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# The workshop project: active learning methods in design and urban studies

Ana Portalés-Mañanós <sup>a</sup> \*, Chele Esteve-Sendra <sup>b</sup>, Ricardo Moreno-Cuesta <sup>c</sup>

#### Abstract

The workshop project is a methodology that promotes active student learning in a practical way. In teaching, this methodology is applicable primarily to subjects' projective character, in our case design, architecture and urbanism. The student work is done in teams of 3 or 4 members encouraging feedback. The teamwork stimulates discussion, establishing close ties among students. Students experience, learn and evolve gradually. In the process acquire skills and abilities that will serve not only the teaching context, but also to unfold and interact in real life and professional field. The classroom becomes a workshop for students learning projects and development work, tutored by the teacher

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### 1. Introduction

The workshop project is an active methodology used in teaching and professional realms for the generation of ideas, studies, pre-projects, organizational plans, etc. This methodology, based in group work, is applicable to disciplines including design, architecture, and urbanization. In the world of teaching, this methodology has previously been utilized in design and urbanization classes in the Escuelas de Arquitectura (ETS de Arquitectura) y Diseño (ETSID) of the University of Valencia (Spain). This method of work, developed with the goal of a concrete end result or final product, is equally as applicable in universities as it is in the professional world. However, in this case, we will center on its application in university teaching.

The Workshop teaching philosophy at the university level projects is based on student learning through the development of team projects. This applies a methodology based on active learning, using teamwork as collaborative and interactive system, between students and students and teacher.

This methodology is based on the collaborative project-based learning (ABPC). In a very generic that can be defined as a teaching strategy that organizes the process of teaching and learning by developing collaborative projects in groups of students.

In relation with the collaborative process, for the initial elaboration of projects, the group is proposed either a resolution to a determined problem or a complex problem for which a solution has yet to be found. For the latter

<sup>&</sup>lt;sup>a</sup> Polytechnic University of Valencia. Camí de Vera s/n. 46022, Valencia, Spain

<sup>&</sup>lt;sup>b</sup> Polytechnic University of Valencia. Camí de Vera s/n. 46022, Valencia, Spain

<sup>&</sup>lt;sup>c</sup> Moreno-Cuesta, Ricardo, Escuela de Arte y Superior de Diseño de Valencia, Calle Pintor Domingo, 20 , Valencia 46001, Spain

<sup>\*</sup> Ana Portalés-Mañanós. Tel.: +0-34 96 316 27 57 E-mail address: anporma@urb.upv.es

students must design a performance plan, put it into practice, take decisions during its application, and resolve problems as they arise.

The themes chosen for the project are real and current. It is important to choose valid themes of "social interest" which maintain the attention of the students. Such themes permit an approach to professional work as much in the field of architecture as in design. They're selection and level of complexity should correspond to the learning level of the students.

The operation and the results of the workshop improve when performed in an intensive manner and the group is able to utilize the highest level of concentration of forces, rhythm, and collaboration. Within the new higher education paradigm of international exchange and cooperation this system allows students and professors from disparate universities to relate and coordinate, in the context of a single theme, a multiplicity of approaches based in diverse cultures and knowledge bases.

The student participates actively in the learning process, exchanges experiences and points of view with classmates and acquires responsibilities. The necessities and interests of the student and his/her learning constitute the focus of the educational work. Through this teaching strategy, he/she acquires a broader knowledge base which will serve him/her when participating in activities more similar to professional work.

The professor accompanies the student through the project, contributing documents, a bibliography and support or applicable advice for the projects. Feedback must always be provided.

#### 2. Methodology of the Workshop Project: Application for the elaboration of an Urbanism or Design class

## 2.1. The student and the group

In order for a student to be able to enroll in the class, it is necessary that he/she have certain previous knowledge bases in the fields of urbanism and design.

From the beginning of the class the students organize themselves in work groups of three or four to carry out a project. Teamwork carries with it debate and the sharing of opinions. In making decisions, students evaluate the options and above all the organization with concern for maximizing time and achievement maximum output. All these components imply the acquisition of a skill set on the part of the students that will serve them in their work in the professional world. In the field of urbanism, for example, jobs are executed by majority within multidisciplinary groups, not in individual work.

The rhythm of the class necessitates that the group organize itself to work in a manner in which it can take full advantage of the class schedule. To this end, we suggest direct supervision of the group and its work by the professor. This establishes continuous gradual learning which will be reflected in the evolution of the project.

Through this methodology of group work, the students' experience, learn, and evolve gradually. In this process they acquire general and specific skills and abilities that not only serve them in the context of educational material, but also will be useful in managing and relating in quotidian and professional life. Group work establishes wide links between students, promotes debate, comparing and contrasting of opinions, defense of positions, and the responsibility of taking decisions.





Figure 1, 2. The student and the group at workshop project.

#### 2.2. The professor

In this teaching methodology, the role of the professor is of accompaniment or as a guide that tutors the groups of students by forming a direct and constant relationship with each of the projects. "Tutoring" is understood as an aid within the process of developing the project. Colleen McLaughlin [4] refers to "tutoring" as the relationship in which a person attempts to aid another be it in an individual or group context, in exploring a problem posed, a process of development, or a special success—for example, successfully completing a transitional phase of one situation or another.

Before the beginning of the class, there is a phase in which the professor or team of professors weighs and chooses the theme for the project, gathering all the cartographic, digital, and bibliographical information necessary to bring to the beginning of the class.

The professor 'works must carry out in the development of the class to contribute to the students' learning processes are:

Continuously monitoring the projects group by group.

Contribute references with the method of lecture. Throughout the course, intersperse a series of specific classes related to references, examples, and projects that are applicable to the course.

Showing positive examples of works by the team of professors and various teams of students with the most relevant work. In this type of class, convene all the students and exhibit a determined number of groups' works to the rest of their peers and professors.

Continuous evaluation of the works. The professor follows each of the works individually, evaluating the weekly evolution of those same works, indicating the aspects to be improved after going in depth and reflecting.

#### 2.3. Phases of work and the learning process

During the course of the class, the role of the student and professor changes and adapts to the learning process, taking into account the functions that each member performs.

The urbanism class is carried out in the following phases:

Class preparation

The team of professors evaluates and chooses the theme of the project, obtaining all of the necessary cartographical, digital, y bibliographical information.

The beginning of the class

Presentation of the theme and informational materials. Organization of the work groups.

Analysis of the project area

Based in the system of "Problem and Opportunity Search", through the field visit, photographical documents etc. The analysis phase will give way to a set of conclusions or ideas which can be used as a departure point for establishing the project idea or intervention strategy.

Intervention strategy, Structural organization

Based on the conclusions of the previous phase, the foundation, ideas, and outline that will serve as the basis for the project are established. In this phase the decisions are made which affect to the general systems and scale of the project.

Development of the project, detailed organiation

In this phase depth and detail are given to the project, changing in scale, resolving and developing a detailed organization (various systems, green zones, equiment, plots, building typologies, volumes etc.)

Finalizing and presenting the projects

The team presents their work in a series of panels, taking into account the content of the project as much as its form and graphical organization.

The Design class is carried out in the following phases:

Class preparation

The team of professors evaluates and chooses the theme of the project, obtaining the briefing, documentation, and necessary bibliographical information.

The beginning of the class

Presentation of the theme and informational materials. Organization of the work groups.

Initial proposal

Based in the system of "Problem and Opportunity Search", through informational analysis, market studies, etc. The analysis phase will give way to a set of conclusions or ideas which can be used as a departure point for establishing the project idea or intervention strategy.

Design pre-project

Based on the conclusions of the previous phase, the foundation, ideas, and outline that will serve as the basis for the project are established. In this phase the decisions are made to conceptualize the design of the product.

Development of the project

In this phase the ideas produced are evaluated and selected until a final design has been arrived to—concretizing the problems which affect the product. Exploring the products technical, productive, and commercial viability and finalizing the conceptualization of the technical project and the prototype.

Production and Sale

In this phase, the programmations of management, production, and registration of the model are carried out. Within this, the commercial launch, sales management, and the end of the design operation are realized.

Finalizing and presentation of the projects

The team presents their work, concluding with a design of the presentation that the team considers adequate for its purpose. Each team explains which materials would be needed, realizing in this section a concrete project based exclusively in the design of the presentation as panels of presentation, multimedia, models, or prototypes, etc.

In the learning process, the professor uses the combination of teaching methods exhibited previously, such as group supervision, lecture, critique, etc.

The students' work evolves gradually, augmenting the level of complexity within the project in the course of the different phases of the class' development.

#### 3. Results

At the end of the workshop, the students present their formal results on hard panels so as to be exhibited. On these panels, the final work taking into account the two scales of approximation (the strucutural organization and the detailed organization).

Special emphasis is also made on the presentation, graphic design, and formality of them—aspects which will influence the final evaluation of the results.

The students' development improves when the workshop is carried out in an intensive manner and the group is able to utilize the highest concentration of strengths, rhythm, and collaboration. The students acquire greater motivation and integration in the group and the ability to obtain a result in a short period of time frees them to dedicate them to outside work.

#### 4. Evaluation

The teaching methodology used, based in the supervision and accompaniment of the works with absolute immediacy, implies that the works of the students are revised continuously—the professor as much as the student taking note of the results of the corrections. The works evolve gradually toward the final result and the students have a highly approximated perception of the progress of their work, developing a continuous evaluation of the work

5.1. Continuous evaluation of the work vs. Feedback

During the course of the workshop the professors continuously monitor the students' work and the students are required to orally and graphically exhibit their proposals. In this phase the following are evaluated:

The quality of the proposal
Explanatory schemes
Graphical presentation
Oral expression and defense of the proposal
Method of work
Evolution of the projects

As a result of this continuous evaluation, the professor gives an evaluation and indicates the grade the project could receive to help bring about a quality final project.

#### 5.2. Final evaluation of the project

Moving on from the previous phase, the final result of the projects is evaluated taking into account the following criteria:

Quality, clarity, and level of the project proposal:

Idea, general schematics, complexity, references within the project, volumetric responses, etc.

Graphical expression and layout:

Special attention must be paid to the graphical expression of the works.

#### 6. Conclusions

The workshop project is a teaching method which favors interaction between students and between students and professors (feedback). The students acquire specific knowledge and skills from the material of urbanism and design which is reflected in the results and general abilities such as oral expression, graphical expression, defense of a work, debate, practicing of other languages etc. The students learn to work in conditions similar to those in which they will work professionally, with a fixed timeframe, with responsibility and through group work. This methodology is applicable to teaching and professional work. In the fields of architecture, urbanism, and design multidisciplinary work groups often work within a clear and concrete timeline. For this reason, we transfer certain circumstances for the real and professional worlds into the classroom.

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