

Quantity Over Quality? Exploring the effectiveness of Collaborative Online International Learning (COIL) programs in aligning with the core model

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Collaborative Online International Learning (COIL) is an approach to virtual intercultural programming which has rapidly gained attention over the last decade. Since the early 2000s, COIL has been growing in popularity among administrators seeking to widen their portfolio of global programs, and the method saw an additional explosion of utilization during the Covid-19 pandemic (Ikeda, 2022). That growth continues in the post-pandemic world. However, while the model has a fairly clear set of core principles and goals, COIL programs across the globe are widely varied in approach and in outcomes. This has resulted in many individual programs diverging from or ignoring entirely the core characteristics which make COIL an attractive approach in the first place. This proposed qualitative research will first employ a systematic review to inform the creation of an assessment tool which is intended to assess the designs of individual COIL programs. The assessment tool will be implemented in a comparative case study of COIL programs in development among institutions of varying size, location, type, and cultural context. The intent of this study is to better understand how COIL programs are being developed, why programs seem to diverge from the codified model in variant ways, and whether or not these divergences impact COIL programs' overall contribution to institutional internationalization objectives.

When global mobility was brought to a standstill by the Covid-19 pandemic, it accelerated the adoption of virtual exchange methodologies which had been slowly growing in popularity since the early 2000s. The global crisis and subsequent national lockdowns created the perfect circumstances for a widespread pivot to virtual exchange and other online program models. This pivot has allowed for new scholarly exploration of virtual models, giving rise to newer concepts such as “mobility of knowledge” (Pouromid and Wiasih, 2021), which focuses not on physically moving from place to place, but rather on the transfer, or “mobility” or

knowledge - be it disciplinary, cultural, or otherwise. The pandemic and the associated effects have also given rise to new contextually-responsive definitions of internationalization. However, the mad dash to establish virtual programs has not afforded practitioners and researchers the time required to critically examine the common approaches to designing these programs. Established mobility models have been the subject of rigorous and ongoing scholarly examination and are better for it. In contrast, virtual exchange approaches such as Collaborative Online International Learning (COIL) have seen little deep examination (The Stevens Initiative, 2022).

The term Collaborative Online International Learning (COIL) was coined by Jon Rubin in 2006, coinciding with the founding of the SUNY COIL Center (Rubin and Guth, 2022). However, COIL was still not widely known as an approach to virtual exchange until the Covid-19 pandemic prompted institutions to explore new methods of global engagement.

Collaborative Online International Learning (COIL) is typically identified as a pedagogical approach to virtual exchange which is based around virtual collaboration (Romero-Rodríguez et al., 2022), project-based learning (Rubin and Guth, 2022, pp. 443-444), and a focus on enhancing courses within “any subject area, at any level” (SUNY COIL Center, 2022) through intercultural learning activities and dialogue.

A COIL program is most commonly implemented as a module of five to six weeks within the scope of a full semester. Instructors from different countries or cultures collaborate to incorporate the COIL module into their respective courses, and co-design a series of activities and project-based assignments which prompt their students to collaborate on specific tasks while engaging in intercultural dialogue (Ravenscroft, 2011). Interactions between collaborating instructors and students take place both synchronously and asynchronously (Vahed & Rodriguez,

2021) and it is not uncommon that from the initial development of the program through implementation and assessment, for no in-person contact to occur.

While the terms “virtual exchange” and “Collaborative Online International Learning (COIL)” are often used interchangeably, they are distinct concepts. EVOLVE (Evidence-Validated Online Learning through Virtual Exchange), an initiative funded through Erasmus+, defines virtual exchange as “a practice, supported by research, that consists of sustained, technology-enabled, people-to-people education programmes or activities in which constructive communication and interaction takes place between individuals or groups who are geographically separated...” (EVOLVE Project Team, 2020). There are many approaches that fit under the umbrella of virtual exchange, such as telecollaboration (Sadler & Dooly, 2016), virtual internships (Jeske & Axtell, 2016), and massive online open courses (MOOCs) (Baturay, 2015). COIL is another approach which can be situated under the virtual exchange umbrella. COIL’s emphasis on collaborative project-based learning and intercultural engagement differentiate the model from its peers, though many common elements remain. Simply put, all COIL is virtual exchange, but not all virtual exchange is COIL. In a 2022 report which surveyed 155 institutions globally, representing more than 2,500 individual programs, just 43% of all programs were identified as aligning with the COIL model (The Stevens Initiative, 2022).

Adoption of the COIL approach has been driven primarily by the belief that the model is a quick and easy solution to the various issues with traditional mobility programs (Lemieux et al., 2022). Advocates of the COIL approach evangelize broadly at conferences and in articles, assuring their peers that “issues of access, affordability, and life circumstances no longer need be barriers to global learning...” (Rubin and Guth, 2022, pp. 25). Yet, despite these promises, scholarly works are consistently published which demonstrate mixed outcomes and feedback for

virtual programs (King-Ramirez (2020), van Rooij & Zirkle, (2016)). While COIL may initially seem to be a way for institutions to broaden their program portfolio and provide global opportunities to wider swathes of their students, a clear gap exists in the understanding of what contributes to a successful or failed COIL program. In the recently published book *The Guide to COIL Virtual Exchange*, Rubin tellingly notes that:

“Because COIL program development is still relatively recent and has largely occurred with institutions inventing infrastructure and professional development methods as they become necessary to each institution, there is, at least as of this writing, no single, clear path to programmatic success.” (Rubin, 2022, pp. 70)

Despite the lack of substantive scholarly work done on the model and absence of accepted best practices, numerous high-profile training programs have popped up for would-be COIL facilitators. Perhaps drawn in by claims of COIL’s built-in equity and accessibility or simply responding to the perceived need for mobility-free global learning, institutions and individuals are spending as much as \$1,800 U.S. dollars per head to receive training in facilitating COIL programs (Florida International University, 2022). This has largely been a net positive in terms of growing development of more COIL programs, but these training courses are primarily informed by institutions’ own programmatic histories and using the successful programs as case studies for training participants. For COIL to truly become an impactful aspect of internationalization of higher education, this natural selection-inspired mode of training must give way to best practice informed by research.

This proposed research will approach COIL not only as a pedagogical model, but also as a set of underlying structures and design decisions which have direct influences on the overall learning experience of instructors and program participants. COIL has been viewed by many as a more accessible, equitable, and inclusive approach to global learning than traditional mobility, but it must stand on its own merits if the model is to have long-term acceptance.

Literature Review

Situating virtual exchange within the scope of internationalization

The field of global education is constantly evolving, and the thinking on internationalization in particular seems to be in a state of perpetual flux. As noted by Knight and de Wit (2018), “Internationalization has become a very broad and varied concept, including many new rationales, approaches, and strategies in different and constantly changing contexts” (p. 2). Knight’s early scholarly work on internationalization gradually evolved, and after a decade was “remodeled”. Rather than viewing internationalization as a monolithic entity, Knight reconceptualized it first as a process, and notably, one with two distinct streams: *internationalization at home* (IaH), which built on work done by Nilsson (Wachter, 2003), and *internationalization abroad* (IA) (Knight, 2004). Perhaps the most critically-necessary development in the history of internationalization research was the understanding that while the overarching goals may remain, the process itself is flexible and can be defined uniquely in a variety of contexts. The establishment of internationalization of higher education for society (IHES) is one example of this, and as virtual models of global learning have come into the mainstream, another unique variant of internationalization has risen as well.

Internationalization at a distance (IaD) is defined as “all forms of education across borders where students, their respective staff, and institutional provisions are separated by geographical distance and supported by technology” (Mittlemeier et al., 2019). This is differentiated from internationalization at home (IaH) in the virtual exchange context, which strives to establish a digital “third space” in which no participants are “at home”, but instead it exists as a neutral environment in which true cultural engagement can take place (Bhabha, 1988). Of course, it is impossible to escape the fact that “when peoples from two different cultures meet, there are usually differences in power, the colonized and the colonizer, the marginalized and those who are not” (Jørgensen et al., 2020). These differences exist not only within the realm of participants and instructors, they also can be seen within the structures of virtual exchange courses, which can artificially limit participants’ “ability to create, share, and exchange knowledge” (Campbell et al., 2019). As Freire stated simply, “Neutral education cannot, in fact, exist” (Freire, 2020).

The conceptualization of IaD is very recent and as such, the term is not present in the vast majority of scholarly work on virtual exchange and/or COIL. However, research from Mudiamu (2020), Bruhn-Zass (2022), and DeWinter & Klamer (2021) clearly demonstrate COIL’s role in internationalization at home, to which IaD is closely related. As IaD begins to be explored by research, the term will no doubt become much more prevalent in virtual exchange and COIL-related literature.

Defining Collaborative Online International Learning (COIL)

Originally conceived in the early 2000s by Jon Rubin (Rubin & Guth, 2022), Collaborative Online International Learning (COIL) was rapidly adopted within the State

University of New York system as a method of cross-border engagement and intercultural collaboration which did not rely on mobility, but rather was enabled by technology (pp. 6).

Scholar Hans de Wit noted early on that COIL was defined by “four essential dimensions”, those being active collaboration of instructors and participants, reliance on web-based technologies, the presence of international elements, and “integra[tion] into the learning process” (de Wit, 2013).

In the decade or so since that initial codifying of COIL’s core characteristics, a number of variant definitions have emerged. The SUNY COIL Center, which legally owns “COIL” as a registered service mark (SUNY COIL Center, 2022), keeps close to de Wit’s initial four dimensions, though rewording them slightly and expanding them to include an emphasis on project-based learning. This definition also makes bold claims of the model, stating, among other things, that COIL brings “international experiences and their attendant skills development into the reach of all students, at any institution” (SUNY COIL Center, 2022). The SUNY COIL Center’s definition is critically important in relation to the present research, as it is not only legally the official definition of COIL, but it also perfectly lays out the seven core characteristics which my research is intended to examine. The full definition is listed below, with key phrases bolded for easy reference:

“Collaborative Online International Learning – COIL – connects faculty, students and classes at higher education institutions around the world for discussions, exploration and collaborative project work. **COIL is integrated into the curriculum of classes – in any subject area, at any level** – and engages students and faculty in **significant intercultural interactions** through applied and project-based learning, thereby bringing

international experiences and their attendant skills development **into the reach of all students, at any institution.** COIL sits at the intersection of many important goals of higher education: innovation, applied learning, **diversity, partnerships, access and equity,** and development of skills for career and life.” (SUNY COIL Center, 2022)

Rubin’s updated definition of COIL expands significantly on the original four characteristics identified by de Wit, leaning into COIL as a pedagogical model which “benefits two or more classrooms of collaborating students, usually located in different countries, who have had different life experiences” (Rubin, 2017). Rubin also notes that there is a lack of clarity on whether COIL is a pedagogy, a model, a method, or a format, and points out that there are “multiple terms used to describe what COIL means” (Rubin & Guth, 2022, p. 11). As will become clear, this lack of clarity extends far beyond simple definitions - it impacts how institutions, faculty, and other stakeholders approach the development, implementation, and assessment of COIL programs.

Myriad other definitions of COIL exist, and it can seem that nearly every institution engaging in COIL program development has a slightly different understanding of the model, though the core tenets remain essentially constant. Despite Rubin’s hesitancy to label COIL as a pedagogical model outright (Rubin & Guth, 2022, p. 11), COIL’s close relationship with distance learning and instructional design does shepherd the emphasis of much of the scholarly work on the topic towards more pedagogical themes.

Seven Core Characteristics of COIL

Though there is not a singular accepted definition of COIL, seven core characterizing terms are commonly found in scholarly work related to virtual exchange and COIL and can be drawn from the SUNY COIL Center definition above. These seven terms will inform the foundation of the inquiry of my research and represent my conceptual framework by which I will examine COIL programs. In combination, these terms represent the most common understanding of the foundational characteristics of the COIL model, which have boosted the attractiveness of the model as a whole. These seven core characterizing terms are *Collaborative*, *Integrated*, *Accessible*, *Inclusive*, *Equitable*, *Diverse*, and *Significantly Intercultural*. These terms can be found either directly or in spirit across much of the literature, largely informed by the SUNY COIL Center.

Collaborative is the first word in “Collaborative Online International Learning”, and is a key feature of the COIL model. Without collaboration, COIL would not exist - it would more closely align with other approaches to virtual exchange (Kolm et al., 2021). COIL is *collaborative* in multiple ways; first, the experience itself is the result (ideally) of a partnership between faculty from different cultures and/or countries, teaching within the same or different disciplines (Vahed & Levine, 2019). These faculty must work together to co-design a COIL program which serves all participating students as well as the learning goals of both the COIL program itself and their respective disciplinary courses. However, the collaboration is broader than a simple one-to-one academic partnership. As various scholarly works have noted, institutional collaboration is critical to the success of COIL programs (Van den Berg & Verster, 2022), and of course, student collaboration within the program itself is a core principle of COIL

(Appiah-Kubi, P., & Annan, E. (2020). In reality, a successful COIL program relies on multiple productive collaborations working in concert.

Unfortunately, scholarly and anecdotal evidence indicates that some COIL partnerships are not healthy collaborations, which is to say, interactions which are “characterized by shared goals, symmetry of structure, and a high degree of negotiation, interactivity, and interdependence” (Lai, 2011). Faculty, in a very real sense, participate in a COIL-like experience during the development of their program, and as Rubin and Guth (2015) note, faculty serve as models of virtual collaboration for their students. Yet, anecdotal evidence regularly highlights the challenges of faculty and institutional collaboration. As my research will in part seek to demonstrate, unaddressed friction within faculty and institutional partnerships can be felt by students in the program, which can directly impact the success of their own partnerships.

The term *integrated* is found directly in SUNY COIL Center’s explanation of the COIL model, which is highlighted as being “integrated into the curriculum of classes - in any subject area, at any level” (SUNY COIL Center, 2022). O’Dowd notes that in fact, this integration is a core piece of all virtual exchange programs, not only within the COIL model (2018). This again connects virtual exchange models to IaH, which “integrat[es] an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education” (Knight, 2003). Curricular integration is a key element of COIL, not only to seat it within internationalization at home (Beelen & Jones, 2018), but also to frame the COIL module as an embedded curricular experience rather than a co-curricular or extracurricular one (Rubin & Guth, 2022, pp. 39-44). The embedded nature of COIL encourages wider participation from students (Reed, 2016) and from faculty, who may be able to add a COIL-enhanced course to their tenure portfolio when pursuing promotion (Mudiamu, 2020, Rubin & Guth, 2020, pp. 205), or who may

simply be looking for a way to begin internationalizing their practice in a way perceived as less intrusive than semester-length mobility.

Integration goes beyond just linking the COIL module and its associated activities and deliverables with the disciplinary course of the collaborating faculty - it also includes how students are brought into the experience (Wise, 2022), the strength of the links between the COIL module and the connected courses, the inclusion of diverse content and perspectives from both sides of the collaboration (Reich & Reich, 2006), and ensuring access to the support for staff and faculty that may not be available to co-curricular programs (Rubin & Guth, 2022, pp. 216-243). In summary, integration is a critical goal of the COIL model, and one which can be challenging to achieve given its complexity.

Accessibility in COIL is primarily demonstrated in contrast to physical mobility programs. Certainly, physical mobility programs, and internationalization efforts more broadly, are often not accessible to wide swathes of student populations (Whatley & Clayton (2020), de Wit & Jones (2017), Frost & Raby (2009)). While internationalization at home (IaH) was not developed in direct response to this lack of access, it clearly does consider access among its core aims (Mittlemeier, 2021). In fact, access is a primary concern for mobility practitioners and is a constant focus of conference presentations, scholarly exploration (Frost & Raby, 2009), and scholarship and/or grant funding (Fund for Education Abroad, 2023). The idea that distance education can widen access is not an innovation of COIL - it has grown as an accepted and tested assumption across three major phases of development since the early 1990s (Anderson & Dron, 2011) and has continued to develop with the rise of massive online open courses (MOOCs) run by education institutions and private companies (Lambert, 2019).

When comparing physical mobility programs to COIL programs, the term *accessibility* is often replaced by or equated with affordability (Zhang, J., & Pearlman, A. M. G. (2018), though as noted by Rubin, there are wider access issues around physical mobility that COIL can address (Rubin, 2017). COIL programs have become an integral part of some institutional efforts to widen access to global opportunities specifically as a response to the cost of physical mobility. DePaul University's Global Learning Experience (GLE) launched in 2013 (DePaul University, 2023) and specifically aims to "expand access to intercultural and transformational learning opportunities for all students, and especially low-income students" (Esche, 2018, p. 10). A review of COIL webpages across a wide range of institutions in the U.S. and elsewhere demonstrates a high number of instances of terms such as "affordable", "cost-effective", and "low-cost", a clear indication that this is a selling point of the COIL model to institutions seeking to expand overall access to global programs. However, as my research will seek to demonstrate, *accessibility* in terms of cost is simply one aspect of *accessibility*, and therefore deeming a COIL program to be such is using one small piece of a wider puzzle to describe the full picture.

As noted by de Wit and Jones (2018), "current internationalization policies and practices are not inclusive and leave out the great majority of students worldwide" (p. 17). Virtual exchange, and COIL specifically, is often described as an *inclusive* alternative to physical mobility (Mudiamu, 2020) and other traditional internationalization activities (Guimarães et al, 2019). Indeed, virtual exchange is increasingly a part of institutional initiatives regarding diversity, equity, and inclusion (Ruiz-Corbella, 2014). A notable distinction must be made that *inclusive* and *accessible* are often related, but are not synonymous. As noted previously, within the scope of COIL, *accessibility* primarily refers to the ability of participants to enter into the

experience. In contrast, *inclusion* refers to participants' ability to engage in an experience which is responsive to their preparedness, cultural background, and so on (Naicker et al., 2021).

Inclusion is a prerequisite for participant agency, or belonging, which directly influences the student learning experience (Seifert & Bar-Tal, 2022). Especially true in a collaborative learning environment, a sense of belonging can be linked to successful participatory design (Wise, 2022). This is an encouraging connection, as participatory design and experiential education share roots in the seminal work by Freire (Serpa et al, Freire 2011, Freire 2005). Truly inclusive education does not view diversity as an obstacle to overcome; rather, it “embraces the view of the individual and individual difference as the source of diversity that can enrich the lives and learning of others” (Hockings, 2010). It must also be emphasized that inclusion must not only be a student-facing practice; there should be intentional inclusion among faculty partners as well. This is an oft-overlooked need within faculty collaborations, including COIL, but can have major implications if not addressed (Reich & Reich, 2006).

Equitable is another term that is often equated with accessible, but which also has distinct characteristics which may easily be overlooked or undervalued. In virtual program models, digital equity must be at the forefront of the experience design (Willems et al., 2019). The National Digital Inclusion Alliance defines digital equity as “a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy and economy” (2019). In considering how to design a COIL experience, these differences can be addressed directly in an effort to ensure that those who are disadvantaged outside the learning experience are not equally disadvantaged within it (Lambert, 2019).

However, as highlighted by Resta, Laferriere, McLaughlin, and Kouraogo, digital equity in an educational context goes beyond simple access to technology - it also considers relevant and contextual learning content as well as educators who “know how to use digital tools and resources” (2018). This equity of training is critical, especially in Global North-Global South distance education programs where technological training and connectivity may not be safe assumptions (Aluko, 2011). In fact, it can be argued that COIL’s reliance on web-connected technologies is a mark against it in terms of equity, as much of the world does not have access to the internet or the familiarity with LMS systems required to participate in many distance learning programs (Marcillo-Gómez & Desilus, 2016).

Equity within virtual collaborations must also strive to upend existing power structures. The Erasmus+ funded program “iKudu” is a prime example of intentional design with equity and decolonization at the forefront (DeWinter & Klamer, 2021). In COIL collaborations, these underlying power structures may be seen in how funding is disbursed, how decisions regarding program structure are made, and within the institutional motivations for developing COIL. These issues cannot be left unaddressed, lest they perpetuate inequities or even impact the success of the program overall (Adekola, J. et al., 2021).

Diversity is regularly linked with equity and inclusion in higher education literature. The three terms do share much overlap and common threads. A common critique of physical mobility programs is the lack of diversity among student cohorts (Fischer, 2015). COIL and other virtual exchange models have been identified as tools for diversifying participation in global experiences (Lemieux et al., 2022). However, there is little data to support this outside of individual case studies. Notably, the Stevens Initiative specifically notes in the *2022 Survey of the Virtual Exchange Field Report* that the organization has thus far been unable to generate

meaningful data on participation by demographic (The Stevens Initiative, 2022), citing limited resources. Naturally, diversity goes beyond student participation numbers. In COIL, it must also include diverse faculty, varied institutional partnerships, and academic disciplines.

Practitioners designing COIL programs must include issues of equity, inclusion, and access as part of their diversity considerations. Beyond this, practitioners must ensure that when scaling COIL initiatives, the model retains its responsiveness to the context of participants and faculty. Though COIL initiatives can be scaled successfully (Rubin & Guth, 2022, pp. 139-142), it is essential that individual programs not lose their individuality, which is directly informed by the faculty partners (pp. 46-47).

Perhaps the most contentious claim made by advocates of the COIL model is that interactions taking place within COIL programs are *significantly intercultural*. Deardorff argues rightly that intercultural learning doesn't just happen; it requires an intentional and structured approach for maximizing impact on participants and host communities (Deardorff & Arasaratnam-Smith, 2017). Indeed, as nearly a century of formal international mobility and the resulting literature has indicated, intentionally building intercultural learning objectives into a mobility experience has great benefits beyond what might otherwise be achieved through unguided immersion alone (Rexeisen et al., 2008). There is evidence that COIL programs can encourage some intercultural learning (Fernández Gutiérrez et al., 2022, Rodolico et al, 2022). Naturally, any level of interaction across cultures is likely to spark some level of growth in participants. Trapè found that when a program is explicitly designed for intercultural learning objectives, meaningful results can occur especially in empathy-building (Trapè, 2019). Other scholarly works describe similar results of empathy-building (King Ramírez, 2020), development

of global mindsets (Zheng et al., 2022, pp. 435), and expanded interest in pursuing physical mobility in the future (Reed, 2016).

Yet, the depth of intercultural learning via virtual modalities is still in question. As with the early days of short-term study abroad, there is a lack of data to either support or refute the claim that COIL is *significantly intercultural*. Some scholars openly dispute this claim, noting rightly that “Though teleconferencing technology can be fruitfully used in intercultural learning as a new addition to existing tools, it cannot replace physical programs, nor can it fully address the equity issue.” (Liu et al., 2022). Early studies on virtual exchange indicated lackluster evidence of any change in intercultural mindset or competencies (Vinagre, M., 2014). There are also clear disparities in outcomes between participant groups, as evidenced in studies by Zheng (2022), King-Ramirez (2020), and others. This is a concern not only in terms of equity and inclusion, but also when it comes to the overall value of COIL experiences for many participants and collaborating institutions.

Research Questions

The research questions guiding this study are as follows:

RQ1 - In what ways do design decisions influence a program’s adherence to the core promises of the COIL model?

RQ2 - Can COIL programs be assessed in such a way as to limit their divergence from the model as laid out by the core characterizing terms?

RQ3 - Are COIL programs which are more aligned with the conceptual framework of the COIL model more effective at achieving the program goals?

As noted in the previous section, there are clear gaps of knowledge regarding COIL; some of which my research will seek to address. The primary gap is reflected in Rubin's determination that COIL has been largely implemented in an ad hoc manner, and that there is no clear set of best practices for program success (Rubin & Guth, 2022, pp.). This is reflected in the core point which I have identified as my scope of research - the disparity between the core conceptualized characteristics of the COIL model and the realities of COIL programs when implemented.

The first research question above takes aim at that disparity, primarily through an exploration of the seven core terms previously identified and their presence (or lack thereof) among real-world COIL programs. The second question expands on this, again using the seven core terms, to explore the potential to assess the design of a COIL program pre-implementation using the model itself as the baseline measure. Finally, the third question seeks to explore the validity of the model itself as a guide for design efficacy. In short, are programs which align with the COIL model better for achieving the intended outcomes for students? For example, does designing for inclusion matter in terms of the overall reported student experience?

Research Design

This qualitative research will employ a systematic review to inform the creation of an assessment tool which will then be implemented in a comparative case study of COIL programs across the globe.

Research Procedure

Phase one of my research design is to develop an assessment tool for COIL programs using the core terms previously identified as a foundation. Through a systematic review of the literature, borrowing from a variety of disciplines and theories, I will craft contextual definitions for each of the core terms which are relevant to COIL. For example, once I understand what *accessibility* means within the COIL context, it will then be possible to craft a set of assessment questions around that definition which may be used to examine the design of a COIL program.

The conceptual framework of this research centers on the core terms previously noted. The contextual definitions of the core terms will be informed by existing theories and concepts from the fields of international education, distance learning, decolonization, critical pedagogy, liberatory design, learning experience design, and other areas. This is a necessity to be responsive to COIL's interdisciplinarity. For example, an apparently simple question such as, "Is this program designed to elevate traditionally underrepresented voices?" will draw from liberatory pedagogy (Freire, 2005), feminist theory (Humm, 2003), dialogue theory (Frankenstein & Drury, 1968), and more. Naturally, the theories and concepts used to inform the questions will vary depending on the "parent" core terms and in relation to the type of information the questions is seeking to collect. This conceptual framework will guide the formation of the assessment tool in phase two of the research. This systematic review will address RQ1 in as much as it will inform an understanding of how practitioners across fields create designs with the core characterizing terms of COIL in mind (though not necessarily within the context of COIL).

Development of the Assessment Tool

The assessment tool should include no more than 8-10 questions per core term, leading to an overall program assessment tool of approximately 50-70 questions - more if additional core terms are identified. This tool is intended to be implemented as a pre-program assessment - a linked post-program set of questions will be developed, which will collect student feedback on the program and reflections on their experience. Given the relatively short time frame for COIL programs (modules typically conclude after 5-6 weeks), it may be possible to collect a large volume of data from many programs. The creation of the assessment tools represents the entirety of phase one.

The assessment questions (both pre-program and post-program) will be drawn from the core terms as laid out in the conceptual framework, and will be responsive to the contextual nature of the terms within COIL. The pre-program assessment will be administered via an online form, while the post-program student questions will be included within the assessment structure of the subject program as supplementary questions. Alternatively, these may also be administered online as a separate assessment.

The development and subsequent testing of the assessment tool will address RQ2, as it will reveal the efficacy of a COIL assessment focusing on structural design rather than on pedagogical approach only. The testing portion of this phase is anticipated to provide valuable data not only about the subject institutions, but also regarding the links between the COIL model, program design and implementation, and participant experience and feedback. Much of the data provided through the assessment testing and implementation will also serve to answer RQ3.

Sample/Participants

In phase two of my research, I will implement the assessment tools with partnering institutions. My hope is to have a varied sample group, intentionally working with institutions of varying types across cultural and regional contexts. The list of specific participant institutions is yet to be codified, pending approval to move forward with this proposed research. The assessment process will likely be quick with some institutions and take longer with others, but I believe strongly that it is important to have a varied sample in order to strengthen my conclusions. This comparative case study approach will positively impact my conclusions' generalizability, a core aim for my research.

The pre-program assessment subjects will be faculty and/or staff developing the COIL program. Both sides of the collaboration will be asked to complete the assessment separately. The post-program assessment subjects will be student participants in the COIL programs. This is critical to understanding how, or if, the pre-program design decisions had an impact on the participants. As with the pre-program assessment, both sides of the collaboration will be asked to complete the assessment.

Data analysis

Phase three will be focused on data analysis. By collecting the pre-program assessment information along with the post-program participant feedback, it will then be possible to discern if a particular COIL program fulfilled the promises of the model by way of its alignment with the core terms within the conceptual framework.

Pre-program assessment data will largely be analyzed through using the grounded theory method, with the contextualized core term definitions of the conceptual framework serving as the

baseline. During the review of assessment data from each respondent institution, the core question will be, “Does this response indicate an adherence to, or divergence from, the linked core term?”. Survey scoring will be applied to this data for ease of interpretation and for further applicability of results for subjects. The specific rubric to be used is yet to be developed, though a sample rubric for simple coding is included below.

+1	This response indicates a positive alignment (convergence) with the contextual definition of the associated core term.
+0	This response does not indicate either alignment (convergence) or divergence or does not indicate this point as a consideration in the design.
-1	This response indicates a negative alignment (divergence) with the contextual definition of the associated core term.

The post-program participant assessment data will be analyzed using a thematic analysis method. Using the core terms as a guide, the analysis will explore how, or if, the core terms impacted students and/or were important to students. This will be accomplished through coding and analysis, though I am also exploring the possibility of employing natural language processing (NLP) and sentiment analysis to participant responses.

Of course, the core research questions will be approached first, but with the type of data collected during the assessments, other useful information may be revealed, allowing for supplemental analysis and publishing of results linked to, but unique from, this doctoral thesis. Beyond the core queries of the research, other common themes may arise, such as common or disparate approaches to structural or pedagogical challenges. In this way, further analysis of the

data may serve to crowdsource effective best practices for future COIL programs, something which the field currently lacks.

Outline of the Thesis

The following is a description of the anticipated thesis structure, presented in outline form:

1. Opening Pages

- a. Signature page
- b. Abstract
- c. Dedications and/or acknowledgements

2. Main Body Chapters

a. Introduction

- i. This chapter will open with an overview of virtual exchange and COIL, explaining what the COIL model is and how it is situated within internationalization of higher education.
- ii. It will then identify and present the identified problem through key case studies, highlighting the gap in knowledge and establishing the need for this particular research. This will include a presentation of the research questions and subquestions as well as a clear laying out of a problem statement.
- iii. This chapter will conclude with demonstrating how this research is important to the long-term growth and development of the COIL approach. No conclusions will be made, but it will express clearly why this specific topic is critical.

b. Literature Review

- i. This chapter will first link COIL to the three core fields of the research (international education, distance learning, and instructional/learning experience design). It will show how each of these fields contributes directly to the model's initial and current development.
 1. This will ground the COIL model within theory from all three fields respectively to explain why the model was developed in the way that it was.
 2. This process will include some additional coverage of the theoretical grounding, posing additional questions which will be revisited in later sections.
- ii. Through case studies and other scholarly literature, I will then show the gap between the writing on the COIL model in theory and the COIL model in real-world practice, specifically citing areas of digression from the model.
- iii. Conceptual Framework
- iv. The following section will more deeply explore the variant definitions of the COIL model and explaining why it is important to contextually define the seven key terms in order to create a foundation for the research.
 1. These terms will be systematically defined one by one in this section - this is an important step prior to the research itself. Those key terms are:
 - a. Collaborative

- b. Integrated
- c. Accessible
- d. Inclusive
- e. Equitable
- f. Diverse
- g. Significantly Intercultural

2. Each term will be defined using literature from each of the three fields from which COIL borrows.

c. Methodology

- i. Introduction
- ii. Questions and Hypotheses - Here, I will restate my research questions and express my beliefs about what I believe the findings of my work will be
- iii. Research Design - This section will cover the selected research methods, why they were chosen over others, and how they align with the overall conceptual framework
- iv. Discussion of subjects - This session will explore how I selected participants, including what considerations were made in their selection
- v. Limitations
- vi. Assessment inventory development
 - 1. This section will include a deep dive into the assessment created for this study. Mirroring the explanation of key terms from the literature review, I will explain how the specific assessment questions link to the key terms.

d. Presentation of Results

- i. In this chapter, I will present all of the results. This will include a full analysis of the data from individual institutions as well as highlighting trends in the data.

e. Discussion/Implications/Conclusions

- i. In this discussion of the results/findings, I will revisit the initial research questions and my hypotheses and compare them.
- ii. I will also list key areas for future research supported by this study's findings

3. Closing Pages

- a. References/Bibliography
- b. Appendices

Timeframe

The proposed research is multifaceted and so it is important to plan for each phase wisely to ensure completion within the given timeframe. The initial phase of research primarily will focus on developing contextual definitions of the key terms, as noted previously. In truth, this process has already begun as a result of exploring the literature. If this proposal is approved in September 2023, I anticipate being able to finish developing the contextual definitions by the following January, thereby allowing four months to develop clear definitions of the seven core characterizing terms identified previously (collaborative, integrated, accessible, inclusive, equitable, diverse, and significantly intercultural).

Between February 2024 and July 2024 (six months), I will focus on formulating the questions for the assessment inventory. As noted previously, the assessment questions will be

linked to the contextual definitions of the seven core characterizing terms and are intended to explore how well a given COIL program's design aligns with the core promises of the COIL model. This process will certainly be iterative, and the questions included in the inventory, as well as their wording, will change significantly during this period. This timing is intentional, as many institutions will be in the midst of their COIL program development over the summer months. By completing the inventory in mid-summer, I will be able to begin sharing the survey and collecting data almost immediately.

This data collection process will continue during the academic year (August 2024 - March 2025, eight months), during which I hope to gather completed assessments from eight to ten institutions, representing fifteen to twenty-five distinct COIL programs. This estimate is intentionally low, though it does represent the minimum response rate that I feel would be useful in informing the conclusions of the research. This would also allow for initial findings to be shared during the March 2025 CHEI Seminar.

I hope to continue sharing the assessment as long into the doctoral timeline as possible, but the initial data analysis will begin in April 2025 and ideally fully conclude by the end of the year (eight months). This process will of course include some clarifying communication with participant institutions, various analysis approaches, and exploring what conclusions the data supports in relation to my initial research questions. Naturally, I will be writing some portions of my thesis during the aforementioned phases, but I will be able to fully focus on the writing from January 2026 until the deadline to submit, allotting between five and seven months to complete the thesis.

During this time, I plan to submit a number of publications and present parts of my research at various conferences. In fact, I have already submitted two accepted conference

sessions for the 2023 Michigan Association of International Educators (MAIE) conference as well as a poster presentation at the 2023 NAFSA National Conference. Other conferences that I plan to submit sessions for later in the process are: International Virtual Exchange Conference (IVEC), EAIE, the Diversity Abroad Global Inclusion Conference, and various regional conferences. As my work progresses, it will provide additional content to inform future presentations.

In terms of publications, I am currently drafting an article exploring the first contextual definition that I am developing - *accessibility*. I hope to combine all seven of the contextual definitions into a longer paper next year. Additional articles surrounding the development of the assessment inventory and results of my research are also distinct possibilities. I plan to explore publishing in the following publications, and others:

- Journal of Studies in International Education (JSIE)
- Journal of Virtual Exchange (JVE)
- Journal of Comparative & International Higher Education (JCIHE)
- Frontiers: The Interdisciplinary Journal of Study Abroad
- Critical Internationalization Studies Review (CISR)
- International Journal of Multidisciplinary Perspectives in Higher Education

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