

# Jana Fečkaninová

## SCHOOLS OF ARCHITECTURE AND EXPERIMENTS IN INNOVATIVE ARCHITECTURAL EDUCATION

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### ABSTRACT

Over the course of history, schools of architecture as institutions have been going through continuous transformations of their systems and educational processes. It appears there are distinctive forms of architectural presentation of school buildings that are related to school's philosophy and teaching strategy. In recent years, many existing schools had undergone refurbishments and new schools were built, which underlines currency of the topic. While researching general new trends in architectural education several experiments in teaching and learning architecture had been conducted, focused on creative process. Different means of influence such as mobility or curiosity were used. The paper analyses methods being used in architectural schools nowadays as well as finished and ongoing experiments, world-wide.

## INTRODUCTION

The topic of spatial realization of schools of architecture is very current these days. Just in the last decade there is great number of refurbishments, transformations and competitions for designing new architectural schools across whole Europe.<sup>1</sup> Rapid information flow and development of progressive technologies has influenced the requirements needed of an individual to gain expert skills. Methods of pedagogical process are going through similarly rich transformations.

Their creation, adoption or integration into an existing system often requires changes in physical structure. Just from this first point of interest we can safely assume there is direct link between physical structure of the school and its internal philosophy of educational processes. This contribution is on a dissertation topic: Schools of architecture (Architecture of School of Architecture). This thesis creates the missing unifying portrait of Schools of Architecture, where rich detailed analysis, though mainly from pedagogical perspective, loses connections with building where the school is housed.

## METHODS

The work analyses the current state of knowledge and existing buildings of schools of architecture, which are selected on the basis of current results of several assessment charts and rankings of European architectural schools<sup>2</sup>, with the emphasis on the widest variety of selected schools, both in terms of setting their curriculum and character of education and a unique approach to the school building. The analytical part is emphasised by a personal visit of schools along with interviewing architects working at these faculties<sup>3</sup>. By the synthesis of the analytical work there will be formed the general conclusions in the thesis.

## RESULTS

To be able to describe the architecture of a school building, we need to first understand its internal strategy - specify the "genius loci". We can say that the school of architecture, like every building consists of its physical structure and the life that it is filled with and the philosophy that makes it living. Architectural philosophy of the school may even shape its ideal expression and predetermine the structure of its internal system.

In philosophy, there is also hidden an opinion on the use of the building, which in the case of the school of architecture predicts the direction of thinking about architecture. Linked to this is the creation of an environment that a man imagines for the processes he uses for designing.

1 The competition for arch. school Delft in 2009, a competition for school University of Applied Arts in Vienna (d. 2012) and its ongoing refurbishment, the refurbishment of the school of architecture University of Innsbruck completed in 2015, global competition for the design of schools of Architecture Aarhus (2016), the refurbishment of schools the Bartlett completed in autumn 2016, and others.

2 The best known are: Domus - Europe's top 100 schools of Architecture and Design, recognizing an annual top 50 schools of architecture of Europe, a book Masterclass (2014) which, according to other criteria selects 29 best architectural schools of the world and compares each other's Master degree, evaluation system QS World University Rankings, which annually ranks the best architectural schools of the world, which are part of universities. There exists also occasional selecting of the best arch. schools done by individual architectural websites. One common instrument, which would be comparing and ranking all the schools of architecture in world is currently unknown.

3 During the last two years I have visited 13 schools of architecture to discuss the functionality of the spaces of each school with their actual users. I made a personal visit to namely: VŠVU (SK), FUTUKE (SK), Academy of Fine Arts in Vienna (AT), University of Applied Arts, Vienna (AT), TU Vienna (AT), ETSAM (ES), ie School of Architecture and Design (ES), Bauhaus-Universität Weimar (DE), The Bartlett (UK), AA (UK), TU Berlin, FAUP (PT), University of Innsbruck (AT)

The author's architectural design of the school is mostly linked with the opinion on the education of architects and the image of it is created along with the program of the school. However, there exist also numerous examples on it, where school strategy created a perfect harmony with the space, which was for this purpose later transformed, accommodated and then fully embraced it. In such context, we can speak of experiments in educational methods that took place in the past but are still considered as revolutionary.

### **Substantial Experiments in Architectural Education**

One of them was the school of Bauhaus. Its main idea was *"to reunite all types of art that were previously separated on the academia"* (Bauhaus, no date). By working with the current technical modernization and industrialization, it aimed not only for bring a new design, but to form modern human society and continuously *"build the future"*. Bauhaus school was workshop based. It was focused on developing product design for industrial manufactory, beautiful and yet functional, but still affordable for an ordinary household. When there was a threat that the school would be closed, the pavilion was built – family house "Haus am Horn", which was uniting and exhibiting different design under one roof. Although previously unapplied, Bauhaus has been perfectly functioning experiment of education in the process of applied arts.

A revolutionary turn for the 'Research Based Education' was marked with the birth of the architectural group Archigram (from Architecture + Telegram), founded by several young architects in the early 60s. These young gentlemen published a magazine that was redefining the thinking about architecture in an unconventional way. It had an experimental character with a global reach, which *"reinvented the whole mode of the architectural education" as well as "redesigned the scope of experimental thought and teaching"* (Daniel, 2013).

A still used method of architectural education is 'Unit System' that is based on *„the competitive framework of the vertical studios - "units"*. This system has been reshaped many times but one interesting experiment which was implemented by Alvin Boyarsky, a leading figure of AA (Architectural Association) since 1971. Boyarsky did not believe in the curriculum, and thus offered to architects

*"the autonomous pedagogical territory for the development of the individual architectural research"* (Sunwoo, 2010, p.25) - to teach freely according to their own interests and manifesto's.

It is quite common, that schools of architecture are in different ways dealing with their spatial variability and facing the challenges of spatial flexibility, with experiments on the methods of architectural education and therefore conducted on the theme "mobility".

Facing the topic of mobile school space was a project of Peter Murray,

Cedric Price and the AA in the 1970s, when architectural students were seeking other options for redefining architectural project beyond traditional education. They redesigned a double-decker bus into place for architectural education - the mobile space for teaching architecture - AS / AA / Polyark. "Mobility", as describes Jessica Harris at her work 'On the Buses'(2016), "was a tool for alternative modes of architectural education and practice". As reported by Georgia Papathanasiou (2016) - by such projects was developed "an unlimited network of built and unbuilt spaces by employing mobile space".

What remained unanswered in terms of mobility in the school's space, was the student's mobility itself and that in relation to the educational processes, the process of designing and creation. With regards to answering this topic it fell to the students of Academy of Fine Arts in Vienna in winter 2015. "Working environments that require of us to remain within a reduced spatial terrain in a sitting position are efficient solely at the level of square meterage" (Tschapeller, 2016). Based on this premise there was run the project 'Peripatetic Environment', which was led by Michelle Howard and Luciano Parodi. During which were done numerous experiments focused on the exact opposite - the creation of opportunities for creative effectiveness based on an abundance of dynamic interaction with space. The thematic group included designs such as: 'Movement for Ideas', 'Distracting trigger', or 'Wanderlust' were physically embodied in the area and used by students for a certain time.

On the opinion that "the institution of the future does not longer work on lasting, but on intervals of continuous education" (Koolhaas, 2010-2011, pp. 135) was founded an experimental program within the School of Architecture - Strelka Institute in Moscow, which was being developed together with Rem Koolhaas and the research group AMO. It is a school based on a research, discussion and publicity of new knowledge, operating on the principle of 5-month study program, cyclically repeating, again and again, always starting with a new theme and a new group of students. It builds on the quick pace of our period and related demise of old truths, replaced with continual need for self-development in ever repeating work-study cycles ensuring one's skill remain up to date with work requirements (Koolhaas, 2010-2011). The essential element of such a young architectural school is sharing of information, newly discovered contexts and proposals for solutions and to this purpose serve the major proportion of the school spaces.

One of the most significant experimental methods of architectural education is the establishment of the online school. The pioneer of such a based curriculum is IE School of Architecture and Design, which uses online methods since second year of Bachelors study. It sends its students every year to intern in studios around the world, who in part to this can determine what

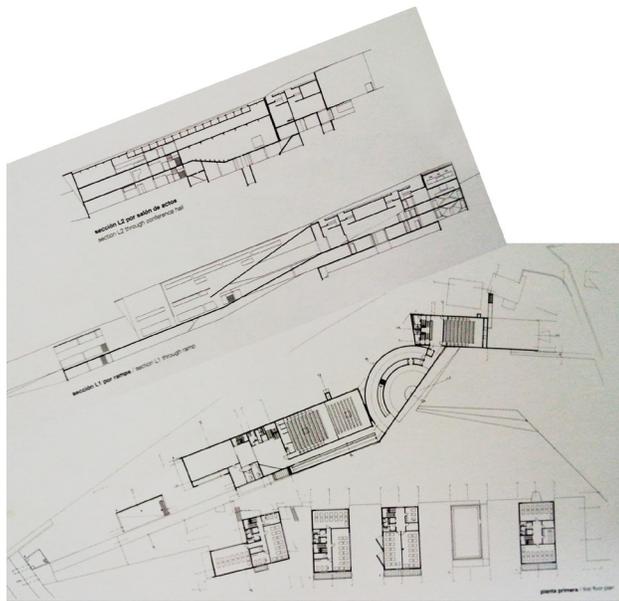


Figure 1: Scheme of the spatial structure of the FAUP – Faculty of Architecture, University of Porto, original material from El Croquis (2007). Alvaro Siza 1958-2000: El Croquis 68/69+95, p.110, Author: Jana Feckaninova



Figure 2: FAUP – Faculty of Architecture, University of Porto – One of the atmospheres of inner spaces – exhibition hall, Photo: Jana Feckaninova

type of studio and work suits them the best and with which type of the creative process they identify themselves with the most. So, they can promptly respond to the real conditions of practice and immediately adapt their requirements on education and orientation of their study. Done through an on-line system making it possible to practice in the field and study at the school in three countries simultaneously at once.<sup>4</sup>

Another one of the experiments relating to education at schools of architecture is applying the education about space directly through the very object of the School - the building. The excellent example of this is the Faculty of Architecture FAUP in Porto, that the school building is designed as an educational tool itself.

It works as a harmonious synthesis of the rich psychological moments of allocation of spaces. It starts with intentionally different orientation of windows in the studios and reaches the strategic composing of geometrical elements shaping the movement and behaviour of people in the area, how it does for example in the library (Copans, Neumann, 2011). Teachers themselves use the school building as a tool to illustrate the composition of various elements to achievable spatial designs, not only functionally and visually, but also through feelings that that could be perceived from certain dimensions within the space. It is interesting to review student studio works, as they in many cases actually carry Siza's signature.<sup>5</sup>

### Physical Formations of Educational Strategies

While describing experiments in methods of architectural education, some gradually became widely used and attained their currently almost obvious, natural image whilst others are still being „tested“ and verified. From this we can observe that different types of strategies lead to certain physical formations of the schools where they are in various levels of use. Based on the prevalent philosophy of architectural schools related to their physical proportions we can distinguish 5 types of school:

4 The typical example of leading-person-centric kind of a school is University of Applied Arts in Vienna.

5 From interview with Raquel Paulino and Manuel Montenegro

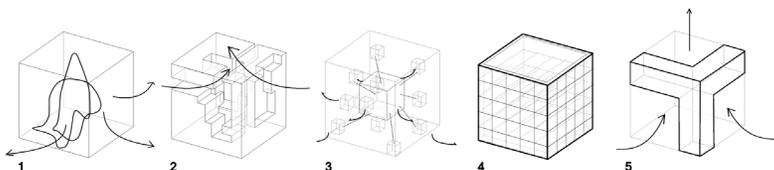


Figure 3: Scheme illustrating spatial formations of different teaching strategies. 1. School -workshop 2. School - author's original signature 3. Online school 4. School - universe of microworlds 5. School - public discussion. Author: Jana Feckaninova

**School - workshop** is primarily focused on physical verification of topics being studied, creating designs and on applied science. Experimental designs and their transformation to the physical world via usage, testing and development of fabrication processes is the very essence of this school type. The outputs are primarily projects with real world applications, from usage of newly designed and developed robots through experimental materials, to livable temporary pavilions. This type of school quite often resembles an actual workshop as its key space. The ultimate representative of this kind of the school is an industrial hall changing only to cater “manufacture - exhibit” mode of operation. One such example is Institute for Advanced Architecture of Catalonia (laaC).

**School – author’s original signature** consists of a building or set of buildings intentionally designed for providing different kinds of atmosphere, surrounding psychological experience or light changes to the students in order to allow them to better understand compositional principles and related sensual impressions as well as human influence via direct subjective experience. The most notable example is FAUP, which presents this function of architecture, from understanding the significance of geometric differences and light effects, to the subjective differences in perceiving surroundings via different means of connecting rooms of unequal sizes and heights. Teaching and learning at this kind of school means - but is not limited to - the daily analysis of a work of art.

**Online school** is especially interesting due to reduction of the architectural school space, yet with rich studios experience, between which the student is required to alternate during his time of study. The school building itself therefore doesn’t have that much influence on the student in terms of his surroundings. Thus, online school type puts emphasis on spatial forms of studios of architectural practice more than on the school building.

**School - universe of microworlds** - the principle of small closed rooms for small groups of students, typical for this type of school such AA is “*a series of small independent worlds forming one large institution*” (Steele, 2010, s.42). It’s a system of vertical studios, smaller groups that form their unique world derived from the studio master of that studio. As such for this kind of teaching the most effective system turned out to be a set of smaller rooms, which was verified on the Bartlett school where this ‘The Unit System’ was adopted and modified, as The Bartlett’s footprint easily allowed to be implemented. The rooms however can’t be sealed completely, as the system relies on competitiveness of the students and further enhances it (White, 2014).

## School - public discussion

Currently there is a tendency of communicating architecture to the general public and also attracting younger and younger generations to schools, as well as explaining basics of architectural perception to the youth (Staub, 2016). The principle of sharing these most recent findings is the main goal of Strelka Institute, which in its own space demonstrates the essence of the school - a public discussion. As such this school specifically dedicates approximately 2/3 of its footprint to serve this purpose.

These physical forms of architectonic schools are present to various extent in all school buildings. What is interesting is targeted and conscious analysis of ratios between different types of spaces derived from the character of pedagogical process being used, and upon which the requirements can be put to more harmonic union with realistic expectations.

## DISCUSSION

Of course, there is no need to evaluate only new school building. What is also interesting is analyzing compatibility between school building and pedagogical processes being used. It's about unity in rules of using physical space and preferred educational strategy. The question of certain repeating footprint types while achieving different levels of success in operation deserves further exploration. Examining relationships between both elements shows that certain expectations in the process of education might not be met in otherwise fully functioning buildings. The same topic is mentioned with regards to Yale School of Art and Architecture by Paul Rudolph, who designed the school

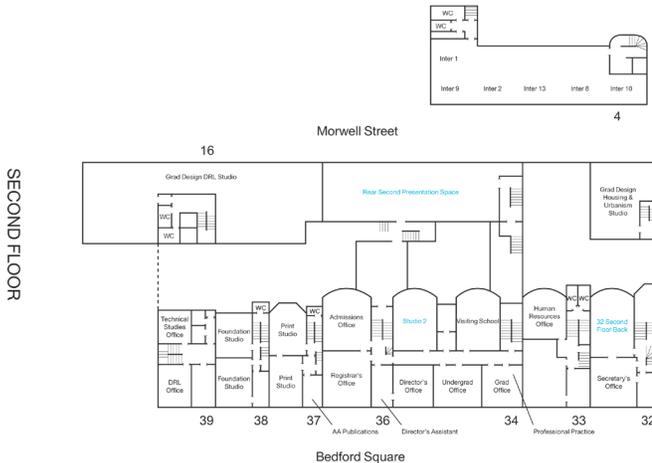


Figure 4: AA - Architectural Association, floorplan – ground floor  
<https://www.aaschool.ac.uk/Downloads/AAFloorPlans.pdf>

building using large collective central spaces for architects and designers to work, from which they could benefit both during study as well as during presentations and discussions. "These spaces were underutilized, they were too open, too noisy" (White, 2014). As such the expectations of this learning process did not meet with the physical surroundings that would make learning comfortable. From researching these displays, the school's philosophy and principal education strategy related to the building usage, one can set more realistic expectations how will designed school building will work along with its educational system and discover its further potential. The next question is the topic of mobility in the teaching / learning process and implementing it to the design of the building. How would an architecture school's building look like when designed as per the principles of creative thinking resulting from mobility? How would the pedagogical process look like in this kind of school?

## **CONCLUSION**

Analyzing almost the revolutionary changes in schools of architecture, such as the birth of Bauhaus or the pedagogical shift in London during 1960s, the main driver for changes in pedagogical process are always changes in the society during particular period of time and also somewhat related advancements not available before. It's all about keeping up with the tempo of the period and with expected development. This is the main reason why there are always experiments in education processes. The online school of architecture has proven itself to be very effective from a time-saving perspective, especially when value of time increases exponentially. However, in this early phase of the online school it's questionable what impact a complete removal of school building, physical contact with lecturers and other students, who often bring different points of view on the architecture based on different cultural background, will have.

Though it was observed the preferred character of education is physically embodied in the building where education takes place. Identification and systematization of these relations can have a most positive effect when refurbishing or designing new buildings for schools of architecture. Namely, analyzed types of architectural education systems and the buildings that are used, considering their uniqueness, as each are very specific. Their study is needed to be generalized to allow for more precise application of discovered principles - in various scales - into selected schools of architecture. Speaking of schools of architecture, we are also discussing about analyzing different forms of creative environments, which can in deeper research uncover requirements for better usage of spatial parameters not just for schools of architecture, but for schools in general.

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