

Teaching Practice of 3Dmax Course for Animated Ads

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Abstract.3D design software 3Dmax is a fundamental computer aided design (CAD) course for students who majored in design. It not only can help students to learn and master the 3D design tool and to improve their innovative ability in a short time, but also can promote training higher technical personnel skilled in applied advertising for society. Aiming at some problems existing in the teaching process of 3D design software 3Dmax course, this paper analyzes and summarizes the teaching rules from the perspectives of the course features and classroom teaching. Based on the authors' practical teaching experience, some effective practical methods are proposed to combine the theoretical teaching with animated advertisements designing application, which has positive accelerative effects on the teaching effect, the teaching quality and students' professional skills.

Introduction

In the 1990s the 3D design software was applied in the field of CAD design, leading to a qualitative leap of the product design and development. Due to the advantages of strong function, technological innovation and ease of learning and master, 3Dmax stand out among other 3D softwares and become popular with art designers, teachers and students, so many universities and colleges offer 3D design software 3Dmax course. In the teaching process of 3D design software 3Dmax course, the teachers of advertising design are confronted with a few problems, such as how to comprehensively introduce the functions of 3Dmax in a limited classroom teaching time and how to help student to learn and master 3Dmax efficiently. Based on the authors' years of practical teaching experience, some effective practical methods are proposed to combine the theoretical teaching with advertising design application, so as to accelerate the teaching effect, the teaching quality and students' professional skills.

With the rapid development of advertising and animation industry, animated ads are becoming more and more familiar with most of us [1]. In recent years, with computer software and hardware technology like 3D animation development, advertisements also get some new motive power, especially in the area of animated ads. Compared with traditional ad, animated ad has its own features and specific audience. And with its creative and featured style, animated ad has a broad development space. Its biggest difference with traditional ads is that animated ad is made by more softwares than ever. In this case, the main problem faced with animated ad makers is that they should not only be able to design the animated ads, but also has the imagination of creating ads.

As an important tool for advertisers to sell products to their target audience, especially with the increasingly importance of communicating with their consumers, to find an effective way to realize their goal, is a big challenge faced with everyone majored in advertising. Animated advertisement is an effective and easy way for them to communicate with their target consumers. Then the important course for people to learn is 3Dmax, which is so essential to create animated ads that everyone should handle their butchers' clever skillfully.

3Dmax Course is ESSENTIAL to ANIMATED ADS

While doing animated ads, we should at first get to know about the word "animation", it comes from the Latin root of anima, meaning soul, then it's meaning extends to make up the meaning of

something living, so animation is also can be interpreted cartoon. 3D animation is also called three-dimensional animation. And the best tool of doing three-dimensional animation is 3Dmax.

When working with 3Dmax, we first set up a virtual world, in the virtual three-dimensional world we set the shape of the size of the model and set up scenes, and then set the model in accordance with the requirements of the exercise track, virtual camera movements and other animation parameters, the final model given under the requirements for specific materials, and marked with lights. When all this come out after the completion of automatic computing allows computers to generate the final picture.

Simulate the real three-dimensional animation technology make it a useful tool for animated ads makers. Because of its accuracy, authenticity and unlimited interoperability, it is now widely used in medicine, education, military, entertainment and many other areas. Television ads in production, this new technology can give us fresh and new feeling, it has been welcomed by many customers. Three-dimensional animation can be used in television ads and movie special effects production (such as explosions, smoke, rain, light effect, etc.), stunt (crash, deformation, or the role of fantasy scenes, etc.), advertising products, titles and so on to fly the word.

Compared with the real film advertisement, 3D animated ads have the following characteristics:

Animated ads can be able to complete the film with no completed lens; and the production almost has no relations with seasonal factors such as weather effects; and the technical requirements for the production staff is much higher than traditional ads, and the ability of using 3Dmax software is one of those abilities; it is also able to meet the quality requirements easily than real film advertisements, which is much more vulnerable to control; the cost of three-dimensional advertisements are much lower than that of traditional ads; it is also very easy for us to be able to demonstrate products roles.

Of course, there are no such physical limitations for screen performance photographic equipment, whose three-dimensional animated virtual world called by camera is the ideal movie camera, and production staff play roles of directors, cinematographers, art, scenery, and the final picture effect is not just depends on the level of production staff's experience and artistic accomplishment, but also on their using ability of 3D animation softwares and hardware technical limitations.

Deeply understand the artistic and technical abilities needed in creating ANIMATED ADS

For students, doing advertising is obviously an easy work, but doing better and more effective advertisements is a harder job.

Before doing animated advertisements, Creatives should have a concept of marketing and a proper idea of advertising creativity. All of the creative activities should start with products, which is both the project of the advertising and the reason for marketing [2]. Thus people should do deep research on target market\target audience\competitors and other market problems, conceive the theme of the ad proposition. In a word, the advertisement's creative should center on product and target audience from begin to the end, only in this way can the creative be effective.

In order to solve the marketing problems, students have the right direction of creating animated advertisements. This part of job is relevant to students' creative power.

When a truly proper advertisement is conceived, then it is the ability of using every kind of softwares to create animated ads. Although 3D animation technology is with lower entry threshold, it needs years of knowledge of using 3Dmax software and yet it requires unremitting efforts. With the rapid development of 3Dmax software, it is important for people to keep on learning new technologies. Because of the technical complexity, the best designers are unlikely to master 3D animation in all its aspects, and all forms of television advertising production technology is the highest.

Of course, it is not just the ability of handling so many softwares, but also the ability of imagination to create ads playing an important role in the process of doing animated ads, that's because advertising is a job of both artistic and technical work[3], and 3D animation is also an integration of art and technology work. During the production process, people should have the full realization of the technical requirements of creative ads on the one hand, on the other hand, they should also have a deep understanding of the picture color, composition, lighting, lens design team,

and they can grasp the rhythm of the arts and other aspects of the re-creation. So it is truly necessary for students to learn technical skills while at the same time have sharp artistic insight.

While the creative process of animated ads is one kind of artistic thinking activity going between animated ads planning and advertising creation and presentation, which is going by the theme of ads, on the basis of deep thinking and planning, making use of all kinds of animated ads' artistic means, composing all the mastered materials in a creative way, to build one specific image in the end. So, it's important for teachers to remind students to pay more attention on the techniques of creating animated ads and have students to do huge exercises to improve those abilities purposely, and do examinations regularly. Only in this way, can students improve their technical and artistic abilities in a reasonable manner.

3Dmax Course is important for training technical personnel skilled in applied advertising

Professor von Kármán of California Institute of Technology once said: Scientists explore what is and engineers create what has never been. In other words, the aim of science is seeking the laws of nature, while the aim of animated advertisements designing is transforming nature by using science, which includes natural science, technique science and social science. With the rapid development of science and technology, technical personnel skilled in applied advertising are urgently needed because they will greatly promote the development of social productivity and progress.

The main task of colleges and universities is to train and bring up qualified graduate students satisfying the social need. For students majoring in mechanical art designing, they have to follow the trend of design and manufacturing technology closely, and try to transform the designing methods from 2D to 3D. The traditional 2D CAD software is just a painting tool, which can improve the chart quality, but cannot raise the design quality and carry on technique innovation, so a strong 3D spatial imaginative ability is needed for designers. For example, when designing fitness equipment for sit-ups, designers have to imagine its 3D shape, and then project the 3D solid into several 2D diagrams with the help of orthographic projection, as shown in Fig.1. When reading drawings, designers need to transform all the 2D diagrams to the original 3D elements through imagination. So, the efficiency is reduced and mistakes easily occur. However, 3D softwares, especially 3Dmax, not only can transform the designing methods from 2D to 3D smoothly (shown in Fig.1), but also can enhance the ability of student's spatial abstract thinking and image thinking [4].

3Dmax can be used in assisting teaching. The relationship between the model and projection can be established by using the automatic generation feature of the advertisement designing, which can greatly increase students' interest, stir up their spatial thinking ability, enhance their confidence and cultivate their innovation ability. In addition, during bidding process, enterprise can use 3Dmax to create vivid 3D models and animation of products, which not only can contribute to technique exchanges, but also invisibly display the R&D means and ability and propagandize the image of the enterprise itself.

Design and imagination are always the core elements of the advertising Industry. 3Dmax provides an effective and strong method for the design of animated ads, which promotes and creates new advertisement forms. Advertising agencies urgently expect 3D software to improve the design measures, as well as the animation companies and the creative industry. 3Dmax is not merely a simple 3D model tool but a set of high integrated CAD / CAE / CAM software and a system of the design and manufacture, which provides a powerful simulated platform for art designers. Therefore, it is necessary to offer 3D design software 3Dmax course for training higher technical personnel skilled in applied art designing for society.

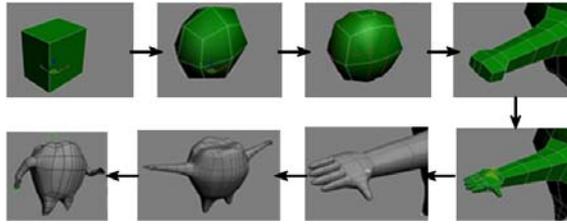


Fig1. 3D model for CNICE toothpaste animated ad

Flexible use of 3Dmax Teaching Model is Efficient for Improving the Teaching Effect

According to the characteristics of the 3Dmax course, the following aspects should be strengthened in order to guarantee the teaching effect.

A. *Well Organized Teaching Contents.*

The teaching contents of 3Dmax course should take animated advertisements designing application as a target and contain all the key points [5]. Draft, shaping feature, assemble body and animated advertisements designing diagram should be contained. In the teaching process, teachers should not only focus on the animated advertisements designing examples but also make the concept of 3Dmax often-used function clear. For example, when teaching “feature modeling”, teachers should consciously enable students to distinguish the 3Dmax features from the features in life and know the 3Dmax features being the basic units of constitute models, which can be driven by its size or parameters and be controlled by its manager. In addition, teachers should demonstrate the concrete examples. Only in this way, can students get the firm knowledge in a limited classroom teaching time.

B. *Construct the Active Classroom Atmosphere.*

The teacher should encourage students to ask questions, adopt heuristic methods of teaching and enhance internal exchange among students. Teaching literatures also emphasize that teachers should mobilize all the students to arouse their interests in the teaching process [6]. If the teachers just introduce theory and concept instead of practical operations, students will easily get into the period of the decline and confluence mentally. Therefore, teachers should enable students to participate in the teaching process.

For example, the teachers could ask students to modify a history record in feature tree and imitate the reached process by using trace stick. In this way the students can realize after characterized by draft that 3Dmax model move on to 3D model. The user not only can modify feature parameter to achieve the reconstruction of the actual model, but also can use the trace stick to represent reconstruction model. This way is consistent with the basic steps of producing model construction and the students’ thinking process, so students can accept easily. Meanwhile, this way could promote students to actively participate in the teaching process, leading to a good teaching effect.

C. *More exercises and role-plays are needed in classroom.*

The characteristics of 3Dmax Course provide students more exercises than ever. When the topic is set, students should create several copies from different perspectives, design the model needed in the animated ad, after that, they talk about their works with each other, and teacher give some advice on their scripts, so that students can have proper ideas to do the following works. These kinds of exercises should be given twice a week.

After students have their scripts done, they should have chances to show their works to other students. The role-play activities will greatly encourage students to work hard on their 3Dmax course. There are three steps for students to do role-plays:

- 1) *Students should have their works done, and then 3-5 students are assigned to be the judges, of course, some rating sheets are needed;*
- 2) *After the preparatory work is done, the show is going to be put on the stage. students have their works performed in public one by one, and give some presentation on their thinking of creating their works, and the judges grade;*

3) *After the judges graded, they do noun sorting, and then select good works ,save them into CD-ROMs for later exhibitions or competitions.*

D. Encourage students to take part in the ad design competitions as many as possible.

In fact, actively taking part in ads design competitions is a good way for students to show their ideas, their abilities, their good command of the course, so it is necessary for students to find ways to show their works. Of course, basic abilities are pre-requisite.

Every kinds of design competitions are very popular with most of the students majored in design. And it is a good way for them to show their brilliant ideas, and may be they can get some rewards, of course, a better job prospect is included.

One of the famous design competitions is one-show, which is founded in New York, 1975. It is the top reward for admen. Everyone pursuing advertising as their lifelong career is looking forward to the reward, because it is a great confirmation to their works.

Taking part in the competitions can give students some enthusiasm and self-confidence, and the most important thing for them is that they can learn from the competition during their creating process, so that they can have improvements for the next competition.

E. Change the Evaluation Mode of 3Dmax Course.

According to the characteristics of 3Dmax Course, the traditional close-book examination cannot reflect students' level in mastering 3Dmax. Therefore, handing in their works combined with class attendance is adopted, which can reflect student's actual level comprehensively and reasonably. Their works may be advertisement designing parts, assembly body model or their advertisement designing graphs. So process test and summative test are used for evaluating the student's final grades.

1) *Process test (70%): arrange several computer operating tests, which requires "deal with the question on the spot" to ensure the teaching quality.*

2) *Summative test (30%): at the end of the course, students submit different types of the three-dimensional models or animated advertisements designing graphs as the semester assignments. And then a reasonable grade is given according to the content, the form, the used function and the aesthetic value of the submitted works. In this way, we can test students more reasonably and effectively.*

Conclusions

3D design software 3Dmax course is offered for students who majored in art designing. It has greatly promoted training higher technical personnel skilled in applied animated advertisements designing for society. Based on the author's practical teaching experience, we analyze the teaching methods of 3Dmax course comprehensively and deeply according to its characteristics. As one big help to the 3Dmax course, the scientific and efficient teaching methods not only make the teaching become more scientific and elaborate and liven up the classroom atmosphere, but also improve the efficiency of 3Dmax course and arouse students' interest. So this method will promote the expansion of 3Dmax course in colleges and universities. The teaching methods mentioned above will benefit students a lot, because they are favorable for mastering 3Dmax software, improving students' practice ability and transforming the animated advertisements design from 2D to 3D.

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