

## **Towards the integrity of teachers' and designers' environments - conclusions from a teachers' exchange between Kraków and Alicante**

**Robert A. Marcinkowski**

Cracow University of Technology  
Kraków, Poland

**ABSTRACT:** The goal of organising international exchanges is to integrate professional communities and to create relationships between parallel groups of students, teachers and designers working in different countries. Countries with similar political conditions and with similar levels of material life for its citizens should theoretically produce consistent or at least similar rules of architecture. Architecture as a process of organisation of space aiming to fulfil human needs (according to one of the existing definitions) should generate similar effects in similar conditions. But, in spite of all the similarities, some differences can still be observed both in academic teaching and in architectural design. The differences in approach to teaching have been noticed by the author when in contact with a group of foreign students, and were also observed in the locally created architecture. The aim of this article is to point out and explain the differences and, thus, make a contribution to integration engineers' environment.

### INTRODUCTION

Meeting both teachers of architecture and architects from another country, despite all intercultural differences and level of available technology, one can usually discover mostly similarities in the approach to the work. However, this article points out astonishing differences in the approach to education and designing that can be observed in foreign architecture. The goal is not to criticise foreign projects, but rather to *translate* them and make them understandable in other circumstances, i.e. by the audience from other countries. These differences concern the process of education, but even more expressively, the architectural objects created in the urban space. The natural bases of research are direct observations and comparisons of buildings created under different requirements of the building law, and also contact with students and architects educated in foreign universities.

The choice of Alicante (Spain) is a result of the author's additional teaching experience gained during the exchange of academic teachers between the Faculties of Architecture at Cracow University of Technology, Kraków, Poland. This experience was gained over a relatively short time, but it is important, because of the intensive professional work and as it provided even better insight than the contact with Spanish students normally available for the author within standard courses of students' exchanges (within the Erasmus Programme). The issues in this article have been grouped into two parts: discussion of differences in the education of students, including the awareness of the building techniques/technologies available, and differences in newly created architecture. Detailed conclusions concern the advantages of different learning programmes, factors of effectiveness of the education, the relations between the architect as *an artist* and users as *an audience*, the common feeling of the style and typical dichotomy of addressing the architecture, i.e. satisfying users' cravings or attempting to change their minds.

### THE NOTES ON THE METHODOLOGY

The teachers' exchange between the universities of Kraków and Alicante was related to the Constructions subject. It took place over two seasons. During the first season, Spanish architect Daniel Sirvent, DSc, conducted workshops in Kraków. The main subject of these workshops was shelter-housing for refugees in the region of the Sahara Desert. This subject gave students the opportunity to discover the social role of an architect, rarely accentuated in standard teaching programmes. Students could also meet unique problems of designing in relatively exotic, *overheated* climate conditions. The direct contact of a Spanish teacher with Polish workshop participants lasted only one week, but mail contact with the teacher and his remarks had an important impact on the final assessment and students' semester notes.

The second season of the exchange and author's work with Spanish students from the University of Alicante establishes the most important methodological base of this article. Conclusions concerning the teaching methodology were possible, because the relatively numerous group of workshop participants (up to 50 students, working individually and

in teams; finally, creating 20 entries) allows for an evaluation of the level and the specific *style* of education. At the same time, this style of architectural education has an impact on modern architecture, which can also be observed in the city of Alicante. Both teachers and designers are the subject of generalisations leading to the integration mentioned in the title of this article.

## THE WORKSHOPS AS AN INSTRUMENT FOR THE INTEGRATION OF TEACHING METHODS

The choice of flooding as the subject of the workshops was the natural counterbalance to the issues of previous workshops connected with deserts, and was also similar in its social context. Disasters that occurred to many Polish villages in 1997 as the result of rain, flooding and landslides were almost the natural conclusion. Flooding also occurred in some regions of Spain. Students were given a choice between workshops on two possible subjects. First, relatively easier, the design of a settlement of small houses for victims of the flood. Second, technologically more advanced, was to answer the question: can a single-family house be waterproof? Surprisingly, students chose both, and decided to design settlements of waterproof houses. At this point, the level of their knowledge and creativity appeared to be higher than expected. The efficiency of the workshops resulted from its specific conditions:

- Education at this University is not divided into different specialties, such as architecture and structural engineering. The combination of knowledge from these different areas encourages students to less conventional thinking.
- The subject of construction is conducted in later semesters than in Poland, providing students with the advantage of experience.
- The great majority of the group were volunteers, which explains their better motivation and creates a kind of self-propelled team resulting in high activity, exceeding the standard process of education.

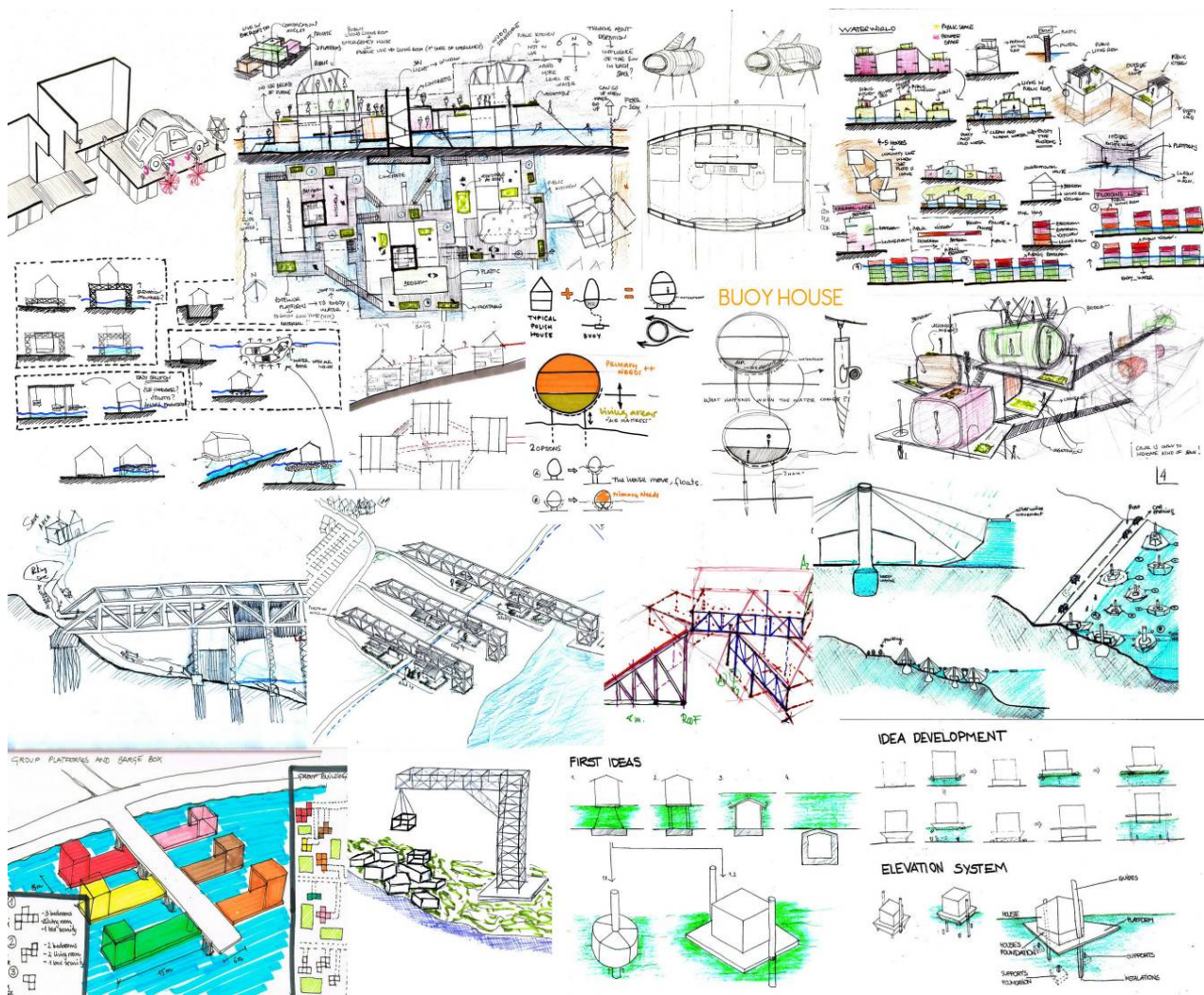


Figure 1: Water-resistant housing. The collage of students' first sketches shows the variability of approaches to technological problems.

Figure 1 shows a collage of students' first sketches demonstrating their creativity and courage when confronted with unconventional technologies. Students were encouraged to show their first associations, as well as the final solutions. The collage form serves the simplicity and shortens the presentation. The final versions of projects took up too much

space for the purpose, which is not to present separate projects, but rather the wide spectrum of ways of thinking, which are briefly listed below:

- Lots of versions of floating houses, including the *Amsterdam style* barge or a set of rafts.
- Constructing lower floors of the building of waterproof materials, which need only to be cleaned after a flood.
- Houses with individually sliding waterproof parts/capsules. Also, new kinds of a furniture only partially vulnerable to water.
- The submarine-house, attractive in a similar way as fashionable underwater hotel apartments.
- Connecting roofs of buildings by means of temporary bridges to create a communal roof-camp for proper neighbours' relationships during the stressful period of flooding.
- The *Buoy-house*, ellipsoidal, anchored to the ground. Modularly adapted to different families' needs.
- Houses protected by surrounding membranes like *upside down umbrellas* lifted by the force of flooding water.
- Versions of projects treating the disaster of flooding as a temporary attraction: the *Waterworld* or *Enjoy the flood!*, with flexible membranes filtering water and filling swimming pools, also creating extraordinary places for underwater parties.
- The *City of gantries* with houses hanging at different levels under structural bridges, enabling pedestrians to have alternative access from the top.
- Houses lifted by means of a crane and temporarily placed on higher terrain.
- A few versions of already existing *Dutch* solutions: houses sliding vertically along pillars and flexibly connected to installations.

However, while the technological aspects of designing reminded one of eruptions of invention, functional solutions (theoretically easier) seemed normal or sometimes remained outside future designers' attention. For instance, the central part of Figure 2 shows a double bed standing at the entrance, in the middle of the doorway of the building. Responding to the question *...is it the best place for a parent's bed?* The student answered *...we never talked about functions.* This fact was astonishing from the point of view that is probably typical for most Polish universities. It looked as though there was a kind of asymmetry in the level of professional skills in different subjects.

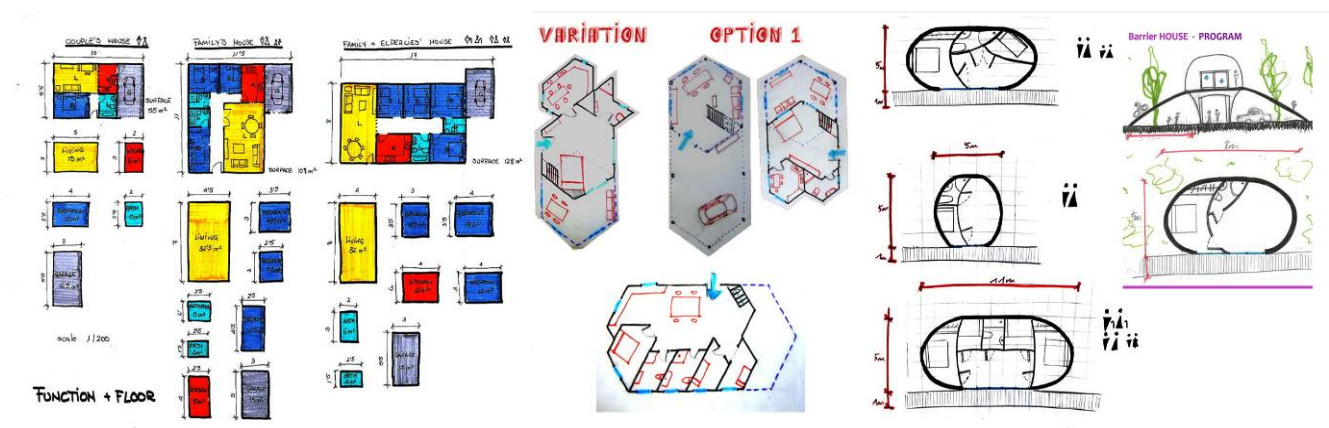


Figure 2: Water-resistant housing (continuation). Solutions of interior design original, but far less functional.

A similar kind of astonishing or in some way *inconvenient* solutions were present in the surrounding architecture. The remarks below concern the university campus, but similar *intercultural differences* could be observed in the modern architecture of the whole city: the high level of sculptural or generally architectural forms, and at the same time, some details that were theoretically less important, because the functionality surprisingly did not match the style or the level of design. At this point one could put the question: *...is the school of modern architecture also visible in mature architects' work?* Or, to put the problem into a different semantic frame: *...what kind of description could make the astonishing elements of this architecture more understandable?*

The examples below illustrate the differences in the perception of architecture by its authors and by an audience coming from another country. Different points of view can obviously create many kinds of misunderstandings. The goal is to reduce the incidence of these misunderstandings.

#### FROM ASTONISHING TO UNDERSTANDABLE CREATIONS

The campus of the University of Alicante is described as being one of the best European campuses [1], with its easy access, spacious terrain and wide walkways. The architecture is not uniform, but is representative of several styles of designing.

In opposition to the carefully designed pavement of walkways, the courtyard of the Rectorate building (Figure 3) is left without cover and after rain, traces of clay are visible on all columns. In Poland, an architect as an author of this

solution could already anticipate problems at the stage of technical commissioning, even if the lack of a waterproof plinth was his favourite idea. Thus, similar malfunctions also happen, but mostly as a result of constructional errors or less frequently, the error of the designer.

In this case, one could expect this courtyard to be a marginal place of the campus, with less attention being paid at the design or construction stages. But, in other buildings the repetitions of similar *misunderstandings* prove it not to be a mistake, but rather the phenomenon of the specific style of designing, with a contestation of boring waterproof protections.



Figure 3: Place: campus, the courtyard of the Rectorate and Authorities (Rectorado y Servicios Generales) building. The aspect described: inefficient drainage and lack of waterproof or rain-resistant façade finishing. (All photos in this article were made by the author in March 2013).

The courtyard of German Benacer Building (Figure 4) has well-balanced proportions and functionally accurate entrance to the second of three floors. All façades of the courtyard are glazed and partially covered by permanently fixed sunscreens. However, sunscreens are also present on the northern façade, where the risk of over-insolation is minimal. Also, the position of sunscreens needs to be remarked on: sunscreens reduce the visual contact across the courtyard, but glazing along the floor preserves a surprisingly clear view on shoes and legs of persons inside. Thus, the role of sunscreens differs from the normally expected role and is not completely functional. The conclusion is that for the purity of form and its internal consistency were more important for the designer.



Figure 4: Place: campus, the courtyard of the German Bernacer building (similar illustrations are also available as a street view on Google Maps [2]). The aspect described: the glazing along the floor.

The entrance of the Faculty of Economics and Business Sciences (shown in Figure 5) is composed of bare concrete elements: the roofing and the ramp for handicapped people. The doorway is blocked by a crossing concrete barrier, and ramps are positioned in a manner enlarging this non-functional or rather anti-functional obstacle. The lack of drainage does not look accidental: the whole façade is covered by the dirt leaking from the roof with the rainwater. This makes the roofing over the entrance, and especially the front pillars the dirtiest part of all the building (or the equally dirtiest place on the campus). Astonishing is the fact that at the same time the major part of the building has been both carefully designed and constructed. Also, the dirt does not seem to be a desirable symbol of the Faculty: the Google street map service shows the same *clean* building 11 months earlier, on April 2012 [3].

Theoretically, the entrance is usually a decorative or even symbolic representative part of the building, but the meaning of these words changes with time, and with surrounding social circumstances. For some designers, the wet concrete can

be assumed to be the correct, natural state of the decoration, while for common observers it looks like a contestation of rationality.



Figure 5: Place: campus, the entrance of Faculty of Economics and Business Sciences. Aspects described: decorations blocking the entrance and the lack of drainage system.

The feeling of astonishment obviously cannot be an objective method of architectural evaluation; it only can illustrate possible different perceptions of the same form. Opinions on the decorative values of building materials can also depend on historical conditions. For instance, living in concrete blocks during the communist period in Poland is possibly the most important factor leading to a reduction in enthusiasm for bare concrete, especially, among the older generation. But, for the Spanish architect (mentioned above, conducting the first stage of workshops in Poland) studying such blocks as the research for his scientific work, the concrete sub-standard buildings appeared to be formally pure, economical, and in some way friendly.



Figure 6: Place: the City of Alicante, Placa de Ajuntament. The aspect described: the fountain in the pavement of the square, potentially dangerous for handicapped people.

Figure 6 shows a fountain installed on the stone surface of the square in the old part of the city. The fountain is composed of several repeatable basins lowered in relation to the level of the square. Although visually attractive with its lighting, the installation would be problematic in assessments made under restrictions imposed by Polish building law. The form of fountain could be rejected as risky and creating a *trap for handicapped people* when the light is off. To be more accurate: the restrictions of the law are similar to regulations met in many other countries, but the big difference is the implementation of the law, which can be observed as having direct impact on the newly built architecture.

Also, the form visible in Figure 7 can be interpreted as a *single, non-marked step* in the area available for the public. At this point, it is important to emphasise that the modern architecture shown in the illustrations is generally original and attractive. The remarks made above are not intended to criticise the architectural projects, but to show significant differences in the *range of freedom* designers have working in different countries or under differently restrictive conditions.



Figure 7: Place: the city of Alicante (Calle San Pascual, also available on Geographic.com [4]). The aspect described: the differences of levels in the surface of the street.

The examples of the intentionally dirty façades could be described as misunderstandings between the author and the audience. But, similar *mistakes* (which could be also described as wrong attempts to read the project) are normal or even significant in all contemporary architecture and frequently present even among its masters. For instance, over a half century ago, Mies van der Rohe created his famous details establishing the contemporary classic of technology, but for Charles Jencks his repetitions of forms not reflecting the function of objects were unacceptable [5].



Figure 8: Place: the harbour of Alicante. The aspect described: the deck of café bar without handrails.

The Noray café bar shown in Figure 8 takes a prominent place on the waterside of the yachts' harbour. Exposed from many directions, it establishes a symbolic example of the modern architecture of Alicante. The object was built between 1997 and 2000, of prefabricated elements, dry-mounted on the building site. The idea of the project was to continue the technology, precision of assembling and high quality of materials, typical in the shipbuilding industry. The wooden floor is to create associations with the deck of a ship. Moreover, its designer, architect Javier García-Solera Vera is held in high esteem among architects. Architectural solutions are not accidental, but express the architect's idea.

The extraordinary outcome is that the flat surface of the floor is not protected by any handrail from the side of the dock. Theoretically such a bare edge of the floor looks as though it is encouraging passengers to step from yachts directly into the cafeteria. One way or another in Poland, such a solution would probably be assessed as creating an opportunity for accidents.

However, the solutions shown in the figures above are not literally forbidden under Polish law. The official statement reads only:

*§ 291. The building and the equipment associated with it should be designed and constructed in a manner that does not present unacceptable risk of accidents during the operation...* [6]. (Translation by the author, 2016).

Because, it is difficult to define the *unacceptable risk* precisely, this general requirement can be interpreted in a very restrictive way. In practice, it depends on the point of view of the institutions supervising and assessing projects. Restrictions for designers often result not from the building law, but from occupational hygiene and safety regulations.

Handrails are obligatory when the difference of levels of floors exceeds 50 centimetres (literally only on staircases, but according to OHS regulations, also in work places and practically in all areas accessible by the public). Also, flat glazing without any visible elements (literally forbidden only in doorways) is assessed as dangerous not only for birds, but as well for handicapped (visually impaired) people.

Finally, all the inconveniences described are accepted by users and exist in their common life. The wet façades are not exposed to the destructive impact of freezing and, thus, do not need frequent repair. The small decorative elements installed on surfaces of streets and squares can work properly and create only an *acceptable risk of accidents* for pedestrians. In a matter of fact, the *single, non-marked steps* mentioned in official regulations are mostly dangerous during winters in countries with a colder climate, when, as slippery obstacles, are potentially hidden by snow.

## CONCLUSIONS

The following conclusions are drawn:

- Intercultural differences in approaches to architecture can still be observed between different countries despite all integrative processes ongoing in Europe during recent decades. Student exchanges and meeting foreign lecturers are a necessary part of future international integration.
- Effectiveness of teaching (not only engineering subjects) depends more on the atmosphere of active work (in this case the workshops) rather than on the total number of class hours. The exchanges and intercultural meetings are an important factor of attractiveness of the process of education and, at the same time, can integrate future engineers.
- Volunteers usually work better. Making all students into volunteers is certainly not possible under strict schedules of teaching programmes. But, it gives a hint: more flexible structures could mean more subjective freedom for students.
- The subject of constructions corresponds better with the third or fourth years of the teaching programme than with earlier semesters. Students become more aware of the importance and impact of knowledge on the process of designing.
- The process of educating future professionals includes some dichotomies. The awareness of future restrictions makes students (especially beginners) more responsible, but at the same time reduces the *space of freedom* necessary for forming future designers' best skills.
- The example of dichotomy in an architect's professional work is the problem of addressing the architecture, i.e. satisfying users' cravings or attempting to change their minds.
- A feeling of astonishment, obviously, cannot be an objective method of architectural evaluation. However, it shows the existence of stereotypes both in the sphere of creation and the perception of architecture. The work with the stereotypes and their gradual elimination is the humanistic aspect of scientific work.
- The examples of existing stereotypes are opinions on the decorative values of buildings, and can also depend on historical conditions. Living in concrete blocks during the communist period in Poland has reduced the enthusiasm for bare concrete and rusted steel, especially among the older generations. However, especially among younger architects and engineers, such solutions are gaining new followers.
- Misunderstanding of perception can also be culturally symmetrical. Sub-standard concrete Polish *blocks* from the communist period can now be found in different conditions, as being formally pure, historically attractive, economic and friendly.
- Creating the proper balance between the easy and restrictive interpretation of the law encounters the dichotomy. On the one hand, more freedom for designers causes less acceptable risk, but on the other, restrictive assessment is destructive of designers' creativity. The negative trend (unfortunately, noticeable in Polish architecture) means multiplying self-contradictory restrictions and increasing the bureaucracy, resulting in stopping projects and shifting the responsibility between several institutions.

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