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The impact of the popularisation of architectural studies on the number of applicants

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ABSTRACT: The Faculty of Architecture and Design at Slovak University of Technology in Bratislava, Slovakia, has a long-term tradition of teaching architecture in Slovakia. However, the number of applicants for subjects, such as Architecture and Urbanism has had a decreasing tendency in the last decade. The reason for this decline can be attributed not only to the recent pandemic but also to an increasing attractiveness of foreign architectural universities. The high school students' awareness of architecture is insufficient. Students lack soft skills and sufficient ability to express themselves at hand-drawn graphics. Teachers have tried to make education more attractive through various initiatives. In this article, the authors look at the purpose, conception and goals of these initiatives that promote and make studying more attractive. These activities include lecturing about the Faculty of Architecture at secondary schools or providing courses in drawing, modelling or descriptive geometry. The article describes the methods used and evaluate the impact of the activities on increasing interest in studying architecture during recent years. The attractiveness of the courses depends on the level of knowledge of the given subject. Lastly, there is also included a sketch of potential developments that could be expected in the future, and an outline of other necessary activities in terms of study attractiveness.

Keywords: Architectural education, applicants, activities

INTRODUCTION

The origin of institutional architectural education in Slovakia dates back to 1946, while an independent faculty was established in 1976 [1]. This testifies to the uniqueness and importance of architectural education in Slovakia. The Faculty of Architecture and Design (FAD) is a member of the European Association for Architectural Education, and its educational system is regulated by the Directive 2013/55/EU of the European Parliament and of the Council of 20/11/2013.

The above-mentioned facts bind the Faculty to have a responsible approach not only to the educational system, the educational process, but also to the preparation of applicants for architectural studies. A simple hypothesis may be derived from the following: a higher number of applicants for the studies introduces a wider possibility of selection, and inevitably the higher quality of the selected students. The study of architecture is not only based on the completion of a six-year study as continuous preparation for the admission examinations and for architectural education itself should commence already during the secondary school years.

The aim of the admission procedure is to verify the applicant's ability to study architecture. Architecture combines art, science and technology. Therefore, the entrance examination also includes a verification of the applicants' talents. These are verified by specific tasks that focus on spatial imagination, visual thinking, drawing and a general overview in the fields of architecture, art and design. The tasks are designed to reveal the candidates' strengths and weaknesses.

> *Visual thinking has played a valuable role in the architecture education over the past years. Needs and requirements of the architectural profession must follow the current noticeable tendency of replacing the words by the pictures. The context of contemporary visual messages is also important for the designers. These illustrative messages exist in many aspects of contemporary visual culture. Graphical representations of projects should be a message conveying clear information. In this aspect, creating illustrations showing the multi-faceted nature of architecture is a challenge for designers. In addition, the complexity-clarity relationship connected to the illustration of an architectural idea should be constantly taken into account* [2].

ANALYSIS OF APPLICANTS AND METHODOLOGY OF PREPARATION FOR HIGHER EDUCATION

In recent years, the Faculty of Architecture and Design has seen a decrease in the number of applicants for this field of study (Figure 1). Although there was not such a wide range of study fields offered in Slovakia in the past, the situation

today is different. The large number of universities and the wide range of different study programmes offered at home, as well as at foreign universities, have caused a change in the way students think and decide when choosing their studies. As research has shown, a good study programme is considered to be one that is flexible, original, with modern technologies, international perspective and teachers with innovative teaching methods [3].

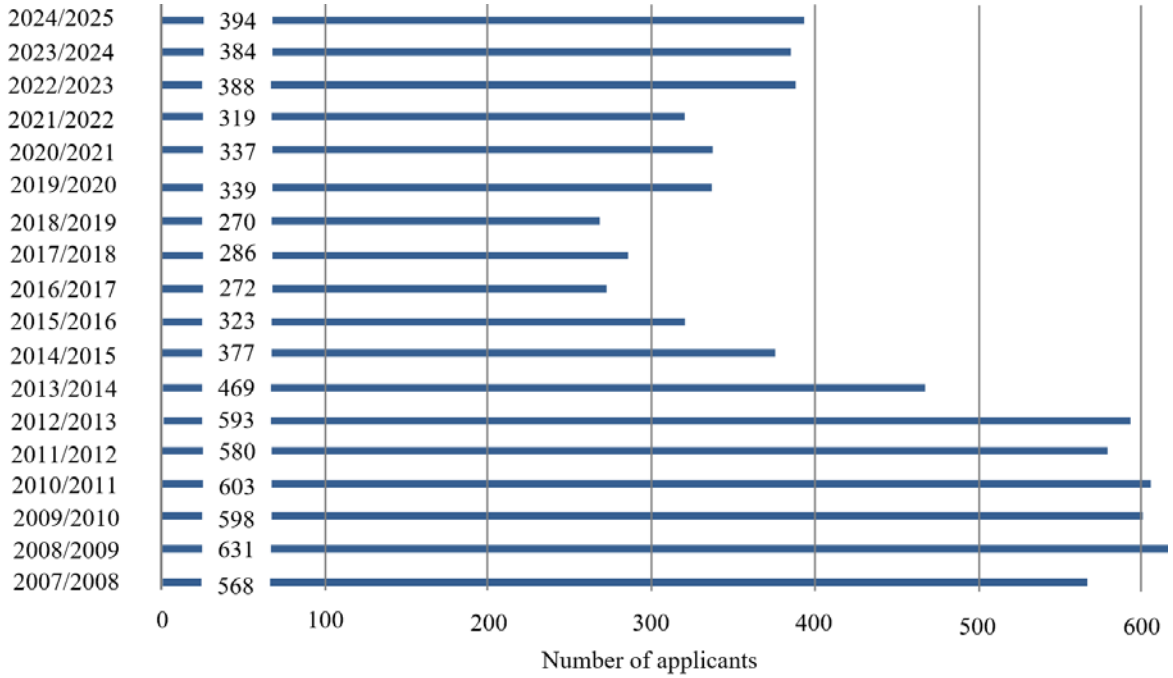

Figure 1: Number of applicants for the Architecture and Urbanism study programme (source: authors, academic information system, 2023).

The system and methodology of preparation for university studies at an earlier secondary school level and the economic position of graduates in the actual practice in comparison to other disciplines are significant determinants in the choice of studies. This has also an impact on the changing gender balance of applicants. The number of women has increased approximately by 20 percent in the last 15 years. Of course, this finding neither has a negative impact on the field of architecture nor does it reflect the quality of architectural works. On the contrary, it indicates a reversal of the trends in the past decades, when architecture was primarily a male profession.

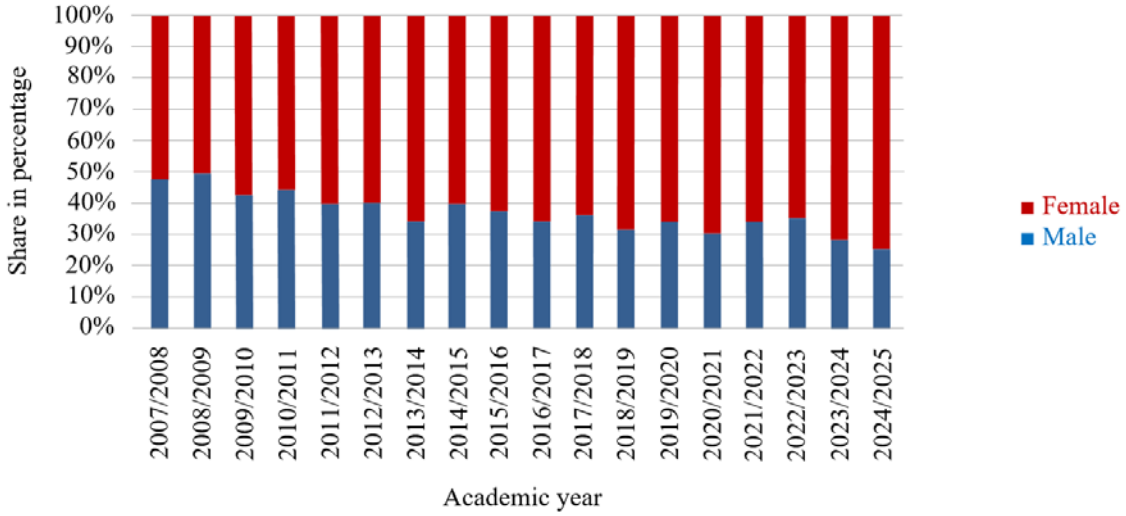

Figure 2: Proportion of applicants to the Architecture and Urban Planning study programme (source: authors, academic information system, 2023).

> *The quality of study programme teaching is largely dependent on the quality of individual subjects, which consists of the systematic updating of their theoretical base and teaching methods* [4].

The study of architecture is generally considered to be challenging. Above all, applicants are required to have the talent or skills to be able to produce original designs in the future. Following admission to study, attention is also given to expression and critical thinking based on the individual's ability to argue. The process is the same in the architectural practice. Nowadays, architects are required to have a general overview and the ability to understand and integrate several scientific disciplines, and subsequently to apply them in the design of an architectural object or in an urban structure.

Despite the fact that between 2008 and 2018, the position of a designer *was still mainly hard-skill oriented, the advertised positions increasingly demanded good communication skills, independence and responsibility, as well as analytical or logical thinking or resistance to stress from applicants* [5].

The system of preparation for university studies consists mainly of activities that the Faculty has determined to be meaningful and that meet its needs in terms of a long-term effect. The Faculty has established two basic approaches: the first one is to reach out to primary school pupils already in the form of short-term visits to the Faculty facilities, the second one are activities for secondary school students (Figure 3). The aim of these activities is to increase interest in the study of architecture and, at the same time, to attract applicants for study.

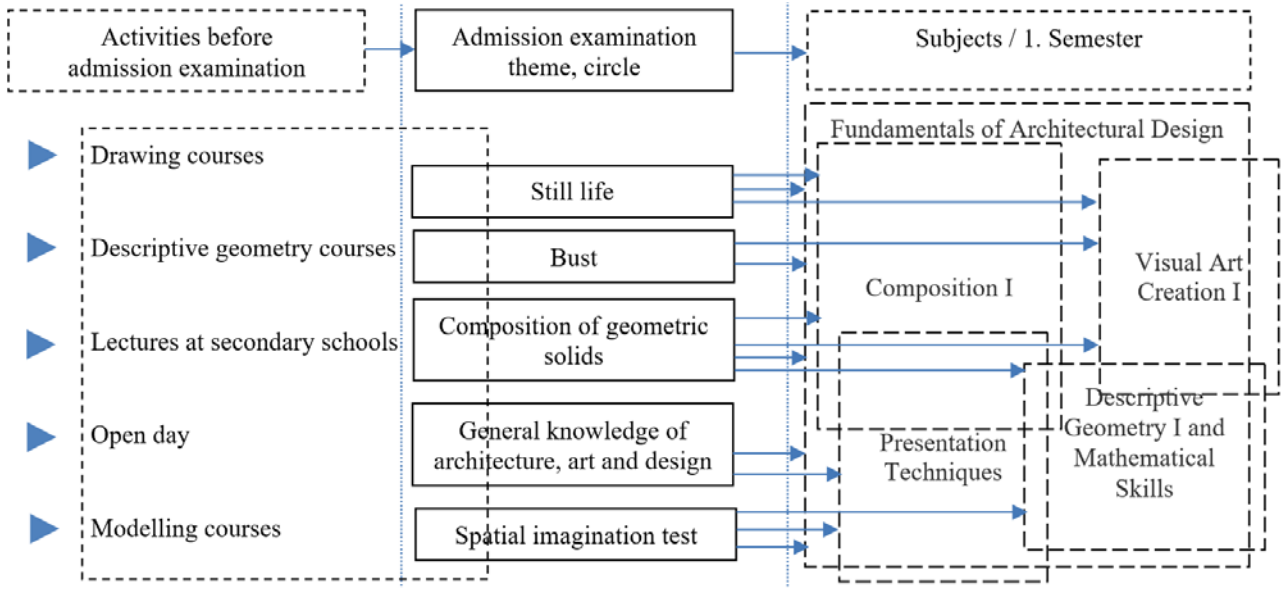

Figure 3. Methodology of preparation for studies - range and interconnection of activities for applicants, tasks of the entrance examination and subjects during the first semester of study in the Architecture and Urbanism study programme.

The system and the interconnection of activities is evident in the form of drawing courses, the aim of which is to verify the ability of the applicant to express himself/herself graphically, to capture spatial formations and proportions in the form of hand drawing. The second form includes courses of descriptive geometry, where the spatial imagination of the applicants is tested. These two forms are carried out during the whole academic year, when a candidate can enrol in several courses at the same time. The effect is that he/she gradually improves in tonal or linear drawing and also refines his/her spatial thinking.

Discussing and critiquing the drawings is better absorbed by students when it is carried out in a civilised manner during one-to-one contact sessions. Similarly, making remarks on perspective sketches of students' own projects is helpful in presenting design ideas. Developing the ability to use a drawing, creating original graphic records presented in public and integration with design objects, are important in the social communication of design concepts [6].

Figure 4: Simulation of the entrance examination tasks at the FAD Open event (photographs: M. Czafík).

The biggest event at the Faculty is the event known as the FAD Open, i.e. the open day. It is a one-day activity where various tasks of the admission procedure are simulated in the environment of the Faculty's classrooms. In small formats, fictional assignments are solved in which candidates test their manual skills in creating models of simple architectural objects with the participation of teachers. During the event, they can also try out tasks of spatial imagination, displaying simple shapes using sketch, side view and floor plan derived from the volume of a cube and *vice versa*.

Another form of Faculty promotion are lectures presented at selected secondary schools in Slovakia. The lectures are connected with the introduction of the Faculty, its history and study opportunities. During the lectures, applicants are also introduced to individual profile subjects, the system of studio works or various forms of the educational activities. Moreover, candidates are presented with semester works and their outputs in the form of portfolios and models of objects that they will learn to design during their studies. The lectures are also devoted to innovative forms of design in the form of BIM technologies and virtual reality accompanied with direct demonstration of several technologies.

The lectures have the advantage of direct contact between the teacher and the candidate, while the discussion is conducted in an informal format. This means that the lecturer leads a free discussion about the study of architecture and the architectural profession and simultaneously answers the candidates' questions. Simultaneously, he/she explains the purpose of studying architecture and its positive impact on the whole society using an analytical method. Without doubt, it is very important to attract attention through an interactive lecture, therefore the lecturer should use the vocabulary of the young generation, be engaged, and should react pragmatically to their suggestions.

> *Summarizing we can say that the interactive lectures have more advantages than formal ones. Because of the development of new technologies,* [in the] *digital era we can teach even lectures in interactive way. The aim of interactive lectures or interactive learning is active involvement and participation so that students are no longer passive in the learning process, and to make the lectures more effective tool for learning even if there are large groups. At the same time, the lecturers possess different roles in organizing interaction, as we have mentioned before, it is a two-way process* [7].

IMPACT ON THE NUMBER OF APLLICANTS

The activities carried out prior to the admission procedure are not only aimed at increasing the quality of applicants, but above all they are supposed to:

- verify their talent;
- exploit their potential;
- popularise architectural education;
- promote architectural profession;
- increase the quality of students;
- ensure a smoother transition between the secondary and higher education system, etc.

The activities, in addition to the factors mentioned above, also teach students soft skills, teach them systematic work, patience and habits to look critically at certain issues related to architecture [8][9]. They also teach students to communicate with each other. The work process in the architectural profession and in teaching is implemented in the studio works, while mutual communication is the basis of success and quality of the project. Thus, future architects learn to successfully convey information and respect each other [10].

The impact of the above-mentioned implemented activities is evident in the number of applicants (Figure 1). For the academic years 2023/24 and 2024/2025, the number of applicants has risen to 384 and 394, respectively. For the academic year 2022/2023, the figure was approximately the same, but the admissions system was a two-round process. In the academic year 2022/2023, 264 applicants applied in the first round. This shows that the increase in the number of applicants in 2023/2024 compared to 2022/2023 (first round only) was approximately 50%, compared to 2021/2022 there was an increase of approximately 23%.

Table 1: Number of applicants for courses.

Course title	Number of applicants per calendar year				
	2024	2023	2022	2021	2019
Drawing course	68	73	69	65	103
Talent course	344	296	29	-	-

After the COVID-19 pandemic period, the Faculty of Architecture has re-launched and initiated several preparatory courses for applicants. The aim of the courses is to test candidates' imaging skills in linear and tonal drawing. For one day, a candidate can try drawing a bust or still life based on the depicted reality, with the assistance of a teacher. The number of participants of the courses is constantly increasing (Table 1), which is also reflected in the number of applicants in the entrance examinations.

When comparing the average values of the scores obtained in the individual tasks over the last two years, it can be stated that the quality of applicants has a slightly increasing tendency. This is evidenced by the percentage difference in the obtained scores (Table 2) for the last two academic years, i.e. in the post-pandemic period. The entrance examination consisted of five tasks (still life, bust, composition of geometric solid, general knowledge of architecture, art and design, and spatial imagination test), which were assessed by four-member committees. In both academic years, the same committee had evaluated the candidates' work, guaranteeing the verification of the research results.

Table 2: Comparison of the average scores obtained in the individual tasks in the admission procedure in the academic years 2023/2024 and 2024/2025.

Theme, circle	Max. number of points (for the academic year 2024/25)	Average score in %	Max. number of points (for the academic year 2023/24)	Average score in %	Percentage difference in scored points
Still life	250	47 %	250	43 %	+ 4%
Bust	250	64%	250	64 %	0 %
Composition of geometric solids	250	53 %	300	58 %	- 5 %
General knowledge of architecture, art and design	50	61%	50	58 %	+ 4 %
Spatial imagination test	200	65%	150	60 %	+5 %

There is a visible positive impact of the performed activities on the quality of the candidates in all types of tasks, with the exception of the task - composition of geometric solids. The aim of this task is to draw a composition of different geometric solids, such as sphere, block, cube, prism, needle, cone according to the given topic. This task has not yet been the subject of any preparatory courses at the Faculty, which is the reason for the lower success rate in the entrance examinations. The themes for the processing task are varied and are randomly selected by the candidates at the beginning of the admission process.

The number of applicants from each secondary school, from which applicants attended the FAD Open event and where lectured were given is shown in Table 3 (only a sample of approximately 180 secondary schools is given).

Table 3: Number of applicants that attended the FAD Open event.

	Number of applicants per academic year		
	2024/2025	2023/2022	Balance
Secondary School of Building Construction in Bratislava	27	16	+11
Secondary School of Building Construction in Trencin	14	7	+7
J.G. Tajovského High School in Banská Bystrica	11	7	+4
High School Metodova in Bratislava	7	5	+2
Secondary School of Building Construction in Žilina	7	5	+2
School of Art Industry in Bratislava	20	12	+8
Arm. Gen. L. Svobodu Secondary School in Humenne and others	8	1	+7

The survey among applicants by secondary school shows that direct lectures realised in the selected schools increased the number of applicants. This trend needs to be intensified in the future, not only in the Slovak environment but also in foreign secondary schools. This will give a prerequisite for increasing the number of foreign applicants, and will help to internationalise architectural education and to promote the sole faculty of architecture in Slovakia.

CONCLUSIONS

The impact achieved by the activities carried out to increase the quantity and quality of graduates is unquestionable in view of the statistics above. The hypothesis that a higher number of applicants for the talent-based entrance examinations brings a wider choice and simultaneously raises the quality of the applicants is demonstrably confirmed. This is the result of long-term preparation for study during secondary school. The popularisation of architectural education, therefore, appears to be the most effective when the student is addressed through direct teacher-candidate-student contact. So far, proven methods of popularisation through the on-line space, social networks or print press seem to be still effective, but currently less sufficient. Although social networks are extremely popular today, they cannot provide the physical component as it is needed; namely, the direct contact and mediation of the physical component of architecture: architectural and urban models.

The question remains how to improve this system, so that it is sustainable for the long term with positive results every academic year. It can be stated with certainty that it is necessary to work on improving the task of composition from geometric solids in the preparation of applicants for the study. The achieved partial results of the research need to be continuously monitored and verified in the following academic years.

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BIOGRAPHIES

Michal Czafík graduated from the Faculty of Architecture at Slovak University of Technology in Bratislava (STU), Slovakia (2011) and concluded his PhD studies through the dissertation thesis there (2014). He is currently working as an Associate Professor in the Institute of Architecture of Residential Buildings in the Faculty of Architecture and Design at the STU. He is mainly involved in research and social housing issues focusing on homeless people housing. He conducts lectures and teaches theoretical and practical courses. His academic portfolio includes published scientific papers, participation in international grant projects, as well as numerous completed architectural projects. He has participated in many conferences home and abroad. The Ministry of Transport, Construction and Regional Development appointed him a member of the jury for the assessment of affordable housing in Slovakia, in 2015.

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Edita Vráblová graduated from the Faculty of Architecture at Slovak University of Technology in Bratislava (STU), Slovakia, and concurrently accomplished one year scholarship at the Vienna University of Technology, Austria. Since then, she has practiced and worked at the Institute of Architecture of Residential Buildings in the Faculty of Architecture and Design at the STU. Currently, she holds the position of an Associate Professor and is Head of the Institute of Architecture of Residential Buildings, involved in her main domain are residential buildings and progressive trends in temporary accommodation. She conducts several research activities in architecture and presents their outcomes at domestic and foreign science forums. She runs her own architectural office. Her practise mainly focuses on the residential, educational and healthcare buildings.

Professor Ľubica Selcova studied in the Faculty of Architecture at Slovak Technical University (STU) in Bratislava, Slovaka, and graduated in 1988. She has worked in design at her own architectural studio ASA Design since 1996. She has also been an Associate Professor in the Faculty of Architecture and Design at the STU since 1988, and has been engaged in research, pedagogical and editorial work in the Institute of Residential Buildings at the STU. Her areas of expertise include residential buildings, building conversions, the revitalisations of vineyards' cultural landscapes, the experimental forms of housing and the universal design of adjustable housing. She is currently Deputy Head of the Institute of Architecture of Residential Buildings at the STU. Professor Selcova is also responsible for conducting XELLA - an international competition for architecture students.