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An experiential learning approach to educational development: Responses to teaching architecture through the lenses of reflective practice

Ingrid Le Duc¹

*Teaching Support Centre (CAPE), EPF Lausanne
1015 Lausanne, Switzerland*

Dieter Dietz², Patricia Guaita³

*ALICE, IA ENAC, EPF Lausanne
1015 Lausanne, Switzerland*

Abstract

This paper tells the story of a decade-long relationship between a teaching team (TT) and an educational developer (EDP). They have been using an experiential learning approach to monitor improvements in teaching architecture to first year students.

We explain how the model ALACT (Korthaghen & Vasalos, 2005) serves to scaffold the construction of a common pedagogical experience. Indeed, we will explain how ALACT, as a model in teacher education, can also help teachers in architecture and EDPs to balance learning-by-doing. This uses a situated approach, capable of moving between ideas of craft, know-how and educational development (ED).

As a result, the architectural vocabulary became interweaved into ED activities such as teaching workshops, student feedback surveys, student focus group interviews and conversations with faculty and studio directors (SD). We suggest a model for ED that aims to go beyond standard quantitative analyses by integrating reflection on the experience which brought the EDP and TT together in a common endeavor of mutual care.

1 Introduction

1.1 A model for ED in architecture teaching

In a broad sense, the term ED groups all services and activities aiming for better teaching and learning. In addition to the services often provided by ED (individual support, curricular and instructional development, institutional development), for architecture teaching ED has also included team meetings with SD and student representatives, visits to the studios, specific pedagogical workshops and student focus groups. All these services and activities have followed an iterative reflection for advising on teaching and learning.

Evidence-based ED means using data to reflect and to decide on adjusting current instructional practices. In the ED for the architecture studio teaching in question, it constantly provided a safe space to innovate instruction and to collect data about it. In this sense, our experience

¹ Ingrid.leduc@epfl.ch – corresponding author

² Dieter.dietz@epfl.ch, <https://www.epfl.ch/labs/alice/>

³ Patricia.guaita@epfl.ch

adheres to ED's general definition of the term and its functioning (Fraser et al, 2010; Gibbs, 2013, POD Network).

In addition to the services, we use the term ED as incorporating specific terms used for teaching architecture such as *design methodologies*, *building ideas* (imagining, designing, drawing) and *understanding the making* of architecture as a complex system where the work is presented and discussed collectively. Using Gibbs own words (2013, p.4), ED led us to

gain some perspective on what, at a particular moment in time, might seem inevitable or "the only approach possible," but which in retrospect appears simply as one of a number of stages on a long and winding road, or as one of a number of different paths that it might be possible to take.

1.2 The pedagogies of studio teaching in architecture

Architecture teaching in the studio means combining conceptual tools and practical learning, with its flaws and strengths. Srinivasan's (2011) insightful review of architecture teaching mentions Donald Schon's (1984) praise of architecture studios as a "place for reflection and action." It also criticizes the individualization of students through study and production in the studio because it leads to a "*promotion of the individual, and lack of systematic development of communication and interpersonal skills*" (Nicol, D. et al, 2000, in Srinivasan, 2011, p.1834).

To overcome this criticism, Srinivasan (2011) proposed reframing design studio pedagogy using Kolb's experiential learning cycle. Kolb's learning cycle (1984) pictures a learner-centred construction of knowledge in four key steps: (1) doing (having an experience); (2) reflecting on the experience; (3) learning from the experience; and (4) experimenting by applying what has been learned. In our studios, architectural tools and spatiality generate a collective transformation for students and for teachers.

With this in mind, we will explain how ED supported better teaching and learning in the architecture studio through a shared reflective journey. Although they did not follow Kolb's model, the TT and the EDP went through the experiential learning cycle proposed for teacher education following the ALACT model described below.

2 Application of the ALACT model

Teacher education requires that unexperienced teachers improve professional practice by looking back and assessing their actions during training. Reflecting on practice is known to equip inexperienced teachers with confidence to teach (Darling-Hammond, 2002; Reupert and Woodcock, 2010; Beddoes and Panther, 2018). The **A-L-A-C-T** model thus stands for **A**ction, **L**ooking back on the action, **A**wareness of essential aspects, **C**reating alternative methods of action and **T**rial. Korthaghen & Vasalos (2005) thought this extrapolation of Kolb's model would boost teacher educators to reflect on how their own instruction may impact their students' future ways of instruction. The model's basic idea is to promote improvement of instruction through reflective practice and repeated trial (Korthaghen, et al, 2006).

For the EDP and the TT, Action meant becoming aware of tensions in a studio, perceptions on the grading criteria and the fatigue blamed on the workload. In line with Korthagen (2017, p. 388), ALACT here helped to encourage a "*connection with the person of the teacher,*" as well as that of the EDP, through self-reflection. This because SD believe that heavy investment is prevalent and inescapable in an architect's education.

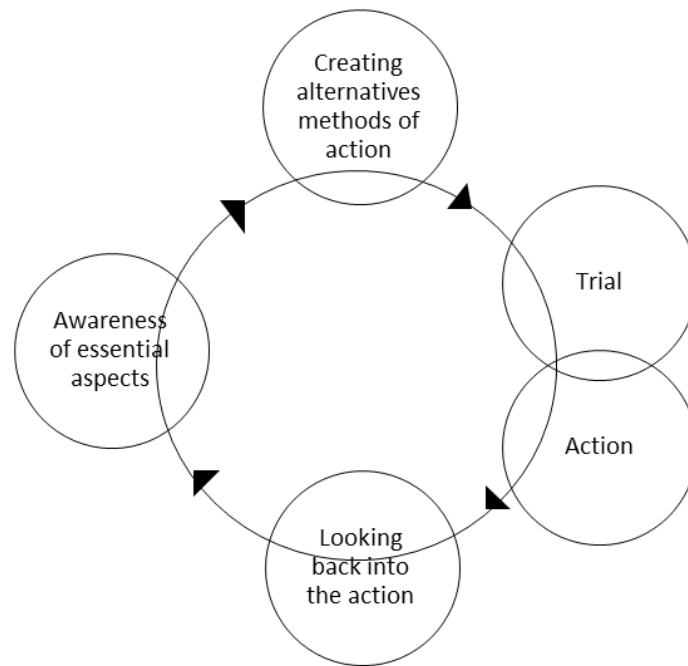


Figure 1: Adapted drawing of the ALACT model

It should be clear by now that ALACT represents the reflective journey of everyone involved in improving teaching. In the next paragraphs we describe our journey in the first year Architecture course.

2.1 The architecture studio set-up

The student numbers for this studio have fluctuated between 250-310 students divided into 10-16 studios. Each group of 15 to 24 students is supervised by an SD and a student assistant.

2.1.1 Working space and daily organization

The on-campus working spaces are permanently open and are extremely flexible: spatial arrangements are undefined. This organization outsmarts traditional pedagogy and emerges as an extension of the individual and the collective work.

2.1.2 Teaching

The program has two semesters. The first sets the foundation for the entire year. Here students get to know the tools of the architect, such as drawing by hand, crafts models and 1:1 prototypes. The first semester prepares them to understand architectural tectonics, including measure, scale, and the body in space.

Next is the realization of an architectural project that deals with space and construction within an architectonic discourse. Students' work in individual and collective projects was later tested in protostructures for a chosen construction site.

Students are also expected to develop communication skills when sharing their work. This prepares them for the future.

2.1.3 Exchanges

Four types of exchange take place simultaneously in the studio:

1. Constant conversation within the studio (SD, student assistants) provide feedback on the basis of the work that is done (hand drawings models, prototypes, texts). These help to clarify concepts and rehearse techniques.
2. Private weekly tutoring of 20 to 40 minutes takes place with the SD (with drawings/ models / prototypes). These sessions are scheduled reflective conversations about techniques, and concepts but mostly about the process.
3. Group tutoring takes place, where 2 or 3 students present their work to their studio on a regular basis. These are led by each SD and aim to prepare students to present to critics. Student test their arguments and display their production techniques to get feedback.
4. Intermediary and final reviews expose all studio processes and finalized work to the entire class. While the head teacher and SD may invite expert designers and architects for comment, all students and student assistants are invited to participate.

2.1.4 Knowledge through crafts

Sketching, drawing by hand, crafts modelling and 1:1 prototyping are essential skills and knowledge for the architect. Today, students practice them individually or in small groups (2-4) using the 3d software available. They do so instinctively, without any lecturer-centered teaching and in different phases of the program.

However, precision and rigor became crucial in improving students' craft modelling. Therefore, small group discussion focusing on craft modelling within studios were scheduled.

3 A reflective journey

3.1 The EDP's journey

The first **Action** to support this course took place a decade ago and consisted of a series of meetings which made the EDP visible to the TT, such as a seminar on course alignment. She also visited the studios and observed critiques. Questionnaires were distributed to more than 300 students, and then collected and analyzed.

Looking back: The TT communicated an interest in keeping teaching diverse, deploying various perspectives, organizations and types of exchanges. Thus the student survey results, student outcomes and the TT views intersected in the discussions.

Awareness of one or two essential aspects: First, we acknowledged the importance of the student experience with alternative data collecting methods. Second, mixing pedagogical with architectural jargon became common to everyone.

Creating alternative methods for action: A specific student questionnaire for this course was constantly revised and updated. Additionally, using focus groups gave a deeper understanding of issues such as time management when under stress.

Trial of new initiatives for ED has been vast. An example is the initial presentation to SDs, which today covers design thinking and management of class climate. Now an **Action**, which is assessed with the TT at the end of every semester.

This application of ALACT extended to the TT journey presented below.

3.2 The TT's journey

The above-mentioned ALACT journey impacted the experience of the TT. Several changes were made during the years 2010–2019. Below we mention the most significant.

3.2.1 Teaching

While the program structure described before is stable, the structure of daily teaching has evolved. Due to curricular restructuring, the lecturing was reduced from two full days to one and a half days. This reduction was an opportunity to incorporate the EDP's advice and student feedback into teaching. Therefore, the day and a half of direct instruction was broken down into a mix of weekly scheduled lectures, blog reviews and working hours in the studio so more time could be given to practical learning and exchanges in the studio.

3.2.2 Exchanges

As stated before, over the years the organization of exchanges has gained structure. Here we can say that observing and collecting data has helped us to appreciate a variety of individual and collective learning trajectories.

The structure of exchanges has taught students and SD to give and get feedback. Studios remain a laboratory for experimenting with the space of imagination.

The iterative questioning and reviewing have installed a spirit of reflection and transformation. For example, the EDPs decreased the focus on course alignment and increased the perception of SD concerns on managing the studio climate and stimulating structured creativity. Finally, exchanges have evolved to giving feedback on the process as well as on the task or the final product.

3.2.3 Knowledge through crafts

Sequencing constant feedback and finding time to enhance knowledge in crafts proved to be a delicate task. The SD supported students directly.

Informal exchanges, observations and student feedback collected through focus group interviews and student surveys provided unique information for reassessing the approach to crafts, notably moving from hand crafts to digital tools.

4 Conclusion

The aim of this paper was to explain how an experiential learning cycle supported better teaching and learning in the architecture studio through a shared reflective journey. We presented the ALACT model to structure the reflective journey of the TT and the EDP. These journeys are distinct and parallel.

We find ALACT a useful and adjustable model for structuring ED activities such as advice and support. To conclude, a reflective approach to ED including hits and near misses should be part of the educational developers' continuing education.

We strongly suggest ALACT as a model for rethinking ED in post-COVID teaching development initiatives.

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