Architectural Design Teaching and Cultivation of Students’ Design Capability

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Abstract. It can be said that Architectural Design goes throughout the entire study process of Architecture, because it is a foundation which supports students to enter the society and shine luminously in the construction sector. It is worth exploring that how to learn it well and how teachers can not only care young students’ creative concepts and ideas, but also help them sort out the rules and regulations of the real field.

As a very important core course of Architecture major, Architectural Design covers 3 academic years and 6 semesters, and it can be divided into 3 stages, namely basic design, improving design and integrated design. No matter what stage of teaching it is, it requires strict concepts, rigorous process, as well as flexible methods and strong practicability. In addition, the contradiction between students’ original level and the cultivation goals ought to be solved in the process of teaching. There are many controversial issues in this regard, especially about how to achieve the goal of cultivating students’ design ability. Therefore, the following discussion was conducted.

Understand the Knowledge Structure of Architectural Design Course Deeply

It is necessary to figure out the knowledge structure of Architectural Design so as to fully explore its study scope and study objects. Architectural Design is a complex and highly integrated course, as it is essential to pay attention to traditional design methods and procedures, and inspire students’ innovative design solutions. Thus, a clear understanding of the course knowledge structure is particularly important.

In the Architectural Design course, various stages have their own independence, but their independence is relative, while their connection is common. In the teaching process, teachers should strive to let students master the foundation of design knowledge and form a knowledge structure system of design course through building the design knowledge structure of each stage until the cultivation of design capacity is formed. So, what constitutes its knowledge structure? The first knowledge structure system is the national design standards and specifications. In terms of planning and architectural design, the state has made specific provisions for the projection, drawings, size standards, general layouts, planes, elevations and sections. The cultivation of students’ rigorous work style should be combined with the training of students’ strict compliance with national design codes in the process of teaching, in a bid to avoid building houses behind closed doors. Furthermore, cultivating students’ proficiency in using engineering language can prevent the appearance of dumb architects and deaf architect. The second one is the system of mechanical structure and architectural appearance connection. As we all know, the purposes of
design include safety, practicality, economy and image, among which safety is the priority. Safety requires strong support from mechanics and structure. Mechanical structure can provide security theoretical bases for the basic elements and assembly elements of architectural design, so only those designers who possess the knowledge of this area are qualified. The third one is to build views on the foiling function of the material color, quality and environment for the constructions. The imagination and expressive force of architectural space are the basic skills of architectural design. Therefore, making good use of the material color, quality and establishing the contact theory of environment, history as well as folklore can deal with different types of architectural design problems and avoid the phenomenon of rational planes with single elevation and grungy-style constructions thereby.

In my opinion, the first one is the criterion, while the second one is the basis, and the third one is creation. These are the three knowledge structures of design ability which must be seized tightly in architectural design teaching.

**Complete the Teaching of Introductory Class Better, Seize the Course Framework and Inspire Design Capability**

All courses start with introductory classes in teaching. Comparatively speaking, the contents of the introductory part are relatively brief with strong generality and low requirements. In general, it will not be treated as the key point in teaching. However, I believe the introductory class can’t be overlooked in Architectural Design course. Students are supposed to obtain theoretical support from the introductory class as so to insist on the design classes during the 6 semesters. We need to introduce thoroughly the fields studied by the Architectural Design course, the problems solved by it, the development history and prospects of this discipline, its features and learning methods. The purpose of the above teaching is to guide students to establish correct major ideas, boost their love for this major and arouse their interests in learning spontaneously. It is expected to inspire students to catch up vigorously by setting forth the development history of this discipline and the achievements as well as status of the Chinese nation in this regard. Moreover, teachers’ coaching can effectively help students to avoid taking a roundabout course in the future work and study, enhance their understanding, strengthen their practice and ability to synthesize, and enlighten their design capabilities.

**Lay Emphasis on Basic Education and Enhance Design Capability**

Although the Architectural Design is a major course, emphasis still should be laid on the basic education and training in the teaching process. One very important point is to train students to build space concepts, which means to facilitate students' transition from the one-dimensional plane to the three-dimensional space. It is a prerequisite of body projection to establish a three-dimensional space. Researching the projection of points, lines and surfaces cannot only lay the foundation for expressing the buildings correctly and solving the spatiality, but also provide powerful ways to analyze the spatial geometry of the form expression. Therefore, students can understand the geometrical relationship and projection methods of three-dimensional space basically and initially form the basics of the knowledge structure of Architectural Design, which paves the way for the projection capability of architectural form design.
Pay Attention to Objective Practical Teaching and Improve Design Capability

There are a variety of teaching processes, so teachers should pay attention to optimize the teaching process, so that the teaching process can always have a subtle effect of clearing up doubts to develop students’ ability to obtain self-development. In my opinion, students’ professional competences can be cultivated in reality and the direct management. For instance, teachers can enhance students’ perceptual knowledge by means of models, teaching boards, picture recording, videos, visits, research and other methods. In addition, teachers can also let students come into contact with all types of architectural forms directly in the different stages of architectural design, so that students can understand the composition and shapes of the constructions from the contacts, learn the relationship between the basic assembly of the constructions as well as the combination and sub-blocks through observation, understand the correlation, combination and separation of the various parts of the constructions through analyses. If so, students are bound to have a certain stock of knowledge and even be knowledgeable thereby.

Summary

In summary, based on the fact that the Architectural Design course is comprehensive and important, there are a lot of methods to train students’ design capabilities. Only a certain aspect was explored in this paper in order to improve students’ design ability.

References

