

## Teaching architectural composition in the Faculty of Architecture at Slovak University of Technology in Bratislava, Slovakia

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**ABSTRACT:** Architectural composition is one of the basic tools in architecture. Its role in the cultivation of the future architect is irreplaceable, especially for the development of artistic abilities. In the Faculty of Architecture at Slovak University of Technology in Bratislava (STU) the teaching methodology of architectural composition provides a theoretical and practical basis with an artistic orientation. The aim is to develop the student's ability to express the meaning of an architectonic work by acquiring basic knowledge of abstract and concrete planer and spatial composition. The aim of this article is to inform about applying this approach to educational practice based on the results of international research on teaching architectural composition. A system of exercises aimed at expressing semantic meanings on a bipolar scale is described. Successive tasks gradually add complexity. The exercises and lectures on architectural composition involve the study and analysis of the work of important world architects.

### INTRODUCTION

Architectural composition provides the theoretical and practical grounding of the artistic orientation of teaching in the Faculty of Architecture at Slovak University of Technology in Bratislava (STU). Architectural composition is both a theoretical discipline for the creation and evaluation of architectural work, and also a creative process resulting in a new spatial quality. In this sense, it is one of the basic tools for creating architecture.

The process of creating an architectural oeuvre is largely determined by the nature of its creator, such as the ability to invent and interpret, and the ability to acquire and apply expertise. Architectural composition plays an irreplaceable role in the cultivation of the talent of the future architect. The result of architectural creation is this:

*...architectural work, integrates several dimensions in its own, namely the structural-physical dimension, functional and operational (or utilitarian) dimension, socio-psychological and cultural-aestheti dimension [1].*

Composition is a term used in any art though the definition and interpretation is not completely unified. The Encyclopaedia of Aesthetics proposes for all the artistic disciplines that composition is explained as:

*...the order, the proportions, and the relationships between the different parts of the work of art, especially if this order and these correlations are manifestations of the artist's explicit decision. This term also refers to the activity by which the artist performs these correlations [2].*

### COMPOSITION IN ARCHITECTURE AND EXPRESSION OF MEANING

The expression of a cultural-aesthetic dimension in the form of an architectural work requires its author to use the richest available repertoire of the visual properties for the elements of the work. The architect is faced with the task of knowing and mastering the tools and methods of architectural composition to be able to reflect genuine artistic ambition into the work. The final assessment of an architectural work is the decisive visual perception, i.e. the perception associated with the *form* of the work.

Composing architecture means choosing a form to match the design idea and content. The composition is a creative, purposeful way for the forms to be used and connected into the whole. The value of an architectural work corresponds to the sensory perception of the perceiver, which reflects the needs and value system of the perceiver. The composition (and therefore design) of a new architectural work is primarily about visual perception. Therefore, the visual properties of the mould are decisive. For this reason, the aim of the academic subject, which focuses on the creative aspect of

an architectural design, is to develop the student's ability to learn about abstract and practical planer and spatial composition.

Ching on the teaching of architectural composition considers interpretation as basic to architecture considered as an artistic creation [3]. Ching opines:

*...as an art, architecture is more than satisfying the purely functional requirements of a building program. Fundamentally, the physical manifestations of architecture accommodate human activity. However, the arrangement and ordering of forms and spaces also determine how architecture might promote endeavors, elicit responses, and communicate meaning [3].*

## COMPOSITION AS A SUBJECT OF STUDY

Composition as a subject of study focuses on the artistic-creative aspect of an architectural design. The student must learn basic knowledge about abstract and practical planer and spatial composition. The ability to apply formal means and methods of architectural composition must be matched by the interpretation of the meaning of a design. This approach has been applied in the Faculty of Architecture of STU in Bratislava and is based on the result of international research in the field of architectural composition teaching. It was introduced primarily through a system of exercises aimed at expressing predetermined semantic meanings on a bipolar scale.

Based on practical teaching experience, the exercises are graduated and become more difficult. This is reflected in the number of parameters and properties of the individual mould elements that are used starting with the point, line and surface in monochromatic expression through to colour and the structural differentiation of the individual elements and, finally, to the three-dimensional forms and their mutual composition.

The main objective of the creative work of the architect should be the quality of the spatial composition with a semiotically legible expression of the idea of the composition (the *content* of the composition). Meaning in architectural composition and its subsequent perception in the creation of architectural space are currently considered as one of the foundations of teaching architectural composition at the Faculty of Architecture of STU in Bratislava.

*For the new generation of architects who should be able to apply artistic ambitions in their work, it is necessary not only to accept but also to control the meaning of form and its articulation through architectural composition [4].*

In order for the students to be able to understand the meaning of their architectural work, the assignments were augmented with a cycle of lectures and literature reviews.

## ARCHITECTONIC COMPOSITION

The content of a composition should reflect the intended meaning of its creator. For this reason, a goal of architectural composition as a subject is to express how the composition fulfils the meaning of the original proposal. This is based on the assumption that an architectural composition should express the essence of the ideas of the architect.

In creating a new architecture, the architectural composition should be based primarily on the ideas of the author. First year students of architectural composition in the Faculty of Architecture of STU in Bratislava study pre-set material. They must initially, in two-dimensional design, master the basic range of bipolar meanings, such as concentration - de-concentration, acceleration - retardation, routing - digression, continuity - discontinuity, superiority - inferiority, order - chaos, harmony - disharmony, monotony - diversity, tension - serenity [5].

### Developing a Composition - Material Structure and Colour

The first task is to express a gradual change in the meaning of the two-dimensional composition, from one assigned (meaning) pole to the other. A student uses a precisely defined range of basic elements of form, as points and straight lines, curves or folded lines, always in monochromatic design. The selection is then presented as a graphic.

The second task is based on the same foundation. Planar elements with colours are used. At first, the gradual change is of the size and shapes of the area forms. The next step is to change the meaning of the original monochromatic composition by adding highlight colours to the individual elements. The result is also displayed graphically. The addition of colour to flat forms makes it necessary to master the architectural composition, including other optically perceptible properties, such as surface structure.

The third task deals with the structure, texture and the treated surface of the individual planar forms of the two-dimensional composition. The first option is to search for the degree of differentiation of mould elements expressed graphically. This is a composition of elements whose properties are perceptible only optically.

Another possibility is at the opposite extreme, where the composition of the surface formations is perceived primarily by touch, i.e. haptically. This may be a collage made up of elements that have natural material structure, but are not distinguishable by different surface colours. In this case, the elements vary by surface grain size. Naturally, when processing this task, it is preferred to use planar elements in their natural material fabrication, where the differences are perceptible both optically and haptically.

#### Developing a Composition - Scaling to Full-size

Besides the nature of the surface, it is also necessary to deal with the size of the individual elements and their interrelationships. This is the main aim of the transformation from the surface composition to large size. This changing of the scale, while preserving the original meaning of the composition is another task for students in the subject of architectural composition based on the experience and discussions at the International Symposium on Architectural Composition.

The repertoire of features of the planar elements, which the student manipulates has been extended at this stage. In addition to the size, shape and colour of the elements, the structure of their surfaces is also involved in changing the scale and the meaning of the composition. This planar composition also provides a methodical basis for the subsequent transformation of the composition to the third dimension.

#### Developing a Composition - Adding the Third Dimension

The transition from flat to three-dimensional composition is first presented graphically. The student examines the possibilities for transforming the flat composition and its individual elements into the third dimension. This transformation requires the mental effort of moving parts of the composition away from the original flat presentation. This movement into the third dimension may diminish, support or add new meaning to the composition. Handling the three-dimensional composition is another task for the student.

Monochromatic processing places emphasis on the perception of spatial characteristics of the composition. The third dimension of the architectural composition requires a great deal of work to deal with the meaning of features. The originally suppressed elements may go into completely different positions in relation to others; for example, the background may become a figure, creating new meaning. All parts of the original composition and their mutual relationships must be decisively handled. This creates a volume-space composition as the basis of a true architectural composition.

#### Developing a Composition - Adding Complex Meaning

One of the last tasks for the student is to express more complex meanings in spatial composition. These are meanings that can characterise a certain space as dreamlike, melancholy, illusion, intimidation, festive, playful, high-tech, and so on.

At first, these meanings were explored through real examples of urban or natural architecture. An environment characterised by such meanings requires students to be the true perceiver of the spatial composition of the interior space. The model of the interior space should contain only elements that are clearly defined by their shape, size and material characteristics. These then can be interpreted as architectonic elements, and the whole space is the architectural space. This composition of architectural space is important for the future development of students of architecture.

## CONCLUSIONS

Students should be able not only to respond to prescribed tasks, but also to set their own goals in terms of the meaning of architectural composition. Therefore, during the semester, they undertake a separate compositional task. Based on their own analysis of the architectural work of significant contemporary world architects, they characterise the creative *credo* of these architects. They also specify meanings that they were able to identify in the work of the architect. At the same time they reveal the compositional principles and the main features that are reflected in their designs. Students apply the results of this research to their own design (for example: an architectural facade, expressed by a plastic relief).

The mastering of this task should prove the student's ability to control the basic tools of architectural composition, while also presenting their level of independent research and the setting of artistic goals for architecture. Thus, architectural composition cultivates the talent of the future architect in finding the right answers to compositional tasks. At the same time, as artistic creators they must be able to ask their own artistic questions and to define the meaning in their own work.

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