

Alternative methods for education and training at the Architectural Research Centre for Heritage and Art education (ARCHA) at Banská Štiavnica

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ABSTRACT: The Architectural Research Centre for Heritage and Art education (ARCHA) is a Detached Workplace of the Slovak University of Technology in Bratislava (STU) at the Faculty of Architecture in Banská Štiavnica. Since its inception in 2000, it has been a training centre for experimental and innovative forms of education. The renovation and adaptation of a decaying historical building became itself an alternative educational centre for more than 400 students - future architects who participated in rescue and reconstruction works during the period 1986-90. At present, it is the centre for specialised education of historical heritage restoration and terrain-related teaching, art workshops, exercise and studio sessions, design workshops, lifelong learning and the Autumn University of Architecture. The centre is also a place to practise skills that are not yet in the Faculty's curriculum e.g. communication with the client, psychology in practice and principles of presentation of an architectural project. This is part of the ARCHilab project - creative laboratory of architecture. In this article, the author presents the methodology of teaching these educational activities.

INTRODUCTION

During the socialist era, it was customary in the former Czechoslovakia to organise summer activities for university students. One such was held in Banská Štiavnica in 1985, where students of architecture were engaged as auxiliary workers for the state-owned construction company, Pamiatkostav, whose focus was on the renovation of historic buildings. Students developed the idea of rescuing the damaged facade of an historic building in the city centre (see Figure 1), at that time in private ownership and without the prospect of early rehabilitation. The students started to address gradually the actions required which, at that time in the universities in Slovakia, was unprecedented. After negotiations with the owner and the Ministry of Culture, the property was redeemed and subsequently transferred for a nominal price to the Faculty of Architecture at the Slovak University of Technology in Bratislava (STU). Through the Faculty a contract was signed with the city management for the employment of students and the provision of materials and tools. At the time this was the only way to proceed with this activity.



a)

b)

Figure 1: The historical building of the Faculty of Architecture STU in Banská Štiavnica; a) before restoration; b) after restoration (Photographs by L. Paučulová and P. Gregor).

Work on the renovation of the building started in 1986 and the first students were accommodated in the house in basic conditions. However, many saw it as an attractive and extraordinary opportunity to undertake professional and independent work. The work mainly was led by graduates of the Faculty and at the beginning was most difficult. It was a time of *adventure*; project documentation for the rescue plan did not exist. Many problems required an immediate solution on the spot. The construction also encouraged the involvement of local residents, who, for example, repaired a broken mixer and supplied missing tools.

During the first summer, with the consent of the then Dean, Prof. Ján Antal, about 50 students took part, even during the mandatory collection of potatoes in September. During socialism this was a required *professional* activity for students. Under the guidance of teachers and PhD students over four years, basic rescue work was carried out including installing a new roof. Restoration of the house was highly attractive for the students, as a way of learning on *the ground* by implementing specific tasks (see before and after images in Figure 1). Eventually, more than 400 students were involved in the construction works, increasing their level of knowledge and skills. Members of the Slovak Union of Nature Conservation and Landscape Conservation, who were craftsmen, professional guarantors and builders, also contributed to the rescue.

EDUCATIONAL BEGINNINGS

With the rescue work on the building underway, the Faculty of Architecture was able to conclude teaching in the town and its surroundings. Several graduates from the Faculty found professional jobs in Banská Štiavnica, where before, the profession of architect was virtually nil. The Faculty was instrumental in initiating the process of the listing of Banská Štiavnica as the first Slovak town to become a UNESCO World Cultural and Natural Heritage centre.

The Faculty department, Protection and Design in the Monumental Environment (head: Anna Schwarczová and Pavel Gregor), conducted regular pedagogical activities during this period. These included detailed measurements of historical objects, surveys, workshops and seminars (see examples of the work in Figure 2). This better informed students and teachers of the practice of architecture. This work built on earlier developments by teachers and students from the 1950s (Prof. Alfréd Piffli), who were the first in Slovakia to focus on the facades of monumental buildings in the historical centre of Banská Štiavnica.



Figure 2: Documentation and measurement of historical buildings (Photographs by P. Gregor).

After 1989, the Faculty received financial support for the next stage of restoration. A professional rebuilding company took over the rehabilitation and in 2001 the then Dean (Prof. R. Špaček) was able to officially open the work of the Detached Workplace (then assigned to the Department of Protection and Design of the Monumental Environment). After completion of the renovations, the teaching was conducted in much better conditions. This was especially so after the establishment of accommodation in the loft and premises for teaching and administration. This was mainly a consequent of the projects *Educational - Scientific and Research Centre FA STU in Banská Štiavnica* (Prof. Pavel Gregor) and *Laboratory for Digital Documentation and Simulation of Architectural Heritage* (Doc. Eva Krá'ová).

With increased activity, the learning and accommodation space proved inadequate. As a result, after 2010, the Faculty leased a neighbouring building from the town, which has been reconstructed and functionally connected with the original building. This allows for the needs of other projects, i.e. *Reconstruction and modernization of the buildings of Detached workplace FA STU in Banská Štiavnica* and the *Implementation and modernization of the ICT infrastructure of FA STU in Banská Štiavnica*. The Detached Workplace has thus acquired additional learning areas with excellent

technical equipment, such as computers, interactive boards, 3D cutter, 3D printer and 3D scanner. As well, the accommodation has capacity for 25 students and six tutors [1].

PROGRESSIVE AND INNOVATIVE TRAINING METHODS FOR CULTURAL HERITAGE

Since its inception, the Detached Workplace has been a training centre for experimental and innovative forms of education. Its location in one of the most historically important places in Slovakia determined the initial professional focus on protection, restoration and preservation of cultural heritage. At the time, sustainable cultural development was not discussed in Czechoslovakia.

Lectures were based on the theory of conservation and restoration of monuments, with seminars focused on the documentation of monuments and the examination of knowledge from the research and methodology of historical architecture renewal. Originally taught in the Faculty of Architecture in Bratislava, they were gradually transferred to Banská Štiavnica. The teaching, first for selected groups of students, featured concentrated block training of one week's duration. After receiving a grant for the project, *Creating and applying progressive teaching methods for the area of protection and restoration of architectural cultural heritage* [2], the lessons focused on fieldwork exercises from the subject Monument Restoration, which included:

- a) Documenting the interior of an architectural cultural monument: a pair of students measured and documented selected parts of the interior of an historic building and selected architectural details (doors, handles, etc). The output of the assignment was graphical documentation of a room (ground plan and cross section at 1:10 scale) and details (scale 1:1).
- b) Field excursion: focused on the cultural and historical value of objects, spaces and landscapes. The results were written up in the form of an essay, professional article or paper.
- c) Expert excursion to a selected historical object: connected with the presentation of the subject and types of monumental research (architectural, archaeological, restoration). Output was a written report of the interpretation of the object's value.

The above content is identical to exercises in the Faculty of Architecture in Bratislava. However, it has been supplemented by practical training in traditional building crafts, such as carpentry, plastering, stone processing and forging. The aim of this training was to buttress theoretical knowledge from the lectures through contact, by the students, with specific monument materials and historical technology. This enables students to appreciate the heritage of the previous generations, which includes an appreciation of craftsmanship often missing in today's objects and industrial technologies. All students of the study programme, Architecture and Urban-planning, could practise techniques from individual crafts (see Figure 3):

- a) Carpentry: for example, traditional carpentry joints; machining of logs through pruning, planning, drilling, tooling and designing a reduced model of a truss structure.
- b) Plaster technology: exercises for the preparation of different types of lime-based plaster mixtures; a range of types of surface treatments and familiarisation with the tools, including basic tools and surface treatment of stone processing.
- c) Blacksmith training has focused on demonstration of metal profiles processing and familiarisation with tools.



a)



b)



c)

Figure 3: Training in traditional crafts (Photographs by L. Paučulová).

At the end of this training, students developed an individual evaluation to assist in the preparation and implementation of other training sessions. The participation of students in this training was voluntary and an alternative way to obtain credits for the subject, Monument Restoration. The interest of students in such forms of education initially exceeded the

physical and financial capacity of the programme. However, from an initial 15% of the students who participated, by the end of the project the participation rate was almost 70%.

INNOVATIVE METHODS OF EDUCATION IN ARCHITECTURAL DESIGN

The inspiring environment of Banská Štiavnica and the capacity of the Detached Workplace (25-30 students) predetermined it as a site for artistic workshops, to which later was added the Autumn University of Architecture [3]. This latter focused mainly on documenting the historical heritage of Banská Štiavnica, with workshops focusing on architecture, urban-planning and design.

The workplace also has become the site of several lifelong learning courses for students focusing on selected aspects of architecture in an historical environment within the framework of the Creative Architecture Laboratory project (ARCHilab). After the foundation of the Architectural Research Centre for Heritage and Art education (ARCHA), the Detached Workplace became part of the regular teaching of the STU Faculty of Architecture, where it is used for experimental and innovative teaching. This includes studio design work, focusing on aspects that are not yet in the Faculty curriculum, such as communication with the client, psychology in practice and principles of presentation of an architectural project.



Figure 4: Presentation and discussion of student design projects within the ARCHilab framework (Photographs by P. Gregor).

In co-operation with a professional psychologist, training has focused on teamwork, team leadership and professional communication with the client. The training was based on a project-based learning approach [4]. Students were divided into groups whose members assumed the roles of architect, client and the staff of an expert body, who assessed and approved their work. In set situations, they explored the tools of communication, argumentation and conflict resolution.

The groups' initial analysis and subsequent concept solutions were presented to a group that aimed to determine positive and negative aspects of the proposals (see Figures 4 and 5). A feature of these discussions was the lack of student skills in presentation tools and techniques. For this reason, a specialised seminar, *How to Present in Architecture*, was included in the course. The aim of the seminar was to acquaint students on a theoretical and practical level with the possibilities for the presentation of an architectural design. The seminar was divided into three blocks:

1. Non-verbal presentation (static): basics of graphic design, content and solutions for architectural drawings and posters. The task of the students was to modify their own previous work, based on knowledge from the lecture followed by demonstrations.
2. Basics of verbal presentation: content and form, structure and presentation hierarchy, visualisation, speech, rhetoric and technical support. The task of the students was to master the visual presentation of the previous designs in combination with the spoken word followed by personal presentations.
3. Non-verbal presentation (dynamic): tips and tricks. The task of the students was to manage the presentation of their own design using computer animation, video and music.

In the assignments, the students gradually developed the ability to handle various presentation tools and techniques. They came to realise their effects on the target group and the various levels of informative and emotional response.

CONCLUSIONS

Apart from the above-mentioned trainings, it is pleasing that the current Faculty of Architecture STU students in Bratislava continue the tradition of their predecessors and continue to actively participate in the further development of

the Detached Workplace in Banská Štiavnica. This is so, even if they do not use buckets and pickaxes, but rather the tools of their future profession.

The voluntary workshops and regular lessons in the studios deal with the interior and visual finishing of the building or exhibition. It is, thus, hoped that the idea of linking the survival of historical heritage with fieldwork will also survive for future generations of young architects and will contribute to their professional development.



a)



b)

Figure 5: Example of the student's project *Live Stream* - how to connect workplaces of the Faculty of Architecture STU in Bratislava and Banská Štiavnica.

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