

**RECEPTIONS OF ECOARCHITECTURE IN THE GRADUATE  
EDUCATIONAL ARCHITECTURAL DESIGN  
TECHNICAL UNIVERSITY OF MOROCCO**

**EL ECHCHEIKH EL ALAOUI DOUAA, TANIRVERDIIEV A.D.,  
VASYLENKO O.B.**

*Odessa State Academy of Civil Engineering and Architecture, Odessa, Ukraine*

The goal of the educational design of ecological architecture at the Faculty of Architecture and Civil Engineering of the Technical University of Rabat was that students working with specialized objects differed with the difference in objects and scales. Students share their creative ideas about upcoming graduation projects and think about introducing the theme of ecology into architecture.

The subject of special design is to explore the awareness of students in a variety of techniques and principles that use the ecology of architecture. Students are ready to solve actual environmental problems in their work and in future practice.

Environmental architecture is affected in the specialty Architecture and urban planning and in the following areas:

- «Theory and history of architecture»;
- «Landscape architecture»,
- «Restoration and reconstruction in architecture»,
- «Design of the architectural environment»;
- «Urban planning»,
- «Architecture of rural settlements»,
- «Architecture of industrial buildings»;
- «Residential buildings»;
- «Public buildings».

The most complete and holistic vision of the use of ecological architecture techniques was presented in the theses of the students of the department «Design of the architectural environment», «Architecture of buildings and structures», but there were also very interesting proposals in the works of students of the department «Urban planning».

The results made it possible to understand that some students understand the complexity of the problem and are ready to offer solutions for the widest range of problems. An example is the introduction of energy-efficient diode fixtures and lamps for lighting rooms, as well as the use of motion sensors to regulate the flow of water in bathroom taps.

On a larger scale, this is the use of cross lighting inside special underground spaces with reflected light to save energy. Project ecological directions, which students bring in their works, are divided into blocks: energy-efficient building materials; natural energy sources and modern technologies; ecological transport; smart House; compact plan, bionics in architectural shaping; recycling of raw materials; secondary use (raw materials, water, heat, energy); saving energy consumption.

On the positive side, when thinking about the introduction of electric vehicles in the settlements, students immediately talk about the need to place the appropriate infrastructure (gas stations) and the availability of places for such vehicles in underground garages.

It is necessary to focus on unique solutions in some projects, for example, in one of the works during the development of the village it was proposed to replace cars with internal combustion engines with electric vehicles, horses, bicycles, which in itself complicates the overall results.

In addition to such obvious examples, there were less radical, but more massive ones. A large number of works have proposed moving industrial production out of the settlement, but such a solution cannot be called environmentally friendly, since the question remains where to bring these enterprises and how to deliver the goods they produce to the same city, district or village.

Many students suggested actively using the underground space for car parking, but such underground penetration can adversely affect aquifers and soil structure, which can lead to collapses and subsidence of the earth's surface.

For village projects, the use of wind generators has become a very common technique, but it must be understood that their use is largely based on the prevailing wind pattern and topography.

Student clauses also consider the social aspect, which is hidden behind such phrases as “developed pedestrian and bicycle network”, “creation of urban neighborhoods”, “improvement of adjacent territories, embankments and recreational areas”.

All these techniques contribute to the emergence of not just a favorable environmental situation, but such an urgent issue as urban identity and the revival of urban communities. The generation of ideas that have an impact on the creation of a favorable, friendly and open environment in a social sense is today the most important aspect of the development of cities around the world.

Today, the young generation of architects needs to be involved in issues of ecology, sociology, psychology, broaden their horizons and be ready to answer the questions of future architectural and urban planning activities.