

Architecture students gain experience from open-air workshops in drawing and painting

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ABSTRACT: The aim of this article is to show correlations and relationships between the art of drawing and painting, and the art of architectural design in the context of educating students in the Faculty of Architecture at Cracow University of Technology, Kraków, Poland. The scope of the study covers obligatory open-air workshops for students after the first year of studies. With skilful and smart implementation of the study programme, it is possible to help develop the imagination and creative awareness of architecture students, and consequently to provide scientific and experimental foundations for the future architect-designer-artist. The study was based on research and analysis of selected materials published in the field of education, and the art of drawing and painting. The conclusions suggest that the ability to use drawings and colour fluently is of importance in the education of architects. The research on the topic can increase interest in the creative duties of both students and task-conscious educators.

OBJECTIVE

Painting and drawing play a major role in gaining basic knowledge and enriching a future architect's creative background. Outdoor art classes are a great opportunity to obtain experience in the field. The main objective of this work is to point out relations between the art of drawing and painting and the art of architectural design. The key role here is played by an artistic emotional experience, which accompanies an action of building a designed space and creating the proper artistic conditions for arranging it.

SUBJECT

The work focuses on some of the most important aspects of the architectural studies first-year students' creative work with painting and drawing. Presenting, exposing and emphasising the need and the possibility of artistic intervention within the realm of design, is the main subject of the work. A significant part of the work is devoted to the analysis of the designer's creative work and creating ambience within the architectural space.

Generally speaking, the work should result in the finding and naming of common threads within the art of painting and drawing and architecture, their interaction and the effect they have on the viewer. Moreover, there is an assumption that the multifaceted possibilities of creative explorations are available within school curricula.

EXPLICATION

The design of architectural works requires special knowledge and experience. A key factor that guarantees high quality designs is a fluent, creative ability to record an architectural thought by means of drawing - building a spatial form and its light/shadow intensity - and painting, which helps to define the right colour and ambience of the form, as well as of the surroundings. The choice of this particular subject stems from the need to carry out an analysis of the teaching of drawing and painting. Another question relates to the obligatory, yet gradually declining number of teaching hours devoted to artistic education, and the fact that decision-makers do not seem fully aware of the significance to teaching in this field and tend to underestimate the value of art classes in educating students of architecture.

PRESENT RESEARCH

At present, it was found that the interdisciplinary quality of architecture and the art of drawing and painting, with stress put on broader knowledge and more creative ways of using colour, is gaining a new meaning in teaching. Numerous theoretical works promoting art enabled the author to conduct a review of opinions and theories within this area.

RESEARCH TASK

The research task was based on pointing out the coexistence of similar subject matters, which only differ in their structure and form. The idea of creative thinking in architectural and urban space design is juxtaposed with selected issues related to the world of art and its connections to architecture.

RANGE

The broad range and complexity of the problem meant the author has focused only on certain aspects of implementing drawing and painting lessons as a part of the compulsory curriculum.

METHOD

The work is based on the research and analysis of selected published materials related to education and the art of drawing and painting. Personal experience and thoughts on painting, drawing, composition and photography have played a significant role in the research.

POSSIBLE CONCLUSIONS

Conclusions lead to a statement that drawing skills and an ability to use colour creatively are of great significance in educating architects. Further research may advance the discourse and increase interest in the creative duties of both students and highly educated, task-conscious teachers. The author hopes that by focusing on the subject, the results will be to pay more attention to the issues related to architectural design, which include the awareness and maturity of its creators. The first year of tertiary studies marks the beginning of this kind of responsible education. If appropriately implemented, it can effectively influence the students' imagination and creative awareness, and furthermore, create a strong theoretical background for future architects-designers-artists.

MEANING OF ARCHITECTURE

Architecture is ubiquitous. Sometimes, it is almost unnoticed or leaves a subtle impact, without really attracting much attention or involving a sense of perception - or it often only just registers. At times, its influence can be either positive or negative: it may be found aggressive or overwhelming. It can seem acceptable or not. But it is impossible to pretend that architecture does not exist or does not affect everyday lives. The art of architecture is a testimony of time; a record of life, a memory of the past and evidence of a present day that defines the directions into the future. It evolves, among a search for new, innovative solutions in art and technology.

The minds of both the creator and the spectator are the main tools for experiencing architecture. Science makes art relevant by putting it among the hierarchy of experience and values. By accepting new values, it helps to embrace novelties. It also tries to eliminate the popular hypothesis about people not being able to understand contemporary art; particularly architecture itself, which, on the one hand is often seen as a discipline that ought to create universal forms giving aesthetic pleasure, and on the other hand, create harmony and order in the human environment. Given the time context, architecture is viewed as the history of humans, their legacy, achievement and life continuity; and may be regarded as priceless.

AN ARCHITECT'S WORKSHOP

Today's art is multidimensional, and so is the art of architecture. An architect's workshop (background, range of professional possibilities and tools) is evolving constantly. That smartphones and laptops offer a wide selection of graphic software is one of the examples of following trends linked to contemporary working conditions and pace of work. However, no technical device has ever been, and most probably never will be, able to generate feelings or individual, human-like sensibility, or create a culture based on imagination - a unique aspect of every human being.

Students of architecture not only have a right to develop those features; it is also their duty to educate themselves and master skills. Even *...the old folk wisdom has often stressed how significant an imagination is for the health of a human being, as well as for the balance and abundance of his/her inner life. Some modern languages still use certain phrases and terms expressing sympathy for the one who has no imagination - a limited, average, sad and unhappy individual [1].*

POTENTIAL EFFECTS OF CURRICULUM MODIFICATIONS

It is a shame that some changes and modifications to curricula related to drawing and painting lessons tend to lessen the value of these classes. This results in not providing students of architecture with enough possibilities to develop themselves - a crucial factor in the educational process. Such a situation is caused also by the need to adjust to the reduced number of teaching hours to the requirements of the school curriculum. In analysing students' timetables, an opinion may be that *...generally drawing and painting classes in the faculty of architecture are taught in order to*

develop one's architectural background. When it comes to teaching basics, we can even talk of an academic approach of a certain kind. But the main aim is to develop the student's special imagination and, simultaneously, letting him/her gain experience in conscious and objective perception of the spatial phenomena - those that already [exist], as well as the ones [that] are still being designed [2]. But, when focus is placed on the details of the subject, it becomes clear how much knowledge and practical experience an architecture student should have to start designing their own works responsibly in every scale and each possible architectural space. Presenting reality in an expressive, dynamic way is particularly useful when it comes to architecture.

An architect gives meaning to colours in the design, and hence illustrates the reality, but the design should also contain something more than the other media in architecture can convey. To achieve this profound effect, the truth of copying should be enriched with the truth of subjective perception of nature. Yet contemporary art is still drawing heavily on the past. Advantages and possibilities offered by traditional working methods are something that beginners should bear in mind, while developing their creative language. As Lam points out: *...in a creative process, the new always relates to the old and merely predicts the future. And so, the present is always a bridge between the past and the future. This is why the most significant values of the past millennia have not been erased, and past experiences remain relevant nowadays. Widely respected art of life drawing, which fertilises an artist's imagination and intellect, is one of such great achievements of the past [3].*

Images of reality and their perception always will be connected with the subjective feeling and the subjective perception of nature. A further conclusion states: *...mythical and barren yet still lively contradiction between creation and reflection, nature and system, spontaneity and rationality live on in theoretical reflections and in artists' personal views and opinions on their own works [4].*

A CHANCE THAT SHOULD NOT BE MISSED

For many years, the local authorities of Chełmno in northern Poland have been doing their best to meet the needs of the architecture students and to help them widen their knowledge and master skills. Each year art workshops - officially named Nationwide Outdoor Art Workshops for Architecture Students - are run. The main goal of the event is to promote young talent and to attract people to a wonderfully located city, which has a history that is centuries old and numerous examples of precious cultural heritage. Chełmno is on the Vistula River, in a central part of what is known as the Kujawsko-Pomorskie voivodeship (province). With a unique urban plan, historical monuments that date from the Middle Ages, beautiful panoramic views and one of Europe's most remarkable examples of defensive architecture, makes this a special place.

Outdoor art confrontations for participants, architecture students from different schools around the country, as well as students from the Lvov Polytechnic's Faculty of Architecture, year-by-year create a chance to exchange views about drawing and painting. Issues regarding the presence and workings of colour in historical and contemporary architectural space are among those analysed. Moreover, threads dealing with philosophy or even medicine are often discussed.

Philosophers have described the complexity of human perception within the context of art and artists' choice of colour. Analogous relations take place within colour and form in architecture. It is possible to hear many interesting opinions, including the one

...that impressions don't usually appear on their own, but together with connotations and judgements, creating what psychologists tend to name observations or reflections. They can be either nice or not, mainly due to the impressions they are comprised of. However, juxtaposed images or judgements can change the intensity of sensation-related pleasure up to the point when it actually becomes painful, and the other way around. A certain colour may be perceived as nice or not, depending on the object that it actually covers or reflects. According to a well-known and amusing example given by Fechner, the colour red is nice when seen on a young girl's lips, but automatically becomes unpleasant when noticed on an old drunkard's nose. Those relations may even go further and become more complex: a painter, who enjoys particular colour effects, may find the drunkard's nose attractive. [...] This explains why we tend to find certain colours nice or unpleasant - our impression doesn't strictly depend how we perceive a colour itself, but also on the circumstances and context [5].

WORK AS IT APPEARS IN OUTDOOR LESSONS

Students learn the rules of applying colours, followed by a number of painting tasks. The ultimate goal was to apply the available painting media to catch and express multidimensional architectural, and urban values of the surroundings. This was also a chance for a teacher to gradually broaden and enrich the range of tasks-exercises and find new ways of doing them. Each task contained a new element of colour by applying knowledge. People, sensitive and contemplative by nature, had a great chance to develop and master valuable personality traits. Corrections were made with each student, depending on their sensitivity and perception, as well as the level of art skills. Overall, group correction summed up all the aspects and opinions collected during the individual corrections. This type of correction programme introduced participants more effectively to the abundance of colour-related topics. Sketches of a chosen image were an important part of the classes.

The outdoor art classes resulted in a collection of works that may be a source of information and help, while the student learned how to paint and apply colour. Students could treat the collection as a helpful analytical work to return to in the future. An architecture student's own, conscious choice of topic for their painting may result in future possibilities to better learn the aspect of artist-art viewer interactions.

Years of experience enabled teachers to create standard ways of working outdoors and a set of materials typically used, i.e. canvases measuring 50 cm x 70 cm, acrylic paint, white Bristol board or own choice of the backdrop's colour. Acrylic paint has been chosen for several reasons. First, acrylic colours dry quickly, and thus are fairly easy to correct and enable the application of several layers of paint, which often creates most interesting textural effects. Students also have a chance to apply a wide selection of painting tools, including brushes and palette knives, to create other interesting textural effects. With these tools, painting tasks devoted to colour application are enriched by powerful artistic expression. This is particularly important to architecture students, as it gives them the idea of how a colour works on an often-elaborate texture of architectural elevation. The space in the painting has been built with colour (see Figure 1a and Figure 1b). But *...the more colour, the stronger it works. Cezanne put it nicely: two kilograms of the colour blue are much more blue than one kilogram of the same colour* [6].



a)



b)

Figure 1a and Figure 1b: Dialogue of form and colour and the colour effect in architectural composition (Author: E. Ptasznik; Photograph by A. Domarzewski).

Issues related to colour, such as shade, intensity and light/shadow frequency were a significant part of the classes. Students gradually became aware of what they had actually seen, rather than what they had simply looked at (see Figure 2a and Figure 2b).



a)



b)

Figure 2a and Figure 2b: Space, colours and sketch (Authors: E. Ptasznik, D. Sułkowska; Photograph by A. Domarzewski).

Applying linear and aerial perspective in paintings and drawings was an important and interesting experience for architecture students. The first part was to make a draft with a brush, highlighting the foreground and planning the

composition across the canvas. Next, the colour was added to the sketched details. Then, the image was turned into an individual interpretation of the composition of the space.

Through the principles of linear perspective, a chosen topic could be presented more realistically, and the depth effect applied to guide the viewer's eye. An aerial perspective effect was achieved through subtle transition of shades and hues. During the confrontations and discussions, participants took up the challenge of analysing the art viewer's perception and range. Precision of expression, transparency or sometimes ambiguity are all components of a phenomenon known as the artist-art viewer communication.

Designing colours in architecture is as equally important as designing the forms, structures or functions. It should be remembered that each architectural detail has a colour. It is up to the architect to determine how to use its powerful influence. Linear perspective, overlapping forms, juxtaposed relative sizes - all enhance an illusion of a three-dimensional image. Impression of spatial depth can be achieved through colour; namely, contrasts in its intensity and *temperature*. Interacting colours profoundly impact perception and sensations.

The same rules relate to spatial relations. Colour and form correspond to each other. Their *dialogue* should take place in visual harmony which underlines the aesthetic value of the artwork. In the process of creating space, an architect may need to adjust the colour palette to that of an adjacent building, without disturbing it. An architect should have full, conscious control over the designed forms and the way they are perceived. There is a popular concept that certain colours deliver certain messages.

The significance and meaning of a colour vary in different cultures, and is strongly connected to the history of humanity. It has been scientifically proven that colours affect the mind. In arts in space, colour rarely is seen in isolation. Psychological perception of spatial structures - architecture - may undergo a change when the colour of its components is modified. It is important to responsibly add newly designed colours to the existing ones in architecture. Choosing an emotionally gentle range of soft colours usually works best. Sharp, striking contrasts between the colours are often perceived as unpleasant.

Credibility in using colour in architecture requires careful planning and deep thought by the designer. Experience cannot be replaced by theoretical knowledge learned at school, which may be superficial or incomplete. But as always - practice enhances professional experience and so does working with colours during outdoor art classes, such as the workshops in Chełmno. Architecture students not only *passed* the painting and drawing course, but also acquired knowledge of colours, their application and impact on humans and the human environment. All participants experienced this, either individually or collectively.

The teachers'/tutors' personal creative experience and their vast practical knowledge play a significant role in the didactic process. In fact, they often trigger the whole process, let students trust their teacher and believe that certain thoughts, terms and connotations are not only raw theory but are a real person's experience.

ROLE OF COLOUR IN ARCHITECTURE: THEORY AND PRACTICE

Architects often deal with the issue of colour and its significance in architecture in both theory and practice. Wawrzyniak states that *...operating with light: shadow and light play together with all the aspects of using colour and texture, are key elements in shaping architectural composition* [7]. The role of colour in architecture also has been defined by Szmids as: *...contemporary architecture [...] is a light function, and every object that is lit has its own colour. Hence, the art of architecture comes down to the art of using colour* [8]. Colour and form are inseparable in the world of architecture. They cannot be torn apart only differentiated.

Gropius, one of the most outstanding architects of the 20th Century, wrote much about the psychological impact of shapes and colours. *Shapes can either stimulate or soothe, and an intended impact is additionally enhanced by the choice of sharp or soft colours. The colour and the texture are actually two separate, self-sufficient beings emitting measurable energy. They can be perceived as warm or cold, pulling or pushing, light or dark, lightweight or heavy, strained or relaxed, or even attractive or repulsive* [9].

According to Gropius, an architect's education should be broadened by the students' emotional abilities training. He saw it as *...drawing on creative disciplines, such as music, poetry or visual arts. This kind of action is not merely an addition to the thinking process - it is a fundamental experience. And the only educating tool mutually linked to our perceptive and inventive skills* [9].

The author has stressed the importance of high-quality drawing and painting classes offered to students at universities. The quality of education affects the quality of surroundings and the environment; places where people live and where future generations will live. Nowadays, the environment and the vast collection of creations in it, is dominated by colour. There is the idea of an artist who communicates with the environment. It is known that colour is used in medicine, to support mental health therapies and treat physical ailments. It is clear that only responsible people and those fully aware of their skills should have a chance to create such a strong impact.

Architects with poor and limited knowledge of colours, as well as those with little experience in the field, lack power in creative expression, an indispensable element of creative activity. Skills and talent should be enhanced by awareness. Scrutinising nature can develop basic awareness. Relating to nature is valuable at the beginning of an artistic path, and throughout the entire process of creative development.

At present, people tend to support the idea of implementing investment control measures, including when it comes to the colours of buildings in certain regions. There are no rules or regulations in Polish law that would apply to the colours of buildings in a certain area. Obligatory unification of the environment's colour range, private house colours or residential estate colours, may lead to absurd, harmful results. Voices supporting the act of colour unification probably and simply lack knowledge - sometimes elementary - about the possibilities of affecting people and their environment by the application of colour.

This is caused by poorly educated architecture students and, most probably, by lack of proper art teaching in primary schools. Only architects with expert knowledge of colour theory and many years of practical experience in the field should be entitled to comment and discuss the subject of colour and its impact on architecture. Occasionally, no need of such education for architecture students is suggested. Such opinion can only stem from unawareness, that is a lack of knowledge and skills to responsibly handle the issue. It is true that knowledge of colour and its use in architectural space is difficult to acquire, mainly because of related issues. But leaving everything to chance may result in harmful treatment of the environment.

CONCLUSIONS

Much needs to be done to improve the education of architecture students. An intuitive approach is not enough. There should be a demand for an increased number of teaching hours.

For architecture students, *learning* can be possible only by combining theoretical knowledge with practical experience. The more students are submerged in creative work, the more they search for a theoretical answer to support their experience. In the world of art, theory often follows intuition, making artists realise that art has its principles and rules.

Satisfactory creative results turn meaningless or are even frowned upon once they become repetitive and tend to last too long; they become boring and annoying. Overlooking colour theory and its application, means degrading future architects' designing skills. This, in turn, may result in the lack of a proper professional background that enables contemporary architects to create state-of-the-art, top-notch designs. The quality of education will affect the quality of surroundings and the environment; places where people live and the future generations will live.

Finally, an anecdote illustrating the efforts of a teacher working with young people: the teacher promised to do everything they could, and a student reacted with: *Well, that is way too little!* Conclusion: no matter how hard anyone tries, always expect something better.

REFERENCES

1. Eliade, M., *Obrazy i Symbole*. Warszawa: Wydawnictwo Aletheja (2009) (in Polish).
2. Białkiewicz, A., *Rola Rysunku w Warsztacie Architekta. Szkoła Krakowska w Kontekście Dokonań Wybranych Uczelni Europejskich i Polskich*. Politechnika Krakowska, Seria Architektura, Monografia 315, Kraków: Wydawnictwo Politechniki Krakowskiej (2004) (in Polish).
3. Lam, W., *Malarstwo*. Warszawa: PWN (1966) (in Polish).
4. Radajewski, A., *Żywa Sztuka Współczesności*. Wrocław: Ossolineum (1982) (in Polish).
5. Tatariewicz W., *O Szczęściu*. Warszawa: PWN (1979) (in Polish).
6. Hockney, D. and Gayford, M., *A History of Pictures. From the Cave to the Computer Screen*. Poznań: Dom Wydawniczy Rebis (2016).
7. Wawrzyniak, W., *Sacrum w Architekturze*. Wrocław: Dom Wydawniczy Politechniki Wrocławskiej (1996) (in Polish).
8. Szmidt, B., *Ład Przestrzeni*. Warszawa: Państwowy Instytut Wydawniczy (1981) (in Polish).
9. Gropius, W., *Pelnia Architektury*. Kraków: Wydawnictwo Karakter (2014) (in Polish).