

Utilising Collaborative Online International Learning

COIL as a Pedagogical Framework for Design Thinking Projects

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The University of Derby (UoD) and Jiangxi University of Technology (JXUT) run annual, joint projects that provide students with an opportunity to develop cultural awareness and work on participatory Design Thinking and professional practice projects. These have normally taken place on the Derby campus but in 2020/21 the teaching delivery moved entirely to a virtual realm, due to the Covid-19 restrictions in the UK. This year, participants were tasked to propose products and services to improve student wellbeing in inner-city areas. This case study presents the results of this collaboration. The online Design Thinking project, undertaken by UK and Chinese students utilises the COIL framework (Collaborative Online International Learning). The goal of this approach is for students to become independent critical thinkers, who use empathetic methodologies to Design. Furthermore, it will present visual samples of students' work and present how online real-time interactive platforms facilitated their research and communication skills. The conclusion summarises what was learned from this way of working, together with suggestions of how this might feed into design pedagogy in the post-Covid era.

Keywords: Online Learning Environments; Design Pedagogy; Participatory Design Thinking

Introduction – Case Study 2021; Outlines

The Design Thinking project presented in this case study is a part of the ongoing partnership between UoD and JXUT. It reflects the objective of advancing students' capabilities to work within collaborative and participatory, methodological contexts to build confidence in team-work skills and utilise interdisciplinary methods in their thinking and making processes. These types of projects have been running since 2017 and would usually take place in a studio environment on campus. Due to Covid-19 restrictions in 2021, all teaching and work were moved online to Microsoft Teams (MST) and Miro. MST replaced face to face delivery and allowed for virtual communication channels that students could use privately or as a group. The studio environment was moved onto Miro, a real-time interactive platform that hosts student-designed collaborative exhibition spaces.

A mixed group of Level 4 & 5 Interior and Fashion Design students were briefed to propose solutions in the form of products or services that might improve student wellbeing in the Derby inner city area. This was to be visualised through data and process mapping that would be informed through contextual, site and visual research. For the participating international students from China, this project was also a first introduction to Derby as their new place of study and residence.

Design Thinking modules are a firm part of the UoD curriculum and act as a core learning development asset for conceptual and practice-driven work. The benefit of these modules and briefs lies in their ability to present inter-disciplinary and exploratory environments for students, in which they can experiment and further their critical thinking and making skills (Razzouk & Shutte 2012).

The learning objectives set in this brief revolved around students' core-skill development; their competence to work in interdisciplinary teams; critical thinking about the Design process and improvement of their practice and methodologies through diverse inputs, experimentation and crit.



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The Framework: Collaborative Online International Learning (COIL)

Due to the prompt shift from campus to online study, the framework of the project could no longer rely on studio pedagogy alone but had to take a hybrid form that would correspond to the new shared learning environments. Although studio pedagogy reiterates the necessity of interaction and designing in a creative space (Dutton, 2014, Carpenter, Valley, Napier & Apostel 2013), it was no longer possible to rely on physical interaction, but on simulated spaces that mimicked the exhibitory nature of the studio and workshop. A different framework was necessary to bind project objectives with student development and experience that would build on positive and supportive networking as the main driving force for collaboration, whilst fostering holistic methods to Design Thinking and making. In the process of looking for models and frameworks for this shift to blended and online learning, lecturers at UoD came across an online learning model that was written within the parameters of Design Thinking and participatory practice. The COIL framework was founded and developed at Coventry University, as a model for online collaborative short projects between UK and International students, who were predominantly from China (Hilton 2019). At its core, COIL aims to create inviting, interactive and playful environments for students to collaborate and work within, whilst allowing for the development of culturally aware and empathetic thinkers and makers. COIL builds on students' intrinsic motivations to learning and sets constraints to working within playful boundaries that are to be individually interpreted but collectively developed and solved (Hilton 2019). As a model, COIL presented an opportunity to frame the project at UoD in parallel to the objectives and proposals that were originally set when the project was to be undertaken on campus. Therefore, this presented an ideal opportunity to test the model in the collaboration of Chinese students who were already residing in the UK and those who were still at home in China. This case study will present the testing of COIL and analyse its application to online learning contexts of culturally related, yet geographically distanced groups of students and how those factors affected their thinking and learning.

Barriers to Collaboration

In Chinese education, it is common for the students to attend seminar lectures (Sit 2013), where a passive learning style is fostered (Zhu & Gao, 2012, Hilton, 2019). In this model, students listen to the material, take notes and then proceed to study further outside the classroom. At the UoD, Design Thinking is taught in a predominantly interactive way, where all learning is driven through discussion and debate which subsequently encourages peer-to-peer learning. This approach is in stark contrast to the common learning models and methods Chinese students encounter in their home education institutions (Edwards 2006, Qing 2008) and they were therefore experiencing a major difference in approach, to which they had to get quickly get used to. Furthermore, not only did the Chinese students need to get used to different delivery and learning styles, but also to the fact that the briefs were set entirely online. This meant that students were no longer in an open, face-to-face environment, where prompting them to participate was a standard procedure. Being on MST meant that students could choose if they wanted to proactively participate or not. The facilitator's role in this instance was not to force the students to talk or participate on camera but to overcome their anxieties over being put on the spot. One of the main initiators for this fear was the existing language barriers in those students who did not feel entirely confident in their spoken English. This curbed the collaboration from the beginning of the project and meant that alternative ways of communicating and interacting were necessary to run the project.

Alternative Communication Channels

To overcome the differences in learning approaches and existing language barriers, a shared learning Miro board was created (see Figure 1) where all project details, reading materials and finished tasks could be posted on. This way, students could communicate with their peers and lecturers via post-it notes, whilst being in group calls on MST.

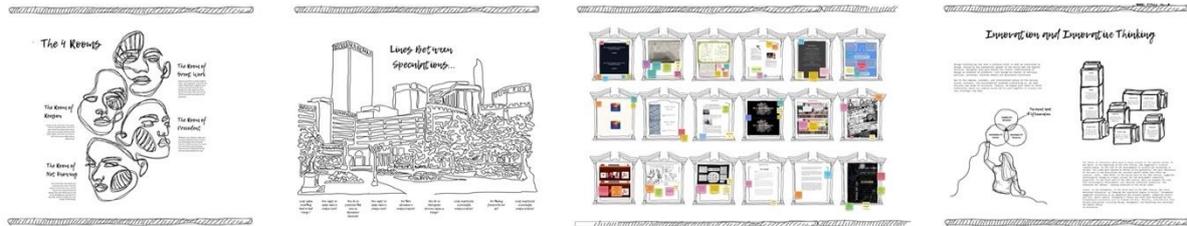


Figure 1. Shared Learning Miro Board (Excerpt), UoD & JXUT (2021) Project Developments and COIL Implementation

Once the alternative communication channels and their operation was established and familiarised to the students, the project was faced with its first stage of the Design process, developing research methods that would be applicable to the new circumstances. This posed direct challenges given the geographically linked nature of the brief. Whilst one group of the students was already residing in Derby and had an introduction to its layout, infrastructure and destinations, the other group was still at home in China and had only seen the city digitally.



Figure 2. Shared Learning Miro Board (Excerpt), UoD & JXUT (2021)

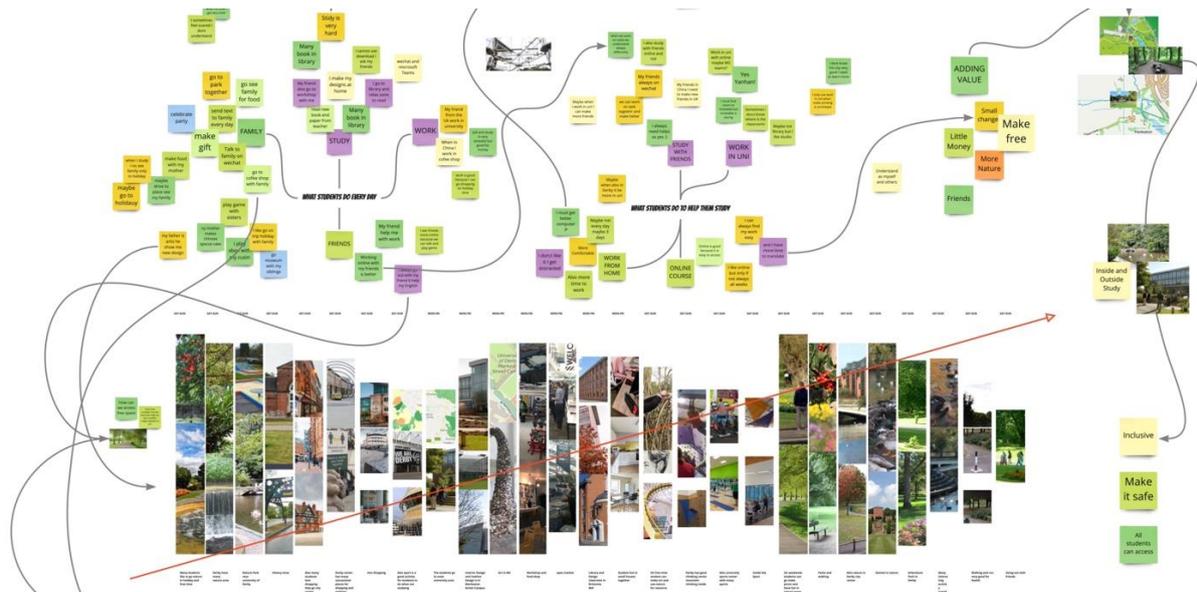


Figure 3. Shared Learning Miro Board (Excerpt), UoD & JXUT (2021)

The groups had to collaborate and develop their own Design Thinking process that would allow all participants to have equal input, whilst recognising and utilising the strengths and specialisms of both disciplines. The COIL framework was used to scaffold the brief in such a manner that students had to rely on both groups' knowledge of the city, as well as their abilities to research about it further in a playful and exploratory way.

The group that was already residing in the UK, did multiple individual site analyses, strictly following the government's social distancing rules. Students took photographs and videos of places commonly used by students and proceeded to undertake online Design probes with students who shared dormitories and campus with them. The group that was still in China, did online research and collected data from the local council, study libraries and the student union online spaces. All information was shared and collectively developed into creative and experimental site and context maps (see Figure 2, 3 & 4).

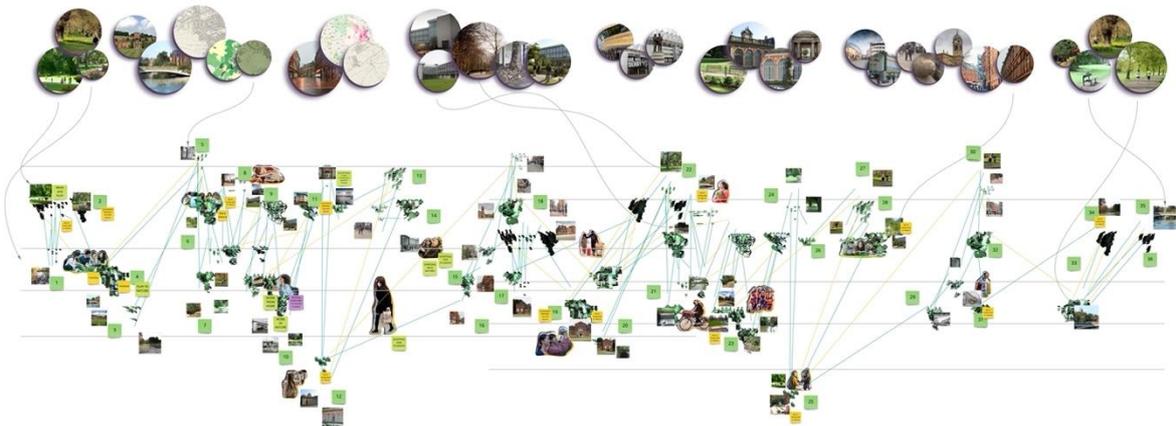


Figure 4. Shared Learning Miro Board (Excerpt), UoD & JXUT (2021)

Throughout the project, students increasingly became more open to discussion and collaboration, and the video call meetings hosted through MST became longer and busier with each stage of the research. Interior Design students were able to contribute with their knowledge of site research and analysis and share those methods with their colleagues from Fashion Design. Simultaneously, students from Fashion Design shared data collage visualising methods with their Interior colleagues, resulting in new collaborative visual methods evidenced on the shared Miro.

COIL as Constraint

Evidently, by framing the project around COIL's playful knowledge exchange and encouragement of experimental Design Thinking, students were able to overcome their initial language barriers and develop their creative and critical skills further. However, due to the open nature of COIL and the students' need to undertake self-directed collaborative study, the majority were asking for clarification of research roles and how the amount of work each group did was to be justified. This was not only an issue that emerged out of the acclimatisation from a Chinese to a UK learning structure but also an issue of data accessibility. In the example of the group that was in the UK, students were able to undertake site studies on locations and collect qualitative data directly, whilst students in China could only rely on information that was available online. This led to discussions about parameters of quantity and how students could evaluate the impact of both sets of data. Given the open-ended nature of COIL and its emphasis on peer learning, coupled with the students' pre-existing patterns of working, occasions arose where groups felt directionless and unable to generate tangible proposals.

The challenging circumstances also posed questions about the lack of experience of site research that students who were not in the UK missed out on. Whilst a common method in Design research, when undertaken in groups, site research presents an opportunity for further shared learning experiences that foster a stronger team ethic. Something that should be anticipated in the future for similar projects is this imbalance in opportunity research experience and how it might be used more intentionally to promote an exchange in knowledge between students. These debates were subsequently addressed in the online sessions, where through peer-to-peer learning, students taught one another about the different methods to visual research, however, it is yet to be tested further if aspects of physical research can work within this paradigm. Although these are not straight criticisms of COIL, these might be adjustments to bear in mind for future projects, where the learning and pedagogical adaptations are anticipated and pre-calculated in advance before being converted into a transitioning period.

Ultimately, the desire for a specified purpose that the Chinese students sought was complemented and extended through the free-flow real-time interfaces used and translation of the studio environment to a more constrained domain. Furthermore, the opportunity for some students to conduct site research where others could not, facilitated their roles as experts within their groups, encouraging them to share knowledge and develop their communication skills.

Evaluation

Throughout the collaboration between the UoD and JXUT, undergraduate students from Interior and Fashion Design worked on a collaborative Design Thinking brief, proposing products and services to improve student well-being in the Derby inner-city area. The brief was successfully delivered online using MST and Miro as digital learning and working platforms, allowing students to replicate social and participatory elements of a studio environment.

By framing the project around COIL, both groups of students, although in different countries, were able to undertake exploratory and playful investigations together, whilst developing new research and visual methods to enhance their practice and methodologies. This collaboration and knowledge exchange produced several creative site and data maps, which led to numerous proposals to solve the brief. Although students needed to get used to a new learning approach and structural attitudes, COIL allowed for the generating of skills and a knowledge-driven creative enquiry.

It is worth mentioning that throughout the process, a transformation in student engagement and adaptation to the UoD teaching methods was observed through the use of COIL. From the start, Chinese students were hesitant to participate and felt at unease to talk out loud in MST calls, fearing it might come across as rude or disrespectful to the lecturer. This was not an act of passiveness but one of respect. Just as Chinese students adapted to the UK learning models, UoD lecturers learned about these cultural aspects, and rather than dismissing them as barriers to learning, they celebrated them by acknowledging the value it was adding to the overall learning experience of the whole group. These investments into their culture and values were rewarded with a new openness of students, who consequently started to initiate conversation and discussions in online meetings.

Additionally, within a Design Thinking learning environment in which failure wasn't seen as a negative attribute, but an opportunity for great achievement, students found themselves faced with different ways of approaching critical thinking and designing. COIL directed this experience up by placing the students into the position of the main investigators, critics and creators, whilst fostering a dynamic and respectful approach to all participants. The openness of the brief and the active encouragement of students to undertake their

research playfully rather than following a strict and prescribed model was a completely new way of learning and working for these students.

The outcomes of this project were not only reflected in the produced visual material but the enhanced learning experience of the students, who subsequently asked if these types of projects will continue on campus later on in the semester. The untrue stereotype that Chinese students are passive learners (Radclyffe-Thomas, 2007) and do not perform in participatory environments was overturned throughout the whole length of this project. Not only were these students the initiators of communication and investigations but it was also clearly demonstrated that they have shown a vast tolerance to uncertainty by overcoming any barriers collaboratively through discussion and team-work.

Conclusion

Though collaborative and participatory approaches to Design pedagogy are already common practice at UoD, such endeavours have always shown difficulties if they included international students with language or cultural barriers. Through COIL and utilising online collaborative tools such as MST and Miro, students were not only able to overcome their barriers to learning but unlock their intrinsic motivations to develop in dynamic studying environments, that didn't dismiss their situation but rather celebrated their diverse input and knowledge.

Whilst COIL proved to work well in an online environment, it should not be dismissed that the same approaches and tools would have benefits in face-to-face teaching, which is yet to be tested after the UK Covid-19 social distancing measures are fully lifted.

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