Influence and Impact of CAD on Environmental Art Design Paradigm Under Digital Background

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Abstract.

This paper briefly analyzes the common problems of the environment art design specialty in the course of setting up the course of the specialty of environmental art and design in CAD. According to the common problems in the teaching process, we put forward the idea of teaching design based on the application practice. CAD course is an important course of environmental art design major, should meet the professional characteristics of the organization of teaching content in the course teaching, knowledge using a variety of teaching methods and teaching, pay attention to the knowledge consistency.

Keywords: CAD, paradigm, Environmental art, digital background, influence

Introduction

With the rapid development of social economy, environmental art design has also played an important role in the development of social undertakings. However, with the advent of the information age, the traditional hand-painted design has been unable to meet the needs of society. The progress of science and technology, the computer level to all walks of life are increasingly high requirements, can be an important factor in proficiency in design software has become a graduate majoring in environmental art can successfully achieve employment. The teaching of environmental art cannot be separated from the mastery and application of the design drawing software. As the professional software plays a more and more important role in the art design, it is widely used in the design. More important is the application of these design software can greatly improve the design performance of the combined force of drawing effect, therefore, fully grasp the design drawing software operation is very important to realize the learning and teaching of environmental art specialty.

The progress of society is inseparable from the development of science and technology. As a product of science and technology, computer plays a more and more important role in the progress and development of society. With the gradual strengthening of the practicality of the computer, it is also playing an increasingly important role in the design of environmental art. The traditional hand drawing techniques in environmental art design is too complicated, but the efficiency is not high, higher requirements on the basis of my art designer. The development of the society is more and more fast, the speed and method of hand drawing cannot meet the needs of the market. Under this premise and background, the design drawing software can meet the needs of environmental art.

The development of art major has been more and more widely used in the field of professional software design, which has developed from the original pencil, needle tube pen, pigment and so on. The application of environmental art design software can greatly improve

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the working efficiency and the design drawing performance, including CAD software with friendly interface and accurate modeling is well known, but also environmental art design professional must learn the software course.

After years of development, CAD has been widely used in various fields of design, and its software performance is also gradually enhanced with its own upgrade. In addition to the art class outside the school, computer software tutorial classes have also opened the corresponding courses, but there are also some problems in teaching.

![Figure 1. CAD environment design.](image)

**The Proposed Methodology**

**Connotation and function of CAD.** CAD is a kind of design software, however, in the environmental art professional teaching, just pay attention to the operation skill to explain, and the lack of the theoretical discussion and understanding, to make the students all-round development, we have to master in skills and theory. The essence of it is to help designers take charge of computing, information storage and mapping. In addition, CAD for all kinds of information, whether it is digital, text or graphics can be automatically stored in the computer, and quickly retrieve.

The use of CAD is more extensive, not only limited to environmental art, at the same time, in the industrial modeling, clothing and other professional has an important use. In the actual design, because it usually involves a lot of calculation, analysis and comparison of the problems, these problems need to spend a lot of energy designers themselves. In the design, there will be a lot of problems of calculation, analysis and comparison, and the appearance of CAD can solve these problems easily, because it can judge quickly and decide the best scheme.

**Teaching situation analysis.** Since the last century since the 60s birth of CAD software, application development in big companies, automobile manufacturing, aerospace and electronics industry, has been related to the scope of the field of design, every field of its use in the application of CAD software when the focus is not the same. Similarly, in the CAD environment art design specialized curriculum teaching will choose to stick professional practical teaching content. But in our actual teaching in the teaching content is not difficult to find, many factors will appear because of the teaching content of this course focuses on is not uniform, some focus on interior design, landscape design, and some focus on some focus on 3D
design. How to unify the courses teaching emphasis, we should be the teaching content and the professional fit, only closely with the professional development of application are closely related, and the basic idea of the height, course orientation and curriculum design is we should focus on teaching content.

CAD software is a basic auxiliary design, which is the basis of graphic design, space design, hotel design and so on. This requires teachers in the limited teaching hours, according to the professional position division teaching content focus, let the environment art students through this course of study, understand and master basic knowledge, the use of AutoCAD software and drawing operation method, improve the students' works for the speed and quality of design drawings, and the software technology skillfully used in interior design drawing.

**CAD software drawing specification.** In the teaching process, in addition to train students' computer aided drawing ability, but also to do the software drawing specification. CAD courses and follow-up courses are inextricably linked, will appear in the relevant knowledge of major junior students taught the course of dating. The problem of the non-convergence of knowledge points is also an important reason for the students who are not able to standardize the drawing in CAD software. To solve this problem only in the current teaching process, the introduction of appropriate knowledge points to explain. Such as indoor drawing in the ceiling design, in the teaching of this link to increase the indoor ceiling materials and indoor ceiling construction technology introduction and only when the students need to understand the mapping of knowledge points to explain, so that they have a deeper understanding of the construction process and construction materials, in order to draw a standardized, practical construction drawings.

Therefore, most of the student's final work is not completed in the teaching hours, which makes the teacher cannot effectively and truly understand the production process of student work. In order to avoid the emergence of this situation, can be appropriate to strengthen the normal operation of the process monitoring, so that students in the classroom to complete the application practice and assessment. At the same time, adjust the arrangement of teaching hours, so that the students in the end of the class in a part of the classroom, so that students can effectively complete the work of the real objective understanding and guidance.

**Professional direction.** Due to the professional types of CAD software applications, industrial modeling, fashion design, environmental art design and other professionals need to learn. Will inevitably arise in several professional direction are learning the same software situation in the process of teaching, and teaching content, teaching materials and training materials are basically the same, easy to cause the course of professional students a clear direction, not as soon as possible to apply the knowledge in the professional practice.

Design software plays an important role in the field of modern environmental art design. But only with this skill is not enough, in order to achieve the purpose of teaching, but also to train the students' ability to innovate, only innovation will have a way out, is the design and development of the road. Finally, the realization of the design is a kind of spiritual needs, and to meet the spiritual needs, it must be based on our own culture. In the process of interior design and landscape design, we should grasp the cultural direction from a larger perspective, continue to draw rich nutrition from the culture, the various elements of culture connotation and make full use of the design of performance, so that it will be more in accordance with the national characteristics and ideas.

**Textbook and practice.** At present, for the environmental art design professional CAD version of a large number of textbooks, but also the scope of the content of each kind of teaching material is too wide, for the application of the university environment art professional CAD teaching material is very little. Therefore, according to the personal teaching experience, for
application-oriented university environmental professional, professional teaching, professional practice should be selected based on the order of substantial content, concise textbook teaching tools. The best can be illustrated, give students a strong sense of visual expression, easy to use.

Relative to the textbook book, at the present stage, the application of the CAD software for environmental art design majors is less and less. In the concrete teaching practice, teachers are mostly based on their own knowledge system and teaching experience collected using the corresponding set of exercises, this set of exercises often knowledge of old single, but also can not form a complete standard system, is not conducive to the stable and continuous promotion and application in the field.

CAD professional courses are highly practical courses, including classroom teaching and training on the two main links. In the teaching process of CAD professional courses, sometimes there will be a single use of multimedia teaching, a large number of basic command tools and software operating principles to teach students to accept and understand. And the basic knowledge of teaching and training room, in order to truly achieve the theory to guide practice, and develop students' practical ability and application ability, but it is not easy to do this.

Flexible teaching methods. As CAD software, in the teaching of the course, students have been learning in the room, so you can make the students more access to computers and software, teachers use various teaching methods in the process, improve the learning interest of the students.

The teacher explained the basic method of operation and command to use the demonstration method, the use of multimedia teaching means, while the oral side of the computer operation, so that students can master the use of command. On this basis, the students on the actual computer practice, teachers use the guidance of observation, while the tour counseling, while guiding students to practice, problems in a timely manner. Customs clearance of the actual operation of teachers, teachers from the side of counseling methods, to deepen the understanding of the command and control of the degree, training students ability to operate.

On the basis of command learning, the method of group discussion is conducted to guide students to study independently. For example, according to the current command to ask questions, to allow students to discuss in groups, and ask one of them to answer, the final summary of teachers. In order to give full play to the ability of students to explore knowledge actively, cultivate students' ability to listen to and respect different opinions, based on the formation of the team spirit, cultivate the ability of self-reflection and independent thinking, and strengthen the understanding of the command.

CAD software is a major feature of the use of shortcut keys to improve the drawing speed, students not only need to know how to command the operation, but also need to remember the command shortcut keys. Therefore, in the teaching process of the command, each command to explain the emphasis on its shortcut keys and in the actual operation of students repeatedly command shortcut keys to strengthen the memory of students.

According to the command of learning easily while learning to forget the students in the process of explaining the command, with a small practice and the selected exercises are simple geometric patterns, in order to learn a number of commands in tandem, on the one hand, so that students deepen command mastery, on the other hand, to avoid the boring command learning, improve learning efficiency.

The system teaches software command and operation method, combined with the actual design case of environmental art design practice, so as to stimulate students' imagination and creativity, the application of learning theory of knowledge in the design practice, so as to improve the practical value of CAD software. The selection of training cases to residential interior design based, from simple to difficult, step by step.
In the process of teaching, we should pay attention to the continuity of the professional courses, avoid the isolation of the course that destroy the integrity of the knowledge structure. The basis of computer culture as a compulsory public courses, so that students master the operation of the Windows system. CAD course of the pilot professional courses for architectural drawing, students through the course of learning has been a certain amount of reading, reading, drawing, drawing ability. These two courses laid a solid foundation for CAD courses.

Conclusion

CAD software is the environmental art design professional, it should be consistent with the professional characteristics of the organization of teaching content in the teaching of knowledge, using a variety of teaching methods and teaching, pay attention to the knowledge consistency. As the environment art design specialized teachers, not only to consider the students' learning, but also follow the pace of development of software, and summarizes the reform of teaching methods, new teaching ideas, to improve the teaching effect. In the design, we must adhere to the spirit of innovation, but also pay attention to the use of Western learning, not to abandon the western culture, but we must learn from each other, make full use of the western design techniques. In the process of design, the pursuit of the perfect combination of man and nature, the idea of harmony between man and nature will be applied to the design of the national culture.

References