

Title: Food as a vehicle for successful inter-cultural communication among college students: Collaborative Online International Learning (COIL) in food and nutrition courses

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### **Abstract**

This case study examines how food may play a role in enhancing inter-cultural communication and collaboration through a food-related COIL project among students who are enrolled in food and nutrition courses in two different countries. Students taking a semester-long nutrition course at a university in California and students in a culinary art course in Ecuador worked in groups to complete a Food Product Analysis and Development project. The project focused on Ecuadorian food products, and most of the COIL activities involved examination of food.

A qualitative evaluation revealed that food played an important role in enhancing inter-cultural communication and collaboration in different ways. First, food was an effective ice breaker and a tool for team building. Second, food also played a role in learning about culture and identifying similarities between the two cultures in a unique way. The project gave Ecuadorian students the opportunity to showcase their own culture, which provided them with a sense of pride. Among American students, learning about the history and consumption of food that was foreign to them sparked their curiosity about Ecuador. Finally, experiential learning through food, such as cooking and tasting food, appeared to help students keep motivated about the project and make the group project more enjoyable. Our findings suggest that food may be used as a vehicle for inter-cultural communication and global competency in higher education. Further research is needed to effectively evaluate learning outcomes of food-related COIL projects. The importance of developing interdisciplinary, community-based food-related COIL projects is also discussed.

Key words: COIL, higher education, food, culture, experiential learning

Wordcount: 4,027

## **Introduction**

Since the COVID-19 pandemic, higher education across the globe has shifted toward online communication, adopting a wide range of digital technologies as substitutes for in-person interaction (Borger, 2022). Collaborative Online International Learning (COIL) is a new virtual educational approach to connect two university courses together from around the world to build students' inter-cultural competence (De Castro et al. 2019). Using digital technology, COIL allows students to virtually interact with other students from different parts of the world while being in their home countries (SUNY COIL 2020). Research has demonstrated that intercultural learning experiences enhance student success and cultural competency (O'Brien et al. 2019) and increase social and communication skills through collaborative learning. Skills and knowledge that college students gain through COIL are crucial for successful professionals who work with clients and stakeholders from diverse backgrounds. The COVID-19 pandemic appeared to popularize COIL in higher education and has been identified as a relatively inexpensive approach to a multicultural learning experience among college students (Vasquez and Ramos 2022). Furthermore, COIL via a decolonized approach has shown to be effective in discussing equality in a meaningful way among South African and European students rather than an inexpensive and easy tool for inter-cultural communication (DeWinter & Klamer 2021).

While COIL appears to be an effective strategy for increasing cultural competency among college students in general, there is little discussion about strategies for developing a successful COIL project. Our previous research evaluated students' perspectives and learning experiences of COIL among college students taking nutrition or food courses in the United States and Ecuador (West et al. 2022). Research revealed there were significant pre to post changes in cultural competency among study participants. The majority of study participants reported that they were highly satisfied with the COIL project and that collaborative learning through COIL helped them achieve good academic performance (West et al. 2022). Food was the center of the project. American and Ecuadorian students together implemented a Food Product Analysis and Development project which focused on Ecuadorian food products (e.g. quinoa, hominy, potato, cassava, plantain and cacao). Considering the roles of food plays in inter-cultural connection (Wenzel 2016), it is possible that food played a vehicle for connecting students and helping them understand other cultures in this particular project. To date, there is limited information about roles of food in projects such as COIL that aim to foster inter-cultural communication among college students.

## **Course Curriculum**

This case study examines how food may play a role in enhancing inter-cultural communication and collaboration through a food-related COIL project among students who are enrolled in food and nutrition courses in two different countries. This project was approved by the Institutional Review Board at California State University, Chico.

Using online technology, the project aimed to provide students with opportunities to collaborate and learn from one another through COIL as part of their coursework. As the course instructors in the field of food and nutrition, the first and second authors implemented a COIL project for four semesters. Students taking a semester-long nutrition course at a university in California and students in a culinary arts course in Ecuador worked in groups to complete a Food Product Analysis and Development project. The project focused Ecuadorian food products (e.g. quinoa, hominy, potato, cassava, plantain and cacao). COIL activities consisted of an ice breaker, team building, food product analysis and development, and group reflection. English was used as the common language for

communication. Bilingual U.S. students were encouraged to help facilitate conversations during Zoom meetings if communication became challenging.

Most of the COIL activities involved examination of food at different levels. For an ice breaker, each student made a one-minute video describing three food/beverage items related to their life experience. Food was also used to understand the country and culture. American students developed open-ended questions for Ecuadorian students in order to better understand the history of the Ecuadorian food product, where the food item was grown and consumed in Ecuador. In addition, American students developed questions about how globalization has affected farmers, consumers and other Ecuador stakeholders. Ecuadorian students developed their questions for American students about how the product is found in the US market, ways of consuming the product in the United States, and US consumer perceptions of the product. Using Zoom breakout rooms, students learned from each other by discussing questions from each group. After first presentations about their assigned food product via Zoom, American students conducted research on nutrition issues in Ecuador. Both American and Ecuadorian students collectively came up with a “global dish” as part of nutrition education targeted to a specific population in Ecuador. American students made a flyer, Ecuadorian students made a cooking video, and they jointly presented their products. American students were encouraged to watch those videos, cook global dishes and taste them together. The final event entitled “Cultural Feast” took place in the classroom where five global dishes were shared among American students.

American students experienced an additional Zoom activity about chocolate with the second author, who is a chocolate specialist in the field of gastronomy. The chocolate activity covered the history of chocolate, hands-on sensory evaluations of four types of chocolate from different parts of the world, and concepts of commodity, equity and fair trade.

### **Qualitative Evaluation**

Our previous quantitative study (West et al. 2022) indicated that students effectively collaborated with their international colleagues through COIL and gained cultural competency. The study also showed that students had high satisfaction with the COIL project and gained new cultural perspectives about their courses. Building on our previous study findings, the current qualitative evaluation study was conducted to identify possible roles of food in the COIL project, as well as gain a better understanding of project improvement and expansion. The third author, who is an undergraduate senior and a nutrition major, served as an external evaluator of the project. Eleven qualitative in-depth interviews were conducted with students who participated in the COIL project in the spring of 2022. Six students from the United States and five from Ecuador participated in the study. A semi-structured interview guide was developed to ensure that the interview covered specific questions and themes derived from literature related to COIL, as well as our previous study findings (West et al. 2022).

The interviews were conducted and transcribed by the third author, and the accuracy of the transcripts was verified by the first and second authors. QDA Miner Lite, a qualitative data analysis software program, was used for data management and analysis. The transcribed data were coded using thematic analysis (Braun et al. 2006). A code book was developed and the themes emerging from the analysis were examined, compared, and synthesized across the interviews by the authors.

Qualitative interviews revealed common challenges such as language and communication challenges via Zoom as opposed to in person, as well as challenges related to group work. For example, it was harder for students to manage turn-taking compared to in-person, and some students stayed silent or less engaged. Nevertheless, it was clear that focusing on food in the COIL project facilitated better inter-cultural communication and understanding between students from two universities.

Five themes emerged from data analysis, including food as a common ground, food to address similarities and differences in cultures, food can tell stories about diversity, understanding food systems, and experiential learning through food.

### **Food as a common ground**

Both American and Ecuadorian students agreed that food was used effectively as an ice breaker for the COIL project. After all students posted their videos about food on Padlet, the second author facilitated a 50-minute zoom meeting to further discuss the connection between them through food. Participants noted that food served as a good conversation starter topic and helped them to connect each other.

“The thing that made it unique with food is that it doesn't matter where you're from, or like your backgrounds. Doesn't matter if the dishes are different or like the ways of making them are different. Everybody understands what, like, having dinner with someone that you care about is important. So it [food] was like a common ground for everyone. Everybody had something to say about it.” (Ecuadorian student)

“I mean, food, it's just a great way to bring people together. Yeah. It's gonna be different whatever country you're in. So, it was definitely a good, like equalizer to talk about differences and like, “Wow, that's so interesting.” (US student)

### **Food to address similarities and differences in cultures**

The project gave Ecuadorian students the opportunity to showcase their own culture, which provided them with a sense of pride. Among American students, learning about the history and consumption of food that was foreign to them sparked their curiosity about Ecuador. Students also noted that food was a good vehicle for addressing differences between cultures as differences in food cultures were something interesting instead of threatening. For example, Latinx students in the U.S. discovered similarities and differences between their own cultures and the Ecuadorian culture through food. For example, while cassava is consumed in both Ecuador and Mexico, the traditional dishes made with differ between the two countries. In general, students noted that there are other themes that can be controversial and they would feel awkward to bring them up, but they could express their ideas more freely about food.

“We are like the same but also different. And you know, sometimes we would talk about something, some type of food with them. They wouldn't know what it is, and we'd explain it to them. And they would be like, oh, yeah, we have that. But it's called something else, you know, so we would be eating the same food, and sometimes it was completely different. You know, like, they've never heard of it.” (US student)

### **Food can tell stories about diversity**

Students in Ecuador also noted that food can tell stories about diversity in the United States. They had pre-conceived notions of Americans who often eat American fast food such as hot dogs. However, one of the students commented that the US group was ethnically diverse. Thus, their perceptions of Americans or the American culture were changed through stories about food by students with diverse cultural backgrounds.

“Focusing on food] is gonna be something that opens doors. Yeah. So, all around the world, people eat, and food is really interesting because you can learn like how they use that product in some places... It was not a US culture, but also people from other parts. For example, there were Mexican and also people from Asia. So, all of their experiences combined, tell you different stories.” (Ecuadorian student)

### **Understanding food systems**

Another theme that emerged from the interviews was that food can help understand culture better in relation to food systems. Understanding food requires understanding complex food systems that are made of sub-systems such as production, processing, distribution, acquisition, and preparation before consumption. A US student who was in the Cassava/Yuca team didn't know much about cassava and noted that investigating cassava was more than understanding the food.

“Focusing on a food tells me a little bit more about their lifestyle as well. When we were discussing cultivating yuca, I got to learn about their agricultural techniques, transportation, and like from farm to table.” (American student)

The student noted that researching cassava sparked a deeper interest in learning about Ecuador and its culture.

### **Experiential Learning**

In the COIL project American students were encouraged to watch the cooking videos made by Ecuadorian students, prepare international dishes at home, and bring them to the classroom. The culminating event, called the “Cultural Feast,” was held in the classroom, where five global dishes were shared among the students. Experiential learning was well received by students. Participants noted the importance of cooking and tasting food products in addition to discussing them. During interviews, some American participants noted that they enjoyed cooking and tasting the final global dishes. Some Ecuadorian students, who were Culinary Arts majors, noted that they would have liked to see a video of American students trying the final global recipes and describing their sensory experience. When asked about possible ideas about expanding COIL project outside of the classroom, they noted that having students on campus try their foods and using videos and flyers for social marketing were popular ideas. One American student noted the following:

“If we all did a presentation or an event, it would be perfect because the items [global dishes] that we all made, everyone in class was very excited to try it. So, I feel like if we were able to do that but make it more involved with the school people who would be interested in trying it and learning about other cultures and stuff like that.” (American Student)

### **Discussion**

Research has shown the importance of eating and sharing food in societies (Danesi 2011). In multi-cultural societies, cultural food plays important roles in bridging food-related cultural capital (e.g. healthy eating habits) among different cultural group (Roche et al. 2015). Food can also play a role in bonding among members of a cultural group and possibly excluding other cultural groups (Roche et al. 2015; Wenzel 2016). At the same time, food may be used to create opportunity for dialogue and possibly interpersonal pathways to greater inter-cultural connection (Wenzel 2016). This concept can be applied to inter-cultural communication and learning among college students. To date, there is limited information about the use of food for intercultural communication in higher education. Findings from our qualitative study, as well as the authors' observations, suggest that food may play an important role in enhancing inter-cultural communication and collaboration among students in different ways. First, food was an effective ice breaker and a tool for team building. It was easy to initiate conversations about common favorite foods and get to know others through new cultural

foods. Second, food also played a role in learning about culture and internalizing it in a unique way. For example, through food, Latinx students in the U.S. discovered similarities and differences between their own cultures and the Ecuadorian culture through food. The project gave Ecuadorian students the opportunity to showcase their own culture, which provided them with a sense of pride. Among American students, learning about the history and consumption of food that was foreign to them (e.g. cassava or plantains) sparked their curiosity about Ecuador. A COIL project between the UK and South Africa revealed that students experienced surprising similarities between them through music (Dewinter 2021). This indicates that common interests, such as food and music, can be effectively used to build trust between students from two different cultures.

Finally, experiential learning through food, such as cooking and tasting food, appeared to help students keep motivated about the project and make the group project more enjoyable. Experiential learning through food has been effective in the field of higher education. For example, Barlett (2011) argues that learning in farms and farmers markets may deepen students' understanding of sustainable food systems among college students. Research by Ozorak (2013) revealed that college students who were enrolled in courses on food and hunger in society made changes in their lives as a result of experiential learning through site visits to local farms, markets, and a soup kitchen. Research has also shown the effectiveness of experiential learning through food in various outcomes. For example, experiential nutrition interventions with an emphasis on hands-on activities such as gardening, cooking and sensory evaluation have shown positive influences on participants' eating behaviors (Verman et al 2021; Condrasky et al. 2010; Chen et al. 2014). Specifically, experiential learning through multicultural foods increased students' appreciation of new foods and recipes from diverse cultures (Chen et al. 2014). Our case study highlights the importance of experiential learning through food in increasing inter-cultural communication among college students. We argue that when any food-related projects are implemented in higher education, experiential learning through food is a powerful way of enhancing students' learning.

The current study examined how food may play a role in enhancing inter-cultural communication and collaboration through COIL. Our study findings indicate that a food may be used as a vehicle for inter-cultural communication or collaborative learning in any discipline in higher education. American students were enrolled in a General Education nutrition course and almost all of them were non-nutrition majors with limited knowledge of nutrition. Just like the one-minute food video, food can be used for short activities for communication tools such as an ice breaker or for team building. Food can also be used to initiate a conversation about a specific topic relevant to their disciplines. Coupled with sensory evaluation activities, chocolate was used in our class to address globalization and fair trade.

Finally, our findings suggest that food cultures can be discussed to embrace diversity and differences. While higher education promotes diversity and inclusion, students may feel uncomfortable with initiating a discussion about diversity. Some students may be afraid of saying something that may be interpreted as discriminatory. Further research is needed to identify and determine effective ways of using food in various disciplines in higher education.

## **Conclusion**

The COVID-19 pandemic appeared to popularize COIL in higher education and has been identified as a relatively inexpensive approach to a multicultural learning experience among college students (Vasquez and Ramos 2022). Based on our findings and reflection, there are several recommendations for future research and practice. First, there is limited information about COIL evaluations. Little is known about possible learning outcomes of food-related COIL projects, as well as assessment methods. The current case study attempted to explore and identify some of the possible outcomes of COIL, such as global competency, through the use of food. Li and Xu (2016) state that global

competency consists of global knowledge, global skills, global attitude and global experience. The next step might be to further theorize and concretize food-related project's roles in each element of global competency. We believe that it would contribute to developing more systematic and effective COIL projects for global competency. Second, there are limited COIL projects that have addressed culture, diversity and equality in a global context (DeWinter & Klamer 2021). DeWinter and Klamer (2021) argue that English is still the dominant language for COIL projects that involve non-English speaking countries, and it is important to develop co-equal, decolonized, and Africanized COIL projects. While our COIL project appeared successful using food as a tool to initiate conversations about culture and diversity in a fun and safe environment, diversity and equality in a global context was not discussed through food. Using the framework by Roche et al (2015), future COIL projects may examine how food can also play a role in bonding among members of a country and possibly bridging countries. Finally, based on our findings and the literature, we emphasize the importance of experiential learning through food in increasing inter-cultural communication and global competency among college students. COIL encourages interdisciplinary partnerships (SUNY COIL 2020), which means that instructors of non-food related courses can partner with food-related courses such as nutrition, food science, culinary arts and agriculture. Furthermore, experiential learning through food is particularly effective when involving community organizations such as farms and soup kitchens. Interdisciplinary, community-based projects require innovation and extensive partnerships. Further research is need to develop, implement and evaluate effective interdisciplinary food-related COIL projects that involve community partnerships.

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