

## A Study of Cross-cultural Learning Experience: through Collaborative Online International Learning (COIL) Interior Design Between Macau and China during the Covid-19

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### ABSTRACT

*As interconnected learning of global cultures has become the main direction of international education. In today's college students' education and learning, a more closely connected trend in education has become to cultivate, inspire, and create college students to succeed in global economic development, which is increasingly becoming the responsibility of international universities - helping college students to obtain Cross-cultural communication, collaboration skills required for work after graduation. In the strategy development program for studying interior design courses, different cultural influences have a direct impact on the student's learning experience in terms of "culture shock", where historical reasons for fragmentation require an opportunity to presuppose how to approach design issues that can be addressed in a cross-cultural context. This paper is based on a strategy to address and explore a new area of educational reform in China - the establishment of a bundled partnership between the Chinese Education Bureau and the Macau Education and Youth Development Bureau for educational co-development, and the study and practice of a virtual collaborative online global learning (COIL) program. This research will provide a platform for reviewing and exploring the concept of multicultural learning and experiences in interior design between China and Macau during the period of COVID-19 through the collaborative Online international learning approach A systematic review will be included in order to gain effective information related to the research topic and review findings of recent articles.*

*Keywords: cross-cultural learning experience; collaborative online international learning (coil); interior design education; intelligent and virtual design*

### INTRODUCTION

In the process of the interior design education courses in China, the demand for students' cross-culture awareness is in short supply. In the era of epidemic, online courses pose huge challenges to the limitations, singularity, and sensibility of interior design courses. The interior design teaching system should have the dual attributes of spirit and material, technology, and art, and requires the unity of knowledge and action. Therefore, teaching cannot ignore the cultivation and cultivation of points of interest. In recent years, with the development and changes of interior design education, a new pattern has been formed in the cultivation of multicultural cooperative talents. Therefore, as a highly practical interior design major, we should pay attention to the guidance and participation of education to maintain the coordination of the development of the talent training cycle.

Especially over the years, the development of architectural education in China has made remarkable achievements. It is the interior design of the past 30 years, and gradually presents a multi-dimensional, multi-mode, multi-objective and self-cultivation situation. The "Canberra Agreement" signed in 2008 provided an international platform for Chinese architectural education, and also raised new challenges. Therefore, exploring an architectural education model with Chinese characteristics has become a top priority. In the context of the new era, diversity and openness have become the themes of the development of architectural education in China. The interior design major reforms the education model and explores the intersection of multiple and open architectural education through joint design, joint competitions, forums and exhibitions, international architectural education and other training and exchange forms. The special topic of the interior design courses implemented by Macao architectural culture in recent years. Taking teaching practice as an example, a series of measures of learning methods from COIL are introduced in detail, and the multicultural exploration and thinking education goals of interior design are revealed. Macau University of Science and Technology and Shenzhen University of Technology design majors in the education mode, highlight their characteristic interior design courses relying on the two universities and regional resources, based on architectural culture and design, innovative ideas, diversified open resources sharing. Taking teaching practice as an example, this paper introduces in detail a series of measures from subject selection to multi-result evaluation mechanism, revealing the exploration and thinking of the interior design major of Macau University of Science and Technology and Shenzhen University of Technology in the education mode, highlighting their reliance on the resources of the two universities and the regional Based on architectural culture and design, the innovative concept of diversified and open characteristic interior design courses.

One of the fundamental skills is developing “intercultural sensitivity”. (Bennett,1993), who developed a developmental model of intercultural sensitivity, there are several stages in extending one's sensitivity to other cultures. Bennett emphasizes that this journey is developmental, "through experience, awareness, and practice, one can move from cultural ethnocentrism, which sees one's own culture as 'reality center', to one that sees culture as 'relative to context' Cultural National Relativism." Intercultural sensitivity involves being aware of differences between cultures and being able to respect and accept those differences (Chen & Starosta, 2000).

## STATEMENT OF THE PROBLEM

Cross-cultural learning increases students’ understanding of their own and other cultures; The concept of capturing and conveying cross-cultural learning – in terms of lifestyle – is at the heart of interior design education. The discipline's commitment to understanding and responding to the needs of all is also reflected in the CIDA (Accreditation Council for Interior Design) 2014 Professional Standards, which require the demonstration of cultural competency in interior design education. “Standard 2—Global Perspective for Design” (specifically indicator 2g) specifies that interior design programs provide “opportunities for developing knowledge of other cultures” (CIDA, 2014).it enhances one’s knowledge of the norms, values, and behaviors that exist in cultures. And it allows the student both to discern and communicate cultural differences with sensitivity and confidence. Because of the cross-cultural training, interior design students are usually better adjusted to their new cultural milieu working with interior design projects as well.

In interior design, cross-culture can be taught in studios. Adopting pedagogies and research methods used in the social sciences allows for a comprehensive inclusion of culture in a studio setting. discussion-type seminars, support courses, large lecture courses enrolling hundreds of students, and online courses. Real-time communication is enabled by new technologies that

facilitate interactions with people in varied physical locations and time zones. With these emerging conditions in mind, undergraduates today must prepare for a world that demands heightened sensitivity toward cultural nuances (Deardorff, de Wit, & Heyl, 2012).

The course can be devoted solely to culture or faculty can add culturally relevant materials to existing courses. Further, students can be encouraged to take classes focused on culture within other departments and related programs, institutions, or in another country together.

The study emphasized that a person would change from cultural ethnocentricity to seeing his culture as "necessary to reality," to cultural ethno-relativism by experience, understanding and practice, and that culture will be seen as "relative to sense" in the phase in general (Desjardins & Bullock, 2019). Intercultural awareness requires understanding and tolerance for discrepancies between cultures. Traditionally, international studies have become the most common avenue for students to enhance intercultural communication in the Asian countries (Gale et al., 2017). Students of every area should be prepared, as culture is increasingly global, to function and reside with citizens of diverse cultural backgrounds. This interconnecting trend brings universities in charge of having students gain intercultural expertise in a global world and practice after graduation. One of essential potential is the development of intercultural experience (Asojo et al., 2019).

Macau, China is a multicultural city. It has also experienced the influence of foreign cultures in history and has become a special system of "one country, two governance" in China's politics. In Macau, there are not only local people but also Portuguese descendants, including various ethnic groups in the entire southern maritime region of Asia - Malays, Japanese, Indians, Timorese, and even Africans. This cultural diversity is strongly reflected in schools in the Macau region. Unfortunately, two aspects pose cross-cultural educational challenges for both Chinese inland students and Macau students in how to experience and learn in combination with cultural differences in the interior design program curriculum. For example, the First Mainland China University has successively opened a large number of exchange study courses for Macau students. Many Macau students have no lack of learning about local Chinese culture and are used to mixed culture and Portuguese-Macau culture. Especially in the special circumstances of the epidemic, it is only convenient to be with students from the same cultural background. There is a tendency to gradually abandon the praise of Chinese cultural values. This change is accompanied by a convergence of the social status of two groups of what sociological language calls their different ethnic origins. Second, the traditional cultural learning content of Chinese inland students is single, lack of communication and cultural identity, exclusion, and alienation.

Collaborative Intercultural Education Online Learning (COIL) between global institutions is a professional organization for globally educated people to have intercultural communication in a situation that goes beyond the academic framework. This obvious advantage provides the main path to deeply reflect on the past approach of single online learning and draw lessons from it for future virtual and rapid learning effects.

The main purpose of this qualitative study was to explore students' experiences of learning in Macao's multicultural classrooms. The second purpose of this study is the understanding of the relationship between culture and culture by Macau students and native Shenzhen students in the same interior design course study. The third purpose of this study is to explore the selectivity of COIL learning method for students to learn cross-cultural methods and tool innovation under the special circumstances of the epidemic. In addition, I wanted to determine whether students' experiences of inter-metacultural learning can be shared with the subject of completing the interior design culture project. The current research is carried out at Macau University of Science and Technology and Shenzhen University of Technology, and the research topic is the "Cross-culture Place Design - Museum of Art Culture and Humanities". The project cycle is 36 weeks.

We realized that, as the meaning of this study, we had to explore our interior design characteristics through an online international collaborative learning approach to the native culture and colonial architectural culture of Macau, China.

#### RESEARCH OBJECTIVES

By studying the case of Cross-culture Place Design - Museum of Art Culture and Humanities”, this research combined with Shenzhen University of Science and Technology VR Interior Design Multicultural Common Project and visited the current situation of COIL design courses for interior design majors in Macau universities. According to the following objectives:

1. Investigate the relevance of COIL learning method to students' learning and practical knowledge experience of interior design and the trend of the results presented.
2. To explore the relationship between Macau students and mainland China through common design topics, online communication methods, and cooperation methods.
3. Determine the student's experience of the COIL (Experience and Perception) design process in cross-cultural learning, balancing cultural identity and objectivity.
4. Explore the local interior architecture history and design courses in Macau and Shenzhen, so that students can learn to clearly understand the content outline of the interior design theory and application courses and how it affects the design direction of the two regions. To propose a reform design model that identifies precisely how students at different stages to shares and communities with COIL to meet their needs.
5. Propose a cross-cultural design project to accurately identify students' co-design concept of modern multicultural design with COIL and analyze how to learn the future cultural exchange value brought by multicultural creation after the epidemic. For Macau students to discover and experience the relationship between traditional Chinese inland culture and modern culture. For example: aesthetic changes, design psychological needs, etc., to enhance cultural identity.

#### RESEARCH QUESTION

In view of the cross-cultural differences between Macau, China, and mainland China, to examine Macau's attitudes towards intercultural multiculturalism and multicultural education, I propose three broad research questions. Macau culture - that is neither fully sinicized nor fully Portuguese, but a unique culture of Macau that integrates the cultures of China and Portugal, and has the characteristics of the cultures of China and Portugal:

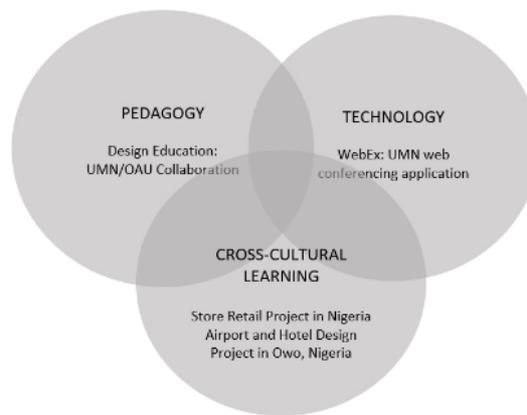
1. Did the COIL experience increase students' knowledge about adjacent interior design learning and practice?
2. How is the experience of students in Macau and mainland China different in shared online courses (COIL)?
3. What differences in cross-cultural influences students reported interior design experience (i.e. COIL experience and perception)?
4. What in this interior design course influences students most to help students learn about Cross-cultural issues? between Macau students and Shenzhen students meet their learning COIL experience need?
5. Did the COIL experience increase student awareness of various learning exchanges between Macau and inland China? Which cultures reflect the vast majority of Macau students' lack of awareness of the concept of Chinese cultural identity?

## SCOPE OF THE STUDY

In order to give students, the opportunity to practice solving design problems in a cross-cultural environment, the faculty of Macau University of Science and Technology chose the Interior Heritage Cultural Remodeling Project Design course, which is usually offered to third-year design students. An average of 30 students from interior design, architecture and other university majors take the course each fall semester. The main objective of this course is to introduce multiculturalism, colonial culture and Macau Portuguese culture as dynamic design elements that influence interior spaces. The assignments and design projects emphasize the integration of multiculturalism with the use of VR for interior and architectural elements. Shenzhen University of Technology faculty selected several architecture graduate students who had taken interior design electives for their courses.

The current research aims to understand how Macau interior design students perceive the relationship between cross-cultural and access to learning experiences, and how they learn the COIL approach to learning in the classroom. I use pedagogy, technology, intercultural learning, and multicultural education as the conceptual framework for this research by Asojo, Kartoshkina, Jaiyeoba, and Amole (2019) as shown in Figure 1 demonstrates.

FIGURE 1. Multicultural Learning and Experiences in Design through Collaborative Online International Learning (COIL) Framework



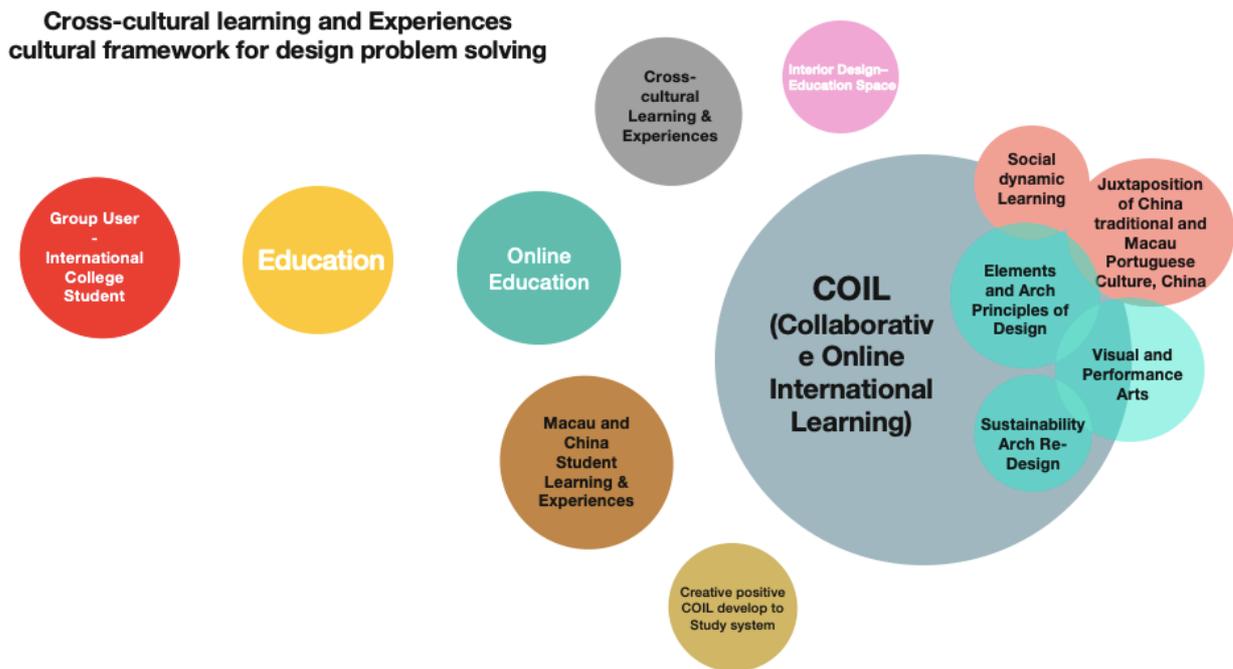
"COIL-ing" courses are opportunities for student and faculty growth, enhancing course content and providing a study abroad-like experience to facilitate cross-cultural learning (SUNY Online Center for International Collaborative Learning, Lo, Johnson, and Tenorio, 2011). Their study of student learning in an online environment showed that "engaging students in online assignments increases student satisfaction and promotes critical thinking and deep learning" (p. 1). Similarly, the iterative attempts and pedagogical practice literature of this one study emphasize the introduction of an international background for educators and the ability of students to pick up comparative and cross-cultural pedagogy. These two studies emphasize the importance of the three main components of COIL, namely pedagogy, technology, and intercultural learning (Bai, Larimer, & Riner, 2016).

## COIL INTERIOR DESIGN COURSE

To promote and foster local, regional and international forms of collaboration in the field of interior design education, and to encourage and support the exchange of cultural, scientific and technical expertise among interior design practitioners and scholars, to infuse creativity,

and to provide support for identifying and addressing interior environmental design issues through an interdisciplinary design process and for the professional development of historic and cultural heritage design and habitat. Students learn how to become professional interior designers who design in ways that protect people's health and safety and improve human well-being. The juxtaposition of Chinese Shenzhen heritage and Macau Portuguese culture is an abstract theme that deals with indigenous influences and the importance of explaining them in a non-literal and non-stereotyped way in the design solution.

FIGURE 2. Five themes of a cultural framework for addressing design problems.



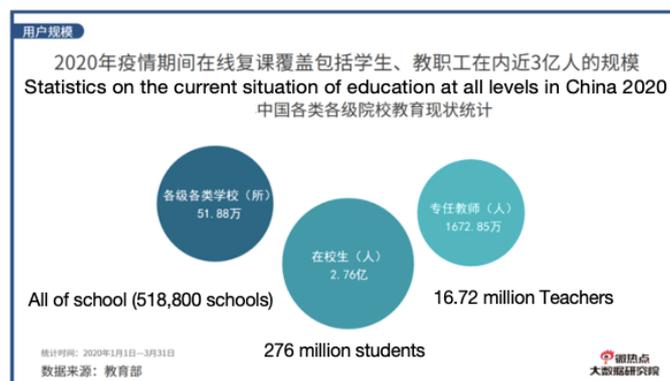
## LITERATURE REVIEW

In the last few years, numbers of research articles were delivered by the authors related to multicultural learning and experiences in interior design. This literature will review findings of previous papers and will enable to enhance understanding about multicultural learning and understanding about collaborative Online international learning approach.

At the height of school closings due to the COVID-19 pandemic, 1.6 billion students were impacted in 193 countries. Educators and students at all levels grappled with how to transition unexpectedly and immediately online. Much like the mass working-from-home experiment for office workers, educators and students began to recognize what they were missing and embrace what was working. (Figure 3)

In December 2019, there was an outbreak of Coronavirus (COVID-19) caused by a new type of coronavirus in Wuhan. The design and education of interior virtual scenes for students is particularly important.

FIGURE 3. Nearly 300 million users will be covered by online resumption of classes during the 2020 new crown epidemic.



According to the data released by the Ministry of Education in 2020, affected by the epidemic, the online resumption of classes during the new crown epidemic in 2020 has covered nearly 300 million people, including students, faculty, and staff. Online education has been widely promoted and applied in China and become an important node in the development of online education.

Affected by this epidemic, the online resumption of classes during the new crown epidemic in 2020 will cover nearly 300 million people, including students, faculty and staff. Online education has ushered in large-scale promotion and application, which may become an important node in the development of online education. Online class resumption exposes hidden dangers, students, parents and teachers have their own concerns.

According to data from research, nearly 50% of the surveyed users believe that the online resumption of classes is difficult to ensure students' concentration; 60% of the surveyed users believe that parents cannot supervise their children; and teachers' biggest concerns are discipline management, content output and communication. Not as good as classroom education. Limited by the influence of network environment, learning environment and other conditions, how to improve the learning quality of online education will become the biggest topic in the industry.

More than half of users believe that the effect of online class resumption is not as good as expected. Online education has a long way to go. According to data from research, 55.3% of the respondents believe that during the epidemic, the expected effect of online education is worse than that of learning in school. Research by analysts believe that the resumption of online classes will certainly effectively promote the further popularization of online education, but how to improve the actual learning effect of students in the future has become the key to the sustainable development of the industry.

The new crown epidemic that has erupted since January 2020 is a disaster for all mankind. In the crisis, online education has become the key to "stopping classes and not stopping school" (People's Republic of China and Ministry of Education, 2020). With online education, there are still a series of urgent problems that need to be solved. Under the epidemic environment, social activities are greatly restricted, and social activities mainly in the form of group gatherings are directly cancelled. In this case, educational activities are directly affected. In order to minimize the impact of the epidemic on education, the Chinese Ministry of Education research and formulate policies for educational work to ensure that the educated group normally receives education, and online education based on Internet technology has become an important choice in teaching activities.

Consulting analysts believe that the adoption of online resumption measures in schools across the country not only effectively avoids the spread of the epidemic, but also ensures the effective advancement of school education to the greatest extent.

Analysts believe that avoiding infection and the spread of the epidemic is the main purpose of online education. And this large-scale application may also become a key touchstone for the effect of online education. After analysts believe that compared with classroom education, poor learning atmosphere and low student concentration are considered the biggest shortcomings of online education. Especially for young students, the control of learning autonomy has become a major problem during the resumption of classes.

Afterwards, analysts believe that the online resumption of classes will inevitably effectively promote the further popularization of online education, but how to improve the actual learning experience of students in the future has become the key to the sustainable development of education quality.

The hallmark of a cultural power is to provide the world with a civilization. In the history of the United States, three large immigration waves attracted a large number of European, African, Asian and Latino immigrants. As a multi-ethnic country, different cultures influence each other, forming a multicultural situation. The concept of American tolerance and openness has laid the ideological foundation for the development of American multiculturalism. American "multiculturalism" has neither a specific connotation nor a clear definition. For this reason, the British scholar C.W. Watson, after a systematic study of it, believes that it is "firstly a historical view, and secondly a cultural view. Again, a value, but also educational philosophy, public policy, and ideology" (Feng, 2017).

For global design trends and culturally contextualized design industries, it is critical for future designers to reflect and for them to conduct culturally sensitive research and engage in projects that consider cultural nuances. The Accrediting Council for Interior Design (2018) dedicates one of its 16 standards (Standard 4) to the global context: it requires interior design graduates to be "prepared to work in a variety of contexts and across geographic, political, social, environmental, cultural, and economic conditions." (p. 16) the American Council for Accreditation of Interior Design Education recognizes the importance of integrating cultural diversity and global issues in design education.

Therefore, it is feasible to use this cultural dimension COIL to test whether it can reveal the behavioral patterns of learning COIL cross-cultures. The aim of this approach is to enhance cross-cultural educational understanding and experience of interior design through collaborative online international learning methods using immersive VR educational learning system educational tools.

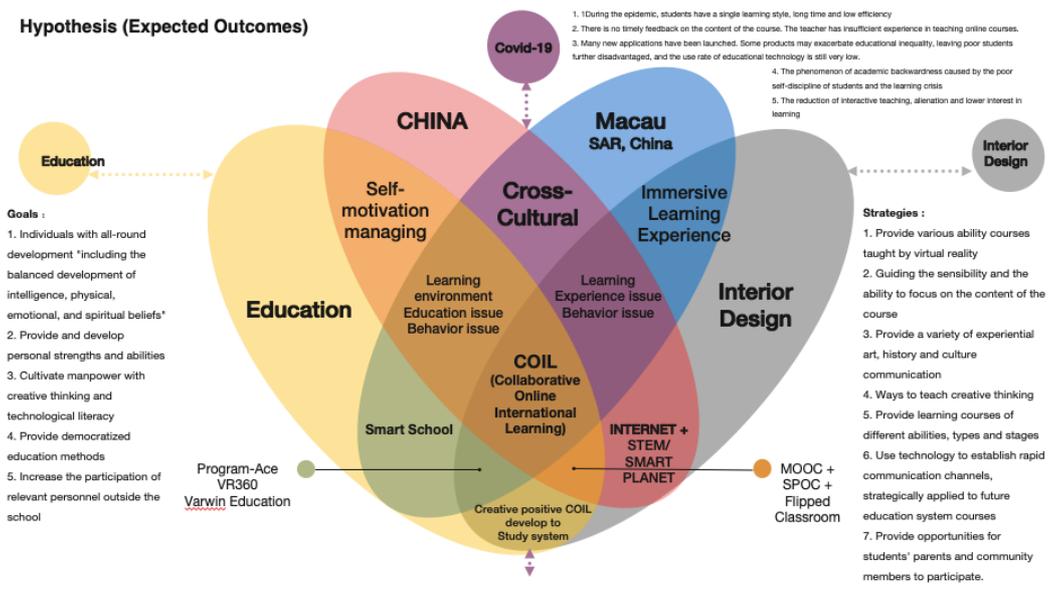
The methodology used in this study is based on the concepts of action research and interview feedback syllabus. Students act as "active experiencers" through history and culture, learning and contributing to the distinctive local cultures being studied. These students are also active "investigators" as they seek opportunities to increase their understanding of the different cultures in their hometowns and neighborhoods by sharing experiences, expanding existing knowledge, and developing new perspectives. In recognition of students' roles as active experiencers and investigators, the data provided in this study were collected through students' cross-cultural experiences in cross-cultural contexts with partners from different regions.

Using this information, COIL students are better able to determine which topics should be included in the Shared Historic and Cultural Buildings module. Topics were selected based on existing gaps in student knowledge expressed by students in the pre-COIL survey. Faculty and curriculum design are careful not to assign potentially controversial and polarizing discussion topics to the groups of students involved. (eg, national territorial sovereignty, language, etc.)

To measure progress made by COIL student participants, the authors reviewed student work for clues of social presence (Arnold & Ducate, 2006), such as willingness to engage with partners and ability to make personal connections. Given that students earn points for completing COIL activities, the measure of cross-cultural design presence is the timeliness of students' responses to partners and the effort they put into those responses. For example, did

the responses to their partners' group discussions indicate that the students had thoroughly learned to appreciate their partners' responses and understood their perspectives/experiences? The measure of ability to build cross-cultural design relationships is based on the degree to which students compare their personal experiences with those of their partners. For example, did students identify similarities and differences between their cultural attributes and that of their partners? Are students able to influence each other and their partners to design extensions and innovations?

FIGURE 3. Research Design



Through the COIL learning method, (Research Design 3) use VR 3D visual transformation to build understanding from the senses such as vision, touch, and hearing Portuguese Macau and Chinese Architectural History, Mobilization. Through the layer-by-layer introduction of historical landscapes, architectural structures, and Mazu's handicraft culture, users can feel emotional cross-culture experience.

## CONCLUSION

This collaboration demonstrates, the geographic gap for students is changed by technological means, allowing students to save time and cost without leaving home to increase their cultural exchange in all directions. Secondly, it is important for educators to reform the education system, enrich and carefully plan an optimized curriculum, and create a new system of teaching and learning media assessment. Local teacher partners from China and Macau were able to create a rich teaching environment for students to learn to practice culturally sensitive interior design. Having established fruitful partnership, it is hoped that other faculty from all disciplines will be encouraged to consider unique partnerships with different universities abroad and develop sustainable assignments. There is no single way that such a program can successfully promote cross-cultural learning for students - it all depends on what different university partners are willing to try. The authors would like to emphasize that the COIL teaching experience is definitely worth embedding in any course but requires careful and thoughtful planning on the part of both partners. In conclusion, COIL can be one of the best tools for bridging the gap between different parts of the world, improving comprehension of cultural differences, developing cultural sensitivity, and ensuring cultural transmission and exchange.

Furthermore, the whole experience of using virtual learning reflection tools is not only about developing design extensions but also interoperability in terms of curriculum, creating favorable conditions for student mobility also educating and teaching them the need to consider and contrast design and cultural issues in a balanced intercultural design, with a greater emphasis on the experiential sense of the learning process and deeper forms of learning behavior change. One of the main goals of exploring and standardizing "intercultural design" as a systematic approach to design education is to enrich culture and society by generating new cultural practices and the objects that support them. As we evolve in an increasingly expanding global community, designers also need to understand cultural differences. An intercultural approach to design explores cultural differences while celebrating diversity through design that opens the dialogue between cultures. At the same time, design across cultures preserves and enhances current local cultures by respecting cultural diversity. Overall, it helps build students' self-awareness, awareness of their own culture, and appreciation of cultural differences. The resulting self-efficacy enables students to share design projects in a respectful, identity-defining way and to work collaboratively together to enlarge and actively create a multicultural future.

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