

## Building career skills through virtual exchange

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### Abstract

As globalization expands and interactions between people increase around the world, organizations need individuals with skills that are not only acquired from traditional curricula. Furthermore, the World Economic Forum has noted that, by 2025, 97 million new jobs will be created with the need for soft skills such as leadership, intercultural fluency, and teamwork. Therefore, higher education institutions may need to develop high-impact pedagogies with internationalized curriculums that bring results beyond classrooms and articulate the link between internationalization and employability. Business educators identified these career success skills through a virtual exchange project known as Collaborative Online International Learning (COIL) in two pairs of courses, Thailand-USA and the Netherlands-USA. Students from Queens College, City University of New York in the U.S. ( $n=54$ ), Assumption University in Thailand ( $n=22$ ), and The Hague University of Applied Sciences in the Netherlands ( $n=19$ ) engaged in a shared assignment across borders through COIL. Using discussions, questionnaires with a five-point Likert scale, and regression analysis, authors discovered that, by using virtual exchange in higher education instruction with an innovative COIL project that included intercultural communication, students build competencies that employers seek. Students specifically enhanced their ability to speak publicly (oral communications), to interact respectfully with all people (intercultural fluency), and to identify their strengths relevant to career goals (career management). The objective of this study is to encourage university leadership to promote and prioritize COIL in order to increase content knowledge and employability.

### Introduction

With today's challenges, employability is the center of higher education strategic planning. According to the National Association of Colleges and Employers (NACE, 2020), which surveyed 150 organizations from New England, the Southwest, the Southeast, the Rocky Mountain/Far West, the Plains, the Mideast, and the Great Lakes in the United States, across 22 industries and varying market shares, the percentage of employers that screen candidates by grade point average or area of study has decreased by 10%. Employers valued attributes that were not gained from traditional curricula (Deming, 2017). They were seeking skills on a candidate's resume or in an interview that showcased how broadly prepared a college graduate was for a successful transition into the workplace. NACE (2020) noted that these skills that reflect career readiness competencies are (1) *Critical thinking*, (2) *Oral/written Communications*, (3) *Teamwork*, (4) *Information Technology Application*, (5) *Leadership*, (6) *Professionalism*, (7) *Career management*, and (8) *Global/Intercultural fluency*. Outside the United States, the European Commission stated, in UNESCO's Declaration of Incheon (2015), "People need the right set of skills and competences to sustain current standards of living, support high rates of employment and foster social cohesion in the light of

tomorrow's society and world of work." UNESCO noted that internationalization of learning was a global trend, particularly due to technology-enabled cross-border academic access. By incorporating this opportunity into higher education, the European Commission recognized that employability of graduates could be enhanced by fostering these skills that enable graduates to participate actively in labor markets. However, literature suggests that, although higher education institutions acknowledge the need to include employability into syllabi, academics are skeptical as it is sometimes viewed as an invasion on academic freedom and diminution of academic standards (Gunn & Kafmann, 2010). The reason for this hesitation may be due to the conviction that academia educates within a branch of knowledge for lifelong learning or future study rather than preps graduates for immediate employment. Furthermore, in order to integrate career readiness competencies that are relevant after graduation into course syllabi, faculty has to collaborate with educational technologists, administrators, and career coordinators which requires additional professional workload that may not complement tenure or promotion. Their concern can be addressed by incentivizing technology-enabled learning and by promoting high-impact pedagogy (Kahn & Agnew, 2017). Recognition and reward systems could support faculty that use innovative tools in their curricula that focus on building specific professional skills. Therefore, this article demonstrates how business educators identified dominant career readiness competencies by utilizing technology to engage students across borders through an innovative virtual exchange project known as Collaborative Online International Learning (COIL).

## Theoretical background

### Global exchange, Global skills

As Altbach and Knight (2007) indicate, globalization and internationalization, although related, are not the same. Globalization includes the economic, political, and societal forces while internationalization includes global policies and practices of academic institutions (Altbach & Knight, 2007). As globalization integrates world economies, the World Economic Forum discovered that the need for Data/Artificial Intelligence (AI) and People/Culture is expanding (WEF, 2020). The workforce is quickly automating while displacing 85 million jobs by 2025 (WEF, 2020). However, the World Economic Forum also noted that, by 2025, 97 million new jobs will be created with the need for soft skills that AI cannot replicate. In a developing world, the value of abilities such as leadership, intercultural fluency, and teamwork will likely increase in order to manage AI. Pursuant to Pew Research Center's 2016 survey, respondents believed that, although technology may outperform humans, AI would not be able to duplicate creative human skills in diverse environments (2017). These respondents saw education as a medium that could develop these competencies to prepare people to work alongside AI. Among the findings from the National Academies of Sciences report (2017), experts recommended changes in educational environments for future labor force, "The education system will need to adapt to prepare individuals for the changing labor market." Therefore, there is a growing demand for employees with certain skills, such as the ability to work in teams, adapt to change, and understand behaviors. According to Deepa and Seth (2013), as workplaces become diverse and teamwork becomes common practice, such abilities have become indispensable. The authors note that "75% of long-term job success depended on people skills and only 25% on technical skills" (p.9).

One essential competency is *intercultural fluency*, i.e., the ability to interact respectfully with all people and understand individuals' differences (NACE, 2020). "Understanding the cultural ways behind behavior," is essential, according to Gardenswartz, Cherbosque, and Rowe (2008), as "it helps people recognize a wide array of norms that exist around the world, from how people communicate to how they participate in meetings" (p.4). To train students to become interculturally aware, many institutions organize exchange programs, such as study abroad with universities worldwide. Although this is a valuable experience, many students cannot afford to participate in such exchanges because they do not master English well or they lack financial resources (Guimares et al., 2019). Therefore, universities are attempting to make internationalization more inclusive by offering opportunities to gain *intercultural fluency* at home. This idea of internationalizing at home could be in various forms such as integrating global perspectives into the curriculum (Kahn & Kahn, 2017), creating local opportunities for student engagement with international organizations, fostering engagement with international students, or

including online work with partner universities. Another approach to gaining this important skill can be through collaborative online learning. Lock and Redmond (2021) studied online collaborative learning over a 12-year period and found that, when online discussion engaged in real world issues that related to today's diverse classrooms, an organic environment emerged and a community (one that respected values, customs, etc.) was fostered. This indicates that communication between classrooms develops *intercultural fluency* through the use of technology and collaboration.

Although implementation of internationalization across institutions and countries is varied, data clearly indicates that when international components exist in a curriculum (Withanachchi, 2020), when students are mobile (Beelen & Jones, 2018), and when cultural diversity is understood (AU, 2019), then employability increases. A study conducted at Queens College (QC), the City University of New York, found an interesting outcome when a global perspective was included into the discipline. According to this study of 524 QC alumni over two decades, findings revealed that, out of the 74% who did not study abroad, a globalized curriculum increased the probability of them being employed full-time by 69% and increased their first job wage by 11.5% (Withanachchi, 2020). This indicates that if an international component is embedded within a curriculum, career success could be positively influenced. Despite such outcomes, the concept of internationalization has traditionally been on mobility. In the Netherlands, several studies prove that student mobility helps students acquire employability skills (Beelen & Jones, 2018). The European Commission has brought student mobility to the center of agendas and institutions have included such effects in higher education policies (UNESCO, 2015).

However, according to Van Gaalen and Gieslen (2016), between 2003 and 2013, an average of only 22.6% of Dutch graduates had been internationally mobile. To make up for this loss of opportunity for the 77.4% of students who stayed home, many higher education institutions explore other forms of internationalization, such as foreign lecturers, international projects, or intercultural modules. An example of such implementation is the online delivery of education. This model could be a student enrolled at a foreign university while "at home" or in another location, such as Dutch students studying in Belgium or German students studying in the Netherlands (Beelen & Jones, 2018). Such domestic experience has been shown to be valuable in building useful intercultural knowledge with positive effects on student learning and career outcomes (Rubin, 2017). This increased attention is not limited to the West, it is also gaining traction in the East. For example, in Thailand, internationalization is incorporated differently. Thai international university programs refer to those using English as the medium of instruction to necessitate global economic trends and upward socioeconomic mobility. Such efforts to internationalize higher education in Thailand show a quantitative growth in programs and an increase in job placement (AU, 2019). However, despite a growth in these programs, graduates do not recognize the importance of professional skills as complements to knowledge gained within a discipline.

A survey of recent graduates from the Martin de Tours School of Management and Economics (MSME) at Assumption University (AU) of Thailand indicated that English communication and understanding of cultural diversity were ranked among the lowest skills from a students' perspective on the curriculum (AU, 2019). Therefore, institutions need to articulate the link between internationalization and employability. UNESCO's (2015) interviews and case studies found that employers perceived a lack of systematic higher education institution practice that promoted employability. Instead, there seemed to be an irregular good practice at individual faculty or departmental levels (UNESCO, 2015). As employers recognize the importance of human competence in diverse environments, universities need to invest in resources that encourage curricula innovation towards career success.

### What is COIL?

While several institutions internationalize their curricula with international students and lecturers, others have explored other innovative methods through technology. For example, Dai's study (2019) on how intercultural knowledge can be enhanced in a technology-enabled learning environment identified that, while all undergraduate students formed cultural-specific knowledge, some students built deep cultural knowledge and insightful cross-cultural interpretations. The execution of a sustained, technology-enabled person-to-person interaction between individuals or groups from different cultural backgrounds could be broadly defined as virtual exchange (O'Dowd, 2018). Virtual exchange has evolved over the last

three decades in different contexts and terminology such as telecollaboration, online intercultural exchange, collaborative online international learning (COIL), globally networked learning, etc. (O'Dowd, 2018) and different online group-based projects such as X-Culture (Taras & Ordeñana, 2015) and Globally Distant Multicultural Teams (Osland, et al., 2004). The COIL approach was developed at the State University of New York (SUNY) in 2006, by Jon Rubin (Rubin, 2017). The objective is to connect (sometimes interdisciplinary) classes from different institutions, in different countries, to work together virtually on a common project. This is facilitated by instructors in the partner universities who implement course modules so that the two different student populations collaborate and engage in communication. The fundamental difference between COIL and other online learning, according to Guth and Rubin (2015), is the collaborative nature of COIL, the shared syllabus, and the emphasis placed on using cultural differences to interpret content. Several academics from Vietnamese universities, for example, who have successfully used COIL, acknowledge that such methods help students expand social networks, acquire a better cultural understanding, and develop a stronger professional identity (Nghia, Giang & Quyen, 2019).

Although COIL was developed more than a decade ago, it is not widely practiced, not institutionalized, not recognized as common pedagogy, and not invested as a tool for student outcome. Some reasons may be due to the lack of knowledge of COIL or misconceptions about it. One common misconception may be that COIL replaces teaching and learning or acts as substitute for in-person learning rather than adding to a pedagogical approach. Another misconception could be that COIL requires a mastery of various online tools. According to Van Gaalen and Gielesen (2016), some universities recognize the importance of internationalization at home, but few formulate a coherent strategy to implement it due to lack of time, funding, and instructor training. Such preconceived ideas necessitate illustrating COIL as a novel pedagogical practice that utilizes minimal resources with many benefits (Rubin, 2017). In the USA, COIL is gaining popularity but is rare at Queens College. In the Netherlands, COIL is well-known in certain universities, but not generally applied. In Thailand, COIL is uncommon. Since there is no definitive COIL methodology, the objective of this project was to use the concept of a shared assignment across borders through an innovative virtual exchange project that focused on building career readiness. Therefore, the goal of this article is to identify specific career readiness skills gained through collaborative online international learning (COIL) in the interest of encouraging university leadership to promote COIL projects and commit to prioritizing COIL in education.

### **Method: The Coil Project**

Since COIL was utilized as a tool to build competencies, the intentionally designed international activities were integrated into two pairs of courses, Thailand-USA and the Netherlands-USA. Students in the United States were from Queens College, the City University of New York. Students from Thailand were enrolled at Assumption University. Students from the Netherlands were at The Hague University of Applied Sciences. The paring did not occur simultaneously. They were two separate projects that occurred in two consecutive semesters, Fall 2019 and Spring 2020.

The demography of the enrolled student population at Queens College is 28.4% Hispanic or Latino, 28.1% Asian, 26.9% White, 8.62% Black or African American, 2.28% Two or More Races, 0.346% Native Hawaiian or Other Pacific Islanders, and 0.316% American Indian or Alaska Native (Data, 2021). The Assumption University in Thailand has a student body of about 19,000 that includes a large component of foreign students from 75 countries of the world (AU, 2019). The international community of scholars similarly represents a diverse population for students to relate to. The Hague University of Applied Sciences (THUAS) also has a diverse and internationally oriented student population. Some of the THUAS student population are 'bi cultural' students (meaning that they are Dutch students with a migrant background). Some of the THUAS student population are first generation students (meaning that they are the first in their family to enter higher education).

The sample included 54 economics and business undergraduate students from Queens College, a four-year public college in a New York City borough with a diverse undergraduate population. Out of the 54 students in the sample, 22 collaborated with 22 multicultural undergraduate students in a statistics and information literacy course from the Martin de Tours School of Management and Economics (MSME) at

the Assumption University of Thailand in 2019. The 22 students from MSME included 5 students from China, Japan, India, Vietnam, and the rest from Thailand. Students produced a short video to introduce themselves and their campus, then worked in global teams in a parallel statistics project to present economic solutions to an intercultural audience based on their topics. They were required to analyze quantitative data on a global issue and compare it to qualitative data that was obtained through discussion of the issue with peers across the border.

The remaining 32 students in the sample collaborated with 19 undergraduate students from the Faculty of Management & Organisation at The Hague University of Applied Sciences (THUAS) in the Netherlands in 2020. These students were of various ethnicities (such as Dutch, Vietnamese, Lithuanian, etc.) and were of interdisciplinary majors taking a course in journalism and media. Students worked in global teams, each with a different global issue. THUAS students interviewed their QC counterparts about their quantitative data and opinions, then wrote a journalistic article about the issue. Topics included child poverty, sustainable living, and of course, since the assignment took place just when the COVID-19 crisis started, many articles were about the pandemic and its impact on the economy. The projects lasted six weeks in which students discussed various global issues referencing their own languages, socio-cultural, and educational backgrounds.

### **Results and Discussion: The Student Experience**

#### **Intercultural competence of Netherlands-USA**

The pre- and post-questionnaires were delivered at the beginning and end of the project. They were completed by 54 Queens College students in the U.S. to explore participants' self-perceived intercultural competence, based on the International Cross-Cultural Experiential Learning Evaluation Toolkit (Rhodes, 2010), and to identify specific competencies that were influenced by the COIL project. The students were asked questions on their openness, cultural worldview and knowledge, general connection of experience to personal growth, connection of cultural experiences to academic context, cultural self-awareness, general transfer of knowledge and skills, understanding of global context and impact, and effective communication (Rhodes, 2010). The self-assessment also gave students the opportunity to reflect on previous experiences with cross-cultural opportunities, such as study abroad, language study, growing up outside the U.S., languages spoken at home, etc. The goal was that the pre- and post-questionnaires could measure the impact of collaborative online international learning on career success skills.

Table 1. Anecdotal evidence from students in the USA

What aspects of this project were most useful or valuable?

*I believe this project taught students how to be accountable for their actions. The communication skills that I learned in this class are invaluable.*

*Cooperation and communication with others are so important, this is the most important thing I learnt from this project.*

*This course forced us to look at the world outside the United States and how vastly different it can be.*

*This project could add to my career because I had to learn to communicate and work together with members who had significant time differences.*

*...working in a group and managing a group within your class and out of country was a big learning a curve. That on its own shows how to work as a team...which can help me in my future.*

*Hearing about firsthand experiences of our COIL team members overseas was most useful. Even among them there was diversity in experiences growing up.*

*The views are different from us and theirs. This project helps us to collaborate with international people and relate to them. The most valuable aspect of this project is we got a chance to make new friends and know about their ideas.*

*The time difference was a huge challenge.*

Regarding intercultural competence, a five-point Likert scale (1=Strongly Disagree, 5=Strongly Agree) gauged the U.S. students' self-perceived dimensions after the COIL project. The 8 dimensions of a student's (self-identified) intercultural competence included COIL 1 = I am more confident about communicating with people whose first language is not the same as my own, COIL 2 = I am better able to understand my own culture and personal perspectives, COIL 3 = I am better able to communicate with individuals who have different cultural backgrounds, COIL 4 = I am less interested in studying or travelling to other countries, COIL 5 = I am less interested to keep abreast of news and events in my partner's country, COIL 6 = I am more interested in working only with those who look and talk like me, COIL 7 = I am more aware of those from different national, cultural, religious, or socioeconomic backgrounds, and COIL 8 = I am less interested in learning about global or international issues. With the U.S. students, the results showed that 85% strongly agreed/agreed that they were "better able to communicate with individuals who had different cultural backgrounds" (COIL 3), 73.5% were "more aware of those from different national, cultural, religious, or socioeconomic backgrounds" (COIL 7), and 59% were "more confident about communicating with people whose first language was not the same as my own" (COIL 1). This aligns with Chun, (Junior & Finardi, 2018) who noted that, by participating in COIL projects, students gain "an understanding not only of the culture and language being studied but also the readiness to suspend disbelief and judgment about the other culture and the willingness to reflect on one's own culture and question the values and presuppositions in one's own cultural practices" (p. 21). Some anecdotal evidence from students in the USA is displayed in Table 1.

The qualitative date indicated that the two most impactful areas of student learning were *communication* and *teamwork*. As Table 1 demonstrates, *communication* became vital as a result of the project. Additionally, *teamwork* trained students to perform collaboratively and relate to international cultures. Most students found such a virtual exchange to be transformative. One student stated, "I never thought that living in New York, I would make friends with someone from across an ocean." Some students felt that they had conquered their stage fright and were able to take initiative when speaking out loud. However, setbacks also occurred due to unforeseen events of the 2020 pandemic that hindered the exchange.

During discussions, the Netherlands students, at The Hague University of Applied Sciences, stated that their cultural differences forced them to take a different approach when working with students from the U.S. For example, how much should they share about themselves initially? According to Erin Meyer, in her book *The Culture Map*, Americans are a lot more open initially, and tend to share more about themselves. The Dutch, on the other hand, tend to be more reserved with people they have just met, and take more time to build up relationships (2014). Also, more practically, the students had to decide which channels to use to communicate. Students organically selected social media channels and What App to communicate within teams. According to Meyer, email (and WhatsApp) etiquette varies greatly from culture to culture, and here too, cultural misunderstandings can easily occur (2014). By looking at the assignment with the eyes of students from a different field of study, the journalism students were forced to think out of the box. Students valued experience through Facebook groups or videos to introduce their cities, school, or hobbies. Also, several mentioned how working on a common assignment made them feel closer to their partners and bridged their differences. Students felt that group discussions facilitated idea generation and creativity, it improved productivity, and boosted motivation. Some of the biggest challenges were scheduling meetings.

Students observed that accommodating busy schedules within a team was hard enough without the additional element of time differences. Similar to the reference by Kahn and Agnew (2017), the "global classroom" helped students "see deeply across the world while reflecting upon themselves" (p. 55). The COVID-19 pandemic also heightened the difficulties of making and respecting appointments. However, as some students reflected, the pandemic accelerated student reliance on technology; to work remotely, navigate time zone differences, and empathize with global events. The virtual exchange also gave students an opportunity to connect profoundly. For example, an international student from Queens College returned home to Stockholm, Sweden, amidst the pandemic, but was able to complete the COIL project with her partners in the U.S. and Netherlands despite the sudden shift to online learning. She was

even able to provide comfort to her peers affected by the coronavirus through WhatsApp. Suddenly, collaborating with peers abroad became essential. This insight reflects skills that could not be gained through content knowledge without the application of a COIL project.

### Career readiness skills of Thailand-USA

To identify which competencies were influenced by the COIL project for Queens College students, the eight independent NACE (2020) skills were tested against the different dimensions of intercultural competence using multiple regression (see Appendix). Specifically (1) *Critical thinking*, (2) *Oral/written Communications*, (3) *Teamwork*, (4) *Information Technology Application*, (5) *Leadership*, (6) *Professionalism*, (7) *Career management*, and (8) *Global/Intercultural fluency* were tested against the 8 COIL dimensions of intercultural competence. The multiple regression results indicated that COIL 3, the dimension in the COIL project that enabled students "to communicate with individuals who have different cultural backgrounds," was the most significant predictor across all career readiness competencies ( $p<0.01$ ) when country (Thailand/Netherlands), discipline (same/different), type of project (same/different) and team size (small/large) were held constant. COIL 2, the dimension in the COIL project that executed students' "understanding of their own culture and personal perspectives," significantly influenced *Intercultural fluency* ( $p<0.01$ ) and *Career management* ( $p<0.05$ ) skills, while COIL 8, interest "in learning about global or international issues," influenced *Intercultural fluency* ( $p<0.05$ ). This demonstrates that the COIL project was beneficial for U.S. students to interact respectfully with all people (*Intercultural fluency*) and identify strengths relevant to career goals (*Career management*). It was interesting to discover that personal accountability and effective work habits (*Professionalism*) was affected by the country in which the COIL project was situated.

At the end of semester, MSME students at Assumption University, in Thailand, also completed a questionnaire to assess their development of competencies after participating in the COIL project. It was conducted using a five-point Likert scale (1=Strongly Disagree, 5=Strongly Agree) with an open-ended question based on seven skills (Critical Thinking, Oral Communications, Teamwork, Diversity, Information Technology, Leadership, and Professionalism) that students could have developed through the collaboration. As Table 2 shows, among all seven skills, diversity awareness (i.e., *Intercultural fluency*) skill had the highest rating with an average score of 4.23 while the lowest rating of 2.55 was devoted to the *Professionalism* skill. This demonstrates that, when Thai students completed a COIL project that involved collaboration in global teams, they perceived an enhancement in understanding and respecting diverse cultures, races, ages, genders, sexual orientations, and religions (*Intercultural fluency*) but not as much in understanding effective work habits or dependability (*Professionalism*).

However, during the discussions, students stated that they had a better understanding of how diversity affected the research methodology and work ethic. Additionally, the sample results revealed that the *Oral communications* was the second highest rating skill. Students found that the COIL project increased their ability to articulate thoughts and ideas clearly and effectively in oral forms to peers in the U.S. Although English is the medium of instruction at AU, Thai students rarely use English for daily communication. Therefore, weekly communication with native English speakers enhanced confidence in non-native English speakers. Interestingly, when 1039 market employers were surveyed across Thailand, both English communication and diversity awareness were competencies that were also expected as the top skills from MSME graduates (AU, 2019). This study's results reflect the preferences of these employers who seek candidates from institutions that produce graduates with good language skills who understand cultural diversity as they enter the labor market.

Table 2. Development of student's skills						
Skills	N	Mean	St. Dev.	Min	Median	Max
Critical Thinking	22	3.45	1.06	1.00	4.00	5.00
<b>Oral Communications</b>	<b>22</b>	<b>4.18</b>	<b>1.01</b>	<b>1.00</b>	<b>4.00</b>	<b>5.00</b>
Teamwork	22	3.18	0.85	1.00	3.00	5.00
<b>Diversity</b>	<b>22</b>	<b>4.23</b>	<b>0.87</b>	<b>2.00</b>	<b>4.00</b>	<b>5.00</b>
Information Technology	22	3.00	0.93	1.00	3.00	5.00
Leadership	22	2.77	0.81	1.00	3.00	4.00
Professionalism	22	2.55	1.01	1.00	2.00	4.00

## Conclusions

### General findings

Despite varying levels of academic standards and degrees of teamwork, there were areas of overlap for Netherland-USA and Thailand-USA. The most significant predictor across all career readiness competencies was communicating with individuals across cultures. This demonstrates that, in order to enhance certain skills, it is essential to include intercultural communication in the curriculum. When Economics and Business students collaborated on a project (despite subjects) that involved discussion with peers from another country, they became individuals who knew how to respect cultural differences and understand international customs. The finding that a cross-cultural exchange leads to improved intercultural competence or improved communication skills may be expected or logical, but the finding that internet technology enhanced professional skills through curriculum innovation is critical. At the end of this study, we reflected on our methods and collaboration. All three faculty partners found that it was necessary to initiate icebreakers for students to become congenial with one other. These initial icebreakers encouraged dialogue and facilitated meaningful discussions. As students became more comfortable in their teams, they were able to complete course-specific tasks. They demonstrated the ability to speak publicly (*Oral communications*), to interact respectfully with all people (*Intercultural fluency*) and identify their strengths relevant to career goals (*Career management*). This aligned with the findings of Gardenswartz et al. (2008) and the confidence suggested by Guimaraes et al. (2019) through weekly communication with native English speakers. The results show that, by using virtual exchange by means of an innovative COIL project, educators were able to link professional skills with employability while teaching in respective disciplines for lifelong learning. These findings also reflected the work of Kahn and Andrew (2017), in which students were encouraged to think about what they learned and what they could do with their knowledge, skills, and attitudes.

### Limitations

The research design considered validity and reliability. In terms of validity, the generalizability of this study was limited to a sample of students from institutions in the U.S., Thailand, and Netherlands in particular disciplines; therefore, it might not be generalizable to other institutions or disciplines. Also, bias in self-evaluation may result from different motivations. However, the appropriateness of the measures was relevant, and the accuracy of the results was consistent. In terms of reliability, the study was consistent as data collection techniques and analytic procedures could be replicated to produce similar results. However, the study's use of analysis could be criticized based on causal analysis of the relations among variables. For instance, a first-generation or new immigrant student may have scored high with

intercultural fluency prior to the COIL project. One way to improve such analysis would be to perform a lagged study to establish temporal precedence.

### Suggestions for future research

Building on the findings of this study, future research could compare perceptions across countries. For example, by analyzing differences in communication styles, were views on integrity and respect different? How would that affect career success skills? An ethnographic study may provide greater understanding of the contexts of interaction. Another study would be to analyze the impact of a COIL initiative on knowledge content. Would the implementation of collaborative online learning in an international setting that included discussion increase a student's knowledge of course content? Additional research could study COVID-19 and the impact of internet technology in higher education learning in relation to the Fourth Industrial Revolution.

### Implications for practice

Although collaboration required careful coordination on the educators' side with one partnership occurring during the chaos of a pandemic, these notable results suggest that it is imperative for faculty to craft a curriculum that links international interactions, career success skills and learning goals. As the most competitive organizations select individuals who have all required skills, there is a need for higher education institutions to communicate that internationalized curriculums are high-impact pedagogies that bring results beyond classrooms. Innovative COIL projects that apply virtual pedagogy can also ensure equity of graduate outcomes and build knowledge-based economies. With the COVID-19 pandemic, COIL has uncovered many opportunities to teach global competencies and collaboration across borders. As institutions across countries realize the importance of building such skills in diverse environments, COIL should be institutionalized with funding as a lever to develop student employability. One of the suggestions listed by Deloitte Global Business Coalition for Education (2018) is for businesses to engage with education systems to encourage integration of the specific skills in program design. This could mean providing opportunities to job shadow and mentor or partnering with higher education institutions to sponsor innovative curricula. With the Fourth Industrial Revolution transforming the type of work that people do, it also offering new opportunities to build skills in areas that AI cannot accomplish (Deloitte, 2018). COIL projects not only link students across geographic barriers while disseminates knowledge and culture, but also introduces innovative pedagogy that can be effortlessly replicated across institutions using easily accessible tools that increase intercultural fluency. Whether these future professionals become colleagues or clients in international business, institutions could market their graduates as emotionally intelligent international scholars who transfer experiences into indispensable skills.

## Appendix

	Predictors of Career Readiness Competencies								
	Dependent variable								
	Critical Thinking	Oral Comm.	Teamwork	Information Technology Application	Leadership	Professionalism	Career Mgt	Intercultural Fluency	
Independ. var†	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
COIL1	-0.034 (0.13)	-0.053 (0.12)	0.007 (0.14)	-0.127 (0.14)	0.034 (0.10)	-0.054 (0.12)	-0.073 (0.13)	-0.12 (0.11)	
COIL2	0.162 (0.11)	0.204* (0.11)	0.125 (0.12)	0.16 (0.12)	0.169* (0.09)	0.186* (0.11)	0.251** (0.11)	0.258*** (0.09)	
COIL3	<b>0.615***</b> (0.16)	<b>0.640***</b> (0.15)	<b>0.635***</b> (0.18)	<b>0.586***</b> (0.17)	<b>0.553***</b> (0.13)	<b>0.556***</b> (0.15)	<b>0.407**</b> (0.16)	<b>0.427***</b> (0.13)	
COIL4	-0.029 (0.09)	0.002 (0.09)	-0.077 (0.10)	-0.093 (0.10)	-0.008 (0.07)	-0.048 (0.09)	-0.058 (0.09)	-0.045 (0.07)	
COIL5	-0.057 (0.10)	-0.012 (0.09)	-0.08 (0.11)	-0.005 (0.11)	-0.046 (0.08)	-0.021 (0.10)	0.001 (0.10)	0.091 (0.08)	
COIL6	0.084 (0.09)	0.036 (0.09)	0.121 (0.10)	0.154 (0.10)	0.091 (0.07)	0.087 (0.09)	0.01 (0.09)	-0.047 (0.08)	
COIL7	0.065 (0.09)	0.024 (0.09)	0.025 (0.10)	0.013 (0.10)	0.113 (0.07)	0.022 (0.09)	0.064 (0.09)	0.092 (0.08)	
COIL8	-0.137 (0.12)	-0.118 (0.11)	-0.135 (0.13)	-0.237* (0.13)	-0.133 (0.10)	-0.199* (0.12)	-0.102 (0.12)	-0.225** (0.10)	
COUNTRY1	0.021 (0.03)	0.019 (0.03)	0.055 (0.04)	0.035 (0.04)	0.039 (0.03)	0.065** (0.03)	0.037 (0.03)	-0.005 (0.03)	
Constant	0.12 (0.08)	0.087 (0.07)	0.117 (0.09)	0.219** (0.08)	0.063 (0.06)	0.168** (0.07)	0.215*** (0.08)	0.272*** (0.06)	
Observations	54	54	54	54	54	54	54	54	
R <sup>2</sup>	0.804	0.813	0.784	0.761	0.869	0.815	0.752	0.849	
Adjusted R <sup>2</sup>	0.763	0.775	0.74	0.712	0.842	0.777	0.702	0.818	
Residual Std. Error (df = 44)	0.114	0.107	0.125	0.121	0.089	0.108	0.111	0.092	
F Statistic (df = 9; 44)	19.993***	21.265***	17.768***	15.585***	32.480***	21.505***	14.849***	27.498***	
Note:	*p<0.1; **p<0.05; ***p<0.01, constants not shown in order to conserve space								

†Dimensions of intercultural competence:

COIL 1 = I am more confident about communicating with people whose first language is not the same as my own.

COIL 2 = I am better able to understand my own culture and personal perspectives.

COIL 3 = I am better able to communicate with individuals who have different cultural backgrounds.

COIL 4 = I am less interested in studying or travelling to other countries.

COIL 5 = I am less interested to keep abreast of news and events in my partner's country.

COIL 6 = I am more interested in working only with those who look, and talk like me.

COIL 7 = I am more aware of those from different national, cultural, religious, or socioeconomic backgrounds.

COIL 8 = I am less interested in learning about global or international issues.

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