Teaching Drawing, Painting and Sculpture at the Faculty of Architecture of the Warsaw University of Technology, classics and modernity

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Abstract. Teaching art disciplines at architectural universities goes back to the nineteenth-century academic art of Art schools. This also applies to the Faculty of Architecture at the Warsaw University of Technology. The fact of establishing a research and a teaching team teaching arts disciplines at WAPW, simultaneously with the University's establishment, is important for the identity of the Warsaw School of Architecture. Teaching drawing and artistic disciplines underwent further changes from 1915 to the present. At that time, the school acquired a specific character; it became recognizable thanks to the elaboration of its own unique style of the architectural drawing and views expressed by its representatives regarding drawing and teaching of architecture. From the very beginning, the school appealed to the classics and for many years preserved traditional didactic methods. Moved to the present day, artistic academicism has undergone a thorough transformation in recent years thanks to a change in the approach to didactics and redefining of the understanding of the most important feature of the drawing. The change of understanding of the meaning of drawing in the educational process from primary school to academic level requires teachers and students to change the perception of the essence of a drawing activity. This is not an easy process because the common understanding of drawing reduces it to the area of aesthetics. Meanwhile, a freehand drawing made by the nature fulfills a fundamental role in the process of developing and shaping an independent creative personality. It is probably the most important skill alongside reading and writing. Acquainting and promoting the meaning of a freehand drawing is a task and a challenge for the current School of Drawing at WAPW. An indication of the essence of a drawing activity as a method that harnesses the processes of reasoning and information processing of an independent drawing record seems to be an innovative look at the drawing and its role in creating culture and civilization. We are therefore facing the task of defining drawing anew and rebuilding of proper artistic education based on a hand drawing from the nature.

1. Introduction
Even before the outbreak of the First World War in 1914, the young painter Zygmunt Kamiński presented a cycle of art and drawing studies from Rome, Venice and Kazimierz Dolny at the exhibition of the artistic association "Young Art" in the halls of the Zachęta gallery, which aroused the interest of Warsaw architects. In the autumn of 1914, at the initiative of academic youth studying architecture at various European universities, unable to return to their home universities due to war activities, architecture courses at the academic level were created in Warsaw. Teaching drawing at these courses was entrusted to Zygmunt Kamiński. In the same year, the Society for Higher Science Courses and the Association of Technicians established committees aimed at creating Polish universities in Warsaw: the University of Technology and the University. In 1915, Zygmunt Kamiński received the order to develop a drawing teaching program at the planned Department of Architecture. After presenting the program and its acceptance by the group of the founders of the Faculty of Architecture, the young 27-year-old Zygmunt Kamiński began to conduct exercises in drawing at the
Faculty of Architecture newly created at the Warsaw University of Technology. After many years Kamiński recalled:

"Many times I had to feel the burden of responsibility, how often I was afraid that in my experiments I should not jeopardize the efforts and precious time of my students who would feel the mistakes and stumbles of the professor on their own skin." [1].

Zygmunt Kamiński searched for proper methods of teaching artistic disciplines for architects, based on the classical academic method of the science of drawing, with which he came into contact during his artistic education. The preserved works from the first years of the School's existence testify to how classic his program was. Examples Student's work, T. Szyne, Wardrobe and armchair. From the collections of PRMiR ZDAiSz WAPW, (Figure 1), Student's work, J. Dykoczewski, 1935, From the collections of PRMiR ZDAiSz WAPW, (Figure 2) study drawings made during many hours of drawing activities from nature, based on observations from the model seem to perfectly bring us into the spirit of the then drawing embedded deeply in the academic tradition

![Figure 1](image1.jpg)  \[\text{Figure 1. Student's work, T. Szyne, Wardrobe and armchair. From the collections of PRMiR ZDAiSz WAPW [2]}\]

![Figure 2](image2.jpg)  \[\text{Figure 2. Student's work, J. Dykoczewski, 1935, From the collections of PRMiR ZDAiSz WAPW [3]}\]

2. Reaching for history
In 1920, the Department of Hand Drawing was established and Zygmunt Kamiński was appointed as a head and an associate professor. The formation of the department crowned his efforts to create a strong integrated didactic institution that would teach artistic disciplines. The period after World War II in the history of the School brought fundamental program changes and led to the emergence, in the environmental consciousness, of a distinctive style of drawing at the Warsaw Department. The
successor of Zygmunt Kamiński, Eugeniusz Szparkowski, after taking over the leadership of the Department, focused primarily on perspective drawing. The attitude of the new manager allowed former students and collaborators of prof. Kamiński and at that time already the assistants of prof. Szparkowski for a quite independent running of the School. During this period, there were many innovative topics of exercises from the perspective, later transferred to the curriculum of perspective drawing classes. At that time, the concept of the Warsaw School of Drawing was created. Classic, academic teaching of drawing was preserved, but the form of drawings itself acquired distinctive features characteristic for the School related to the response to the utilitarian demand in architectural design. Drawings began to present the studied forms displaying all, even invisible lines and geometrical internal structures defining these forms. Such a drawing obtained the name of a structural drawing and became a distinctive feature of the Warsaw School. Presented examples. Student's work, J.Malinowski, Wardrobe and armchair, 1979. From the collections of PRMiR ZDAiSz WAPW (Figure 3), Student's work, R.Guzowski, Sketches of machines, 1983, From the collections of PRMiR ZDAiSz WAPW. (Figure 4) show the many hours of structural studies from the heyday of the School and the full definition of the features of structural drawing.

Structural drawing and the School's method were disseminated in the world by graduates of the Warsaw Faculty of Architecture: Maciej Nowicki, who went to USA and collaborated with Eero Saarinen; Jerzy Sołtan who worked several years after the Second World War in the studio of Le Corbusieur in France; Janusz Kapusta, who worked in graphics in USA, which led him to discover the K-dron; Rafał Olbiński, one of the most recognizable Polish artists in the world, as well as many other Polish architects working all over the world.
Initially, the founders of the university were convinced that architecture is above all art and one of the most important components of artistic culture. Until the end of the twentieth century, the curriculum rules of teaching artistic disciplines at the Faculty of Architecture in their foundations remained unchanged. At the beginning of the present century, these rules began to undergo gradual changes, which, while preserving the understanding of architecture as art, led at the present time to a partial departure from the original idea guiding the creators of the Warsaw School of Architectural Drawing.

Since the mid-1990s, the University's structural and program changes continued, as a result of a drastic reduction in the number of classes the School started to look for new forms of teaching. This led, in the field of study of artistic disciplines and drawing skills, to focus on the process of a study drawing leading to the synthesis of a sketch record. Focusing on the research and analytical drawing allowed for far-reaching program changes, studies of artistic disciplines focused on finding and defining values with the use of drawing, painting and sculpture. Teaching based on studying from nature and treating drawing as a research method, a way of recording thoughts, and not only imaging has now led to profound changes in the method of teaching drawing and artistic disciplines. However, before we focus our attention on the features of these changes.

2.1 Method of teaching artistic disciplines at the School in the years 1915-1939.

In the initial period of the School's operation, the requirements for the method of teaching the drawing were formulated by the founder of the Warsaw School of Drawing, Zygmunt Kamiński, who wrote:

"I was eager to participate in the education of young generations of architects, to help me shape the type of an architect appreciating the value of art, an expert and an enthusiast, capable of initiative and patronage in the proper use of painting, sculpture, stained glass, mosaic, artistic fabric, ceramics etc. in architectural projects. So an architect who, having come to the fore, would be able to choose the right groups of visual artists with various professional classifications, in order to open to them a wide field of artistic creative work for the good of development and progress of art in our homeland." [6]

The Warsaw Faculty of Architecture has had strong ideological connections with Bauhaus since its inception. It is worth recalling the words of the founder of Bauhaus Walter Gropius:

"The aim of Bauhaus was to prepare people artistically talented for the role of designers in industry and crafts, as well as sculptors, painters and architects. The basis was extensive, structured training covering all forms of handicrafts." [7]

And Le Corbusier:

"Gentlemen, painters and sculptors, masters of contemporary art, who endure so much mockery and meet with such indifference, cleanse homes, combine your efforts to rebuild cities. Your works will then appear within the epoch and you will be universally understood and admired. Architecture needs your attention. Face the problem of architecture." [8]

The thought in the quoted statements was directed in the same direction - focusing on architecture as art, liberating the creative energy in the masterful action of a craftsman becoming an artist. The development of individual drawing and painting skills was supposed to make the future author of architecture aware of the role of fine arts and creators of other artistic disciplines in the process of creating architecture. According to the concept of professor Zygmunt Kamiński, this was to take place in the process of comprehensive artistic education of students. Young architecture adepts were to learn the art of drawing, graphics and painting in practice. It was possible then thanks to the huge number of
hours devoted to the discipline of art in the study program. Student's work, W. Brzozowski, Chair, 1936?, from the collections of PRMiR ZDAiSz WAPW. (Figure 5) **Figure 6.** Student's work, W. Olszewski, Capital, 1933, From the collections of PRMiR ZDAiSz WAPW (Figure 6).

2.2 The method of teaching architectural drawing from 1945 to the present day.

The profound changes associated with the adaptation to the limited sovereignty of the state controlled by the Soviet Union after the Second World War led to changes in the expectations of the School in the professional and cultural environment of the Warsaw Faculty of Architecture. The need to rebuild the country, the need for a simple, readable for everyone, often substantively unprepared recipient, presentation of architectural plans led to a replacement of broad artistic education by directional education in compositions of perspective drawings. The architectural perspective made for the purposes of the project presentation was to be a determinant of architectural drawing characteristics for many years. Initially, the classic drawing based on “academism” perfectly placed itself in the demand of the socialist realist ideology of architecture with national content. The style of classic studies preserved after the war from ancient architectural details, sculptures of figures and busts perfectly suited the ideological need of the socialist reconstruction of the country. In drawing themes, the weight was shifted to classical studies. Drawings of the Warsaw School, both of Masters and students, aimed to study historical forms in a reliable way, but at the same time tried to find a method of recording a new, socialist architecture. Drawings began to respond more and more to the needs of project presentations and new architectural visions. Representatives of the Warsaw School served with their drawings the socialist realist press. Following subsequent changes after 1956, there was an ideological thaw. A completely new trend of presentation drawing to the project was created. The new use of a presentation drawing, interpreting the idea of architecture, showing the dynamics of the modernist form through the interaction of horizontal divisions and line dynamics, initially had a very
individual graphic character and had nothing to do with the literalness of present-day visualizations. The value of these structural presentations, penetrating the deepest foundations of the presented projects, today seems to be not fully appreciated. The post-war period of the school’s development is presented in further examples of students’ works Student’s work, Kierzenkowski, Plaster head, 1952, from the collections of PRMiR ZDAiSz WAPW. (Figure 7), Student’s work, A.Nodzykowski, Machine, 1964, from the collections of PRMiR ZDAiSz WAPW (Figure 8) Student’s work, unknown author, architectural drawing, 1976, from the collections of PRMiR ZDAiSz (Figure 9).

Figure. 7. Student's work, Kierzenkowski, Plaster head, 1952, from the collections of PRMiR ZDAiSz WAPW [11]
Figure. 8. Student's work, A.Nodzykowski, Machine, 1964, from the collections of PRMiR ZDAiSz WAPW [12]
Figure. 9. Student's work, unknown author, architectural drawing, 1976, from the collections of PRMiR ZDAiSz [13]

The subsequent transformations of the 1970s led to the consolidation of the school's characteristics, which was achieved thanks to the next manager, Henryk Dąbrowski. The Warsaw School at that time underwent dynamic changes and probably developed a style that distinguishes it today from other drawing environments in Poland and probably in the world. The architectural drawing in the Warsaw School of Drawing, due to its abstractness and structurality of the record, is not an obvious, literal message of the view of architecture, requires the activation of imagination, entering into dialogue with the creator, architect, is in some sense an abstract record requiring the recipient to do some effort in understanding it. Such a drawing is now, for commercial reasons, being pushed away by literal "photographic" computer renderings and photorealistic watercolor visualizations. Perhaps this is due to the graphic nature of manual perspectives, which requires a well-educated viewer with a fairly high level of cultural awareness and perception. Subsequent transformations, as well as preserved traditions, are presented by students' works. Student's work, unknown author, Machine, 1980?, from the collections of PRMiR ZDAiSz WAPW (Figure 10). Student's work, S.Rewski, Architecture, 1999, From the collections of PRMiR ZDAiSz WAPW (Figure 11). Student's work, K.Zawadzka, Spinning wheel, 2006, from the collections of PRMiR ZDAiSz WAPW, (Figure 12). Student's work, J.Gogłoza, Painting composition, 2007, from the collections of PRMiR ZDAiSz WAPW (Figure 13). Student's work, J.Placha, Antiqua, 1996?, From the collections of PRMiR ZDAiSz WAPW. (Figure 14).
Figure 10. Student's work, unknown author, Machine, 1980? From the collections of PRMiR ZDAiSz WAPW [14]

Figure 11. Student's work, S.Rewski, Architecture, 1999, From the collections of PRMiR ZDAiSz WAPW [15]
Figure 12. Student's work, K. Zawadzka, Spinning wheel, 2006, from the collections of PRMiR ZDAiSz WAPW [16]

Figure 13. Student's work, J. Gogloza, Painting composition, 2007, from the collections of PRMiR ZDAiSz WAPW [17]

Figure 14. Student's work, J. Placha, Antiqua, 1996?, From the collections of PRMiR ZDAiSz WAPW [18]
The release of the method from the classic workshop requirements since the early years of the twentieth century allowed for a slightly more relaxed treatment of this side of drawing tasks. While limiting the time of studies on artistic disciplines, program changes were directed towards the individualization of studies, the main burden was also put on the extraction of main features and the analytical sketch. The current directions of changes in the school are illustrated by further examples of student's works: Student's work, unknown author, Painting composition, 2014? From the collections of PRMiR ZDAiSz WAPW (Figure 15), Student's work, unknown author, Capital sketch, 2016?, from the collections of PRMiR ZDAiSz WAPW. (Figure 16), Student's work, J.Tenerowicz, Woodwork, 2012, from the collections of PRMiR ZDAiSz WAPW, (Figure 17).

Figure. 15. Student's work, unknown author, Painting composition, 2014? From the collections of PRMiR ZDAiSz WAPW [19]
Figure 16. Student's work, unknown author, Capital sketch, 2016?, from the collections of PRMiR ZDAiSz WAPW [20]

Figure 17. Student's work, J. Tenerowicz, Woodwork, 2012, from the collections of PRMiR ZDAiSz WAPW [21]
Assigning drawing directly to the design needs opened new spaces for studying the phenomenon of drawing. The initiation of a dialogue on the actual role of drawing in the architect’s profession allowed for further verification of teaching methods. An important role here was played by the fact of supporting the design process by digital techniques.

3. Results and discussions

Today, virtually the entire architectural design process can take place in computer systems. BIM procedures have mastered investment processes. Can you ask if there is still room for artistic disciplines in this technically-styled, managed design world? While it seems likely natural to incorporate computer graphics, modeling etc. into these processes, the question seems to be justified in the case of traditional art disciplines. The answer only seemingly is not easy. The achievements of the Warsaw School of Architectural Drawing show how important in the process of architectural education are traditional artistic techniques. By developing the talents and creative sensitivity of future adepts of architecture through practical artistic exercises, we reach the heart of the design idea.

The place for drawing, painting and sculpture is in the seed of design, at the stage of looking for a design idea. After gathering and analyzing the input materials for design, there is the time for defining the most important features that should be included in the project that is being developed. In the practice of our School, exactly at this place, we introduce artistic disciplines, with their help the creator of architecture is looking for the right expression for the designed architecture. The intentional introduction of artistic activities into the design process is currently the mainstream of changes in academic education within artistic disciplines at the Warsaw School of Architectural Drawing. This place is strictly defined and concerns the most important stage of the design process when the vision of the architect begins to take shape. The project search is illustrated by examples Student's work, B.Kamińska, Local conditions and the first draft of the project idea, 2014, from the collections of PRMiR ZDAiSz WAPW (Figure 18, 19). Student's work, W.Reroń, Site view analysis, Color study, 2014, From the collections of PRMiR ZDAiSz WAPW (Figure 19)
4. Conclusions

The direct introduction of artistic disciplines into the design process carries many interesting formal effects; current classes in this area are carried out by PRMiR on the third year of Bachelor studies and the first year of Master's studies. Experiences collected for three years allow modifying and defining the method of project work based on the disciplines of art. The coming years will allow collecting appropriate visual material for the full depiction of the currently implemented method. Introduction of new methods of work to the students was possible as a result of in-depth studies on the importance of freehand drawing from the nature in human development processes from birth to the adulthood. Drawing experience, as well as the results of research on child's development stages, indicates emphatically to the importance of drawing as a catalyst for developmental changes, drawing as a necessary creative activity of a child and young people during their adolescence. The results of research and sources of studies in developmental psychology were collected by the author in the book entitled "Drawing, the method of creative education". [24] Propagation of a freehand drawing based on the own observation of nature is the basis of didactics of creativity at all school stages from the earliest years and ending with higher studies. Implementation of the drawing method in a conscious and consistent manner gives excellent didactic effects, supports self-reliance and independence in reasoning, helps in mastering abstract issues and problems in the area of mathematics and physics. The task of propagating drawing from the nature is currently the most serious challenge for the Warsaw School of Architectural Drawing.

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