior and lack of training transfer was found (Cutting et al., 2020a). Here, we call transfer-focus training *T-focus training* and non-transfer-focus training *Non-T-focus training*.

### Showcase portfolios

Since inventory does not indicate the causes of the results, we analyzed students' *showcase portfolios* in which they wrote about their attainment of SA outcomes and investigated if training of the critical behavior led to SA outcomes. Barret (2010) explains that in most showcase portfolios, students reflect on their achievement of learning goals by thinking over their selected evidence and write about their learning, its significance, and next learning goals. Our students created showcase portfolios in our re-entry sessions by reflecting on, selecting, and exhibiting their outcomes as well as their next goals. In their showcase portfolios, we examined how they developed their perspectives, especially the effect of the critical behavior. We analyzed their descriptions of outcomes in showcase portfolios following the deductive coding approach by Sato (2008) and examined whether outcomes were attained by the critical behavior. Then, we compared the results between T-focus and Non-T-focus training.

### Surveys

To bolster our data, we conducted *surveys* to investigate if training of the critical behavior led to SA outcomes. We conducted closed questions as well as open-ended questions. Questions were a 4-point Likert scale from 4 (Strongly agree) to 1 (Strongly disagree). The survey, which was anonymous and consented upon, was given to all the participants in the T-focus training 6 months after their return. A limitation of this study is that the survey was created after T-focus training was designed and therefore we only presented the results of T-focus training.

## RESULTS

### IDI results

To understand training impact on SA outcomes, we conducted IDI before and after study abroad for students in T-focus training and Non-T-focus training. In Non-T focus training, 21 out of 22 students (95%) and in T-focus training, 15 out of 16 students (94%) completed pre-posttests. T-tests indicated IDI increase in both training. To compare effect of training onto post-test by eliminating effect of pre-test, we conducted ANCOVA to perform pre-posttest analysis where the pre-test is used as a covariate, the training types as an independent variable, and the post-test as a dependent variable. There is a significant effect of training type on the post-test after controlling for the pre-test, ( $F [1, 33] = 4.29, p < 0.05$ ) and students in T-focus training had statistically higher increase in post-test. Also 87% of students had an increase in IDI in T-focus training, whereas, 57% of students had an increase in the Non-T-focus training.

Table 2. Results of IDI

IDI	Pre		Post		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Non-T-focus (n=21)	85.3	(13.39)	90.5	(13.68)	-2.32	<.031
T-focus (n=15)	84.3	(11.51)	96.7	(12.82)	-4.72	<.0003

IDI	Non-T-focus		T-focus		ANCOVA
	<i>Pre (SD)</i>	<i>Post (SD)</i>	<i>Pre (SD)</i>	<i>Post (SD)</i>	
	85.3(13.39)	90.5(13.68)	84.3(11.51)	96.7(12.82)	
					F (1,33)=4.29, p=0.046

	<i>Increase</i>	<i>Decrease</i>	<i>Increase</i>
Non-T focus (n=21)	12	9	57%
T-focus (n=15)	13	2	87%

### Showcase results

Showcase portfolios were submitted by 21 out of 22 students (95%) in Non-T-focus training and 16 out of 16 students (100%) in T-focus training. In Non-T-focus trainees' showcase, there was no evidence of CB, which is asking questions to seek others' perspectives. For example, this student explained his/her perspective development from observation: *Something I was able to notice as visible differences as, for example, some labor workers seemed to be black people, but I did not see such difference among students.* On the other hand, 8 T-focus trainees out of 16 (50 %) indicated their perspective change by seeking others' viewpoints by asking question as CB.

Table 3. Results of showcase portfolio analysis: Evidence of SA outcomes obtained by the critical behavior

	Extracted descriptions of goal attainment in showcase portfolios
Non-T-focus	None
T-focus	
Student 1	When I encountered something different from myself or Japanese people, instead of feeling strange, I could accept it as a difference. And I gained an attitude to <b>ask and search</b> why there's such a difference.
Student 2	I <b>tried to ask questions</b> when I didn't understand or was curious. Well, mostly about music. <b>At the beginning, I was not asking questions much</b> , so I was often listening to others' questions. But what I am curious about is not necessarily what others want to know, so <b>I thought it is myself who needs to ask. I think my questions to teachers increased recently. Self-solution and solution by friends decreased, I think.</b>
Student 3	I was feeling these volunteers (at the volunteer center) were volunteering as part of a school requirement. But <b>when I asked for reasons</b> why they were coming, I heard lots of voices which surprised me such as, 'because it is fun,' 'because I can meet and talk with lots of people.'
Student 4	I told M that we learned about slavery systems in Japan like this and <b>asked him 'how is it really?'</b> Since I was naturally interested in other cultures, I think I was able to ask questions. But I was not as aware of my own culture as I thought, so when I was asked about my own culture, I looked into it.
Student 5	When I visited my buddy's house, his/her parents were saying they like sushi. <b>When I asked what kinds they like</b> , I was surprised that the mother said she likes sea urchins, since I saw on TV that foreign people do not eat sea urchins much. So, I was tempted to say, 'foreign people do not eat sea urchins, so you don't like them, do you?' But then <b>this question is from my assumption</b> . So instead, <b>I asked, do people here eat sea urchins?</b> Then she said, 'not so much.'
Student 6	I was curious about American food, since I did not want to gain weight. I often hear people say that American food makes people fat. <b>But when I actually asked people about it</b> , healthy food tends to cost more than unhealthy junk food, and because of that reason, many people buy junk food. When I went to the supermarket, salads were indeed expensive.
Student 7	By going to America, I was able to change my stereotypes greatly (finding various views of policies and regulations, etc.) ... By recognizing this, <b>I was able to ask questions with care</b> and to share my culture and values.
Student 8	I was talking (with a dorm resident) about how history is taught in each country. After listening to his explanation, <b>I asked about</b> the case of the Hiroshima atomic bomb. I was shocked at what he said and felt "What? Really?" After that, I researched to see if it was true. Then I found...

-Bold type shows identified segments that indicate when students sought others' perspectives by asking questions.

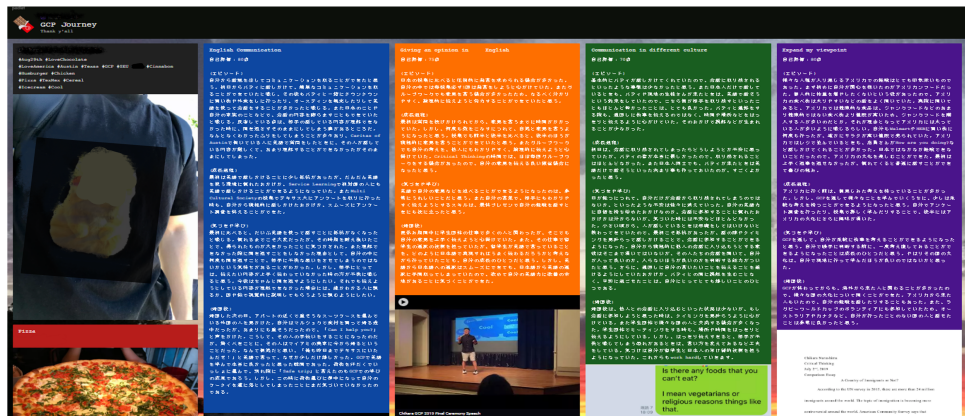


Figure 2. An example of students' showcase portfolios of study abroad outcomes

Survey results

As survey results, 11 students (68%) completed survey and the mean of perceived effectiveness of training critical behavior ranged from 3.5 to 3.9 out of 4.0, highly positive in all questions.

Table 4. Results of surveys: effectiveness of training critical behavior

Practice of critical behavior led me to... (n=11)		M	SD
Level 3 behavior in study abroad			
(3) Become more conscious to ask cultural questions		3.8	.39
(4) Ask cultural questions during study abroad		3.5	.50
(5) Use English more		3.9	.29
Study abroad outcomes			
(7) Broaden my perspectives	SA outcomes (1)	3.9	.29
(6) Learn new cultures with curiosity	SA outcomes (2)	3.8	.39
(8) Deeply communicate with local people	SA outcomes (2)	3.5	.66
(9) Mutually understand in a host country	SA outcomes (2)	3.6	.48

Next, data from open-ended questions in the same surveys were open coded to identify the impact of training. Table 5 shows the responses and coded impact. We found that skill training had impact on perspective development (n=4), suspending judgement (n=5), promote critical behavior (n=4), considering others (n=2), and arouse interest (n=2).

Table 5. Students' comments in surveys: effectiveness of training critical behavior

T-focus	Students' comments about impact of critical behavior training	Coded impact
Student (a)	By asking and learning about cultures, <b>my views broadened.</b>	Perspective development
Student (b)	Through question practice, I noticed I was often making my own judgement unconsciously. Because of that, <b>now I can deal with things doubting my views</b> in a positive way and <b>thinking "what if..."</b>	Suspend judgement, Perspective development (attempt)
Student (c)	After study abroad, I came to think of ways to talk to each other <b>in a considerate manner for others. I really stopped feeling "no way!" or "that's weird,"</b> but instead, <b>I started questioning "why" and deepening my cultural understanding.</b> Not only cultural things, I can see my persona change.	Consideration for others, Suspend judgement, Perspective development
Student (d)	I was able to <b>ask questions smoothly</b> during study abroad.	Promote critical behavior
Student (e)	By learning how to ask questions, I became <b>not hesitant to ask questions</b> to others.	Promote critical behavior
Student (f)	I was able to become <b>interested in cultures</b> , especially America and American nationality as a multi-ethnic country, and was able to <b>ask questions proactively.</b>	Arouse interest Promote critical behavior
Student (g)	Instead of making judgement only through my bias, <b>I think first before making judgement</b> to view things.	Suspend judgement
Student (h)	I stopped my self-conclusion. I <b>stopped my self-centered interpretation</b> such as <b>"maybe that's that, and started asking questions even about a small thing.</b>	Suspend judgement, Promote critical behavior
Student (i)	I became more <b>curious about other cultures.</b>	Arouse interest
Student (j)	Casual things can be totally different, so I <b>decided to be careful</b> of talking about it and started thinking that I want to learn how to <b>talk without leading to bias or prejudice.</b>	Consideration for others, Suspend judgement

Lastly, to understand the impact of the skill training, we conducted interviews 6 months after study abroad. The following interview of a student explains his/her personal transformation after training.

*'After coming back, I often had a chance to talk to international students in English during my club activity and often acted as a translator. I tried to explain about cultural things and I tried to take initiative to ask them about it. I asked about their preference of timing of taking a bath and ways to take one and tried to explain how 'time' is viewed here. I became like this because I learned it is better to think before making judgements during the pre-departure training. Knowledge of intercultural understanding also helped. Previously, when some members said they could not do a task because they were busy, I often assumed that it was an excuse because everyone is busy. But now, without assuming, I came to work with the person by asking and discussing other ways. My thoughts became flexible. I had a fixed thinking before, but now I stop a second and think.'*

## DISCUSSION

Our study employed Kirkpatrick's framework to evaluate if T (transfer)-focus pre-departure training led to expected SA outcomes, which is *perspective development by suspending judgement and seeking others' views by asking questions*. Asking cultural questions in English was set as the critical behavior (CB). IDI results showed T-focus training had significantly higher impact on attainment of SA outcomes than Non-T-focus training. Moreover, in showcase portfolios, 50 % of T-focus trainees indicated their attainment of outcomes by CB, whereas Non-T-focus trainees showed no evidence of practicing CB for the outcomes. The survey after T-focus training indicated a positive perception of training impact on SA outcomes. Lastly, open-ended responses revealed that T-focus training produced various perceived outcomes such as considering others and arousing interest, in addition to the expected outcomes.

The limitation of this study was its narrow focus, but this was to manage the complexity of SA outcomes and trace learning evidence. Moreover, Level 4 in Kirkpatrick model was not examined, which involves organizational impact. Thus, future research is needed to understand training effectiveness in other educational contexts. Despite the fact that our study is limited in its scope, our adaptation of Kirkpatrick's model in pre-departure training gave us a pathway to evaluate training impact of study abroad outcomes.

## CONCLUSION

In the field of study abroad, adequate preparation is necessary especially prior to intercultural experiences (Savicki, 2008; Deardorff, 2009), nonetheless, its effectiveness is rarely examined under complexity of assessing study abroad outcomes. Our study approached this issue by employing Kirkpatrick's framework and evaluated the impact of pre-departure training on study abroad outcomes. The findings from qualitative and quantitative analysis using different evaluation tools suggest our transfer-focused training impacted attainment of expected outcomes. Furthermore, we conclude Kirkpatrick's model is applicable in evaluating pre-departure training for study abroad outcomes. We believe our adaptation of Kirkpatrick's framework using ePortfolio systems can be utilized beyond study abroad settings, such as field trips, teaching internships, and many other programs which send students to a real-world experience after training. Future research is needed to examine organizational impact as Level 4.

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