

Encouraging Youth Action for SDGs by Enhancing Self-Efficacy: Insights from a Study Tour in Thailand

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Abstract—How can higher education effectively motivate young people to engage in environmental actions that contribute to the Sustainable Development Goals (SDGs)? A decade after the United Nations adopted the 2030 Agenda for Sustainable Development, awareness of the SDGs has grown rapidly in Japan; however, translating this awareness into concrete action remains a challenge. According to a 2019 survey by the Nippon Foundation, the proportion of Japanese youth who believe they can influence society is significantly lower than in other countries, reflecting a comparatively low sense of self-efficacy. To address this issue, a Japanese university, in collaboration with a Thai partner institution, organized an intercultural study tour on food security in Thailand in 2024. The program was designed to enhance students' self-efficacy through activities aligned with Bandura's four sources: enactive mastery experience, vicarious experience, verbal persuasion, and emotional arousal. Students engaged in joint learning with Thai peers and practitioners, deepening their understanding of sustainability and building cross-cultural partnerships. After returning to Japan, several students initiated environmental actions in cooperation with an organic farmer. Survey results and follow-up interviews revealed three key elements for promoting pro-environmental actions: (1) recognizing personal strengths and fostering psychologically safe learning communities, (2) engaging in experiential learning with role models from different cultural contexts, and (3) establishing post-program connections with local practitioners who share a common future vision. This study contributes to the design of intercultural Education for Sustainable Development (ESD) programs in higher education by clarifying mechanisms that enhance self-efficacy and sustain youth-led actions for sustainability.

Keywords—Education for Sustainable Development (ESD), Sustainable Development Goals (SDGs), youth engagement, self-efficacy, psychological safety, intercultural learning, higher education

I. INTRODUCTION

Ten years have passed since the 2030 Agenda for Sustainable Development was adopted by the United Nations General Assembly. Since then, diverse approaches have been taken in various fields across nations. In Japan, a survey conducted by Dentsu [1] targeted 1,400 people ranging from teenagers to people in their seventies, and revealed that 91.6 percent of the respondents answered that they had heard of the sustainable development goals (hereinafter referred to as Sustainable Development Goals (SDGs)). Compared to their first survey in 2018 (14.8%), it can be said that the SDGs have been rapidly gaining recognition in Japan. In particular, 72.4% of teenage girls and 58.5% of teenage boys answered that they understand not only the term but also the content. However, based on the survey on 218 university students, Isaka *et al.* [2] revealed that there was no difference in environmentally conscious activities between

environmentally highly conscious students and low conscious students. In the survey, there were some students' descriptions indicating that they don't know what effective actions to take, and that they believe personal actions are meaningless for the environment. Isaka *et al.* [2] suggested that environmental consciousness doesn't automatically lead to action, and that the question of how to link awareness to concrete actions remains a crucial issue for the future of Education for Sustainable Development (ESD).

Here, attention should be given to young people's sense of self-efficacy. Bandura [3] defined that Self-efficacy is the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations. According to the Nippon Foundation [4], only 18.3% of Japanese youth believe they can influence society—a figure significantly lower than in other countries. That is, in Japan, there is room for improvement in young people's self-efficacy. It can be said that environmental education considering self-efficacy would be effective in encouraging their environmentally conscious activities.

Regarding self-efficacy in the context of promoting environmentally conscious behavior, Tiwari [5] highlighted its influence. Furthermore, Jaewoo and Woonsun [6] emphasized that teachers' self-efficacy contributes to encouraging students' pro-environmental behavior. In addition, Zhang and Cao [7] demonstrated through quantitative research that the effectiveness of ESD depends on its ability to transform students' environmental attitudes, strengthen their self-efficacy beliefs, and foster supportive social norms. However, the number of studies addressing practical applications remains limited.

In light of this, the present paper aims to introduce students' behavioral changes observed during an environmental study tour, which focused on enhancing self-efficacy to promote environmentally conscious actions, from a qualitative perspective.

II. LITERATURE REVIEW

In designing the study program, the concepts of self-efficacy theory were taken into account. The term "self-efficacy" was originally proposed by Albert Bandura.

Artino [8] mentioned that since the publication of Albert Bandura's seminal article entitled "Self-Efficacy: Toward a Unifying Theory of Behavioral Change", countless researchers in the social and behavioral sciences have used self-efficacy to predict and explain a wide range of human functioning.

Bandura [3] defined self-efficacy as "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations". Bandura [9]

hypothesized that expectations of personal efficacy determine whether coping behavior will be initiated, how much effort will be expended, and how long it will be sustained in the face of obstacles and aversive experiences.

In addition, Bandura discussed the concept of efficacy expectations. Bandura [9] explained that “an efficacy expectation” refers to the conviction that one can

successfully execute the behavior required to produce desired outcomes, rather than merely estimating the behavior itself. He stated that expectations of personal efficacy are derived from four principal sources of information: enactive mastery experiences, vicarious experience, verbal persuasion, and psychological states (Bandura [9]). Each definition of four sources is as follows (Table 1).

Table 1. Four sources of self-efficacy

Sources of Self-Efficacy	Definition (Summarized according to Bandura’s definition)
Enactive Mastery Experience	Repeated successful performances that strongly influence self-efficacy beliefs.
Vicarious experience	Observing others succeed at a task, which strengthens one’s belief in their own ability.
Verbal Persuasion	Encouraging individuals through positive suggestions and feedback, which helps them believe they can succeed and motivates greater effort.
Emotional Arousal	Physiological and emotional states influence self-efficacy; reducing anxiety and maintaining a positive state can enhance confidence and reduce avoidance.

III. MATERIALS AND METHODS

A. Program Overview

The study tour focusing on food security, entitled “Food and Our Sustainability in Thailand”, was organized in 2024 by a Japanese university in collaboration with a Thai partner institution. This was a non-credit program conducted outside regular coursework. The tour aimed to deepen students’ understanding of sustainability from the perspective of food security, enabling each participant to explore ways to contribute to sustainable development. Eleven Japanese and eleven Thai students, chosen from applicants to reflect community diversity, participated (Thai students participated in both the online sessions and the Bangkok field trip).

The program comprised three phases: pre-trip sessions (two days/online and in-person), a field trip in Bangkok (nine days), and post-trip activities (two days/online and in-person).

This design was based on the expectation that students should begin with self-understanding as a foundation for developing self-efficacy toward environmentally conscious actions. Program activities were aligned with Bandura’s four

sources of self-efficacy—enactive mastery, vicarious experience, verbal persuasion, and emotional arousal (see Appendix).

For example, prior to the field trip, students engaged in self-assessment using a personal strengths diagnostic tool (Enactive Mastery Experience) and received positive peer feedback to foster psychologically safe relationships (Verbal Persuasion and Emotional Arousal). During the trip, they visited and interacted with pioneering practitioners in the field (Vicarious Experience) (see Appendix).

A one-day agricultural activity in Japan was incorporated as a post-trip initiative to promote real-world environmental action.

B. Methodology

Two questionnaire surveys were conducted for Japanese students: one in November 2023, prior to the field trip, and another in February 2024, after the field trip. The questionnaire focused on three main areas: self-understanding, intercultural understanding, and understanding of sustainability. Each domain included both Likert-scale and open-ended questions (see Table 2).

Table 2. Structure of the questionnaire

Component	Content	Relevant Self-Efficacy	Item Type
Self-Understanding	Degree of Understanding of one’s Personal Strength	Enactive Mastery Experience	Scaled (3point scale:0 = Not at all, 2 = Understand)
	How Personal Strengths are utilized for others	Verbal Persuasion	Open-ended
Intercultural Understanding	Degree of Understanding of Other Cultures	Enactive Mastery Experience	Scaled (28 items, 6 point scale; higher scores indicate greater understanding)
	Impressions of Thai People and Thai Culture	Vicarious Experience	Open-ended
Sustainability Understanding	Personal Contributions toward Sustainability of Food	Enactive Mastery Experience and Vicarious Experience	Open-ended

As part of the qualitative data collection process, semi-structured interviews were conducted with three students in June 2024, following the completion of the post-trip phase (see Table 3).

Before the survey, students were provided with an explanation of the study’s objectives and procedures. Informed consent was obtained for the use of their responses in research.

The open-ended responses were analyzed using the KJ method (Affinity Diagram), a qualitative technique for

organizing ideas into thematic clusters. This method was chosen for its ability to synthesize diverse perspectives into coherent themes. Responses were segmented into distinct meaning units, each representing a single idea. These units were labeled with concise descriptors and grouped based on thematic similarity. The grouping was refined to capture emerging themes related to students’ self-efficacy for environmentally aware actions. To enhance credibility, a second researcher independently reviewed the coding and

categorization. Discrepancies were discussed until consensus was reached. All analyses were conducted manually.

Table 3. Schedule of program activity and data collection

Program Activity and Data Collection	Schedule
Questionnaire Survey	Nov. 2023
Pre-trip Program	Feb. 2024
Field Trip	Feb. 2024
Questionnaire Survey	Feb. 2024
Post Trip Program	Apr. 2024
Semi-structured Interview	Jun. 2024

IV. RESULT AND DISCUSSION

A. At the End of the Fieldwork

1) Self-understanding

a) Self-assessment of understanding of personal strengths

To assess the degree to which students understood their personal strengths, they were asked to rate themselves using a three-point scale: “Do not understand at all” (0 points), “Somewhat understand” (1 point), and “Understand” (2 points). Prior to the program, two students reported having no understanding and eight students reported having limited understanding of their personal strengths. Following the field trip, all students reported that they understood their personal strengths.

b) Utilization of their own strength

In response to the question, “How do you utilize your personal strengths for the benefit of others?” nine students answered before the program with statements such as “I try to talk to various people” and “I try to involve everyone in conversations”, without referring to any unique personal strengths.

After the field trip, students were able to explicitly describe their strengths within the program, along with successful experiences that demonstrated those strengths, indicating an increase in self-efficacy. Additionally, comments from several students suggest that feedback from peers in both Thailand and Japan helped them become aware of strengths they had not previously recognized.

“My peers told me that I was good at encouraging others to share their thoughts. Since then, I have paid attention to this in conversations with others.”

“Previously, I focused on fixing my weaknesses. Now, recognizing my strengths helps me appreciate others’ positive traits.”

2) Intercultural understanding

a) Degree of understanding of other cultures

To assess the level of intercultural understanding, a 28-item questionnaire was administered on a six-point scale (1–6; maximum score = 168). Sample items included statements such as “I would like to become friends with international students” and “I would like to work abroad”. After the field trip, the average score increased from 118.5 to 129.1 (a mean gain of 10.6 points). Nine out of eleven students showed an improvement in their scores.

b) Impressions of Thai people and Thai culture

Prior to the program, all students characterized the Thai people as warm, kind, and cheerful. Regarding the country itself, two students who specifically mentioned Thailand described it as a Buddhist nation that places significant value on religious customs and traditions.

Following the field trip, their reflections converged around three key themes (see Table 4).

Table 4. Students’ reflections after the field trip

Open Coding	Response
Hospitality of People	“I was impressed by the Thai people’s kindness and thoughtfulness and decided to incorporate those qualities into myself.”
Passion of Practitioners	“Like them, I hope to develop my own strengths to contribute to a more sustainable society.”
Leadership of Thai Students	“I tried practicing their leadership myself and hope to continue doing so in Japan.” “I would like to incorporate their kindness and compassion into my own behavior.”

Overall, these comments imply that students deepened their understanding of Thai people and came to respect them as role models. The experience fostered intercultural learning and personal growth, particularly in areas such as altruism, sustainability, and leadership.

3) Sustainability understanding

a) Students’ perception about definition of sustainability

Before the program and after the field trip, students were asked to write about their thoughts on sustainability (see Table 5). They primarily perceived sustainability as an abstract concept related to environmental issues. Following the field trip in Thailand, they began to place greater emphasis on the notion of ‘connection’, increasingly highlighting the importance of relationships with others and the global environment in achieving sustainability.

Table 5. Students’ thought on sustainability

Time	Open Coding	Number of Respondents	Response
Prior to the Program	Consideration for Future Generations	5	“Acting with future generations in mind.” “Thinking from a long-term perspective.”
	SDGs	3	“Goals outlined in the SDGs.” “Target followed by corporations.”
	Environmental Issues	3	“Minimizing environmental impacts, including pollution and ecological disruption.”
After the Field Trip	Human Connections	6	“Connections between people are essential as a foundation to craft a sustainable society.”
	Circulation	3	“Sustainability is achieved through circulation, such as utilizing insects and microorganisms.”
	Sense of Ownership	2	“I was moved by the efforts of adults. I realized that I, too, have a role to play in making sustainability a reality.”

b) *Students’ reflections on their personal contributions to food sustainability*

Before the program and after the field trip, students were asked to reflect on how they could contribute to food sustainability (see Table 6).

When asked what they could do to promote food

sustainability, students initially cited reducing food waste, primarily out of concern for poverty. Following the field trip, their proposed contributions evolved to become more concrete and grounded in practical realities. Notably, one student who chose food waste reduction did so with a focus on environmental concerns.

Table 6. Ways to contribute to food sustainability

Time	Open Coding	Number of Respondents	Response
Prior to the Program	Reducing Food Waste	11	Prior to the Program “Since there are people in the world who suffer from hunger, I try not to waste food.”
	Farming	6	“Engaging in organic farming like Thai practitioners.”
	Sharing Information	2	“Sharing information such as advanced examples from Thailand.”
After the Field Trip	Recycling	1	“Making compost at home.”
	Reducing Food Waste	1	“To reduce greenhouse gas emissions, I avoid leaving leftovers.”

B. *After Post-Trip Activities in Japan*

In April 2024, two months after their return to Japan, 8 out of 11 students visited an organic farm in Kanagawa Prefecture, operated by Mr. S, an organic farmer and French chef who had given a lecture on sustainability during the pre-trip program. During the visit, students engaged in hands-on rice cultivation.

In June 2024, four months after the field trip, a group of students voluntarily formed a team. They began cover crop

cultivation as a climate action initiative and participated in farm support activities at Mr. S’s farm. Three students who formed the team were interviewed using a semi-structured format to explore their motivations (see Table 7).

Their comments can be summarized into three main themes: possibilities (such as the feasibility of sustainability initiatives, potential in Japan, and self-efficacy), the presence of peers (connections and enjoyment), and encounters with like-minded practitioners.

Table 7. Result of interview

Respondent	Response (to the question: Why did you decide to initiate this action?)
Student A	“The practitioners in Thailand who were engaged in advanced initiatives said they were learning from Japan. Meeting them gave me a new perspective—Japan as seen from Thailand—and helped me rediscover Japan’s potential.”
	“I have participated in four overseas programs so far, but this was the first time I became so close with my peers. Because I wanted to stay friends with them forever, I felt like trying something together.”
Student B	“The program taught me the feasibility of circular agriculture and the importance of contributing to society. I was inspired to become like those I met during the experience.”
	“I was inspired by Mr. S’s passion. I wanted to apply what I had learned in Thailand to a real-world setting—his farm in Japan. Moreover, since the fellows I met during the trip resonated with my idea, I decided to take on the challenge.”
Student C	“What made me happiest on this trip was making friends from both Japan and Thailand. I never expected we would become so close. I want to stay connected with them in the future. When some members said they wanted to try it in Japan, I decided.”
	“I used to think farm work was tough. However, when I participated in the agricultural work, I was surprised by how enjoyable it actually was. It was fun to work together with my fellows.”

C. *Discussion*

This study examined a case in which Japanese students engaged in experiential learning with Thai practitioners alongside Thai students, subsequently conducted activities in Japan after returning home, and autonomously initiated actions toward sustainable development after the program concluded. The findings suggest a coherent developmental trajectory from shifts in self-understanding and intercultural attitude to the internalization of sustainability as a personally meaningful and actionable domain. These changes are examined through the lenses of self-efficacy (see Fig. 1).

1) *Transformations in Learning*

Prior to the program, some students reported uncertainty about their personal strengths. By the end of the field trip, all students reported understanding their strengths, often articulating them with concrete incidents and citing peer feedback as an important catalyst. Notably, responses after the field trip revealed both self-recognition (e.g., identifying situationally demonstrated strengths) and socially mediated recognition (e.g., “I realized this strength through feedback

from peers”). This mutual recognition appears to have had a secondary effect: recognizing one’s own strengths seemed to ease the acceptance and appreciation of others’ strengths, thus facilitating more effective collaboration. In terms of self-efficacy theory, these processes are consistent with enactive mastery experiences—successfully deploying one’s strengths in real tasks—and positive affective arousal within a supportive peer environment, both of which enhanced self-efficacy and contributed to the formation of psychologically safe learning communities.

Students’ intercultural understanding also broadened. Before the program, impressions of Thai people tended to reflect widely circulated, media-reinforced generalities (e.g., “warm”, “kind”). After the field trip, students described specific episodes with Thai practitioners, Thai peers, and members of the public, articulating concrete, positive attributes and expressing a clear stance of learning from Thai people. These qualitative shifts—from abstract stereotypes to episode-based, person-specific understanding—suggest deeper cognitive engagement and perspective-taking.

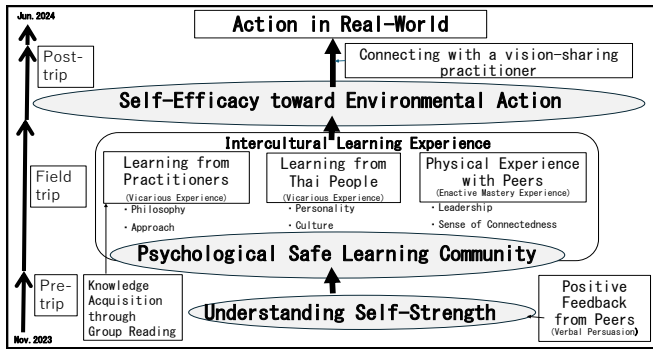


Fig. 1. Learning process in the case.

Students’ conceptualization of sustainability shifted markedly. Pre-program responses treated sustainability in conceptual and impersonal terms, with vague notions of agency. Post-field trip, students described sustainability through relational, cyclical, and self-related lenses (e.g., human connections, circulation, and sense of ownership). Correspondingly, their proposed contributions to “food sustainability” evolved from generalized, morally framed statements (e.g., “I should not leave food because some people are hungry”) to concrete, personal actions that clarified how their behavior could contribute to solutions. This transition from abstraction to actionable specificity indicates a movement toward ownership—i.e., “making compost at home.”

Interpreting these changes through self-efficacy theory, two sets of mechanisms are crucial:

a) *Within the peer community*

Enactive mastery occurred as students used their strengths in collaborative tasks.

Positive affective arousal (e.g., constructive peer feedback) reinforced confidence and created a psychologically safe learning community.

These mechanisms likely increased students’ self-efficacy, making them more willing to engage, take risks, and persist.

b) *Within the intercultural, practitioner-rich environment*

Learning from pioneering Thai practitioners provided not only passion but also concrete methods, enabling students to see that environmental issues are personally relevant and actionable.

Verbal persuasion came from Thai practitioners’ perspectives on Japan, which helped students discover Japan’s potential and appreciate the value of learning with counterparts from different cultures facing shared challenges.

Program conditions securing psychological safety and openness, thereby amplifying the impact of mastery experiences and persuasion.

Taken together, the intercultural setting did not merely increase motivation; it translated motivation into mastery experiences, which are the most potent and durable sources of self-efficacy. In this sense, the intercultural context appears to have operated as a catalyst that accelerated the conversion of interest into competence and commitment.

2) *Bridging to local action: From readiness to real-world engagement*

When students -already psychologically prepared- entered Japanese field sites led by local practitioners who shared a common sustainability vision, they engaged in experiential, enactive mastery within their home context. This step seems

crucial: it provides a clear pathway from learning to action, enabling students to test, adapt, and sustain behaviors in their daily lives. The continuity between intercultural learning and local engagement likely contributed to the persistence of pro-sustainability actions after the program.

Based on the changes observed, we propose three design principles for programs aiming to foster SDG-oriented action.

a) *Cultivating a psychologically safe learning community*

It emphasizes mutual recognition of strengths (self and others) and structured, constructive peer feedback.

b) *Integrating intercultural, practitioner-led role modeling*

Students learn both the why (values/passion) and the how (methods) from exemplars operating under shared challenges.

c) *Building sustained links to local practitioners with a shared vision*

It enables students to enact and iterate concrete behaviors in their home contexts, thus consolidating mastery experiences.

V. CONCLUSION

This case suggests that the combination of strength-based, psychologically safe peer learning, structured, condition-rich intercultural contact with practitioner role models and intentional bridges to local, vision-aligned practice can move students from abstract appreciation of sustainability to sustained, self-directed action. The mechanisms appear to run through the enhancement of self-efficacy—primarily via mastery experiences supported by positive social cues—within a climate of psychological safety fostered by thoughtful intercultural program design (see Fig. 2).

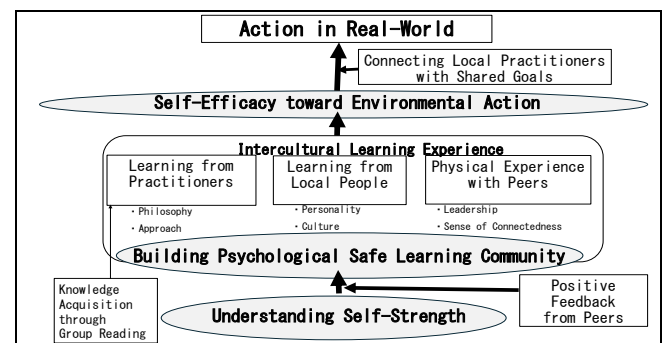


Fig. 2. ESD framework for self-efficacy and action.

In this case, learning in an intercultural environment stimulated students’ motivation for new learning. Allport (1954) stated in his contact hypothesis that when conditions such as equal status, common goal, intergroup cooperation, and support of authorities are met, intercultural contact enhances psychological safety and promotes an open attitude toward learning. This case aligns with this assertion, demonstrating that when the learning experience includes collaboration with practitioners and students from different cultural backgrounds who share the same challenges, it leads to richer learning with more diverse insights. The potential of intercultural exchange in promoting ESD deserves greater attention in future program design.

However, this study has several limitations. First, the sample was limited to 11 Japanese university students, and cultural or gender-related factors were not examined. Second, the data relied on self-reported measures and short-term reflections, leaving the long-term sustainability of behavioral changes unclear. Future research should involve larger and

more diverse samples, cross-cultural comparisons, and the integration of quantitative methods to validate these qualitative findings.

APPENDIX PROGRAM DESIGN WITH CONSIDERATION OF SELF-EFFICACY

Table 8. Program design with consideration of self-efficacy

Stage	Component	Contents	Description	Relevant Source**			
				E	V	P	A
Pre-trip	Self-Understanding	1. Reevaluation of their own Strength	Using the result of the StrengthsFinder® test, participants reevaluated their own past experiences.	✓			
		2. Discussion over each Strength	Listening to other members about their past experiences where they exercised their strength. In addition, they gave positive feedback to each other.			✓	✓
	Intercultural Understanding	3.*Thai Culture and Language (Online)	Thai participants taught Thai to Japanese participants in Zoom breakout rooms. The activity aimed not only to help participants understand the Thai language, but also to foster a sense of security.				✓
	Understanding sustainability	4. Book Presentation and Dialogue with a Practitioner	Participants presented a book on sustainability and received feedback from an organic farmer.		✓		
		5. A Lecture by a Practitioner	A lecture by an organic farmer who revitalized abandoned farmland.		✓		
		6. A site visit to a hotel	Participants visited a hotel in Tokyo, Japan that implements environmental management practices.		✓		
Field trip	Self-Understanding	7. *Discussion over each Strength	Listening to other members about their past experiences where they exercised their strength. In addition, they gave positive feedback to each other.			✓	✓
	Understanding sustainability	8. *Dialogues with Professionals	With Thai professionals such as a researcher of food security and a founder of international NPO focusing on food security.		✓		
		9. *Site Visits to Organic Farmers	Participants visited four organic farms that practice sustainable farming tailored to each environment and gained hands-on experience.	✓	✓		
	Intercultural Understanding	10.*Group Work	Each student group created digital content on condition that they report the importance of sustainable development to the younger generation.	✓	✓		
	Integration of three types of understanding	11.*Reflection	Participants reflected on their achievements during the field trip and discussed necessary measures to promote sustainable development. They also gave positive feedback on each member's strength. Finally, they set a personal goal for sustainability of each life.	✓		✓	
Post-trip	Self-Understanding	12.*Online Reunion Meeting	The follow-up session was held one month after the field trip. During this session, participants shared updates on their current situations and the progress of their individual actions. They encouraged one another to stay motivated and work toward achieving their personal goals.				✓
	Understanding sustainability	13. Hands-on Rice Cultivation Experience	This activity was carried out two months after the field trip as a practical step toward engaging in environmentally conscious actions.	✓	✓		

Note: *indicates activities that Thai participants participated in. **represents the four sources of self-efficacy. "E" for Enactive Mastery Experiences, "V" for Vicarious Experience, "P" for Verbal Persuasion, and "A" for Emotional Arousal.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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