

Geographical and chronological knowledge in teaching the history of architecture

Aleksander Piwek, Tomasz Jazdzewski & Piotr Samól

Gdańsk University of Technology
Gdańsk, Poland

ABSTRACT: The subject of this article is the analysis of examination results from the course, the History of Polish Architecture. These Bachelor studies present the political, economic and cultural issues of medieval and early modern architecture, and their changes over time. Basic knowledge of the administrative division and historical regions is needed for a proper understanding of the regional diversity of cultural heritage monuments in Poland. One of the tasks of the final test is to identify from pictures ten historic buildings and to provide the name, function, time of creation, architectural style, author, city and region of the pictures. Analysis of the answers shows that many students, despite their good knowledge of architecture, have problems with the correct location of not only small- and medium-sized cities, but also the largest cities and the capital. Another issue discussed in this article is the problem of students recognising architectural styles and the time of their occurrence in various regions.

INTRODUCTION

The history of architecture has been an obligatory part of architects' knowledge since the time of ancient Roman architecture theorist Marcus Vitruvius Pollio, who, in the 1st Century AD wrote:

A wide knowledge of history is requisite because, among the ornamental parts of an architect's design for a work, there are many underlying ideas of whose employment he should be able to explain to inquirers [1].

This statement was valid until the birth of modernism, which redefined architecture and rejected the past. However, studying the history of architecture is more than just creating a catalogue of details in various styles. Architecture does not arise without a reason. It is a material response to the needs of people and a spatial attempt to solve their problems. Tracking the evolution of architectural thought through the ages develops skills needed to understand the built environment and to become aware of the features and values of it.

History teaches about the past not in order to suggest formal solutions for the future, but to help make sense of the present [2].

The history of architecture still remains an important element of the education of architectural engineers. In Slovakia, since the 1970s, the history of architecture accounts for about eight percent of all architectural classes [3]. In Poland, in accordance with the 2019 *Standards of preparation for the profession of architect* (Standardy kształcenia przygotowującego do wykonywania zawodu architekta) at the first level of study (Bachelor's), history of architecture, as well as several other complementary subjects, is at least 300 hours of classes and lectures [4]. This represents about 12 percent of the minimum number of classes, which is 2,435 hours.

The remarkable variety of traditional architecture all over the world means teaching the history of it requires a diversity of methods. Culture and mentality also have a big impact. For example, a rejection of history - a remnant of the communist period - is still a problem for Romanian architectural higher education [5]. Teaching the history of contemporary architecture, despite its international character, also requires different methods due to the cultural aspect [6].

Poland, located in the centre of Europe, has always been subject to cultural influences both from the east and the west. Some of them were the result of the intense activity of Italian, Dutch and German architects in the early modern period. Their achievements are manifest in the architecture of the country to varying degrees, depending on the specifics of the region in which they were built. In contemporary Poland, as in other countries, there are two architectural trends: universalisation, due to global trends, and regionalism, trying to preserve and continue local traditions [7]. The second

trend requires architects to recognise, value and creatively respect regional features. This is the intent of teaching the history of Polish architecture.

FACULTY TEACHING OF THE HISTORY OF POLISH ARCHITECTURE

In the Faculty of Architecture at Gdańsk University of Technology (FA-GUT), the teaching of the history of architecture is divided into two subjects: History of World Architecture and the History of Polish Architecture. Historical and conservation issues are continued at the Master's degree level in the subjects: Theory of Conservation and Preservation of Architectural Heritage, Conservational Design and Problems of Architectural Heritage. Students gain an historical architectural perspective [8].

After graduation, this knowledge will help the recent graduates to understand the environment in which they may design. This will aid the proper shaping of new architecture in an historical context. These values are more appreciated by students, who often decide to prepare diploma projects containing elements of sustainable development and adaptive reuse. Such projects often attract awards by architectural organisations and associations [9].

The History of Polish Architecture course lasts for two semesters - the fourth and fifth of the Bachelor's studies. It focuses on a synthetic representation of the development of architectural thought in Poland, the homeland of most of the students. The political, economic and cultural issues of architecture are presented through examples of secular and sacred architecture from the Lusatian culture (around 750 BC); the Middle Ages, periods: Romanesque (10th to 12th Centuries) and Gothic (13th to 14th Centuries); and early modern periods: Renaissance (16th Century) and Baroque (16th to 18th Centuries).

The lectures focus on showing the historical context of the architecture and its characteristics. Important cultural values and typical and innovative features are presented. Highlighting the role of the buildings in history makes it possible to trace its impact on development of the culture of the region. This highlights the construction, design and artistic forms, individuality and relationships with the architecture of other parts of Poland, as well as influences of other European nations.

The exercise classes broaden the knowledge presented in earlier lectures. Issues are discussed in one or more examples of architecture. Students create drawings of historical buildings. This method of presenting the information helps them to understand the issues, and to develop their spatial and drawing skills [10].

The final examination assesses the students' level of knowledge. The questions relate to the knowledge of specific buildings significant in the history of Polish architecture. Then, questions are asked to explore significant transformations in time. An important part of the examination is to identify selected structures presented in photographs and determine their function, the time and architectural style in which they were built, their important features, and the author, if known. It is also important to indicate their location, town or city, and historical region or administrative division unit. This part of the examination checks not only the students' knowledge about the examples, but also their ability to embed them into a broader context. This is important because of the diversity of architecture in the contemporary Polish territory. In the oral examination, it is possible to explain inaccuracies. It also allows the students to demonstrate knowledge that goes beyond the specific question.

EXAMINATION TASK RESULTS

One hundred and fifteen students participated in the examination in 2020. They were divided into two groups. As one of the examination tasks, a set of pictures of 10 historical structures was presented. The tomb of John I Albert in the Wawel Cathedral, the Bernardine Church in Warsaw, Branicki Palace in Białystok, St Mary's Basilica in Kraków, the Jesuit Church in Brzeg (Figure 3a), the Norbertine Church in Strzelno (Figure 3b), Krasieczyn Castle (Figure 4a), Sulejów Abbey, Krzyżtopór Castle and Loitz House in Szczecin were presented to the first group, and the Poznań Town Hall, St Andrew's Church in Kraków (Figure 4b), the Royal Castle in Warsaw, Grandmaster's Palace in Malbork Castle, Sigismund's Chapel in the Wawel Cathedral, Lubiąż Abbey, the Chojna Town Hall, Brzeg Castle, the Cathedral of Kamień Pomorski, and the Piarist Church in Chełm to the second group. At least 30 points were required to pass the task. Points were awarded for each piece of correct information.

The pass rate of this task was 69.57%. The most points were obtained for providing the function (69.26% correct answers) and architectural style (54.24%), and the least points for providing the author (24.17%); additional information (29.13%), structure identification (29.26 %), and city or town (30.78%) (Figure 1). In 42% of cases, the students correctly recognised both the style and the time the building was erected.

Of the students, 30.43% had problems with providing the correct location of Polish major cities; 16.52% did not provide a location for at least one item and 13.91% gave an incorrect answer. Out of 532 cities given by the students (out of 1,035 possible), for 106 no location was given, and for 88 it was incorrect. For major cities, in 240 cases (83.9%) the correct region was given, in 27 cases (9.4%) no location was given, and for 19 major cities (6.6%), the wrong location was given (Figure 2).



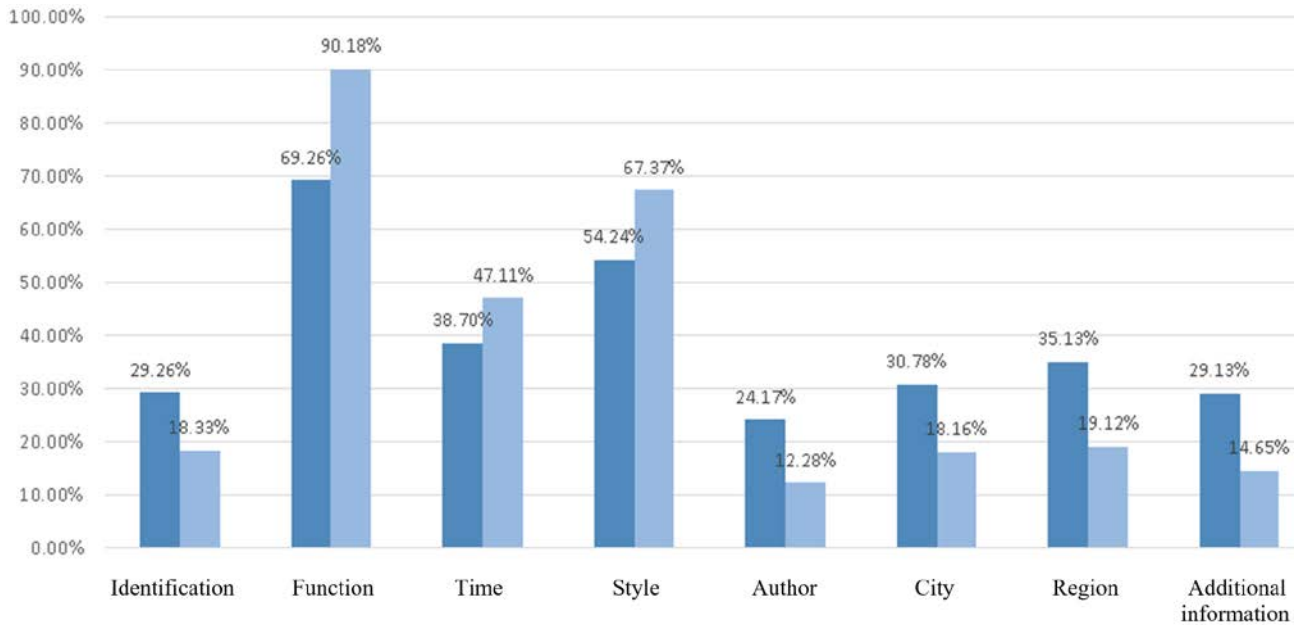


Figure 1: Percentage of correct answers at basic (darker blue) and retake (lighter blue) examinations (Source: Authors).



Figure 2: Map of Poland showing students' mistakes in the location of major cities (Source: Authors).

Fifty-seven students took the retake examination, 34 of whom sat for the examination in the primary examination period. The pass rate for the task of recognising structures from pictures was 38.60%. This was 44.12% among students who were retaking the examination, and 30.43% among students who did not take the examination in the primary period.

The most points were obtained for providing the function (90.18% correct answers), style (67.37%) and time of structure creation (47.11%); and the lowest for providing the author (12.28%), additional information (14.65%), structure identification (18.33%) and town (18.16%). The students who undertook a retake examination achieved better results in terms of function, style and time of the creation, but worse in other aspects (Figure 1). In 40.70% of cases, the students correctly recognised both the style and time of creation of the structure. In only 18.16% of cases were the cities correctly given, and in 19.12% of cases, the historical region or province.

ANALYSIS OF RESULTS

Analysis of the examination results shows that the easiest element to recognise is the function of the structure. However, students rely here more on intuition and experience acquired through visiting similar architectural structures than on knowledge from lectures or exercises.

Some students can specify the towns or cities where the structures are located, but they have problems determining the historical or administrative region. This lack of knowledge is particularly alarming in the case of major cities, including the largest Polish metropolises of enormous cultural significance, not only at a national level, but also on a European scale. The geography of the country is in the primary and secondary school curriculum, and at the level of higher education, this knowledge should be obligatory. However, the examination answers show that this teaching is unsuccessful or the knowledge atrophies. The reason may be a decrease in the students' interest in the home country or an increase in the popularity of foreign tourism at the expense of domestic travel.

A separate problem is the assignment of architectural style to an appropriate time. In individual cases, there are even errors related to the notation of the century itself, e.g. omission of X, which results in shifting the dating by a millennium (in Polish, the century is written in Roman numerals). Abnegation of studies and the diminishing tendency to improve the quality of detailed and general knowledge may also be a reason for this situation.

A comparison of the results from the basic and retake examination shows that the extra time allowed the students to achieve only slightly better results. The pass rate of the retake examination was much lower, and the number of correct answers was higher where students can rely on intuition (function and style), and lower that require specific knowledge from lectures. The pass rate was also higher among those who sat the first examination, but did not pass than those who took only the retake examination.



Figure 3: Sample illustrations from the examination; a) vaults of the Jesuit Church in Brzeg; and b) façade of the Norbertine Church in Strzelno (Source: Department of History, Theory of Architecture and Conservation of the FA-GUT).

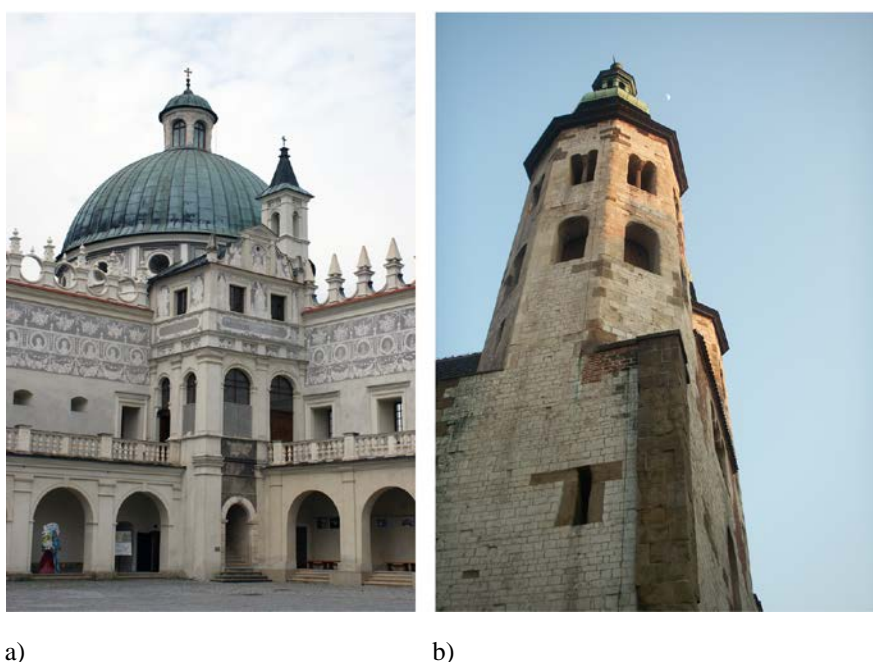


Figure 4: Sample illustrations from the examination; a) courtyard of the Krasiczyn Castle; and b) tower of the St Andrew's Church in Kraków (Source: Department of History, Theory of Architecture and Conservation of the FA-GUT).

CONCLUSIONS

The experience of teaching the history of national and regional architecture highlights the importance of basic knowledge of geography and chronology. Students who have deficiencies have limited cognitive capabilities in regional architecture. How can regional architecture be taught to those who have no idea of the region? Their knowledge will be devoid of regional and chronological context.

To solve this problem, it would be helpful to increase the effectiveness of teaching the geography of the country in primary and secondary schools to form a stable basis for higher education. However, acquired knowledge requires consolidation at further stages of education, for which the student's involvement is necessary. Increasing the attractiveness of teaching will improve its effectiveness. Involvement in class is important, and so is promotion of the self-learning of architecture.

Study trips and visits play an important role in understanding architecture [11-13]. Physical presence in an architectural structure and its multi-sensory perception allows much more information than can be provided in a lecture hall. Trips also enable students to get to know the regions and their cultures. The region ceases to be a spot on the map, and becomes a tangible place. Knowledge of the characteristic details and regional features allows students to develop their ability to recognise them in the studied structures, and ultimately to understand the influence of different regions, countries and styles.

REFERENCES

1. Vitruvius Pollio, M., *The Ten Books on Architecture*. Cambridge: Harvard University Press, I, 5 (1914).
2. Keyvanian, C., Teaching History to Architects. *J. of Architectural Educ.*, 64, 2, 25-36 (2011).
3. Špaček, R., Vitková, L. and Šíp, L., Architectural education at Slovak University of Technology in Bratislava. *Global J. of Engng. Educ.*, 18, 1, 6-15 (2016).
4. Rozporządzenie Ministra Nauki i Szkolnictwa Wyższego z Dnia 18 Lipca 2019 r. w Sprawie Standardu Kształcenia Przygotowującego do Wykonywania Zawodu Architekta (2019), 20 March 2020, <http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20190001359>
5. Julean, D., On Teaching History of Architecture in Higher Education or how to use Sir Banister Fletcher's *A History of Architecture* for a 21st Century Course in Architectural History: an Overview. *European Scientific J.*, April /Special/ Edition (2016).
6. Kłosiewicz, L., Program and method of teaching history of 20th century architecture. *Periodica Polytechnica Architecture*, 21, 3-4, 171-181 (1977).
7. Januszkiewicz, K., Modern Architecture in Poland after the communist era. A new way forward through a Critical Regionalism. *Architecturae et Artibus*, 2, 5-25 (2014).
8. Szczepański, J., Valuation of architectural heritage by multicultural student groups. *Global J. of Engng. Educ.*, 21, 3, 196-201 (2019).
9. Szczepański, J., Sustainable monument preservation in architectural education. *World Trans. on Engng. and Technol. Educ.*, 17, 1, 42-47 (2019).
10. Sołtysik, M.J., Developing students' spatial skills and teaching the history of architecture through *structural drawing*. *World Trans. on Engng. and Technol. Educ.*, 18, 1, 12-17 (2020).
11. Hein, C. and van Dooren, E., Teaching history for design at TU Delft: exploring types of student learning and perceived relevance of history for the architecture profession. *Inter. J. of Technol. and Design Educ.* (2019)
12. Dave, D., Shreya, P. and Baghel, A., Searching new pedagogy: teaching history of architecture in architecture institutes. *Inter. Conf. on Scholarly Comm., Open-access Publishing and Ethics*, Vijayawada, India, 1-7 (2018).
13. Borucka, J., City walk: a didactic innovative experiment in architectural education. *World Trans. on Engng. and Technol. Educ.*, 17, 2, 158-163 (2019).