IO3
2021

Manual of best practices for a blended flexible training activity in architecture for higher education institutions

This volume returns the results of the Intellectual Output 03 of the research project "ArchéA. Architectural European Medium-sized City Arrangement", with the aim of analyzing and restating the state of the art achieved in the field of flexible mixed training in architecture, strongly encouraged by the emergency period of the Covid-19 pandemic. The result is a collection of good practices carried out internally and externally to the ArchéA partner network, in the context of higher education institutions, made possible by new virtual tools capable of mediating teaching and mixed and flexible learning around the disciplines related to the project.
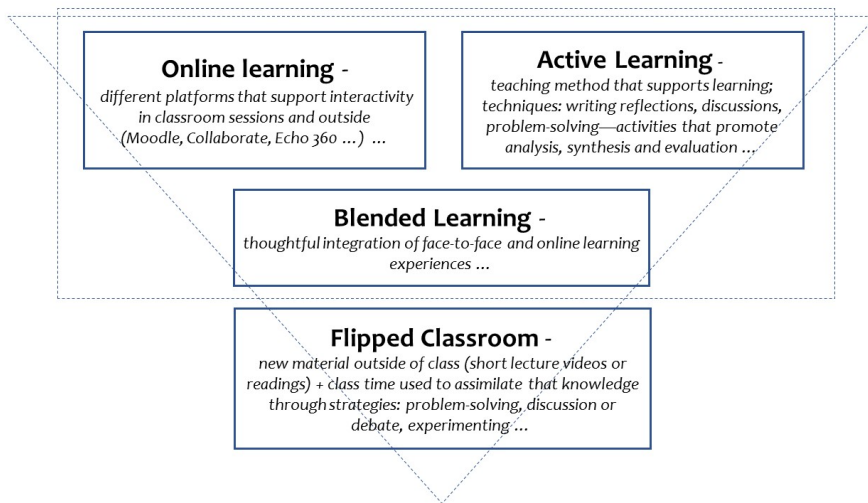
IO3
2021

Manual of best practices for a blended flexible training activity in architecture for higher education institutions

edited by Enrico Prandi and Paolo Strina

Analisys of the Best Practices
Call for papers

Renata Jadresin Milic, Catherine Mitchell
An Alternative Approach to Teaching Architectural History: Redrawing the Pedagogical Boundaries between Architectural History and Design Studio with Flexible and Blended Methods

Unitec Institute of Technology, Auckland, New Zealand

Fig.01 The framework for the teaching provision in CS 1 (Author).
Fig.02 The framework for the class material and flexible learning in CS 1 (Author).

Through the presentation of a case study this paper advocates for the use of flexible and blended learning techniques to teach architectural history in a way that reinforces the connections between architectural history and problem-solving to inform the students design work in studio. The paper seeks to emphasise the utility of employing digital pedagogies to strengthen architectural history and design studio connections whilst, critically, enhancing student learning. A description of the Critical Studies 1 (CS 1) course, the teaching approaches employed within it, and the impact on student learning is offered within the constraints of this short paper.

To illustrate the value of this alternative approach, material is included from the course developed over three academic years from 2016 to 2019. The critical studies strand in the Bachelor of Architectural Studies (BAS)[1] at Unitec consists of five courses with clear and strong connections. The CS 1 (Level 5, first year degree) course is seen as an important component of the programme in providing students with the understandings and skills to manage the transition between high school and university, a period that is often marked by uncertainty about the challenges brought by tertiary study. So, the course has a crucial role to play in scaffolding students into the BAS, the body of knowledge, and the learning and teaching approaches that span the programme. CS 1 is taught in two 2-hour classes per week + one 1-hour PASS (Peer-led tutorial) class per week. Assessment consists of four key tasks including a timeline and essay (25%), a drawing (25%), a building identification test (10%) and a final exam (40%). It typically has a large cohort of students (90-120) drawn from a diverse range of social and cultural backgrounds.

The Ethos of Critical Studies 1

A key aspect of the teaching approach in CS 1 is related to the attempt to avoid communicating basic descriptive facts; instead, learning is based on interpretation, on sharing of personal reactions, on setting up challenging comparisons and provoking discussion between students. While doing assigned activities, the students discover the work of significant modern architects and architectural practices and the influence of historical examples on the architect's current projects. Using these strategies is underpinned by a belief in the importance of stimulating intellectual curiosity and promoting students' critical thinking about the history of architecture to help them establish their own connections within our discipline. This approach to teaching is further based on the assumption that modern pedagogy needs to replace or at least supplement ex-cathedra teaching and examination. Student research is immensely important in the educational process; therefore, much of the teaching is based on encouraging active and creative approaches to learning. Moreover, through employing new adaptive technologies, it is possible to provide pedagogical opportunities that meet with various student learning styles so that online learning can enrich traditional approaches.

The aims of CS 1 include:

1. To encourage students to approach knowledge as a dynamic process discoverable for oneself, rather than something that is handed down to them.

2. To provoke students to question the world instead of just trying to know it.

These aims were achieved through:

A. Architectural History is presented from a point

of view that corresponds to present-day demands; to what is the 'problem situation' of the day.

B. Architectural History being coordinated with Design Studio, so that history becomes involved in the dynamics of 'making' architecture.

C. Students are encouraged to take an active role by introducing active learning strategies to encourage them to process information and make their own sense of it – to 'construct' meanings.

D. The use of new adaptive technologies to make face-to-face learning highly engaging, collaborative and team-based. The diagram below shows the preparation of content for online learning and flipped learning opportunities (Fig. 01).

E-learning activities and tools in the course are offered in complementary ways to face-to-face teaching – the CS 1 course is not taught entirely online. It was based on developing learning activities and integrating WBL components/online platforms/ collaborative F2F activities within the course. Preparation of content for online learning/ flipped learning proved to be favourable for expanding learning opportunities; namely, a drive for the course was a connection to Design studio. Preparation of Pre-class, During-class, and Post-class activities by using Individual Wiki + Q/A Forum (Fig. 02), is structured in a way that History can be thought and learnt through: context, *firmitas, utilitas, venustas*, in a similar way as students are expected to present their designs during Crit in a studio environment.

The course is designed to give an active role to the students, considering the class size, the class level, and the class space (traditional lecture theatre). Blended learning (and Active learning generally) of the course material is organised in:

Pre-class activities – online experience; carefully guided and structured; for students "to do something" (Fig. 03);

During class activities – face to face; includes group discussions + lecture (Fig. 4);

Post-class activities – online; to make a "snowball effect"; free, interpretative; for students "to do something" (Fig. 05-06).

The Impact on Student Learning

To identify the impact of the pedagogical approaches employed in CS 1 on student learning, feedback was regularly and systematically gathered from students through monitoring and tracking. This involved administering course evaluations (two types - school and institution-wide) and collecting feedback through emails, written notes, and verbal comments shared by students about the course. This was supplemented by the preparation of regular reflections through the use of teacher evaluative course diaries in weeks 3, 6 and 11. Improved academic results were also identified. From the students' feedback and official course evaluation done by students (2017-2019 especially), we confirmed the value of the pedagogical interventions made. We were able to identify

some specific examples of new connections being made by students between historical examples and contemporary design that have clear connections to the work in design studio.

Some of the questions asked in the questionnaire were: Do you have "Any additional comments about the course requirements structure content resources or teaching facilities?"; "Any additional comments about the teaching on this course?"; "If you have any comments about your own contribution to your learning on this course, please enter them below."

The improvement in students' learning is evidenced in the following (selected) quotes from students' feedback. Students reported that CS 1:

"helped me engage with what I was learning about and find my own interests in the topics. I find myself able to use information that I learnt from the course outside the class. eg: identifying architectural styles in buildings that I see day today."

"... your lectures had new interpretations of history and theory of architecture. You made this study field interesting and made students to realise how it is important to contemporary architecture through creative connections."

"... Comments regarding the experience and the best learning for me was ... forming/understanding a timeline of which architectural styles related/ opposed/overlapped each other ... Your lectures did a brilliant job of helping us to piece this together ..."

Furthermore, some of the students shared the importance of verbal presentation of their work: "*I enjoyed the class interaction and the opportunity to always present our assignment work.*"

"*This course was very well organised. We knew*

what topics were being covered in each class ahead of time, and for each topic, there was a very thorough Moodle page with pre reading or watching. Class notes questions and key points that would appear in the exam later I enjoyed the supplementary material I believe it will help me greatly in Crit 2."

"[The lecturer] has done everything in her power to make the material clear to us and help us engage with it. I can see why the Design Studio students all want her as their tutor and hope I have her as a lecturer for some of my papers next year!"

An interesting link to studio was identified in one of the students' comments, where a student referred to the name of Critical Studies 1 as "Critical Studio". The student notes, *"the course was structured around the influences of how the practice of architecture began ... (which makes sense because it was critical studio 1)".* Such mixing of the titles of critical studies and design studio may indicate a strong link in the student's mind between these two courses.

Conclusion

This paper has identified the key pedagogical interventions employed in Critical Studies 1, a first-year architectural history course in the Bachelor of Architectural Studies at Unitec Institute of Technology. In this course, we moved away from teaching approaches traditionally relied upon in architectural history and instead focused on: content and interaction through questions/problems: video + questions, interactivity (with others) focus: facilitated synchronous discussion; critical thinking: response to an assigned video/short text;

Resource 1 – Youtube video and questions as part of Pre-class activities

Fig.03 Blended learning activities (Pre-class screen shot with annotations; from CS1 Moodle page).

Activity 2 – ID Test Quiz. Example showing question

Fig.04 Online quiz activity (Pre, Post and During-class screen shot with annotations; from CS1 Moodle page).

production: oral summary/presentation; written essay; drawing and reflection on learning. Using these strategies, we sought to emphasise the value and relevance of architectural history by making explicit the significant connections between it and contemporary architecture and design problem-solving processes. In this way, our work represents our intent to redraw the pedagogical boundaries between two threads of the architectural curriculum, which have often been thought about and taught as distinct areas. Through the presentation of our use of blended and flexible learning approaches, we hope to have provided a 'map' for other architectural educators interested in developing stronger connections between architectural history and practice to develop their own.
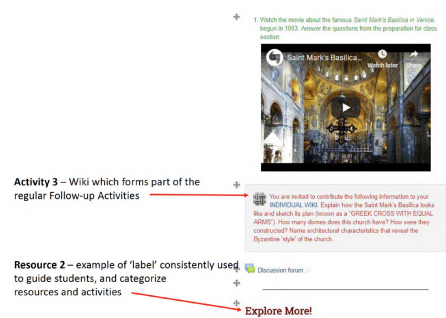

Fig.05 Individual Wiki and Discussion forum activities (Post-class screen shot with annotations; from CS1
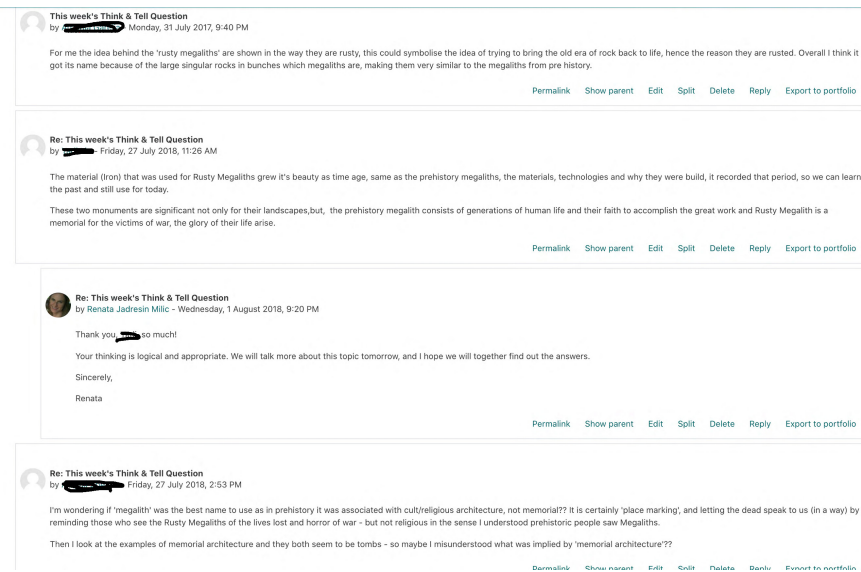

Fig.06 Discussion forum activities (Post-class screen shot; from CS1 Moodle page).

Notes

Bibliography and references

Abeysekera, Lakmal, and Phillip Dawson. 2015. '*Motivation and Cognitive Load in the Flipped Classro   om: Definition, Rationale and a Call for Research',* Higher Education Research & Development, 34.1: 1–14 https://doi.org/10.1080/07294360.201 4.934336

Bloom, Benjamin S. (Benjamin Samuel). 1956. *Taxonomy of Educational Objectives; the Classification of Educational Goals,* (New York: Longmans, Green)

Bransford, John., National Research Council (U.S.). Committee on Developments in the Science of Learning., and National Research Council (U.S.). Committee on Learning Research and Educational Practice. 2000. *How People Learn : Brain, Mind, Experience, and School* (National Academy Press)

Brookfield, Stephen. 2012. *Teaching for Critical Thinking : Tools and Techniques to Help Students Question Their Assumptions* (Hoboken, NJ: Jossey-Bass)

Brown, Brené. 2012. Daring Greatly : *How the Courage to Be Vulnerable Transforms the Way We Live, Love,* Parent, and Lead (New York: Gotham Books)

Ching, Francis D. K., Mark. Jarzombek, and Vikramaditya. Prakash. 2007. *A Global History of Architecture* (Hoboken, NJ: J. Wiley & Sons)————. 2011. A Global History of Architecture, 2nd edn (Hoboken, NJ: Wiley)

Cohen, Louis, Lawrence Manion, and Keith Morrison. 2011. *Research Methods in Education, 7th edn* (Abingdon, United Kingdom: Routledge)

Cope, Bill, and Mary Kalantzis (eds.). 2015. *A Pedagogy of Multiliteracies : Learning by Design* (Houndsmills, United Kingdom)

Costanzo, Denise. 2016. *What Architecture Means: Connecting Ideas and Design* (New York, NY: Routledge, Taylor & Francis) Fink, L. Dee. 2003. *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses* (San Francisco: Jossey-Bass)

Godlewski, Joseph. 2019. *Introduction to Architecture: Global Disciplinary Knowledge* (Cognella)

Richardson, Jennifer C., and Karen Swan. 2003. '*Examininig Social Presence in Online Courses in Relation to Students' Perceived Learning and Satisfaction',* Journal of Asynchronous Learning Networks, 7.1: 68–88

Van Sickle, Jenna. 2016. '*Discrepancies between Student Perception and Achievement of Learning Outcomes in a Flipped Classroom',* Journal of the Scholarship of Teaching and Learning, 16.2: 29–38 [accessed 18 May 2019]

Society of Architectural Historians, *'Publications: Past Conferences',* 2019 https://www.sah.org/conferences-and-programs/past-conferences

Spector, J. Michael. 2016. *Foundations of Educational Technology: Integrative Approaches and Interdisciplinary Perspectives* (New York: Routledge)

Westermann, Edward B. 2014. *'A Half-Flipped Classroom or an Alternative Approach? Primary Sources and Blended Learning',* Educational Research Quarterly., 38.2 (Educational REsearch Quarterly): 43–57 [accessed 19 May 2019]

The structure of the city of Zabrze case study website: http://urbanmodel.org/en/models-of-the-structure-of-the-city-of-aachen-2/ [access 2021.07.04] Video: [access 2021.07.04] Exhibition streaming: https://youtu.be/a9qQA-IrOW4 [access 2021.07.04]