"Learn *with* the world" through CLIL

—Possibilities and Challenges of Virtual Exchange for Future Teachers—

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1. Introduction

This article will describe how a project of a Virtual Exchange (VE) organization called International Education and Resource Network (iEARN, pronounced *I earn*) was integrated into a 15-week Content and Language Integrated Learning (CLIL) English course in fall 2021 at a university in Japan. The course included future elementary school teachers and the project was designed specifically for future educators in the United States, Argentina, and Japan. The article also reports Japanese student outcomes of the VE, measured using a simple post-course survey and written reflections, and discusses the potential uses and challenges of VE through iEARN and CLIL as part of training for future teachers in Japan.

2. Virtual Exchange, iEARN, and CLIL

There appear to be several terminologies used to describe intercultural learning activities based on technology involving teachers and groups of students in different places, such as Virtual Exchange (VE), Telecollaboration, eTandem, Online Intercultural Exchange (OIE), Computer Assisted Language Learning (CALL), and Collaborative Online International Learning (COIL) (O'Dowd, 2018; O'Dowd & O'Rourke, 2019; Dooly & Vinagre, 2022). Activities that have commonly been used for language learning have also evolved separately in other disciplines, and so there has been an effort to agree on a unified terminology among researchers where "VE appears to be set as the most recognizable term, at least in the EU and the USA" (Dooly & Vinagre, 2022, p. 393). O'Dowd (2018) states that VE "involves engaging students in online task-based interaction and collaborative exchange projects with partner-classes in other locations under the guidance of

their teachers" (p.232). While he points out that research and practice of VE in CLIL contexts fall short, he discusses its benefits based on research from other contexts and concludes "it is clear that online intercultural collaboration initiatives can have an important role to play in achieving the goals of CLIL" (p. 238). He also describes three VE organizations, one of which is iEARN.

International Education and Resource Network (iEARN) is a non-profit organization with an online network connecting over 30,000 schools and youth organizations across 140 countries so that they can participate in any of 100 or more active global projects for K-12 students, to "Learn with the world, not just about it" (iEARN, n.d.)

Established in 1988, iEARN's Constitution preamble reads: "The vision and purpose of iEARN is to enable young people to undertake projects designed to make a meaningful contribution to the health and welfare of the planet and its people" (iEARN, 2003). This vision is reflected in each of its projects. Projects are proposed and facilitated by teachers and students, and iEARN (2021) states that each project must answer the question, "how will this project improve the quality of life on the planet?" (p.1). Now, iEARN projects are aligned with the United Nations Sustainable Development Goals.

iEARN projects focus on authentic 21st century themes (e.g., environment, equality, peace). While projects take on different pedagogical forms, iEARN guides teachers in Global Project-Based Learning (PBL) (iEARN, 2014). Kurita (2020) explains that in iEARN's Global PBL, participating students have common goals and tasks, and share final products. The aim is for students from diverse cultures and perspectives to contribute to the health and well-being of the planet and its people by creating new communities and values through iEARN's Global PBL projects.

Another notable aspect of iEARN is its Project Framework (iEARN, 2020). It identifies three Common Components and five Student Outcomes of iEARN projects. The components are shared as a guide for project facilitators and educators to help achieve the following student outcomes:

1. Connect with and become part of a global community.
2. Develop and use communication skills to connect with diverse audiences.
3. Develop openness and respect towards people from other cultures and perspectives.
4. Take collaborative action to make meaningful contributions to their local and global communities.
5. Develop a culture of caring for each other and the planet.

These five outcomes appear to be associated with the Global Competence (GC) model defined by the Organization for Economic Co-operation and Development (OECD) (2018) for The Programme for International Student Assessment (PISA). Rensink (2020) introduces specific examples to show how iEARN projects are related to competencies identified in the GC model. "Through iEARN programming, students acquire these important 21st century skills and global competencies, allowing them to communicate ideas, recognize other perspectives, and take action while connecting their learning to real-world issues" (p.15). Sakamoto & Takizawa (2022) discuss the relationship between iEARN outcomes and the GC model in historical detail and provide a holistic insight into the connection with the ultimate goals of CLIL— to nurture 21st century skills and global competencies.

In designing VE in CLIL courses, O'Dowd (2018) suggests "Principles for the Design and Implementation of Virtual Exchange Projects" as follows:

● Virtual exchanges should involve a gradual introduction to online intercultural interaction.
● Virtual exchanges should involve CLIL tasks which go beyond superficial self-presentation and exchange.
● Teachers should assume an active role in the

Virtual exchange.
● In Virtual exchanges, cases of intercultural communication breakdown are considered opportunities for learning.
● Integrate your virtual exchange into the class and the syllabus. (pp. 234-237)

iEARN projects used by Japanese teachers in their respective educational contexts are reported in the annual online journal published by JEARN, the Japanese centre of iEARN (JEARN, 2022). Specifically for future teachers, Shimizu (2022) reports the use of the 'Youth Project' to have his students support local elementary school teachers in the integration and practice of a project. This teaches future educators the practical skills they will need to implement the project in the future and provides support for current elementary school teachers. This, however, is not part of a CLIL-based course.

A few CLIL practitioners in Japan have provided valuable insights into how iEARN's Global PBL is not only aligned to CLIL principles, but can be integrated into CLIL lessons with elementary school children and/or with university students who act as supporters of K-12 students (e.g., Sakamoto, 2021; Tsuda, 2022; Sakamoto & Takizawa, 2022). A CLIL text book also introduces how iEARN projects can be integrated into CLIL lessons (Machida & Takizawa, 2019).

As pedagogical approaches, iEARN's Global PBL and CLIL appear to combine well, based on limited examples involving elementary school children, their teachers, and future teachers in a supportive role. The following sections will introduce how an iEARN Global PBL project, uniquely for collaboration among future teachers, was integrated into a CLIL course.

3. iEARN's Global PBL for Future Teachers

iEARN's project, "Future Teachers-Knowing Our Students; Knowing Ourselves (KOSKO)" is designed specifically for students who want to be teachers. It was launched in 1999 and "seeks to transform our classrooms and schools by transforming the way teachers are trained. Future teachers gain direct experience with global learning networks as they engage in dialogue with their peers about teaching in the

21st century" (iEARN, 2021, p.7). Facilitators provide organizational support and partner university professors with future educators. In line with iEARN's Global PBL, a project on a real-world issue for future teachers was initiated and designed by partnered educators.

4. The CLIL and Global PBL Course

The purpose of having students participate in an iEARN project was to foster global competence and one of the class goals was to experience intercultural encounters and collaborative work with future educators of another country. Following are the details.

4-1 Class Context

The iEARN project was integrated into the fall 2021 course syllabus of a 90-minute weekly CLIL English communication course for students in the department of Education and Child Development. Of the four third-year students, three were studying for elementary school and middle school English teaching licenses. English proficiency levels for two of the students based on the Common European Framework of Reference for Languages (CEFR) were approximated at CEFR B1 and the other two at CEFR A2. None had studied or lived overseas. The class took place almost exclusively online because of the Covid-19 pandemic, and only two face-to-face classes were held during the semester.

4-2 iEARN Project Design

The fall 2021 VE CLIL course was based on a previous fall 2020 project (Hasegawa, 2021, 2022). The iEARN project facilitators introduced me to a U.S. Professor of elementary and special education, with expertise in the areas of learning disabilities, language learning, global learning, and teacher education. This partner helped guide and lead the collaboration, which designed a project on inclusive education, launched in fall 2020 that worked within the framework of SDG 4 Quality Education, especially Target 4.7, Education for Sustainability and Global Citizenship, and Target 4.5, Eliminate all Discrimination in Education. Students were required to answer the driving question, *What is a Dream School of the Future?* and to share the final product in the form of an advocacy message promoting their dream schools founded on the principles of global

and inclusive education.

For fall 2021, the theme of inclusive education, the driving question and final product assignment remained the same, but new activities for international teams were created as we welcomed a Professor from Argentina, a teacher educator specializing in education technology. The five Global PBL phases of the Future Teachers (FT) Project are presented in Table 1, including a final post-VE phase for Japanese learners only. The bracket below each Phase in the table indicates the Japanese university course week. Due to the timing of the course, Argentine students did not participate in the final part of the project, but they were an integral part of Phases 1, 2, and 3-1.

Table 1 FT Project by Global PBL Phase and Course Week

Phases	*What is a Dream School of the Future?*
Phase 1 (1-3)	Introduction -Virtual meeting 1
Phase 2 (4-7)	Global Interviews 1. Peer (each international group) 2. Inclusive education experts
Phase 3 (8-10)	Special Education Discussions 1. ICT Lesson Plans 2. Autism (US-JP only)
Phase 4 (11)	Final Project Presentations (US-JP) -Virtual meeting 2 + iEARN forum
Phase 5 (12)	Final Reflection (US-JP) -iEARN forum
Post-VE (13-15)	Consolidation of learning -Reflection using Autobiography of Intercultural Encounters (AIE) -iEARN and Japanese education -Describing Global PBL -Reflecting on language development

The 15-week CLIL course integrating five Global PBL phases is organized in the 4Cs framework (Coyle et al., 2010) in Table 2. In brief, the key subject matter was inclusive education with related subtopics as listed (Content). Students worked on technical words and concepts e.g., *neurodiversity* or *neurotypical*, sentence structures and language by genre in English, but translanguaging (Sasajima, 2020, p.33) was also systematically introduced; in particular, a Japanese book was required reading to support subsequent exchange tasks with U.S. partners (Communication).

The project question, *What is a Dream School of the Future?* drove learning and thinking processes, accompanied by a set of questions for every task, that routinely urged students to think deeply and share opinions with each other (Cognition). Students were required to collaborate in both global and local teams, while learning about a global topic and consolidating them to create and advocate a dream inclusive school for the local community (Culture / Community).

Students were required to write weekly reflective journals, a final report, and to finish all the tasks for each project phase.

Table 2 Organization of course in CLIL's 4Cs Framework

CONTENT	**COMMUNICATION**
Inclusive Education -iEARN -iEARN's Global PBL -UN SDG 4 target 4.5, target 4.7 -Multilingualism -Autism	-Language of, for, through learning -translanguaging -sentence structures -weekly reflective journals -genre: poem / emails
COGNITION	**CULTURE / COMMUNITY**
-driving question: *What is a Dream School of the Future?* -set of questions per global task (e.g., Appendix I)	-global team (US, AR, JP) -local team (classmates) -overseas expert interviews -communities of autism -autobiography of intercultural encounters

4-3 Activities by Phase and Course Week

Throughout all phases, students wrote weekly reflective journals, noting content and language learning separately. They received corrective feedback using codes before the next class. Students subsequently corrected their previous journal when submitting their next one. The journals were also used as starter activities where students used them as prompts for oral discussions, meaningful interactions, and fluency development. Other activities by phase were as follows.

Phase 1 (week 1-3) Introduction. In the first two weeks of class, students were introduced to iEARN and iEARN's project for Future Teachers. They prepared *I am from…*, a poem describing a person's origins and what are dear to them, for use in the first live virtual meeting. Virtual meeting 1 kicked off the project through zoom. Students from all three countries in three different time zones were grouped into 16 international teams, set up to work together in Phase 2. Each group met in breakout rooms and shared *I am from…* poems to get to know each other.

Phase 2 (week 4-7) Global Interviews. Each international team was given two global interview tasks. One was to interview each other and the other was to interview one of 16 experts in the field of inclusive education in various parts of the world. This was made possible by the extensive network of inclusive education and Special Educational Needs (SEN) experts of the U.S. and Argentine professors and the cooperation of a Japanese ICT educational contents manager at *eboard*. For the expert interview, students first needed to discuss within their groups which questions they would ask, and how, who, and when to contact and interview the expert. They would then conduct the interview, share questions, and summarize answers in the iEARN online forum created especially for our project by the facilitators.

Students worked in their international groups as needed; class time was spent updating each other on the progress of group projects. Areas of uncertainty among students in the international groups were addressed by discussing, interpreting, and thinking about possible solutions and specific actions to take using genre appropriate language, including for emails and Instagram. We also discussed subject matter readings in class. Students began reading the original Japanese book of *The Reason I Jump* (Higashida, 2007/2013), written by the author who is autistic. This homework reading provided background and enhanced learning for an English language film which students were asked to watch for subsequent exchange tasks in Phase 3.

Phase 3 (week 8-10) Special Education Discussions. There were two tasks in Phase 3.

Phase 3-1 (ICT). The Argentine students developed Instructional and Communication Technology (ICT) English lessons for students with SEN, and posted them with videos describing their lessons. U.S. and Japanese students chose two project lessons and offered feedbacks addressing a) the

strengths and weaknesses and b) how the selected lessons might be perceived in U.S. or Japanese contexts. The exchange took place in the iEARN online forum.

Phase 3-2 (Autism). U.S. and Japanese students watched the documentary film, *The Reason I Jump* (Rothwell & Higashida, 2021) of people with autism around the world. The students were given a set of 8 discussion questions and they were required to answer at least two (see Appendix I). The opinions were handed in, returned with feedback, and then posted on the iEARN online forum to share with partners. Students were also required to respond to two other partner opinions that were shared in the online forum.

Class time was spent discussing phase assignments, reading partner student comments, and answering them. Students then began to focus on their final product, a collaborative creation as one Japanese team. Draft ideas were presented in class for discussion and final scripts and materials were developed for final presentations.

Phase 4 (week 11) Final Project Presentations. U.S. and Japanese students met for a second virtual meeting. All groups presented their *Dream Schools* that advocated for inclusive education. Initial questions by the audience were posted on Jamboard. Each proposal was also shared in the iEARN forum, for students to answer any questions and to add comments to two other *Dream School* proposals.

Phase 5 (week 12) Final Reflection. Japanese students wrote reflections on the intercultural exchange based on the same questions as U.S. students (see Appendix II). These were handed in once for feedback, and then posted online for U.S. students to read. In class, we read forum comments for the Japanese team presentation, exchanged thoughts and impressions of the global intercultural exchange, and discussed final assignments.

Post-VE (week 13-15) Consolidation of learning. Students were asked to read the questions and write their Autobiography of Intercultural Encounters (AIE), an initiative by the Council of Europe "designed to encourage people to think about and learn from intercultural encounters they have had either face to face or through visual media such as television, magazines, films, the Internet, etc." (Council of Europe, 2022). We discussed the values and other features of AIE; to maintain privacy, we did not discuss specific content

written by students. There was also a final assignment to consolidate learning, focused on iEARN and its possible use in Japanese education, Global PBL, AIE, and personal language development. Students had to submit a draft, orally present their understandings and opinions in class for discussion, then submit their final written paper.

5. iEARN Student Outcomes

To see if students had achieved the expected outcomes identified in the iEARN framework, an original post-course survey of 18 questions was developed; 16 of these were based on various iEARN post-project surveys that focused on the five outcomes associated with OECD's (2018) GC model. There were three open questions, and 13 questions to be answered on a 5-point Likert scale (see Appendix III). All four students took the survey after the course.

The results of the survey were positive. No negative answers ("strongly disagree" or "disagree") were recorded. All answers were either "agree" or "strongly agree" apart from two questions related to communication (Q12a, Q13) that were answered "neither" by one student each.

In addition, three open answers from this post-survey and three open answers from Phase 5 Final Reflections were reviewed. Related survey questions and key comments from open answers are organized and summarized below, under each of iEARN's five student outcomes.

iEARN Student Outcome 1: Connect with and become part of a global community

One student chose "agree" and three "strongly agree" for both "I have increased my knowledge and interest in global issues" and "I am now more aware of the connection between personal, local, and global issues." Students commented that the best part of the course was to connect with U.S. and Argentine students. "I was also grateful that I could create and present the idea of dream school in Japan and got many positive comments from other students." "I would like to learn more about English and social issues around the world based on the various things I learned in this class." "By sharing not only education but also other things on a global scale,

we can learn each other's good points and build a good future."

iEARN Student Outcome 2: Develop and use communication skills to connect with diverse audiences

All answered either "agree" or "strongly agree" for confidence in the four skills of English. One answered "agree" and three "strongly agree" to "I explored ways to communicate my ideas effectively to diverse others." They also came to realize that English is useful. "I can communicate by speaking English, even if the languages are different." Other comments were on the need to "take courage and tell them you don't understand" or "brush up the attitude of not giving up and persevering to communicate." More profoundly, "I learned that the important thing in communication is not to learn a language, but to respect each other."

iEARN Student Outcome 3: Develop openness and respect towards people from other cultures and perspectives

Students commented on positive learning about inclusive education from other countries, and that new ideas could be formed from different perspectives. One answered "agree" and three "strongly agree" to "I learned something positive about people from a different country that I did not know before participating in this course" and two "agree", two "strongly agree" for "I recognize my own perspectives and other people's perspectives more." "Because languages and cultures are different there are new discoveries like thinking about something you'd never even thought of. I learned 'difference' is not bad, in fact it's good." Students were also made aware of a difference in how Japan addresses SEN

iEARN Student Outcome 4: Take collaborative action to make meaningful contributions to their local and global communities

There were two "agree" and two "strongly agree" for both "I can apply what I've learned to improve conditions of my local and global communities" and "I can take action on a global issue," and three "strongly agree" and one "agree" to "I can collaborate with others to address challenging global issues." One commented

that they would like to communicate the good parts of both overseas and Japanese education as someone who will be involved with education. All wanted to spread and/or embrace the concept of *neurodiversity* in their future educational capacities.

iEARN Student Outcome 5: Develop a culture of caring for each other and the planet

No post-survey question related directly to this fifth iEARN global competence outcome, but there were expressions of satisfaction from teamwork developing the final product, appreciation for the thoughtfulness and cooperation from others—"What surprised me most through this project was the kindness of students from other countries"—and words of care for inclusive education and how they could help to improve environments for all children with needs.

6. Discussion

The post-course survey and written reflections observed through iEARN's five outcomes related to global competence, indicate positive gains in each expected outcome among course participants. Future teachers experienced a rich intercultural encounter that deepened their learning on the theme of inclusive education through iEARN's Global PBL and CLIL. They perceived their language skills to have improved and appear to have developed awareness and appreciation for intercultural communication and collaboration.

Future teachers gained new knowledge related to the topic of study, inclusive education. *Neurodiversity*, for example, was a new concept they encountered and used as a core concept for their dream school. In learning about inclusive education in other countries, they experienced different perspectives on the same topic, causing them to reflect on their own context and to question, for example, the educational environment for children with SEN in Japan. These experiences renewed their motivation for their future role, such as the desire to "spread neurodiversity" or to imagine what they could do in their future classrooms to make them more inclusive.

They also discovered the usefulness of English. This realization was perhaps reinforced by their interactions

with Argentine students whose native language is also not English. As one student said, it is so obvious, but if you have never had the opportunity to use English in an authentic situation, perhaps it is not so obvious. For future teachers of English to have this understanding is significant arguably essential for Japanese education.

Students also experienced communication breakdowns. One of O'Dowd's (2018) principles mentions that breakdown of communication in an intercultural setting is a learning opportunity. The project included a phase for students to work in international groups where they encountered anxiety and difficulty of communicating in English. However, they found ways to overcome these problems through mental perseverance, alternative ways to communicate, and caring support from partner future educators. These situations are invaluable learning experiences. They also resemble something the students were studying— novel communication strategies by people with autism and their families, where sometimes these strategies are successful and sometimes they are not. Intercultural communication breakdown, in a safe and controlled environment with systematic support by teachers, can help prepare future teachers for authentic intercultural exchanges they may organize for their future students.

Although this report is based on one limited experience, it indicates possible important global competence gains, significant for future teachers who will be nurturing the next generation of globally competent students.

Regarding the role of CLIL teachers who are considering integrating VE into their teaching, O'Dowd (2018) has much to advise through the principle, "Teachers should assume an active role in the Virtual exchange" (p.236). During Phase 2, students were in their respective groups simultaneously and I was unable to get first-hand knowledge of the dynamics of each group. It took time in class, especially in the learners' L2, to try to clarify an intercultural interaction that I had not witnessed. Although we could have used Japanese to quickly understand the situation, it was interesting that the students hardly ever chose to switch to their native language to resolve the question. Class time was prioritized, therefore, to address potential communication breakdowns in students' L2, but this was sometimes at the expense of other planned class

content. Consistent with O'Dowd's advice to teachers, the students did need considerable linguistic support, because of the frequent, authentic situations in which opinions were exchanged for the tasks. Also, in order to avoid unintended misleading or insensitive statements online, students were asked to submit written work before posting their opinions on the iEARN class forum.

As a CLIL language teacher, I found that this was an ideal situation, working with 'content' teachers, whose expertise in the subject of inclusive education brought richness and depth to the CLIL course. iEARN's Global PBL provides not only an opportunity for online intercultural exchange and growth for students, but also for teachers. When I lacked experience in specific subject areas, I encouraged students to ask their professors of Education and Child Development; it was difficult to practice "all teachers are content teachers" (Ikeda, 2016, p.25), but through the partnerships developed in this project, the language teacher also developed greater content expertise.

7. Conclusion

The article introduced a case study of a Virtual Exchange that integrated a 15-week CLIL English communication course with iEARN's Global PBL for future teachers. The project, *Dream School of the Future*, was designed by educators in the United States, Argentina, and Japan that required future teachers to work together on multiple tasks to create a final product that advocated inclusive education.

Student self-analysis using an original post-course survey based on iEARN's five student outcomes and the final student reflections on the intercultural exchange indicated positive experiences in each of the five student outcomes associated with OECD's (2018) GC model. For future teachers, it was an occasion to gain new knowledge and different perspectives, and to reflect on their own context. They also had first-hand experience of overcoming language barriers and feeling the usefulness of language and the importance of communication. Finally, they gained a renewed and refined understanding of their future roles in education.

This is a unique case study, narrowly focused on one established VE organization, iEARN, and a Global PBL project designed specifically for future teachers,

integrated into a CLIL English course. However, hopefully it demonstrates the benefits of including such VE experience for future teacher training and the potential uses of iEARN for CLIL. The indications of gains related to global competence are promising and significant for future teachers who face the challenges of fostering responsible global citizens in today's complex world. I hope that Virtual Exchange for future teachers will be positively acknowledged and pursued, to "learn *with* the world" through CLIL.

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Appendix I
Phase 3-2 Autism Discussion Questions

1. How are families with autistic children included in their communities? in their schools?
2. How is communication portrayed in the film?
3. What systemic factors contribute to exclusion and marginalization
4. What do you imagine in the future for neurodiverse students?
5. What do the families (and film director and author) want us to know about autism?
6. How do you connect with the families as human beings?
7. Why does this film matter to me? my community? the world?
8. What more do you want to know? What do you want to do next?

Appendix II
Phase 5 Final Reflection Questions

1. What did you value about our intercultural education projects? why?
2. What surprised you about our intercultural education projects? why?
3. What next steps could you do as students/future teachers and global citizens?

Appendix III
Post-Course Survey Questions

Open answers:
1. What did you enjoy most in [name of course]?
2. What was most challenging in [name of course]?
3. What did you learn most in [name of course]?

Five-point Likert scale answers:
4. I have increased my knowledge and interest in global issues.
5. I am now more aware of the connection between personal, local, and global issues.
6. I recognize my own perspectives and other people's perspectives more.
7. I explored ways to communicate my ideas effectively to diverse others.
8. My perceptions about people from other countries/cultures have changed.
9. I learned something positive about people from a different country that I did not know before participating in this course.
10. I have developed team-work and collaborative problem-solving skills.
11. I have developed ICT skills (e.g., using SNS, Zoom, developing PowerPoint slides, recording on Flipgrid, etc.)
12. Regarding my English communication skills
    a) I am more confident in my English presentation skills.
    b) I am more confident in my English speaking skills.
    c) I am more confident in my English listening skills.
    d) I am more confident in my English reading skills.
    e) I am more confident in my English writing skills.
13. I am more open to using English to research topics on the internet.
14. I can apply what I've learned to improve conditions of my local and global community
15. I can collaborate with others to address challenging global issues.
16. I can take action on a global issue.