

Growing intercultural speakers in novice Italian: A virtual versus face-to-face comparison

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The Challenge

Intercultural competence (IC) is an essential 21st-century skill that should feature as a learning outcome in world language classrooms. How can the attitudes, knowledge, and behaviors of IC be successfully developed and assessed at the novice level? Are there differences in IC gains in a face-to-face versus asynchronous virtual learning context?

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Abstract

Intercultural competence (IC) has been identified as a crucial outcome of world language education. The purpose of the study is to compare possible differences in IC development between face-to-face and asynchronous virtual modes of delivery that were taken as emergency measures early in the COVID-19 pandemic for a beginning Italian course with 18- to 22-year-old students. The American Association of Colleges & Universities Intercultural Knowledge and Competence Valid Assessment of Learning in Undergraduate Education Rubric serves as a theoretical framework to determine learning outcomes and guide qualitative assessment. Applying a mixed-methods approach, the study collects quantitative data using the Intercultural

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Knowledge and Competence Short Scale and qualitative data from student reflection assignments for both face-to-face (2019) and asynchronous virtual (2020) courses. A comparison of IC development between the two cohorts shows similar achievement of intercultural learning in both modes. Implications for IC development in language classrooms are discussed.

KEYWORDS

distance learning, intercultural awareness and competence, outcomes assessment, Italian, first-year/novice language learning, postsecondary/higher education, program design, implementation and assessment

1 | INTRODUCTION

Intercultural competence (IC), which entails “a set of cognitive, affective, and behavioral skills and characteristics that support effective and appropriate interaction in a variety of cultural contexts” (Bennett, 2008, p. 97), is increasingly recognized as a crucial learning outcome in world languages (Council of Europe, 2001; Geisler et al., 2007; NCSSFL-ACTFL, 2017). Often specified as intercultural *communicative* competence (ICC) in the context of language learning (Byram, 1997; Fantini, 2011; NCSSFL-ACTFL, 2017), IC consists of multiple components. Although the terminology to describe these components may vary considerably (Spitzberg & Chagnon, 2009), many scholars agree that it encompasses a combination of cognitive aspects (knowledge of self and others, self-awareness and awareness of others, linguistic and cultural knowledge, worldview), affective aspects (attitudes, such as curiosity, openness, respect), and behavioral aspects (skills, such as verbal and nonverbal communication, empathy, skills of interpreting and relating, discovery and interaction) (AAC&U, 2009; Byram, 1997; Dearsdorff, 2006; Fantini, 2009).

Researchers and practitioners consider the development of IC to be a lifelong learning process and view it as a developmental continuum (Bennett et al., 2003; Hammer, 2015): it is a complex set of skills that can be acquired and improved upon through training, practice, experience, and reflection, and is, therefore, a teachable and learnable competence. While it is evident that IC is required for living and working in today's diverse professional settings and communities, research has shown that it is not an automatic outcome of world language education or the acquisition of linguistic proficiency (Durocher, 2007; Garrett-Rucks, 2016; Jackson, 2011; Park, 2006) but must be targeted intentionally through learning activities and assessments.

The COVID-19-induced pivot to online course delivery in higher education set the stage for increased comparison of teaching and learning practices as face-to-face language classrooms, characterized by instructor-guided learning in real time, moved by necessity to asynchronous virtual learning spaces where learning content and activities are delivered through a learning management system that students engage with on their own time. The effectiveness of language learning designed explicitly for this mode has been studied (see, e.g., the article

collection in Tarone, 2015), and practices for developing online language education in crisis versus ideal circumstances have also been compared (Gacs et al., 2020). However, little has been done to consider how learners who did not intend to learn online may be affected by these diverse modes of delivery, including both their success in achieving learning outcomes and their perception of their own learning, which has been inadequately studied.

To address the gap in literature, this study aims to compare the impact of face-to-face and asynchronous virtual delivery modes on developing IC in the world language classroom under two specific conditions: (1) The context of an emergency transition from a face-to-face to a primarily asynchronous virtual mode of delivery where the curricular design was limited to translating and adapting face-to-face activities to an asynchronous online environment rather than intentionally designing for this environment; and (2) the context of intercultural learning focused on the development of affective aspects (openness and curiosity) via activities that derive their effectiveness to a large extent from being experiential, that is, from engaging learners in a concrete experience more holistically—not only cognitively, but emotionally, socially, and sometimes physically. While there are numerous studies that explore affective learning in both face-to-face and virtual learning environments in various disciplines, including languages (Arnold, 2011; Baker, 2010; Gegenfurtner et al., 2021; Krashen, 1986; Russo & Benson, 2005; Wang, 2021; Witt & Wheelles, 2001), they commonly discuss it in terms of learners' motivation, self-confidence, anxiety, and attitudes about the course content, learning, instructor, and class community, without considering affective learning as both the content and the intended outcome of instruction. Even less is known about how the transition from a face-to-face to an asynchronous modality can impact the development of affective aspects such as curiosity and openness. A study of a health care course in which affective learning was both content and intended outcome compared affective learning in face-to-face and blended online learning environments and found that the blended learning group perceived significantly higher gains than the face-to-face group (Schaber et al., 2010). However, in this particular case, the blended online course was specifically designed to foster affective learning in the virtual format. In our case, the emergency transition prevented us from intentionally applying key principles of online course design, and we hypothesized that the impact of intercultural learning might be diminished in this mode. We designed our study to address this concern. Specifically, we used three identical learning activities that foster curiosity and openness, which constitute foundational, affective components of IC (Deardorff, 2006, 2009b) in fall 2019 face-to-face sections of novice Italian and in fall 2020 virtual sections of the same. Applying a mixed-method approach, we compared differences in IC development between two cohorts based on quantitative data collected on the Intercultural Knowledge and Competence Short Scale (ASKS2) and qualitative data from students' reflection assignments.

2 | LITERATURE REVIEW

2.1 | Intercultural (communicative) competence in world language education

The most influential language associations in the United States and European Union have recognized IC as an intended outcome of world language education (Council of Europe, 2001; Geisler et al., 2007; NCSSFL-ACTFL, 2017). As noted in their Introduction, Spitzberg and Chagnon (2009) have demonstrated that the complex concept of IC remains difficult to define

and impossible to reduce to a single theory or model. It is important to note that the term IC is not limited to the ability to communicate with people from different national cultures but also refers to the ability to interact effectively and appropriately with people from different ethnic, gendered, professional, regional, religious, etc., backgrounds. Byram (1997) has made a useful distinction between the broader notion of IC and the concept of ICC, which applies more specifically to the context of language learning and teaching. In addition to the five dimensions or *savoirs* of IC (knowledge, skills of interpreting and relating, skills of discovery and interaction, attitudes, and critical cultural awareness), Byram's model of ICC also includes language competences (linguistic, sociolinguistic, discourse) (Wagner et al., 2019). According to Byram (1997), the development of ICC involves the ability to build relationships while communicating in a foreign language, the ability to effectively negotiate communication while addressing the needs of all parties involved, the ability to mediate interactions among people of diverse cultural and linguistic backgrounds, and the effort to continue building communicative skills in new foreign languages.

The question of the role played by language in acquiring IC remains one of the controversial issues in the broader field of intercultural studies. Some interculturalists assign more importance to language and culture-specific knowledge, while others emphasize the culture-general, transferable skills (Acheson & Bean, 2019), maintaining that "language alone may be necessary but not sufficient for intercultural competence" (Deardorff, 2009a, xiii). Many scholars in the field of world language education have argued that a language classroom has the potential to cultivate both IC and ICC because it is an ideal environment for developing linguistic and communicative skills in conjunction with the culture-specific and culture-general knowledge, attitudes, and skills necessary for effective and appropriate intercultural interactions (Aski & Weintritt, 2020; Bennett et al., 2003; Byram, 1997; Garrett-Rucks, 2016; Moeller & Nugent, 2014). Research has shown, however, that IC is not an automatic outcome of world language education and that acquiring linguistic proficiency does not simultaneously guarantee a corresponding development of learners' IC (Durocher, 2007; Garrett-Rucks, 2016; Jackson, 2011; Park, 2006). It is, therefore, necessary to teach IC in a world language classroom in an explicit, systematic, and intentional manner by embedding intercultural goals in the curriculum and by challenging learners to practice and to reflect on intercultural interactions in a safe learning environment undergirded by mentorship and support.

Research has also demonstrated that IC can and should be embedded in the entire language curriculum, starting at the novice level (Bennett et al., 2003; Byram, 1997; NCSSFL-ACTFL, 2017; Wagner et al., 2019). Two publications by ACTFL—World-Readiness Standards for Learning Languages (2015) and 21st Century Skills Map for World Languages (2011)—offer guidelines and concrete examples of how to integrate intercultural learning into language curricula at all levels of language learning. Although academic professional language standards have recognized the importance of IC in world language education, scholars have shown that in practice, language teachers still struggle to teach it (Garret-Rucks, 2016; Sercu et al., 2005). As they point out, one of the frequently quoted barriers to integrating IC in world language education, especially at the novice levels, is the assumption that only the target language should be used in a full-immersion classroom (ACTFL mandates at least 90% target language use), while meaningful discussion of complex intercultural topics and learners' reflections on their intercultural development cannot be successfully processed and expressed in the target language at the novice level. The ACTFL Guidelines (NCSSFL-ACTFL Can-Do Statements for Intercultural Communication, NCSSFL-ACTFL Intercultural Communication Reflection Tool) acknowledge that deep reflection is not always possible in the target language and that it should

be done in the students' first language to facilitate complexity of thought. Some scholars suggest that reflection in the first language should take place outside the classroom (Garret-Rucks, 2016; NCSSFL-ACTFL Intercultural Communication Reflection Tool), and others propose the use of language mixing and translanguaging to stimulate the growth of intercultural skills in the language classroom (Aski & Weintritt, 2020; Kramsch, 2014; Wagner & Tracksdorf, 2018).

Traditionally, the goal of world language education has been expressed in terms of developing learners' linguistic communicative proficiency that ideally culminates in reaching native or native-like proficiency (National Standards Collaborative Board, 2015). While this remains a valuable goal for learners who progress toward advanced courses, it is an unrealistic goal for the majority of world language learners in US higher education who, as Looney and Lusin have noted, take a few introductory courses at most (2019). In light of the new understanding of the importance of IC in the age of globalization and of the changing landscape of language learning, some scholars have called for a redefinition of the core outcomes of world language education (Bennett et al., 2003; Byram, 2009; Byram & Zarate, 1997) that shifts attention from growing native speakers to growing intercultural speakers, that is, language learners who are both linguistically and interculturally competent and who are aware of their own cultural positioning, able to shift perspectives, and capable of mediating among cultures (Byram & Zarate, 1997). The notion of intercultural speaker as an ideal outcome of world language education is more inclusive in the sense that it benefits all language learners and better prepares them for life and work in a globalized society.

2.2 | Asynchronous virtual ICL

Due to the global crisis of the COVID-19 pandemic, where feasible, the education system throughout the world converted instruction from face-to-face learning to virtual learning, some of which was offered asynchronously. Intercultural learning as part of coursework was most often delivered in the face-to-face mode until the pandemic, when it necessarily moved to virtual, with the virtual being synchronous (more similar to face-to-face) or asynchronous. Virtual modes of intercultural learning have already been applied and studied in fields such as language acquisition, business, engineering, and health (Crossman & Bordia, 2011; Fernández-Raga et al., 2019; Hyett et al., 2019; Warner-Ault, 2020), using platforms of videoconferencing, e-mail, online learning management systems, blogs, chats, and podcasts, and so on (Çiftçi & Savaş 2018; Shadiev & Sintawati, 2020). However, these studies address minimally if at all asynchronous virtual intercultural learning in language acquisition.

Intercultural learning within language courses has usually been embedded in study abroad programs or incorporated in coursework involving virtual exchange or using virtual reality (Kern & Develotte, 2018; O'Dowd & Lewis, 2016; Shadiev et al., 2020). Indeed, virtual learner-to-learner exchanges have been used to target the development of IC in the language classroom since the late 1990s (O'Dowd, 2017). Recent research has recognized the potential benefits of virtual learning environments for language learners such as improved world language skills, cultural awareness, and curiosity (Crossman & Bordia, 2011; Fernández-Raga et al., 2019; Hyett et al., 2019; Warner-Ault, 2020). However, asynchronous, online coursework may also introduce challenges for learners and instructors in culturally and linguistically diverse environments due to lack of visual cues, technical difficulties, less peer interaction and communication, and so on (Murphy et al., 2007; Saud Alahmadi & Muslim Alraddadi, 2020).

Although a variety of tools have been used in asynchronous classes to provide sufficient content, interaction, and feedback to learners, it is still necessary to compare their effectiveness to tools used in face-to-face classes considering that language learning requires real-time interaction and constructive feedback (Saud Alahmadi & Muslim Alraddadi, 2020).

In sum, research is still needed to assess whether and how the asynchronous virtual mode of delivery may impact intercultural learning in world language coursework. Furthermore, along with the increasing use of virtual learning environments in the language classroom, little is known about whether asynchronous virtual coursework has a similar impact to face-to-face delivered coursework (Holgate et al., 2020). We, therefore, focus our study on whether asynchronous virtual courses are as effective as in-person courses in facilitating students' intercultural learning.

3 | RESEARCH QUESTION

To address the above gaps in literature, we compare the demonstration of and perceived gains in intercultural learning between face-to-face and asynchronous virtual modes of delivery in a beginning language course. Specifically, we pose the research question: How does the impact of teaching IC in a world language course vary across different modes of delivery (face-to-face vs. asynchronous virtual)?

4 | THEORETICAL FRAMEWORK

We used the *IKC rubric* as the theoretical framework to guide the curriculum design of the course and data analysis. The IKC rubric was developed by the American Association of Colleges and Universities (AAC&U, 2009) as one of 16 rubrics produced through the AAC&U Valid Assessment of Learning in Undergraduate Education project. This project brought together faculty and other experts from all sectors of US higher education to analyze previous efforts and create tools to help institutions demonstrate, share, and assess student accomplishment of progressively more advanced and integrative learning. The IKC rubric breaks intercultural competence into six essential, albeit not exhaustive, components: cultural self-awareness, knowledge of cultural worldview frameworks (knowledge/cognitive components); empathy, verbal and nonverbal communication (skills/behavioral components); and curiosity and openness (attitudes/affective components). In addition, the IKC rubric articulates criteria and developmental performance descriptors on four levels for each component. It has been shown to have construct validity and reliability (Gray et al., 2019) and has been used for qualitative outcome assessment to capture a snapshot of student level (Richards & Doorenbos, 2016), as a direct measure of learning (Cartwright et al., 2021), and as a guide for aligning learning outcomes with interventions (Guberman, 2020).

We considered the IKC rubric in conjunction with Deardorff's (2006) *Pyramid Model of Intercultural Competence* to determine the targeted learning outcomes of curiosity and openness and to choose relevant IC activities for the course. Deardorff's Pyramid Model visually represents the development of key elements of IC as layers of different degrees of complexity and suggests the order of acquisition of IC, presupposing the development of attitudes, knowledge, and skills on the individual level which then lead to the development of more complex internal and external outcomes at the level of interaction. Because curiosity and openness are foundational layers on which other domains rely (Deardorff, 2006), we set these

as the learning objectives in the beginning Italian course. At level two on the IKC rubric, which we considered a minimal desired outcome, the attitude of curiosity is described in terms of behavior: “Asks simple or surface questions about other cultures.” Level two openness is also identified by behavior: “Expresses openness to most, if not all, interactions with culturally different others. Has difficulty suspending any judgment in her/his interactions with culturally different others and is aware of own judgment and expresses a willingness to change.” Additionally, we used the IKC rubric to code and rate student reflections, which constitute the qualitative data samples in our study.

5 | METHODS

5.1 | Course description

We compare the reflections of two cohorts of university students enrolled in first-semester Italian at Purdue University, a large land-grant university in the United States. Both cohorts were taught by three continuing lecturers and one limited-term lecturer. In an attempt to minimize individualized instructor impact on the learning outcomes, all content was highly structured and delivered in a uniform way in each cohort. For example, the final version of all the instructional materials (videos, mini-lectures on IC concepts, debrief questions, and reflection assignments) was created by the program director, and the instructional team discussed and reached a consensus on how to approach debrief questions and handle possible challenges.

All students were asked to write three reflections in English as the final activity in each of three “intercultural labs” that were delivered in a mixture of Italian and English. These “intercultural labs” are modules that involve advance preparation, an experiential activity, a postactivity guided reflection, and curricular integration. The reflection prompted students: (1) To reflect critically on their intercultural experience and intercultural learning in the course (including their emotional response), (2) to relate intercultural learning to the “real world,” and, (3) to imagine a future course of action based on the insights gained from the activities. Students in both the face-to-face and asynchronous virtual cohorts were evaluated for engagement based on the completion of all components, and their reflections were evaluated for completion, complexity, and effort, not for the learner’s stage on the IKC rubric. All intercultural labs were embedded in the beginning Italian curriculum by following the principles of backward design (Wiggins & McTighe, 2005), which means that we first identified the desired intercultural outcomes, then determined suitable assessment forms, and lastly developed intercultural activities that aligned with the outcomes and assessment while supporting the linguistic and cultural topics of the curriculum. The intercultural labs’ content was delivered predominantly in English, with some components in Italian (see Appendix A). The use of English, Italian, and language mixing was encouraged and modeled in class discussions and in reflection assignments. Although at the novice language level students’ development of IC may be significantly greater than that of their ICC, the integration of IC objectives at this level sets the stage for enhanced growth at subsequent levels.

5.2 | Intercultural labs in face-to-face and virtual modes

Intercultural labs promoted experiential learning by creating opportunities for learners to encounter an intercultural situation or experience, to reflect on it, and to apply insights gained

from reflection to “real world” contexts. The structure of intercultural labs was designed to broadly mirror the four stages of Kolb’s (1984) experiential learning cycle: (1) Concrete experience, (2) reflective observation, (3) abstract conceptualization, and (4) active experimentation. Each intercultural activity engaged learners (physically, emotionally, socially, and intellectually) in a simulation of an intercultural experience, often pushing them out of their comfort zone (the equivalent of Kolb’s stage of experiencing). The debrief questions initiated reflective observation in Kolb’s sense by asking learners to take a step back, observe the intercultural experience, compare it to past experiences, and discuss their insights. The guided reflection assignments engaged learners in abstract conceptualization as they started to form abstract ideas and theories based on their experience and to assess how to relate them to the “real world” or a future course of action. The final active experimentation stage was encouraged by creating opportunities for learners to practice and test what they learned in new contexts via postlab curricular integration.

The first intercultural lab, “My Name Is,” targeted curiosity by stimulating learners to ask questions and seek out answers about naming practices. After learning about naming practices in Italian and other cultures, students were asked to investigate the origins of their own names with the goal of piquing their curiosity about connections between cultural practices and deeper cultural perspectives. Learners then shared their findings in small groups, following which the whole group debriefed using reflective questions designed to help them relate the activity to the real world, consider resources for investigating cultural practices, and collectively develop a list of takeaways. The whole group debrief also prompted students to examine the connections between naming and individual and cultural identity and to brainstorm ways for handling names in everyday interactions to create an inclusive environment. After the experiential activity, learners completed a guided reflection, and the lab’s topics were subsequently integrated in the curriculum through activities that utilized students’ knowledge of Italian naming practices to review pronunciation rules and noun and adjective gender agreement and to continue discussion of gender-specific names in Italian and in their own cultural communities.

The second lab, “Yes/No,” challenged students to practice openness, tolerance of ambiguity, suspension of judgment, and emotional resilience by temporarily adopting an unfamiliar nonverbal communication style. Students were asked to work in pairs and to perform two rounds of yes/no questions and answers in Italian based on a fill-in-the-blanks exercise they had completed earlier. In the first round, students were told to answer the questions in complete sentences in Italian as quickly as they could and to say yes/no by nodding to indicate yes and shaking the head side-to-side to indicate no. In the second round, students were again asked to respond with a yes/no sentence but to invert the nonverbal head movements (nod to indicate no, shake head side-to-side to indicate yes). This caused confusion and made communication considerably more difficult. The debrief motivated students to reflect on the impact of cultural conditioning on nonverbal communication and to consider strategies needed to remain open to communication, cope with ambiguity, and suspend judgment while adopting new nonverbal communication styles. Before the lab, learners were introduced to the Italian nonverbal communication style and common gestures. In the postlab phase, they were invited to practice intercultural openness by modifying their customary behavior and including Italian gestures in their communication. The activity was followed by the individual reflection assignment.

The third lab, Describe Interpret Evaluate (“D.I.E.”), guided learners to recognize the impact of culture on perception, to practice suspending judgment, and to remain open to

alternative interpretations and evaluations of culturally different practices, products, and perspectives. Students were shown a photograph of an unfamiliar scene and asked to observe then describe it. After recording students' "descriptions," the instructor introduced the concept of "D.I.E." (description—more objective, although dependent on what is noticed; interpretation—the meaning ascribed to what is seen or experienced; evaluation—the value and judgment made about what is seen or experienced) and elicited students' understanding of these terms. The group then analyzed their initial "descriptions" to discern which were "tainted" by interpretation and/or evaluation. The same photograph was shown again, and this time, students were asked to generate purely descriptive statements, which were then analyzed again for traces of interpretation and/or evaluation. The difficulty students encountered in generating purely descriptive statements was used as a springboard to discuss the interconnectedness between description, interpretation, and evaluation and to explore the influence of cultural and personal experience on perception. To practice frameshifting and generating multiple interpretations of what was observed, students were introduced to a variant of the "D.I.E." model called "Plus, Minus, Null" and were asked to apply it to another photograph. Students first described what they saw then moved to interpretation and evaluation, acknowledging whether their perception led to a positive, negative, or neutral gut evaluation. Finally, they were asked to generate two alternate interpretations with evaluations that were different from their initial gut reaction. The debrief engaged students in processing the feelings evoked by the activity (often of frustration and difficulty) and in connecting their learning to effective "real-life" communication by highlighting how important it is to consider alternative interpretations and evaluations before jumping to conclusions and to practice mindful suspension of judgment in intercultural situations. The postlab curricular integration included an activity in which learners applied the "Plus, Minus, Null" method to the interpretation and evaluation of what is commonly seen as "gross" Italian food. The lab activities were followed by the reflection assignment.¹

The beginning Italian course that integrated the above-described intercultural activities met three times per week in person in Fall 2019, while in Fall 2020 the course had one face-to-face, one synchronous online, and one asynchronous session per week. The decision to transition the intercultural component of the course from face-to-face to asynchronous virtual mode of delivery was made as an emergency measure in the wake of the COVID-19 pandemic, and its primary objective was to allow for ongoing intercultural learning at a time when face-to-face learning was significantly limited. The emergency transition involved the replication of the three face-to-face intercultural labs in virtual mode, which required significant modifications. For example, each intercultural lab retained the same overall structure in both modes (prelab activity, lab activity, reflection, postlab curricular integration), as did the content of each intercultural lab component, the tasks assigned to learners, and the reflection questions. As described in Appendix A, the adaptations to the virtual mode involved the following: (1) Interactive videos were used to convey intercultural lab information and explain the tasks in lieu of in-class mini-lectures with PowerPoint presentations; (2) the discussion board in the learning management system was used as a substitute for in-class discussions, and in case of the second intercultural lab "Yes/No," students were asked to meet using a video-conferencing tool to perform the Q&A portion of the lab; (3) the debrief of intercultural activities in virtual mode was completed in written form in small groups, pairs, or individually in lieu of the instructor-led whole-group oral debrief in face-to-face mode; and (4) the grade percentage assigned to intercultural labs in virtual mode increased to 12% to account for the longer time and individual effort that completion required in virtual mode.

5.3 | Data collection

Although the general content of the three intercultural activities was identical for both cohorts of students, the Fall 2019 cohort ($n = 20$) experienced the intercultural activities face-to-face, while the Fall 2020 cohort ($n = 33$) performed them virtually, and for most components, asynchronously. We used several sources and types of information for data collection for both cohorts: (1) The ASKS2 post- and retrospect surveys were performed during class time and were not weighed in student grades. Data from retrospect surveys were collected at the end of the course but students were asked to reflect back to the beginning of the course (e.g., “Reflecting back to the beginning of the experience, please respond to the following statements...”). (2) Written reflections for each intercultural activity were collected. (3) The researcher (T.B.W.), who served as an instructor in both cohorts, noted her experiences and observations on student engagement in intercultural activities so as to compare the differences and similarities, and her observation notes provided additional qualitative data. For both cohorts, only students who completed all three activities, all three reflections, and both post- and retrospect surveys were selected as participants in this study. (4) Demographic data was collected for these students from the Registrar.

5.4 | Participants

We used ASKS2 to measure students' IC (Holgate et al., 2017, 2020). An indirect measure of student learning, this instrument uses a six-point Likert scale based on Bloom's Affective Domain to assess the degree to which individuals internalize attitudes, skills, and knowledge associated with effective and appropriate intercultural interaction. Student self-report of learning in instruments such as this has been shown to align with actual affective and cognitive learning (Rovai et al., 2009). The ASKS2 survey focuses on the six dimensions of IC developed on the IKC rubric: openness, curiosity, communication, empathy, worldview, and self-awareness. The scale has been demonstrated by Holgate (2020) to have excellent internal consistency (Cronbach $\alpha = .96$). In retrospect- and post-course measurements using ASKS2 were administered for both face-to-face (Fall 2019 cohort) and virtual courses (Fall 2020 cohort).

5.5 | Measures and Instruments

Links to the data collection instruments used in the present study can be found under References. See endnotes for access to the intercultural labs with reflection questions. Syllabuses can be freely downloaded on the IRIS Database, iris-database.org (Table 1).

5.6 | Data analysis

Paired sample t tests were used to compare the retrospect- and post-course mean scores of ASKS2. Independent t tests were used to compare the difference of ASKS2 scores across face-to-face versus virtual format. Cohen's d was also calculated as a measure of effect sizes: a value

less than 0.20 suggests a small effect, 0.50 medium effect, 0.80 large effect, and 1.20 very large effect (Cohen, 1977, 1988).

A. S., T. B. W., and J. K. performed the qualitative analysis of written student reflections and observation notes. We assigned pseudonyms to the reflections of the students, read and reread the qualitative data, and discussed and developed preliminary ideas about codes together. Then we independently coded segments of data relevant to the research questions of the study. Next, we reorganized the codes into sub-themes that were specific to answer the research questions following which we discussed whether the data supported each theme and then revised or combined themes to ensure coherence (Braun & Clarke, 2006; Maguire & Delahunt, 2017). Following this step, we rated the reflections further using the IKC rubric as a guiding frame. The IKC rubric describes four levels for each domain, with level 1 being the lowest, or benchmark, level 4 the capstone, and levels 2 and 3 milestones. All three reflections following the intercultural activities were grouped together to create one sample per student, and each sample was coded and rated for the six domains on the IKC: cultural self-awareness, cultural worldview frameworks, empathy, verbal and nonverbal communication, curiosity, and openness. Initially, we three coders analyzed and discussed eight student samples. Although we found that interrater reliability was high, for reasons of rigor we all three continued to code and rate all samples, discussing any discrepancies of more than 1 point to arrive at an agreed rating of 0.5 difference or less. The final rating for each domain on each sample was then determined by averaging our ratings. Additionally, an average for each domain was calculated for each cohort. For example, the average rating for curiosity in Fall 2019 is 2.30 and in Fall 2020, 2.16, suggesting that as a whole the students asked “simple or surface questions about other cultures” (level 2) but were moving toward asking “deeper questions about other cultures and seek[ing] out answers to these questions” (level 3).

6 | RESULTS

Both the quantitative and qualitative data collected from the online survey and student reflections respectively indicate that students demonstrated intercultural learning and perceived themselves to grow in IC, both in the asynchronous virtual setting and in the face-to-face course.

6.1 | Quantitative results

The statistical results showed that the posttest ASKS2 score was significantly higher than the retrospect for both the face-to-face course ($t(18) = 1.73, p < .005, d = .82$), and the asynchronous virtual course ($t(32) = 1.69, p < .005, d = .60$). The effect sizes, as measured by Cohen's d , were $d = .82$ for the face-to-face course, indicating a large effect; and $d = .60$ for the virtual course, indicating a medium effect. There was no significant difference on the posttest ASKS2 score between the face-to-face course and the asynchronous virtual course. The quantitative results indicated that both courses achieved similar improvement on students' IC.

TABLE 1 Demographics of participants.

2019 (face-to-face)	2020 (virtual)
Number	
20	33
Gender	
9 Male, 11 female	17 Male, 16 female
Ethnicity	
1 Asian	1 Asian
	1 Black or African American
1 Hispanic/Latino	3 Hispanic/Latino
2 International	4 International
1 Two or more races	1 Two or more races
	1 Unknown
15 White	22 White
Age range	
18–22	18–22
Class year	
8 Freshmen	14 Freshmen
6 Sophomores	8 Sophomores
4 Juniors	6 Juniors
2 Seniors	5 Seniors

Note: Categories listed are those used in Purdue University data collection. For example, students could only choose M (male) or F (female) and could not self-identify outside these categories.

6.2 | Qualitative results

6.2.1 | Similarities in asynchronous virtual versus face-to-face course

The qualitative results collected from student reflections indicated that the benefits of asynchronous virtual and face-to-face learning were similar in terms of students' demonstrated openness, curiosity, self-awareness, empathy, communication, and knowledge of cultural worldview frameworks. Independent *t* test results of the rated reflections showed that no significant differences were found in the scores of any domains between two cohorts. Table 2 indicates each domain and samples of highly rated quotes from both cohorts, with the associated intercultural activity and IKC rubric rating (out of 4) noted in parentheses. Table 2 also illustrates how the IKC rubric was applied in the coding and rating process and how guided reflection contributed to the IC development in both cohorts.

Interactive features

Overall, the students of both cohorts perceived that the intercultural activities helped enhance their IC in a variety of domains, regardless of the format. For example, the interactive features

TABLE 2 Domains and samples of student quotes from 2019 and 2020 cohorts.

Domain on IKC rubric	2019 (face-to-face)	2020 (virtual)
<p>Attitudes <i>Openness</i> Level 2: Expresses openness to most, if not all, interactions with culturally different others. Has difficulty suspending any judgment, and is aware of own judgment, and expresses a willingness to change. Level 3: Begins to initiate and develop interactions with culturally different others. Begins to suspend judgment.</p>	<p>I found that it was a lot easier to actually observe a situation than just infer what was happening. By inferring I was unconsciously casting a judgment, whether good or bad, onto a situation that I knew little about. (D.I.E., Student 3, rating 3)</p>	<p>[T]he biggest thing to remember is to be open. to not take things personally as the person you are talking to may not be intending something in the way that you are interpreting it. We can also control the way we use our judgments by thinking through our initial perceptions and evaluating them first. (D.I.E., Student 30A, rating 3)</p>
<p>Attitudes <i>Curiosity</i> Level 2: Asks simple or surface questions about other cultures. Level 3: Asks deeper questions about other cultures and seeks out answers to these questions.</p>	<p>[A] resource that I could use to find more information while I am here is a professor. It would be a great way to build a relationship with this professor by learning about a specific aspect of their knowledge like naming conventions and finding a shared interest in our cultures. I would ask the person with the unfamiliar name or naming practice what the meaning of their name is? Does it hold any special meaning to them, their family, or their community? It might spark an interesting conversation where I can learn more about that person and their family's history. (My Name Is, Student 6, rating 3)</p>	<p>[A] great resource for learning about naming strategies within your own culture is to discuss with people outside your family about how they were named. This question made me think about the saying "curiosity killed the cat." In middle school I would always follow this phrase by saying "but it worked just fine for themonkey," referring to Curious George [character in children's books]. It may sound odd, but George's scrapes did lead him to making a lot of friends. Similarly, the more curious we are, the more people we connect to as we try to satisfy our curiosity. Through this lab, I learned about the intercultural competence continuum [a set of orientations toward cultural difference and commonality that are arrayed along a continuum from the more monocultural to global mindsets]. It seems to me, that the biggest difference between Denial and Adaptation is curiosity. Going back to Curious George, I think that curiosity is at the center of connecting cultures. By building connections with all sorts of people, we are able to learn more about different cultures. (My Name Is, Student 3A, rating 2.92)</p>

(Continues)

TABLE 2 (Continued)

Domain on IKC rubric	2019 (face-to-face)	2020 (virtual)
<p>Knowledge <i>Cultural self-awareness</i> Level 2: Identifies own cultural rules and biases (e.g., with a strong preference for those rules shared with own cultural group and seeks the same in others.) Level 3: Recognizes new perspectives about own cultural rules and biases (e.g., not looking for sameness, comfortable with the complexities that new perspectives offer.)</p>	<p>In the past, I used to be more closed-minded and ignorant of more worldly things. I was stuck to my parents' beliefs and opinions, and I was reluctant to change because that is all I knew was right and comfortable growing up. However, once I began making more diverse friends and educating myself more academically, environmentally, politically, and socially, I began to gain perspective. I used to judge people for not following standards and morals that I had, and for not perceiving things in the same way I was. But now I have completely changed my thinking—learning and growing in my own way, influenced by individual minds and separated from my parents' mindsets. (D.I.E., Student 9, rating 3)</p>	<p>I liked this activity because it allowed for me to slow down my thinking and process the way that I immediately perceive situations. Especially in my major, I have been taught to think quickly and run with my immediate instinct. I believe that we are all taught to make judgments from a young age. Especially in the American culture, my generation grew up seeing a lot of stereotypical models and “perfect” lives on social media so anything outside of that can start to be seen as bad. (D.I.E., Student 30A, rating 2.75) Through this activity I have learned that I will need more information than just what my own culture has provided. In an intercultural context this has taught me to ask questions before making assumptions. My own assumptions are most likely wrong in this context since I have little knowledge about intercultural customs. (D.I.E., Student 3A, rating 2.5)</p>
<p>Skills <i>Empathy</i> Level 2: Identifies components of other cultural perspectives but responds in all situations with their own worldview. Level 3: Recognizes intellectual and emotional dimensions of more than one worldview and sometimes uses more than one worldview in interactions.</p>	<p>You cannot live a life ignoring the experiences and situations surrounding you. Putting yourself into others' shoes and recognizing the thoughts, beliefs, emotions, and so on of others will make conversations and relationships much more meaningful. By Describing, Interpreting, and Evaluating, I can grow my mindset, recognize my bias, and acknowledge diverse perspectives. (D.I.E., Student 9, rating 3) I am in a design major and [this activity] made me realize if you are making a website or product to do with a person's</p>	<p>To see someone of a different culture act a different way and be different than how you were raised will make you have judgments or reservations against that person. I believe that we can control this to an extent, we control it by how much we actually portray our emotions in a physical way, as to not make the other person feel alienated or bad about themselves. From there it is all about understanding and that control turns into changing your own perspective. Once we change the way we think and learn more about their culture, can we then control how we make judgments? (D.I.E., Student 1A, rating 2.5)</p>

TABLE 2 (Continued)

Domain on IKC rubric	2019 (face-to-face)	2020 (virtual)
<p>Skills</p> <p><i>Verbal and nonverbal communication</i></p> <p>Level 2: Identifies some cultural differences in verbal and nonverbal communication and is aware that misunderstandings can occur based on those differences but is still unable to negotiate a shared understanding.</p> <p>Level 3: Recognizes and participates in cultural differences in verbal and nonverbal communication and begins to negotiate a shared understanding based on those differences,</p>	<p>name and you want it to be globally used you have to take in consideration of how people like their names to be displayed so that they feel like its made for them. User experience is key In design and I am glad this helped my awareness to cultural differences. (My Name Is, Student 13, rating 2.5)</p> <p>We will meet a lot of people in our life, people coming from all areas of the world, and it is critical to think about the way people converse and how meaning within conversation can be expressed differently. We will have to recognize various perspectives and take into consideration the right way to approach/adapt conversation. Everyone is not accustomed to the same methods of communication. It is obvious when thinking about the variety of languages, but nonverbal conversation is something that is not always considered. (Yes/No, Student 9, rating 2.5)</p>	<p>Relating back to my mentioning of hand gestures in the many middle eastern cultures, you would be seen as stiff and rigid when speaking to somebody without using hand gestures, unless you were discussing something in a formal context. Carrying this over to Italian cultures, I believe an individual would also be seen as stiff if they were to not use some hand gestures in day-to-day life (Yes/No, Student 12A, rating 2.83)</p>
<p>Knowledge</p> <p><i>Knowledge of cultural worldview frameworks</i></p> <p>Level 2: Demonstrates partial understanding of the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.</p> <p>Level 3: Demonstrates adequate understanding of the</p>	<p>The ancient Chinese cultural naming practice is the way it is because they value the family name much more than the given name. It shows how important they saw their family and how much they honored each other's family names. In many other cultures, they practice naming based on their religion. One specific religion that can be heavily attributed to naming</p>	<p>[W]e dove into the naming practices of other cultures such as the Chinese. and that was just the tip of the iceberg it turns out, as naming unlocks the door to so many other elements of the culture as well as the identity of individuals. (My Name Is, Student 6A, rating 3)</p> <p>[In Quebec] I found myself in this mindset still that the French-speaking people did not exist, and that Canada was just another United States. Looking back, I am</p>

(Continues)

TABLE 2 (Continued)

Domain on IKC rubric	2019 (face-to-face)	2020 (virtual)
complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.	practices is the Muslim religion, where very many people name their children after their prophet Muhammad. This has led to the name Muhammad becoming the most common name on Earth. (My Name Is, Student 15, rating 2.5)	horrified of course that I did not really grasp the rich history and context behind why there is a language barrier, but I feel this example demonstrates how a lot of people in general feel about foreign cultures or immigrants. (D.I.E, Student 6A, rating 3)

Notes: Sic for all student comments. Quotes were excerpted for reasons of space and may not address all components in the description level on the IKC rubric. Numbers refer to student samples in Fall 2019; and numbers followed by “A” refer to student samples in Fall 2020.

Abbreviations: D.I.E., Describe Interpret Evaluate; IKC, Intercultural Knowledge and Competence.

of these activities were consistently appreciated by both cohorts, especially when opportunities were provided to ask questions in group discussion sessions. In their written reflections and online discussion forums for the activity “My Name Is,” several students commented on the discovery-based homework, claiming that these tools contributed to their learning from and about other students in the course. The reflections for “Yes/No” and “D.I.E.” contained references to the instructional videos as useful resources that helped students gain knowledge and context for learning intercultural concepts. Some students expressed enthusiasm about the experiential nature of the activities. As one participant noted, “I really enjoy how hands-on everything we learn in this class is, it makes the experience more impactful” (D.I.E., student 9, 2019 face-to-face cohort).

Critical reflections

By responding to prompts for critical reflection, students documented their experience with the intercultural activities, the meaning or importance of the experience for them (how it contributed to a change in their perspective), and how they planned to implement new knowledge, attitudes, or skills in future “real-life” situations. As one student noted, “Through this activity I have learned that I will need more information than just what my own culture has provided. In an intercultural context this has taught me to ask questions before making assumptions. My own assumptions are most likely wrong in this context since I have little knowledge about intercultural customs” (D.I.E., Student 6A, 2020 virtual cohort). Other students used a similar trope of “before” and “after” the activity as a way to document their perceived IC growth. The quotes in Table 2 are excerpted from these critical reflections and demonstrate student achievement of learning outcomes.

6.2.2 | Differences in asynchronous virtual versus face-to-face course

Based on the instructor’s observation notes, we identified several differences between the asynchronous virtual and the face-to-face modes. These include the more time-consuming nature, greater importance of sequencing, need for more instructions, and lack of real-time

feedback in the asynchronous virtual format, variations in the effectiveness and replication of intercultural activities plus differing types of debriefs across modes.

Time-consuming asynchronous virtual mode

In virtual mode, the intercultural labs generally took longer to complete than in face-to-face mode. As the instructor noted, “While most intercultural activities embedded in the novice Italian curriculum take about 50 minutes to complete in a face-to-face setting (not counting the at-home individual reflection assignment), the online version of the same activities may take considerably longer time, especially if it requires the synchronous small-group or pair collaboration among students.” The virtual format enabled students to approach intercultural learning tasks at their own time and pace, but coordination and equal contribution among students could be problematic.

Sequencing

The instructor’s note about access to the learning materials indicates that sequencing may affect intercultural learning in the asynchronous virtual setting: “If access is given to all steps in the virtual lab—pre-lab activities, lab, reflection, post-lab integration—and students do them out of order, this can diminish the impact of learning (for example, completing reflection before participating in the intercultural lab).” Therefore, clear instructions, reminders, and adaptive release of the materials are key for the virtual mode.

Variations in effectiveness and replication

Regarding replication, when the intercultural activity involved individual work and small group discussion, it could be more effectively replicated in the virtual environment. For example, of the three intercultural labs, the virtual version of the “My Name Is” activity closely mirrored the steps included in the face-to-face version and was most effectively replicated. Both delivery modes entailed students’ investigation of naming practices around the world and the discovery of the meanings of their own names. The face-to-face small group discussion and feedback on naming practices was successfully replicated by sharing and commenting on the small group members’ posts on the virtual discussion board.

When the intercultural activity required more nonverbal communication to ensure clarity, it was more difficult to replicate in the asynchronous virtual mode. For example, regarding the “Yes/No” activity, the instructor noted, “In the face-to-face environment, I was able to physically observe and ensure that the students, who worked in pairs, understood the instructions and interacted in the target language by using the correct nonverbal head motions. In the virtual environment, students were asked to meet synchronously with their assigned partner and to perform the intercultural activity by following the video explanation of the task. A small group of students failed to watch the video instructions and ended up performing the activity incorrectly, thus missing the intended learning outcomes of the lab.” Moreover, the noisy environment of the face-to-face classroom contributed to a successful simulation of a real-life experience of miscommunication—something that could not necessarily be replicated in a synchronous meeting of two students.

Real-time feedback

The asynchronous virtual mode lacked real-time instructor feedback and required additional directions. For example, the effectiveness of the intercultural lab “D.I.E.” largely depended on students’ ability to grasp the nuanced distinctions between description, interpretation, and

evaluation. The instructor reflecting on the experience noted the following: “In the face-to-face iteration of the lab, I was instrumental in guiding students through this process by pointing out every instance in which their attempts at providing purely descriptive statements were ‘tainted’ by interpretation and/or evaluation. As a group, students volunteered their answers and asked questions until a consensus was achieved and the differences between description, interpretation, and evaluation were teased out. In the virtual iteration of this lab, students worked individually on the interactive video presented by me, without the possibility of the real-time instructor feedback, and wrote their answers directly into the discussion board.” The instructor reflected that although the video contained numerous examples of purely descriptive statements as well as interpretive and evaluative statements from previous labs, some students’ answers demonstrated that they still struggled to distinguish between the three. To address this issue, the instructor added a whole-class synchronous debrief to the virtual format of the lab.

Different types of debriefs

The most notable structural difference between the intercultural labs in the two delivery modes concerned the type of debrief. In the face-to-face mode, the debrief afforded the opportunity to share insights in the large-group setting and to foster learning from multiple perspectives provided by the students. The virtual mode, on the other hand, included an asynchronous debrief in which students answered debrief questions in small groups (“My Name Is”), pairs (“Yes/No”), or individually (“D.I.E.”). The instructor captured the resulting differences in her notes: “Unlike the face-to-face volunteer-based participation in the debrief, the asynchronous debrief required each student’s active participation. The asynchronous debrief benefited students by allowing them more time to think through and answer the debrief questions, but it lacked a comparable diversity of students’ observations intrinsic to the whole-group face-to-face debrief.” In an effort to better support students’ intercultural learning and assessment in the virtual environment, the online version included an asynchronous debrief and an additional whole-class synchronous debrief moderated by the instructor.

7 | DISCUSSION

7.1 | Contributing components of the asynchronous virtual mode to ICL

The results indicated that asynchronous virtual learning can be as impactful as a face-to-face course in developing students’ intercultural attitudes, skills, and knowledge. We suggest that key components of the asynchronous virtual intercultural learning in language classrooms that could contribute to improved learning outcomes include a constructive learning environment (Law et al., 2019; Wagner & Trackdorf, 2018) and critical self-reflection (Beagan, 2015) or structured reflection (Byram & Wagner, 2018; Crane & Sosulski, 2020). This finding is supported by previous studies. Law et al., (2019) suggest that a constructive learning environment where students are encouraged to work together and support each other with a variety of tools in online courses is helpful to motivate students’ learning. For example, the Italian online intercultural activities integrated a number of learning features available through the learning management system such as interactive videos, homework assignments based on cultural discovery, (post- and retrospect) surveys, and online discussion forums for students to interact with and learn from each other. Virtual content delivery allowed students to have

ample time to discover, understand, interpret, and process the learning concepts as well as to share their experiences.

A constructive learning environment in both face-to-face and asynchronous virtual contexts provided students with meaningful intercultural experiences within a safe, supportive, and collaborative learning community. However, experience alone is not a guarantee that intercultural learning will actually happen, as pointed out by Crane and Sosulski (2020): “Experience is the starting point for reflection, though not all experiences necessarily lead to learning. It is the act of reflecting that makes experience meaningful to an individual” (p. 73). The key component in developing IC in both contexts was offering students a regular opportunity to critically reflect on the experiences through guided reflection that intentionally focused on the specific intercultural learning objectives (of curiosity and openness). Our findings align with previous studies pointing to critical reflection as an effective tool of transformative learning in the world language classrooms that can lead to perspective-shifting (Crane & Sosulski, 2020) and the development of IC (Byram & Wagner, 2018).

7.2 | Obstacles and advantages of asynchronous virtual mode

Our findings indicate that some aspects of the intercultural labs are more difficult to successfully replicate in the virtual context than others, and this may impact the effectiveness of intercultural learning in the online format if effective online learning design strategies are not applied. To achieve their intended learning goals, some intercultural activities rely more significantly on synchronous interaction among learners and even on their physical and emotional engagement in the interaction. Such interactions are unlikely to be replicated in the asynchronous virtual mode but could be more successfully recreated in the synchronous virtual mode, as demonstrated by the virtual version of the intercultural lab “Yes/No.” Similarly, intercultural activities that focus on nonverbal communication can be replicated in synchronous virtual mode, but their impact may be diminished if learners cannot benefit from immediate instructor support. Our findings suggest that the lack of real-time instructor feedback is an important, if perhaps obvious, drawback for intercultural learning in an asynchronous virtual language course. For example, in the intercultural Lab “Yes/No,” the learning gains depended on carefully following the teacher’s instructions and correctly executing the deliberately confusing nonverbal head motions. In the absence of real-time instructor feedback, some students performed the activity incorrectly and failed to achieve the intended learning outcomes. Because we transitioned from face-to-face to virtual mode as an emergency measure, our findings are limited to the observations based on replicating the pre-existing intercultural activities in the asynchronous virtual mode. Instructors planning for intercultural learning in virtual settings may want to consider which intercultural activities are better suited for a virtual context and even which virtual learning environments, for example, virtual reality, virtual worlds, artificial intelligence for e-learning, asynchronous versus synchronous, etc., might best prepare students for increased remote professional and personal interactions.

We also found that virtual delivery may offer some affordances that enhance the effectiveness of intercultural learning in the asynchronous virtual versus face-to-face mode. Labs that involved small-group discussion of the prelab activities were easily replaced by discussion board interactions among students in the virtual environment (“My Name Is”). By requiring a written individual student contribution, the asynchronous virtual format enabled

each student to articulate and express their observations at their own time and pace, an opportunity that may be jeopardized in a face-to-face environment when student contribution is uneven.

7.3 | Additional findings

In both formats of delivery, face-to-face in Fall 2019, and asynchronous virtual in Fall 2020, learners demonstrated the most significant growth in the areas of intercultural curiosity and openness, the two domains of the IKC rubric that were explicitly targeted by the three lab activities. All student reflections included quotes that were coded and rated as 2.0 or higher for these domains. The findings of this study are thus in line with the literature that argues for the need to teach IC in the world language classroom explicitly and intentionally (Aski & Weintritt, 2020; Bennett et al., 2003; Byram, 1997; Garrett-Rucks, 2016), by following backward design and aligning the desired outcomes with the assessment and the learning activities (Wiggins & McTighe, 2005).

In addition to gains in curiosity and openness, learners' reflections show evidence of growth in other domains of IC. For example, all students had quotes that were coded for verbal and nonverbal communication and rated at 1.5 or higher; however, this result is to be expected given that one intercultural lab focused on nonverbal communication activities. Self-awareness was the next most present domain, with only one student each in fall 2019 and fall 2020 failing to express it, and it received the highest average rating following openness and curiosity in both semesters (1.94 in 2019, 2.09 in 2020). Empathy was widely present (17/20 students in fall 2019; 27/33 in fall 2020), and knowledge of cultural worldview frameworks was present for about sixty percent (13/20 and 20/33) of the students. These results attest to the interconnectedness of cognitive, affective, and behavioral aspects of IC and may suggest the value of a more holistic understanding even when specific domains are targeted.

As noted in its introduction, the IKC rubric itself cannot reflect the complexity it is designed to represent. An analysis of the quotes in Table 2 underscores the fact that IC may encompass seemingly opposite cognitive, affective, and behavioral processes. For example, student understanding of IC may include autonomy of thought that is distinct from that of their family of origin (Cultural Self-Awareness 2019) or a new articulation of an already-held value, as with the student who discusses their middle school defense of curiosity (Curiosity 2020). In some instances, IC means mobilizing prior knowledge, as when students cite knowledge of Muslim naming practices (Cultural Worldview Frameworks 2019) and Middle Eastern hand gestures (Communication 2020). In others, it entails deliberately setting that knowledge aside, e.g., the student who states the value of observing over inferring (Openness 2019) or the one who looks back on assumptions made during a visit to Quebec (Cultural Worldview Frameworks 2020). Where connections to programs of study are concerned, the student who connects naming practices and preferences to user experience in web design demonstrates that IC may have explicit connections with skills taught in a major (Empathy 2019, Student 13), while the student who values slowing down thought processes points to the opposite (Cultural Self-Awareness 2020, Student 30A). Not least, a useful component of IC may be meta-reflection, as demonstrated by the student who hypothesizes the importance of curiosity for advancing on the Intercultural Development Continuum (misnamed in the quote, Curiosity 2020). In general, the reflections confirm that a change in perspective—concerning oneself or others, past and/or future experiences—is key to IC, regardless of medium.

Although it was not included in the research question, we found that in the virtual course, female students perceived greater gains in IC development, while males did not perceive their growth to be as significant. However, from the students' reflections, we did not find differences in perceived learning between female and male students. Although previous research has indicated that female students studying abroad obtain greater IC gains than males do (Berg, 2009), limited literature has explored gender and other demographic differences in virtual intercultural learning. Other demographic differences did not produce significant findings as the sample size was too small. Future research can investigate further what factors may contribute to this outcome in the virtual mode.

7.4 | Limitations

A key limitation to our understanding of differences in learning in face-to-face versus asynchronous virtual modes through this study is the small sample size, which may reduce the power of the study. Another limitation is that we did not examine complex difficulties that students may have encountered during the COVID-19 pandemic such as mental health issues, financial hardships, social isolation, and other potential factors that may hinder intercultural learning in the asynchronous virtual mode. Given that the virtual mode was an emergency measure and that learning might be more challenged in crisis-prompted teaching, it is valuable to see similar results across the two modes. Future studies should consider examining a broader range of variables that may affect student learning, such as student characteristics (e.g., motivation, prior knowledge), instructional methods, teacher effectiveness, and environmental factors (e.g., classroom environment and resources). By considering these additional factors, future research can provide a more nuanced understanding of the complex interactions that impact learning outcomes. Additionally, the qualitative results may have been affected by social desirability bias, which could include a desire to please the instructor even if the assignment was graded for completion only. Our study did not measure the long-term or behavioral impact of students' intercultural development, and these are important areas for future research. Finally, the IKC rubric we used and the ASKS2 survey that is based on it may not be sufficient to capture the complexity of IC; using varied measures and triangulating them may contribute to a more holistic picture.

8 | CONCLUSION

As the COVID-19 pandemic has impacted education significantly, changes in curricula have been made to increase the flexibility and efficacy of teaching and learning in world language classrooms. In summary, the findings of our study indicate that asynchronous virtual modes have great potential to be as effective as face-to-face courses in developing IC. This is especially important now, given the distinctive rise of online learning and the shift to teaching on digital platforms following the COVID-19 pandemic. By increasing the use of asynchronous virtual learning approaches (i.e., online video) in preclass activities, students and instructors may be able to focus on in-depth discussions and whole group debriefs in the classroom. Finally, to effectively achieve learning outcomes and overcome obstacles in asynchronous virtual environments, instructors can create more opportunities for collaborative learning and critical reflection and adjust course content or utilize new tools to eliminate confusion caused by lack

of real-time feedback and interaction. Future research should continue to explore factors that contribute to or impede the effectiveness of intercultural learning in language courses in different modes and contexts and among different student populations.

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ENDNOTE

- ¹ For a more detailed content comparison of intercultural labs in face-to-face and virtual modes, see Appendix A. To access all lab materials (PowerPoint presentations, videos, reflection assignments) and ideas for curricular integration, see <https://hubicl.org/toolbox/tools/759/objectives>.

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APPENDIX A

Table A1

TABLE A1 Content comparison of intercultural labs in face-to-face and in virtual delivery format.

	Fall 2019 face-to-face (<i>n</i> = 20)	Fall 2020 virtual (<i>n</i> = 33)
Intercultural Lab 1: “My Name Is”—“Mi chiamo”	<p>Prelab activity (written homework)</p> <p><i>Objective:</i> Cultural discovery and investigation task</p> <p><i>Format:</i> Handout providing examples of naming practices across cultures and questions prompting students to investigate the origins of their name</p> <p><i>Language:</i> English</p> <p><i>Content:</i> Individually, students reflect on the provided examples of naming practices across cultures and explore the origins of their first and last name in writing</p> <p>In-class intercultural activity</p> <p>Explanation of the objectives and of the IC Lab flow (in-class PowerPoint presentation)</p> <p>In-class discussion of naming practices in Italy (explanation in Italian) and across various cultures, based on the homework assignment</p> <p>In-class small-group discussion of students’ findings about the origins of their name gathered in the prelab preparation phase</p> <p>In-class whole-group instructor-led debrief of intercultural activity, followed by brainstorming on takeaways</p> <p>Reflection assignment</p> <p>Completed individually and submitted through the LMS</p> <p>Postlab curricular integration</p> <p><i>Language:</i> Italian and English</p> <p><i>Content:</i> In-class warm-up activities</p>	<p>Prelab activity (homework posted to the LMS discussion forum)</p> <p><i>Objective:</i> Cultural discovery and investigation task</p> <p><i>Format:</i> (1) Video on naming practices across cultures (in English) and in Italy (in Italian) posted to the LMS, (2) Discussion board questions prompting students to investigate the origins of their name</p> <p><i>Language:</i> English and Italian</p> <p><i>Content:</i> Individually, students reflect on the provided video examples of naming practices across cultures, and explore the origins of their first and last name in writing</p> <p>Virtual intercultural activity</p> <p>Prerecorded video-explanation of the objectives and the IC Lab flow</p> <p>Online small-group collaborative discussion of findings and insights gathered in the prelab preparation phase, posted to the LMS discussion forum, students comment on their group members’ posts</p> <p>Group members collaborate on answering the debrief questions and post them to the discussion forum</p> <p>Instructor compiles small-group debrief answers and performs whole-group debrief in synchronous mode (via Zoom or in person), including takeaways</p> <p>Reflection assignment</p> <p>Completed individually and submitted through the LMS</p> <p>Postlab curricular integration</p> <p><i>Language:</i> Italian and English</p> <p><i>Content:</i> Online discussion homework activities</p>

TABLE A1 (Continued)

	Fall 2019 face-to-face (n = 20)	Fall 2020 virtual (n = 33)
	<ul style="list-style-type: none"> Using Italian names to review pronunciation rules, and the noun and adjective gender agreement Using a news article to continue the discussion on gender-specific names in Italian and learners' own cultures 	<ul style="list-style-type: none"> Using Italian names to review pronunciation rules, and the noun and adjective gender agreement Using a news article to continue the discussion on gender-specific names in Italian and learners' own cultures
Intercultural Lab 2: "Yes/No" — "Si/No"	<p>Prelab activity (written homework) <i>Objective:</i> grammar review <i>Language:</i> Italian <i>Content:</i> Students complete a 20-question fill-in-the-blanks exercise (verb conjugation) that will be used during the Q&A lab activity</p> <p>In-class intercultural activity <i>Language:</i> English and Italian</p> <p>Introduction to the Italian gestures and nonverbal language (in-class PowerPoint presentation and video clips)</p> <p>Explanation of the objectives and of the IC Lab 2 flow (in-class PowerPoint presentation)</p> <p>In-class pair Q&A activity</p> <p>In-class whole-group instructor-led debrief of intercultural activity, followed by brainstorming on takeaways</p> <p>Reflection assignment</p> <p>Completed individually and submitted through the LMS</p> <p>Postlab curricular integration <i>Language:</i> Italian <i>Content:</i> In-class warm-up activity</p> <ul style="list-style-type: none"> Students practice using Italian gestures introduced during IC Lab 2 in the context of a provided dialog in Italian 	<p>Prelab activity (homework posted to the LMS discussion forum) <i>Objective:</i> grammar review <i>Language:</i> Italian <i>Content:</i> Students complete a 20-question fill-in-the-blanks exercise (verb conjugation) that will be used during the Q&A lab activity</p> <p><i>Objective:</i> cultural discovery and investigation <i>Language:</i> English and Italian <i>Content:</i> Students watch a prerecorded video by the instructor about Italian gestures and nonverbal language</p> <p>Virtual intercultural activity</p> <p>Prerecorded video-explanation of the objectives and the IC Lab 2 flow</p> <p>Students meet with their assigned partner using video-conferencing tools and record their Q&A interaction (video posted to the discussion forum)</p> <p>Student pairs collaborate on answering the debrief questions and post them to the discussion forum</p> <p>Instructor compiles pair debrief answers and performs a whole-group debrief in synchronous mode (via Zoom or in person), including takeaways</p> <p>Reflection assignment</p> <p>Completed individually and submitted through the LMS</p> <p>Postlab curricular integration</p> <p>Not performed in asynchronous virtual format (performed in synchronous mode or face-to-face mode)</p>

(Continues)

TABLE A1 (Continued)

	Fall 2019 face-to-face (<i>n</i> = 20)	Fall 2020 virtual (<i>n</i> = 33)
Intercultural Lab 3: “D.I.E.”—“D.I.V.”	<p>In-class intercultural activity</p> <p>Explanation of the objectives and of the IC Lab 3 flow (in-class PowerPoint presentation)</p> <p>Whole-group participation in the intercultural activity (D.I.E.) and pair discussion of “Plus, minus, null” activity</p> <p>In-class whole-group instructor-led debrief of intercultural activity, followed by brainstorming on takeaways</p> <p>Reflection assignment</p> <p>Completed individually and submitted through the LMS</p> <p>Postlab curricular integration</p> <p><i>Language:</i> Italian</p> <p><i>Content:</i> In-class warm-up activity</p> <ul style="list-style-type: none"> • Students apply the “Plus, Minus, Null” method to the interpretation and evaluation of what is commonly seen as “gross” Italian food 	<p>Virtual intercultural activity</p> <p>Prerecorded interactive video containing explanation of the objectives and the intercultural activity</p> <p>Students participate individually in the video version of the intercultural activity and post their answers to the questions asked in the video in “real time” to the discussion board</p> <p>Individual students answer the debrief questions and post them to the discussion forum</p> <p>Instructor compiles individual debrief answers and performs a whole-group debrief in synchronous mode (via Zoom or face-to-face), including takeaways</p> <p>Reflection assignment</p> <p>Completed individually and submitted through the LMS</p> <p>Postlab curricular integration</p> <p>Not performed in asynchronous virtual format (performed in synchronous mode or face-to-face mode)</p>
Grading	Completion of intercultural activities and of the reflection assignments are part of the participation grade (roughly 5% of the overall grade)	Completion of intercultural activities and of the reflection assignments are part of the intercultural labs grade (worth 12% of the overall grade)

Abbreviations: D.I.E., Describe Interpret Evaluate; IC, intercultural competence; LMS, learning management system.