

DESIGN STUDIO PRACTICE TO FOSTER CULTURAL AWARENESS: A TALE OF TWO COUNTRIES

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ABSTRACT

The design studio practice is a key component of design education, providing a hands-on, constructivist learning environment where students tackle complex challenges. This study explored how the design studio fosters multicultural awareness among students from different countries and disciplines through structured interactions. Three types of interactions—learner-teacher, learner-content, and learner-learner—facilitate dynamic idea exchange, experimentation, and teamwork. These interactions are essential for interdisciplinary collaboration and cultural understanding. Given the global nature of design work, cultural awareness is vital, as professionals must collaborate across diverse backgrounds. The design studio helps students develop these skills by engaging with peers from different cultures, preparing them for international teamwork. The study involved 111 undergraduate and graduate students from Interior Design, Product Design, and Interactive Media Design at universities in Colombia and the U.S. Using a virtual exchange (VE) project aligned with the Collaborative Online International Learning (COIL) framework, students collaborated to create an “experiential environment” for dining. Each discipline contributed expertise, from spatial design to user experience. A pre- and post-project survey assessed cultural awareness, revealing overall improvement, though some students showed resistance to socialising outside their culture. The findings underscore the design studio’s role in fostering cross-cultural competencies, demonstrating how its interactive, interdisciplinary nature enhances real-world learning and global preparedness.

Keywords: Design studio, multicultural, collaboration, virtual exchange

1 INTRODUCTION

Design studio practice is a cornerstone of design education, providing students with an experiential, constructivist learning environment where they tackle complex, open-ended challenges through hands-on engagement. It encourages creativity, critical thinking, and problem-solving, equipping students with the necessary skills to navigate professional design practice. Beyond technical skills, the design studio fosters collaboration, communication, and adaptability—qualities essential in today’s globalised design industry. This study examines how design studio practice enhances multicultural awareness among students from different countries and academic disciplines, demonstrating its potential as a space for both skill-building and cultural exchange.

1.1 Interaction as the core of learning in Design Studio

The design studio is an interactive learning environment where students engage with instructors, course content, and peers to develop and refine their design skills. Three fundamental types of interaction shape the learning experience: learner-teacher, learner-content, and learner-learner. Each of these interactions contributes to a holistic, immersive education model that extends beyond conventional classroom instruction [1].

The learner-teacher interaction is centred around mentorship, dialogue, and iterative feedback, contrasting with the more linear knowledge transmission typical of traditional lecture-based instruction. Through critical discourse and guided exploration, students refine their ideas independently while developing essential skills such as critical thinking and adaptability—both vital for interdisciplinary collaboration [2]. The learner-content interaction further enriches the educational process, as students engage with course material through research, prototyping, and iterative design work. This engagement

exposes them to diverse cultural influences, historical references, and local traditions, broadening their understanding of human-centred and culturally responsive design practices [3]. Equally important is learner-learner interaction, where collaboration with peers fosters communication, teamwork, and the exchange of ideas. Simpson and Galbo [4] describe interaction as the reciprocal exchange of behaviours, both verbal and nonverbal. Working within multicultural teams, students must navigate varying communication styles and perspectives, thereby strengthening their ability to operate effectively in global design environments [5]. Together, these three forms of interaction create a dynamic, immersive educational framework that prepares students for the complexities of contemporary design practice. By integrating these forms of interaction, the design studio creates an environment that nurtures interdisciplinary collaboration and cross-cultural understanding, preparing students for the realities of global design practice.

Likewise, current trends in studio practice, such as collaborative, global, and distributed design, reflect the realities of today’s interconnected world. Collaborative design fosters teamwork and empathy, encouraging students to integrate diverse perspectives. Global design expands students' awareness of cultural differences and the need for inclusive solutions, while distributed design builds digital communication and project management skills across geographical and cultural boundaries. Together, they cultivate the cultural sensitivity and adaptability crucial for success in the global design industry.

1.2 Cultural awareness and its importance in Design

Cultural awareness is an essential competency in the design field, where professionals often work on projects requiring collaboration across diverse teams and audiences. Culture encompasses values, communication norms, and behaviours that shape individuals' perspectives and interactions with the world [6]. A lack of cultural awareness in design can lead to miscommunication, ineffective solutions, and unintentional exclusion of certain user groups.

Multicultural exposure in design education prepares students for real-world challenges by fostering an appreciation for different perspectives. Studies have shown that culturally diverse teams tend to produce more innovative and user-centred solutions because they integrate a wider range of insights and experiences [7]. Furthermore, cultural competency is increasingly valued in professional design teams, as it enhances collaboration, user empathy, and creative problem-solving.

2 VIRTUAL EXCHANGE AND THE COLLABORATIVE ONLINE INTERNATIONAL LEARNING FRAMEWORK

This study was conducted over two years and involved 111 ($n = 111$) undergraduate and graduate students from three design disciplines—Interior Design, Industrial Design, and Interactive Media Design—across three universities: two in Colombia and one in the United States. All participants were above eighteen years old. Of the overall sample, 85% were female. Two students in the 2023 and one in the 2024 cohorts for “Institution 1” were from the graduate level. Only three students from “Institution 1” surpassed 23 years of age. Detailed information is available in Table 1. The institutions collaborated on a virtual exchange (VE) project aligned with the COIL framework. VE initiatives leverage digital tools to facilitate international collaboration, allowing students from different locations to work together on shared projects without the need for physical travel [8].

Table 1. Sample’s demographics

		2023		2024		TOTAL
		Female	Male	Female	Male	
Institution 1	Number	27	0	39	1	67
	%	40%	0%	58%	1%	100%
Institution 2	Number	7	6	15	5	33
	%	21%	18%	45%	15%	100%
Institution 3	Number	6	5	0	0	11
	%	55%	45%	0%	0%	100%
TOTAL	Number	40	11	54	6	111
	%	36%	10%	49%	5%	100%

The Collaborative Online International Learning (COIL) framework is an educational model that facilitates international collaboration between students and instructors from different institutions around the world through digital tools. COIL leverages virtual exchange to connect students across borders, enabling them to work on shared projects, engage in cross-cultural dialogue, and develop global competencies without the need for physical travel. This approach enhances students' intercultural communication skills, broadens their academic perspectives, and prepares them for the interconnected global workforce. COIL initiatives are widely used in higher education to foster collaboration, critical thinking, and cultural awareness in a diverse and globalised context.

COIL is an innovative educational framework that connects students and educators from diverse cultural and geographical backgrounds through virtual collaboration. By integrating international learning experiences directly into the curriculum, COIL facilitates joint projects and cross-cultural dialogue without requiring physical travel. This approach not only enriches academic content but also develops global competencies, fostering a deeper understanding of different perspectives in today's interconnected world [9].

The project aimed to foster intercultural exchange by engaging students in a collaborative design challenge. Participants worked in teams, assuming both the roles of designers and clients. Each group was tasked with conceptualising an "experiential environment" that transcended physical boundaries, integrating cultural elements into their designs to create holistic and immersive experiences.

Experiential design is a multidisciplinary approach that focuses on creating immersive, engaging, and memorable experiences for users by integrating elements of product, architecture, technology, storytelling, and sensory engagement. Unlike traditional design, which primarily emphasises functionality and aesthetics, experiential design prioritises how users emotionally and cognitively interact with a space, product, or digital interface [10]. At its core, experiential design seeks to shape environments that evoke emotions, foster connections, and enhance user experiences. This approach is widely used in fields such as retail, hospitality, museums, brand experiences, interactive installations, and digital environments [11].

Under this guidance, students from three bachelor's degrees within two countries were selected to collaborate on the project. From the United States, majors in interior design, and from Colombia, majors in industrial design and interactive media design.

In the first year (2023), the project brief revolved around developing an interactive, experiential restaurant. The overall objective was to design a space that required teamwork and engaged the three disciplines, each contributing their field of expertise. For United States-based students, the location of this restaurant was to be in one of the major Colombian cities. Likewise, Colombian students were going to work on developing products and digital interactions for a restaurant located in a city in the southeast United States. Six teams were formed with between 8 to 9 students per group, and all groups included all disciplines.

This dynamic was carefully thought out, with students playing the role of designers and clients but still using collaborative design to develop the holistic proposal. They were required to communicate among themselves. Nonetheless, each institution and discipline will have its student learning outcomes (SOL), project outcomes, and expectations. This is a tremendous replicable practice that this study contributes to the VE methodology. Previous attempts with universities overseas that combined students from different institutions working simultaneously in mixed teams presented difficulties in logistics and coordination. This new approach allows students to interact between institutions, exchange information, and share cultural values, each working on their project. To assess such communication, students were required to engage in their own time and show artifacts such as screenshots, short video recordings, and text conversations of their interactions (Figure 1).

The second year (2024) addressed a bolder design brief in expectations of intercultural exchange development. Students were required to design a United States experiential museum showcasing Colombian culture. Once again, students with the three aforementioned disciplinary backgrounds worked together in six teams. Each discipline contributed its expertise, with industrial designers focusing on product development, interactive media designers on digital media and user interface, and interior designers focusing on space planning and the built environment. The same method used the year before on recording screenshots and text conversations to account for team involvement was replicated.



Figure 1. Student exchange and project examples

To encourage meaningful intercultural interaction, the project was structured around several key activities:

- **Cultural Research and Exchange:** Students conducted research on their assigned locations, exploring cultural factors such as design aesthetics, social behaviours, and environmental considerations. Findings were shared through virtual meetings, fostering discussions on cultural nuances in design.
- **Collaborative Design Process:** Teams developed design solutions that blended multiple cultural influences. Interior designers focused on spatial organisation, product designers on furniture and materiality, and interactive media designers on digital interfaces and user experience.
- **Client-Designer Role Play:** Students provided feedback from the perspective of their home culture, helping their peers consider user needs beyond their own familiar contexts. This approach cultivated empathy and a deeper understanding of cultural differences in design decision-making.

3 EVALUATING THE IMPACT OF THE DESIGN STUDIO ON MULTICULTURAL AWARENESS

To measure the efficacy of these projects in the construct of multicultural awareness, a reliable instrument developed by a Southeast university in the United States was used. This instrument measures international critical thinking (IntCrit) as well as international communication skills (IntCOMM).

The IntCrit and IntCOMM Attitudes and Beliefs Survey is designed to assess critical thinking and communication skills through a set of 26 items—12 focused on International Critical Thinking and 14 on International Communication. Validity and reliability of the 12 IntCrit items are supported by discrimination values ranging from 0.612 to 0.696 and a reliability coefficient of 0.90. Similarly, the 14 items of the IntCOMM survey included exhibited discrimination values between 0.538 and 0.692, also achieving a reliability coefficient of 0.90. Each item is evaluated using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), allowing for a nuanced measurement of respondents' attitudes and beliefs in these areas.

The data from the two consecutive years was compiled, and students reported a significant growth in most of the items, supporting their ability to collaborate across cultures and reinforcing the role of design studio practice as a platform for intercultural learning (Figure 2, Figure 3). Furthermore, statistical analysis in the IntCrit portion displayed significant differences in items 1, 4, and 5, corresponding to: 1) *I consider different perspectives before making conclusions about the world.* 4) *I can make effective decisions when placed in different cultural situations.* 5) *Knowing about other cultural norms and beliefs is important to me.* The IntCOMM portion displayed similar behavior with statistical significance for items 15 and 20, where item 15 is *I am confident that I can adapt to different cultural environments,* and item 20, *I often ask questions about culture to members of other cultures.* More interesting was the fact that items 14 and 17 were the only ones to decrease, corresponding to “I prefer to socialise with people of my culture” and “I like working in groups with students from other countries,” respectively.

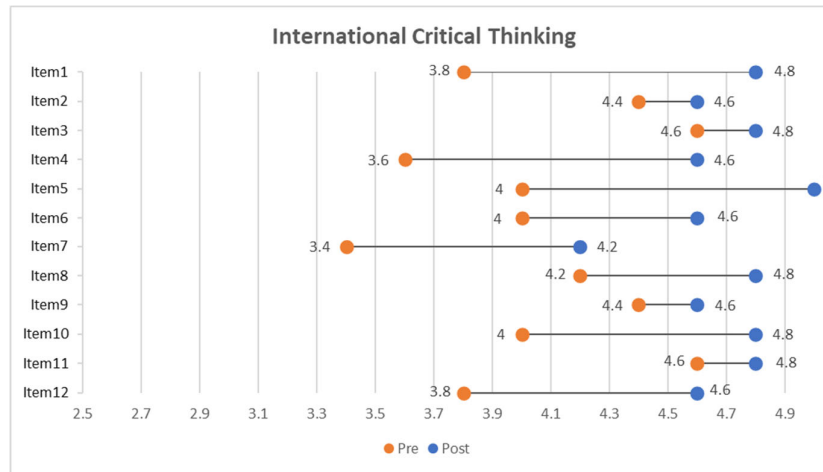


Figure 2. IntCrit Items detail

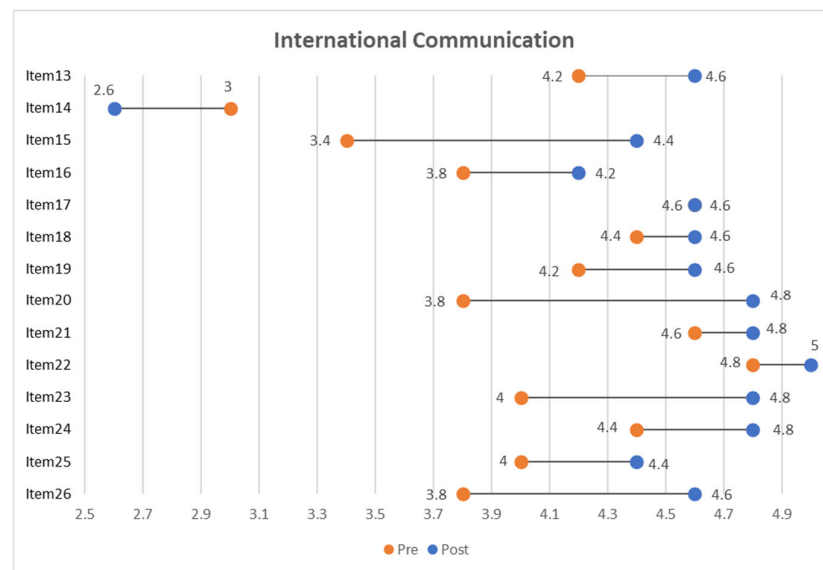


Figure 3. IntCOMM item detail

The results demonstrated an overall increase in cultural awareness, with students expressing greater openness to working with peers from different backgrounds. One notable shift was a decline in the statement, “I prefer to socialise with people of my culture,” suggesting that students became more comfortable interacting across cultural lines. However, while most items showed improvement, the statement, “I like working in groups with students from other countries,” remained unchanged, indicating that some students may still have faced challenges in cross-cultural teamwork.

4 IMPLICATIONS FOR DESIGN EDUCATION

The findings of this study highlight the benefits of incorporating virtual exchange into design studio practice. By fostering real-world collaboration among students from different cultural backgrounds, design education can better prepare graduates for the demands of globalised professional environments. Some key takeaways include:

- **Enhanced Cross-Cultural Communication Skills:** Students who engage in international collaborative projects develop stronger communication and negotiation skills, essential for working in diverse teams [11].
- **Expanded Design Perspectives:** Exposure to different cultural viewpoints broadens students' design thinking, encouraging more inclusive and user-centred solutions [12].

- Greater Adaptability and Problem-Solving Abilities: Working with peers from different backgrounds challenges students to be more flexible in their approach, refining their ability to navigate complex design problems [13].

To further enhance multicultural learning in design studios, educators can integrate multilingual resources, invite international guest lecturers, and foster ongoing collaborations with global institutions.

5 CONCLUSIONS

The design studio is not only a fundamental method in design education but also a dynamic space where students develop essential technical, conceptual, and cultural skills for their professional growth. This study demonstrates that integrating Collaborative Online International Learning (COIL) into design education fosters multicultural awareness and strengthens key competencies for global collaboration.

The results indicate that students improved their critical thinking and ability to interact in intercultural contexts, although challenges remain in fostering spontaneous social integration with individuals from different cultures. This suggests that while the design studio and virtual exchange initiatives facilitate collaborative learning, additional strategies are needed to promote more organic and sustained interaction among participants.

As design education continues to evolve in an increasingly interconnected world, it is essential to explore methodologies that combine experiential learning with international collaboration. Future research could focus on optimising pedagogical strategies within the design studio, incorporating new digital tools and teaching models that reinforce cultural immersion and interdisciplinary teamwork.

Ultimately, this study reaffirms that design education must transcend physical and cultural boundaries, preparing future designers to navigate the challenges of a globalised professional environment where diversity and collaboration are key elements for innovation and success.

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