Japanese Students' Patterns of Emotional Engagement in COIL Projects

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Collaborative Online International Learning (COIL) is a pedagogical approach that facilitates the collaboration of students and teachers in different countries on projects as part of their curriculum. This article introduces two five-week COIL projects conducted at a university in Western Japan, in partnership with two American universities, and focuses on Japanese students' emotional engagement during intercultural interactions. Engagement is viewed as a complex and multifaceted construct that also reflects the intertwined nature of language learning and intercultural experiences. The main objective of this study was to identify patterns of emotional engagement in COIL projects, using continuous reflection to examine how students' emotional responses evolved throughout their learning experience. Data was collected from pre- and post-COIL surveys, as well as from the students' learning diaries following the main stages of the projects. Findings revealed four patterns of emotional engagement that can guide teachers in supporting students' language and intercultural development.

オンライン協働学習（COIL）は、異なる国々の学生と教師が、それぞれのカリキュラムの一環として、共同プロジェクトに取り組むという教育手法である。本稿では、日本の大学が、アメリカの大学２校と連携して実施した、５週間にわたる　COILについて、異文化交流における日本人学生のエンゲージメントの、感情的側面に着目して分析する。エンゲージメントという概念を、言語学習と異文化体験の相互関連を反映した、複雑で多面的な構成概念と捉える。本研究の目的は、継続的な振り返りを通じて、学生の感情的反応が学習体験の過程でどのように変化したかを分析し、COILプロジェクトにおける感情的関与のパターンを特定することである」。COIL　実施事前・事後の調査と、プロジェクトの主たるステージを追った学生の学習日記から、データを収集した。その結果、学生の言語的・異文化的な成長をサポートする際の指導に役立つと考えられる、４つの感情的エンゲージメント・パターンが明らかになった。

The internationalization of higher education has been a goal of institutions worldwide for at least half a century, but it has mainly involved the mobility of an elite minority of faculty and students (Rubin, 2017). In Japan, efforts to promote internationalization have continued since the 1980s (Yonezawa & Yonezawa, 2016; JSPS, 2018), also focusing on increasing the elite minority of inbound and outbound students (Radjai & Hammond, 2024).

Developed by Jon Rubin at the State University of New York (SUNY), Collaborative Online International Learning (COIL) is a pedagogical approach that allows students and teachers in different countries to work together remotely on collaborative projects as part of their curriculum (SUNY COIL Center, 2020). The key characteristics of COIL are joint development of the COIL project by the co-teachers, in-depth collaboration between students over a 5-15-week period, authentic cross-cultural interaction opportunities, and synchronous / asynchronous online collaboration modalities (Rubin, 2022).

The COVID-19 pandemic accelerated the implementation of COIL in higher education worldwide (Rubin & Guth, 2022), as some institutions sought to replace their cancelled study abroad programs. After this sharp increase in the number of COIL projects, research into the contribution that COIL can make to the internationalization of higher education has followed (Finardi & Aşık, 2024; Radjai & Hammond, 2023; Wimpenny et al., 2022).

Although research on COIL and its implementation is growing (Rubin & Guth, 2022), studies on specific outcomes–especially emotional engagement–remain limited. This study focused on how Japanese students emotionally engaged with a COIL project using English for intercultural communication. It examined patterns of emotional response over time and how students navigated the project's demands and cultural learning through these emotions.

Literature Review

Numerous studies have highlighted the critical role of teachers' emotional support in fostering student engagement across all educational levels in traditional classroom settings (Jin & Wang, 2019; Liu et al., 2023; Yang et al., 2021; Zhou et al., 2023), but such insights are largely absent in the context of COIL. Cusen (2025), analyzing 18 COIL projects, also identified teachers' emotional support as a key factor for success. This support includes creating a stable environment with clear goals and expectations, offering positive encouragement, celebrating achievements, and offering emotional support to help students overcome challenges.

However, little research has explored students' emotional engagement specific to COIL projects (Li, 2024). Student engagement is widely recognized as a multidimensional construct encompassing behavioral, cognitive, and emotional dimensions (Reschly & Christenson, 2012). While behavioral engagement involves active participation in learning tasks and school life, and cognitive engagement relates to mental effort and the use of self-regulated strategies, emotional engagement pertains to students' feelings, such as interest, boredom, happiness, anxiety, and their sense of belonging within a school or subject (Fredricks et al., 2004, 2016).

Emotional engagement is crucial for educational success, fostering positive relationships with teachers and peers, promoting empathy, and enhancing self-worth (Ulmanen et al., 2016). Furthermore, Molinillo et al. (2018) highlighted the role of emotional engagement in active collaborative learning, where online collaboration facilitates communication, alleviates fears of face-to-face interactions, and builds trust within groups, thereby encouraging participation and improving outcomes.

Despite the aforementioned research into students' emotional engagement, longitudinal studies tracking how emotional engagement shifts throughout the duration of a COIL project are also lacking. This study sought to address these gaps by identifying and analyzing emotional engagement patterns in a COIL project.

Methodology

Teaching Context

The COIL projects outlined in this study were carried out at a university in Western Japan, in partnership with two universities in the United States. These projects were integrated into a mandatory, intensive English course for first- and second-year students. Classes met three times a week and the course instructor had significant control over curriculum design, allowing for the seamless inclusion of the COIL projects in the syllabus.

A total of 44 second-year Japanese students took part in the projects. Their TOEIC scores ranged between 685 and 895, with an average score of 750. Based on responses to demographic questions in the pre-COIL questionnaire, a unique characteristic of this cohort of students emerged. They had diverse educational backgrounds, which included public and private schools, as well as international schools in Japan and abroad, and short- and long-term study abroad experiences. All the participants gave informed consent, agreeing to the use of their reflective assignments for research purposes, with the assurance that their identities would remain confidential.

The projects unfolded in six stages (Orientation, Icebreaking, Teambuilding, Collaboration, Conclusion, Presentation/Reflection) based on an adapted COIL framework (Cusen, 2025). During the Orientation stage, the COIL project was introduced, the goals and expected learning outcomes were set, and technology training was provided. In the Icebreaking stage, students from both countries uploaded self-introduction videos to Padlet, establishing initial connections via comments exchanged below each video. During the Teambuilding stage, groups of 4-5 students (2-3 from each country) held Zoom meetings, and discussed intercultural topics to get to know each other better. The Collaboration stage involved Zoom group presentations on cultural and linguistic themes, followed by discussions. The Conclusion stage included exchanging thank-you videos. Finally, Japanese students reflected on their COIL experiences through a 5-minute presentation shared with their classmates in the Presentation/Reflections stage.

Data Collection

The data for this study was gathered through pre- and post- COIL questionnaires and guided reflection assignments that students completed during the COIL project. Of the 44 students involved, complete datasets were obtained from 36 participants. At each stage of the projects, students responded to comparable questions, giving them multiple chances to articulate their experiences and emotions, interpret their meaning, and reflect on their importance. Reflection was seen as "a process of thinking, evaluating, and making sense of existing experiences as well as planning for future experiences" (Chan & Lee, 2021, para. 2).

The pre- and post- COIL questionnaires included three questions that particularly focused on students' likes and dislikes and their feelings regarding interaction with people from other cultures and participating in the COIL projects. After interacting with their American peers during the three main stages of COIL, Japanese students submitted

learning diaries, which also included reflection questions on what they liked or disliked, and on their feelings during each experience (See Appendix). Students were required to answer all questions in English, and they were instructed not to use translation software.

Data Analysis and Interpretation

Reflexive thematic analysis (RTA) was employed to analyze students' reflections. RTA is a qualitative research methodology that allows researchers to develop, analyze and interpret patterns across a dataset (Braun & Clarke, 2012). Both authors identified a series of keywords describing students' positive and negative emotional responses. Positive emotional responses included keywords such as *excited* (*exciting*), *happy*, *fun*, *like*, *interested* (*interesting*), while negative emotional responses included keywords such as *nervous*, *anxious* (*anxiety*), *worried*, *frustrated*, *uncomfortable*, *dislike*, *hate*. These keywords were found throughout the data and used as a guide towards the development of themes. Based on the analysis, four patterns of emotional engagement in COIL were identified as follows: (1) linguaculture perception pattern, (2) task-specific pattern, (3) interpersonal interaction pattern, and (4) outcome perception pattern.

Results

This section describes each of the four identified patterns and provides samples of students' reflections. In response to the requirements and challenges of each project stage, students displayed a variation of the identified patterns.

Linguaculture Perception Pattern

We defined the linguaculture perception pattern as an emotional engagement pattern that highlights how students' awareness of linguistic and cultural differences impacts their emotional responses and engagement during COIL. The concept of linguaculture details the intricate relationship between language and culture. Shaules et al. (2020) argued that the integration of linguaculture in language learning can help students engage with the cultural nuances of a language, fostering a deeper understanding and appreciation of the target culture. This concept was chosen to define the most common pattern encountered in the data, and Table 1 shows two representative examples of this pattern.

Table 1

Linguaculture Perception Pattern Examples

Example 1	Example 2
"I could get not everything they said in the video due to my poor listening skill. Even if I understand English grammar on a paper, I can't catch what they say in a video. To understand it, I have to learn 'linking' which means that some sounds drop out."	*"When I interact with people from different cultures, I feel happy and a little nervous at the same time. It is because I'm worried that I'll get caught up in my own values and say something disrespectful to the other person. For example, people are often praised for their appearance in Japan, but I recently learned that this isn't very good overseas."*

The first example shows the student's awareness of the linguistic skills necessary for smooth communication. The student begins by expressing difficulty in following along with the conversation during the Zoom meeting and attributes this to their poor listening skills. This revealed an emotional response of frustration, but also a feeling of inadequacy. The reference to understanding grammar on paper but struggling with spoken language points to the student's developing awareness of the gap between academic knowledge and practical application. This is underscored by the fact that the student can identify one cause of their problems with listening comprehension, and formulate a solution, namely practicing the comprehension of "linking".

The second example highlights the student's emotional engagement with cultural differences and their awareness of the interplay between language and cultural norms. This student describes feeling both happiness and nervousness when interacting with people from different cultures. This mixed emotional response demonstrates the internal tension experienced during cross-cultural interactions in COIL. Moreover, recognizing the potential for misunderstanding is a critical aspect of the linguaculture perception pattern, as it requires reflection on one's cultural conditioning and its impact on interactions with others. The student also provides a concrete example, noting that praising someone's appearance is common in Japan, but may not be well-received in other cultures. This observation highlights their growing understanding of how cultural norms shape communication styles and appropriateness, reflecting an effort to adapt and respect cultural differences.

Task-Specific Pattern

The task-specific emotional engagement pattern involves students' emotional reactions to specific tasks in their learning experiences. The COIL projects in this study were organized based on project-based learning and teaching principles (Stoller, 2006; Stoller & Chandel Myers, 2020), which characterize a project as a series of tasks. The specific parameters of each task were designed to accomplish specific goals, and the data in this study showed that students exhibited strong emotional reactions to some of those specifications.

Table 2

Task-specific Pattern Examples

Example 1	Example 2
"To be honest, a self-introduction video was not what I wanted because I really hate putting pictures or videos online for people I don't know or don't get along with."	*"Actually, I hated the time when we waited to get a question in Spin Question. I mean i felt awkward during the spinning question. I think it's too long to wait, because we didn't talk about anything."*

In the first example, the student expresses a strong dislike for the task in the Icebreaking stage, specifically creating a self-introduction video. The phrase "I really hate" indicates a strong negative emotional response, highlighting the student's discomfort or anxiety about the task. In the second example, the student focuses on the mechanics of the task and expresses dislike for the waiting time in this specific activity, describing it as awkward and unproductive. Both quotes are clear examples of the task-specific emotional engagement pattern, where emotions are directly tied to the nature or mechanics of the tasks rather than the broader learning experience during COIL.

Interpersonal Interaction Pattern

The interpersonal interaction pattern emphasizes emotional engagement arising from collaborative and social interactions during the COIL project. Ulmanen et al. (2016) argued that the sense of belonging is a crucial constituent of emotional engagement. Researchers in previous studies explained emotional engagement as comprising experiences of belonging within the school community, including experienced relationships with teachers and peers, and the affective dimensions of learning and emotions towards school in general (Eccles et al., 1993; Fredricks et al., 2004). The current study refers to the interactions among peers, both Japanese and Americans, and the sense of belonging within their assigned COIL groups. The table below shows examples of how students interpreted their interpersonal collaborations and the impact that had on their emotional engagement.

Table 3

Interpersonal Interaction Pattern Examples

Example 1	Example 2
"I believe this third Coil Project provided a very valuable experience. My partner and I gathered every day to discuss and create our presentation, drafting scripts together and thinking how to make it effectively. Through this process, we were able to build trust and become close."	*"To be honest, I was really nervous to the COIL project at first becase I had almost no experiences to talk about something with American student in English but actually we had no need to worry about such things. The reason is that my coil partner has given me a lot of advice. They told me that there was nothing to worry about and that they would help me if I was in trouble. Those words saved me, and I was able to interact with American friends without feeling nervous."*

In the first example, the student highlights daily collaboration with their Japan-based partner to prepare their Japanese culture and language presentation. The process of discussing, drafting scripts, and strategizing together reflects active engagement in teamwork. The student conveys a sense of satisfaction and value derived from this experience. This reflects the emotional fulfillment gained from building trust, developing friendships, and engaging meaningfully with peers.

The second example demonstrates how emotional engagement arises through supportive relationships and collaborative interactions. The student begins by expressing nervousness about participating in the COIL project due to their limited experience communicating in English. The turning point for this student was the emotional support provided by their U.S.-based partners. This support highlights the transformative power of interpersonal interaction, as encouragement from peers can reduce anxiety and foster confidence. This supportive dynamic enabled the student to interact with American peers more confidently, shifting their emotional state from nervousness to comfort and ease.

Outcome Perception Pattern

The outcome perception pattern is characterized by a student's emotional engagement stemming from their perception of the personal or practical value of the COIL learning experiences. An established definition of learning outcomes is Adam's from 2004, as cited in Prøitz (2010, p. 129): "A learning outcome is a written statement of what the successful student/learner is expected to be able to do at the end of the module/course unit." Learning outcomes are often associated with teachers' desired results at the end of a project or course, but in this context, outcome refers to students' perceived learning outcomes at the end of the COIL project. The table below shows two representative examples of this pattern.

Table 4

Outcome Perception Pattern Examples

Example 1	Example 2
"I had participated in this COIL project and I got so proud of myself right now. Making the schedules for the meetings, making the presentation for the U.S. peers, and discussing with my partner for the meeting are really helpful when I became an adult and got a job. Even though these skills are usually necessary for people who get a job, I could make it and did these steps perfectly with my partner."	*"I feel this project to be a valuable experience for me. Making a presentation in front of U.S. students wouldn't have happened if I hadn't participated in this project. This experience will undoubtedly assist me when I begin working and have opportunities to present in English. Through this project, I became aware of my lack of English skill, motivating me to study English further."*

In the first example, the student expresses pride in their achievements during the COIL project, which indicates a strong positive emotional response linked to their success. The student connects the skills gained from the project–scheduling meetings, preparing presentations, and collaborating with a partner–to future professional applications. They recognize these skills as "really helpful" for adulthood and the workplace, demonstrating their perception of the practical outcomes of the COIL experience. By acknowledging their partner's role in achieving success, they suggest a shared sense of accomplishment, thus reinforcing the collaborative nature of the project.

The second example also highlights the student's emotional engagement derived from recognizing the personal and practical value of the experience. Preparing and delivering a presentation for U.S. peers is seen as a rare and meaningful opportunity, which the student links to their professional aspirations. This connection demonstrates their recognition of the project's relevance to real-world applications. This student also realizes their "lack of English skill," an honest self-assessment prompted by the project. Rather than discouraging them, this realization acts as a motivator, inspiring them to "study English further." This shift from self-awareness to action reflects positive emotional engagement through goal-oriented reflection.

Shifts in the Patterns

The continuous reflection process starting from the pre-COIL questionnaire, continuing through the three learning diaries and ending with the post-COIL questionnaire, facilitated a deeper understanding of students' learning journeys. As shown in Table 5, the key characteristic of the way the emotional engagement patterns presented in the data was its fluidity as the students worked their way through the demanding tasks of the COIL projects.

Table 5

Example of Shifting Patterns

Instrument	Examples	Patterns
Pre-COIL Questionnaire	*"It's fun to learn about cultures and ways of thinking that have inherited different histories and traditions from mine."*	Outcome perception pattern
Learning Diary 1	*"I hate posting photos or videos, so I disliked the process of filming the video and post it."*	Task-specific pattern
Learning Diary 1	*"I felt it was difficult to communicate with other language. There is a video which difficult to comment because I couldn't express my thoughts in English."*	Linguaculture perception pattern

Instrument	Examples	Patterns
Learning Diary 2	*"I don't have any particular point I like or dislike about interacting on zoom. But if I had to say, my peer had to share the roulette screen, I made my peer a co-host, but I had a little trouble because I had the wrong settings on my zoom."*	Task-specific pattern
Learning Diary 3	*"It was fun. I felt I had a great time to learn more about US. I got to know my peers better and made the meeting meaningful."*	Outcome perception pattern
Post-COIL Questionnaire	*"It was fun that I could experience unusual experiences I don't do usually which communicate with the American students in online meeting."*	Outcome perception pattern

By analyzing this student's reflections, a clear arc emerged. In the beginning of the project, they showed excitement and an anticipation of having fun learning about a different culture. However, following the first two stages of the project, the student expresses mainly negative emotions in response to the challenging tasks and the newness of interacting online in a structured fashion. After the Collaboration meeting, which the student perceived as successful, they returned to a more positive outlook, but this time it was more defined and focused on the authentic experiences during the COIL project.

Discussion

This study detailed the emotional engagement of students participating in a COIL through continuous reflection, revealing a range of positive, negative, and mixed emotional responses tied to their learning activities, environment, and social interactions. These findings contribute to the growing understanding of how emotional engagement impacts student experiences in intercultural and online collaborative settings.

Emotional Engagement Dimensions of Students' Learning Journeys

Emotional engagement was found to be closely tied to self-awareness, cultural awareness, and linguistic development. Students recognized how their emotions influenced their ability to engage with tasks, adapt to intercultural contexts, and navigate language barriers. This self-reflection not only illuminated their struggles but also highlighted growth in their confidence and competence.

Johnson et al. (2020) highlighted the link between emotional engagement, self-awareness, and cultural adaptation in international students' learning, supporting our study's findings. Their argument that emotions influence task engagement and intercultural navigation aligns with patterns observed in our data, reinforcing the importance of emotional engagement in personal and academic growth.

The interconnected nature of emotional engagement patterns emerged as a critical finding of this study. For example, shifts in linguaculture-perception patterns, such as overcoming frustration with understanding spoken English, often led to improved outcome perceptions, such as increased pride in their achievements. These interconnections underscored the complexity of emotional engagement, demonstrating that changes in one area can cascade into others, enhancing or hindering overall engagement. Delving into the emotional experiences of second language learners of Chinese, Chang & Haugh (2017) also emphasized the emotive aspects of intercultural communication. Their study found that learners often experience emotional dissonance when reflecting on intercultural interactions, which in turn affects their communicative competence. This emphasized the complex interplay between emotional engagement and the development of intercultural and linguistic skills, which is also reflected in the interconnections found among the identified patterns in this study.

Dynamic and Evolving Emotional Patterns

The study revealed that emotional engagement patterns are dynamic, with notable shifts over time. As students gained proficiency, adapted to tasks, or built stronger interpersonal relationships, their emotional responses often transitioned from negative or mixed to more positive. Such shifts suggest that emotional engagement is not static but evolves in response to changing internal and external factors throughout a COIL project. These factors include the students' skill development, the structure of the tasks, and the quality of social interactions within COIL.

These findings support the view that learners' emotional responses shift as they develop proficiency, adapt to tasks, and form relationships (Wang et al., 2024). Sulis (2024) similarly emphasized that engagement is dynamic, context-sensitive, and evolves over time through learner–environment interaction. Our study reinforces these perspectives within the unique context of online intercultural collaboration.

Conclusion

The patterns identified in this study revealed the intricate, multifaceted construct of emotional engagement in a COIL context. The main objective here was to explore how continuous reflection reveals students' emotional responses during COIL projects. Data was collected through pre- and post-COIL surveys and learning diaries completed throughout key stages of the project. Given the lack of longitudinal studies on emotional engagement in COIL, this study aimed to identify emerging patterns over time.

RTA was employed to analyze students' reflections. From the data analysis, four different patterns were identified. The linguaculture perception pattern is characterized by an emotional response to linguistic challenges tied to cultural nuances, a growing awareness of how language functions differently in cultural contexts compared to formal learning, and the development of adaptive strategies to bridge linguistic and cultural gaps. Educators can support their students by fostering an environment where they can explore these differences without fear of judgment, encouraging both cultural self-awareness and sensitivity to others' perspectives. The task-specific pattern shows the importance of understanding students' individual preferences and emotional boundaries when designing tasks. Educators can also help mitigate negative emotional engagement by offering alternative ways for students to complete tasks, while still meeting the learning objectives.

The third pattern identified was the interpersonal interaction pattern. This was characterized by emotional engagement through collaboration. By working together to achieve a shared goal, students fostered trust, rapport, social connections and friendships. This enriched the learning experience and created a supportive environment. By fostering an environment that prioritizes interpersonal interaction, educators can enhance students' emotional engagement and create more meaningful learning experiences. The outcome perception pattern emphasizes the importance of helping students link learning experiences to meaningful, long-term benefits. To foster this pattern, educators can highlight the transferable skills students will gain from tasks, emphasizing their relevance to real-world contexts, and provide opportunities for students to reflect on their accomplishments and recognize their growth. By aligning tasks with students' future aspirations and offering platforms to celebrate their success, educators can strengthen students' emotional engagement.

This study highlighted the importance of continuous reflection in understanding emotional engagement within COIL. The findings demonstrated that emotional engagement patterns are fluid, interconnected, and influenced by a range of dynamic factors. Using these insights, future educators can better support students' intercultural and linguistic development, ultimately creating a more inclusive and effective learning experience.

Bio Data

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Appendix

Pre- and Post-COIL Survey Questions

Pre-COIL Survey Questions	Post-COIL Survey Questions
What do you like/ dislike about interacting with people from different cultures?	What did you like/ dislike about interacting with the American students?
How do you feel about interacting with people from different cultures?	How did you feel about interacting with American students?
How do you feel about participating in this COIL project?	How do you feel now about having participated in this COIL project?

COIL Learning Diaries Questions

COIL Stages	Learning Diaries Questions
Icebreaking	1. Is there anything you particularly liked or disliked about interacting on Padlet during the icebreaking activity? 2. Overall, how did you feel about your first interaction with your U.S. COIL peers?
Teambuilding	1. Is there anything you particularly liked or disliked about interacting on Zoom during the teambuilding activity? 2. Overall, how did you feel about your second interaction with your U.S. COIL peers?
Collaboration	1. Is there anything you particularly liked or disliked about this type of collaboration? 2. Overall, how did you feel about your third interaction with your U.S. COIL peers?