

Application and Exploration of PAD Class in the Course of Modeling Foundation

Fangxia Yuan

College of Art Design, Lanzhou Jiaotong University, Lanzhou, Gansu, China

Keywords: PAD; Assimilation; Autonomy; Discussion

Abstract: In allusion to the problems existing in traditional classroom teaching, such as the one-way transmission of knowledge, insufficient attention paid to students' active learning and inquiry ability, lack of interaction between teachers and students, and unsatisfactory classroom teaching effect, etc., the innovative teaching mode - "PAD Class", which combines the advantages of lecture-based classroom and discussion-based classroom, emerges as the time requires. Through the practical application of the PAD model in the course of " Modeling Foundation " for students majoring in art design, this paper explore its positive role in improving students' analysis, reproduction, variation, reorganization of the artistic form, conceptual knowledge of the form and subjective creation. It has been proved in the curriculum practice that the application of the PAD class has greatly enhanced the interaction between the teachers and students and among the students, created a favorable learning atmosphere, effectively promoted the students' sensitivity of artistic feeling, the activeness of art thinking, the unique artistic experience and the stimulation of creativity, and prompted students to master the basic laws of visual arts, while abandoning conventions and breaking away from old patterns, and express the meaningful form in a true and unique aesthetic sense, which greatly improves the teaching effect.

1. Introduction

The "PAD" class is the abbreviation of Presentation, Assimilation and Discussion. The PAD class was proposed by Professor Zhang Xuexin of Fudan University in 2014. This model fully combines the advantages of lecturing-based class and discussion-based class, in which half of the class time is left for teachers to give lectures and the other half for students to actively and interactively learn in the form of discussion. The form of PAD can be either the in-class PAD, or next-class PAD, i.e. in the second half of a class, the teaching content is lectured; the students' autonomous learning after class refers to the finishing of homework, the comprehensive review and in-depth thinking of the course content, and the effectively completion of the assimilation of the teaching content; and then the classroom discussion in groups and between groups will be conducted in the first half of the next class. Since the teaching method of next-class PAD staggers the time of classroom teaching and discussion, the students can have a period of autonomous learning time after class and effectively complete the assimilation of knowledge.

From the teaching mode of PAD class, it can be found that while the PAD class retains the teaching link of traditional teaching which guarantees the systematicness and accuracy of knowledge transmission, the great importance are attached to the cultivation of students' ability of independent learning and thinking. The teaching mode of PAD class has very important practical guiding significance for enhancing students' learning initiative, cultivating their exploratory consciousness and creativity, and improving classroom teaching effect. At present, many colleges and universities have carried out the research and practice of PAD class mode. However, how to truly grasp the essence of PAD class and achieve the expected teaching effect of PAD class in specific teaching are of great significance. It should be recognized that in the PAD class, the teacher is the guide of knowledge and shoulders the responsibility of organizing and designing the teaching process. The sequence, time distribution and cohesion of the whole teaching process, as well as the lecture framework, content, assignment, discussion direction, height and depth of guidance require the careful design and planning by teachers to ensure the integrity, scientificity and effectiveness of

the teaching. The author will take the application and exploration of PAD class in the course of "Modeling Foundation " for the students majoring in art design as an example to explain it from four aspects.

2. Classroom Presentation

In PAD class, the teachers' presentation should be highly generalized and comprehensive. He/she should fully refine the knowledge framework of the curriculum, reasonably grasp the depth, difficulty, key and difficult points of the content of the curriculum, and truly present briefly and succinctly and leave appropriate space for thinking. It ought to be recognized that teachers do not say all they knows, but should be a guide of "cast a brick to attract jade", stimulating students' interest in learning, desire in discussion and more of their imagination and creativity with knowledge points and thinking points. In this way, it is easier for students to think deeply about the problems in the process of assimilation after class.

For instance, in the chapter of "Internal Structure and Unit Type" of the course " Modeling Foundation ", the students are guided to understand the internal and micro-morphology of objective objects and the functional organizational structure implied in the interior of objects through the theoretical teaching and work analysis, which makes them come to know that the study of internal morphology and structural skeleton can help enhance their ideology. The purpose of this chapter is to study the internal form of the objective entity, to extract the elements of shape and explore the structural principle and framework of the basic unit structure of form, and lay a foundation for the creation of new form through the multiplication, variation and reorganization of form. Once the students have got a clear and definite picture of the teaching purpose and practical principle of the course, they can collect and analyze the materials and works in the process of assimilation after class, and bring their imagination and creativity into full play to create corresponding works.

3. Assignment

Assignment is the core environment for connecting lectures and discussions, an important means for implementing the PAD strategy, and the key to the success of the PAD strategy. Assignment should effectively link classroom lectures with discussion in the next class, so as to truly connect the preceding with the following and achieve mastery through a comprehensive study. Assignment must have the high degree, difficulty and precision required by the syllabus; must have a certain degree of openness, provide students with sufficient space for divergent thinking and imagination, and promote students to carry out the personalized construction as novel and unique as possible, so as to stimulate students' interest in learning, enhance students' learning initiative, tap students' potential, and effectively realize the assimilation of learning content.

In the chapter of "Internal Structure and Unit Type" of " Modeling Foundation " course, the first content of assignment is to read textbooks for the further understanding of the content of the course comprehensively and profoundly. Secondly, through the course resources website established by the teachers, the selected case works will be viewed, analyzed and thought of. Thirdly, according to the curriculum requirements and learning objectives, the excellent works created by internal shape, skeleton influence or inspiration will be independently collected and selected to specifically analyze their creative origins, performance characteristics, artistic effects, etc., summarize the enlightenment received, and seek to inspire one's own artistic inspiration. Fourthly, the right objects will be collected independently and their internal morphology will be analyzed. The process of analysis will be recorded by sketch, drawing, photography and text analysis, to make visual notes and text notes by classifying the decomposed shapes, the relationship between shapes, the texture extracted and the color analyzed, etc. Fifthly, combining the fourth and fifth items of assignment, i.e. combining the analysis of excellent works and one's own visual text notes, the restructuring of elements and structural skeleton, and the experiment of variant works will be actively explored under the enlightenment and inspiration, so as to complete one's own artistic creation, and summarize and record one's own creative inspiration, thinking, process and effect.

4. Discussion in Next Class

From the methodological point of view, the way of learning discussed is more in line with the psychological process and rules of knowledge acceptance. The learning pyramid studied by the National Training Laboratory of the United States shows us that at the top of the pyramid, listening is the most common and conventional way of learning, which we are most familiar with, but the learning effect is the lowest, and only 5% of the learning content can be retained in two weeks. In addition, 10%, 20% and 30% of the learning content can be retained by reading, sound pictures and demonstration. Active learning methods, such as group discussion, can retain 50% of the learning content. So It is clear that the discussion link in the classroom is very necessary, which is a very efficient way of learning.

The PDA class focus on the communication between teachers and students, the small group cooperation between students and students, and the development of discussion learning mode. This discussion clarifies the leading role of teachers in the classroom and the main role of students. Teachers should effectively accomplish the goal of transforming theoretical teachers into practical tutors. The focus of guidance should be shifted from the propaganda of knowledge to helping students grind and absorb knowledge. It is no longer the "authority" and "dominance" of knowledge imparting that has been emphasized in traditional teaching mode, but step down from the platform and discuss with students, become the guide, promoter of students' learning, and helper in the process of students' knowledge internalization.

In the process of discussion, teachers should design logical, enlightening and guiding discussion topics and directions, communicate and discuss the results to achieve the corresponding teaching objectives and requirements, and discuss the design of each link to be logical, scientific and effective. According to the curriculum requirements, this chapter can be guided by the following aspects: 1. the richness of internal form and skeleton; 2. the connection between internal structure and skeleton style and its external form; 3. the way of studying internal form; 4. The possibility of experimental creation of restructuring, variation and artistic design according to the refined internal form and framework; 5. Inspiration and experience in the creative process. Through the guidance of discussion direction, students will have a comprehensive and in-depth discussion.

The teachers should create a positive, open and free atmosphere for the discussion and guide students' thinking and discussion go with a swing. The principle that students are the main body of teaching activities and the teachers only play a guiding role in cultivating students' awareness and habits of being diligent in thinking and innovative should be constantly abided by. For instance, the observation and analysis methods of internal morphology should be as diverse as possible to achieve more novel observation results. In order to obtain more abundant and novel internal forms, is there a way to break through the conventional observation? Many students give different angles of observation, different ways of cutting, etc., while some students even propose that the form of internal structure of the object can be obtained by using X-ray machine to observe the image, or the micro morphology of the object can be observed by microscope. This is undoubtedly a ground-breaking thinking, if not through the discussion, triggering the spark of thought impact, which is very difficult to be triggered.

Through the discussion, the students' ability to analyze, multiply, mutate and reorganize the form should be cultivated so as to achieve the rational understanding and subjective creation of the form, which is the teaching goal of this chapter. Through the presentation, analysis and interpretation of students' excellent works and the refinement, reproduction, variation and reorganization of their own works' form elements, and questioning, answering and even debating with each other, the cultivation of their thinking flexibility, artistic sensitivity and aesthetic ability of form can be promoted, as well as the most important stimulation of students' own creativity and unique experience, ultimately enabling them not only to grasp the basic principles of visual art, but also to abandon conventions, get rid of traditions, express meaningful forms in a real and unique aesthetic, and create the excellent works blended with their own ration and emotion in the world of art design.

5. Teaching Evaluation

Due to the application of PAD class, the way of curriculum assessment has also been adjusted accordingly. In order to evaluate students' learning effect fairly and reasonably, and to reflect the process of assessment, the overall assessment results are divided into two parts: the usual performance results and the final examination results. Performance scores are increased from 50% to 60% of the total score, and final scores account for 40% of the total score. Performance scores mainly include students' attendance, homework, learning notes, classroom discussions and other modules, the time and effort deserved for the quality learning will be scattered throughout the whole semester via the evaluation.

In order to urge students to actively participate in PAD and improve their enthusiasm for learning, the quality of students' work analysis report, personal discussion, group discussion, attitude and effect in the process of discussion, etc. are taken as scoring factors. Students can arrange their future study input according to the scores and feedback of their homework. By communicating with students, teachers can make more objective and impartial evaluation of students' daily input and learning quality, effectively improving the accuracy of students' performance evaluation.

By increasing the proportion of student's performance scores, refining the composition and criteria of their performance scores and improving the impartiality and objectivity of the overall evaluation, the students can be greatly motivated to devote themselves to learning, so as to carry out independent learning more actively and achieve the elevation of the effect of "teaching" and "learning".

6. Conclusion

The ideal higher education is to create a good teaching environment for schools and teachers, organize a series of appropriate teaching activities, promote students' autonomous learning, cultivate students' ability to think positively, solve problems and enhance innovative thinking. In the final analysis, learning is led and completed by the learning subject itself. From "teaching" to "learning", let students successfully complete the self-control of learning, and transfer from passive learning to active participation, which is the basis of future education.

The introduction of PAD class just conforms to this trend and puts it into practice on the basis of methodology. By exploring the application of PAD class in the course of Modeling Foundation, it can be seen that PAD class does not only emphasize the importance of teachers in the teaching process, but also attaches importance to the status of students as the learning subjects. By fully mobilizing the enthusiasm of teachers and students, the students' subjective initiative can be brought into full play and they will be guided to explore independently, so as to enable them to have the characteristics of independent learning, divergent thinking and innovative ability, consequently effectively enhancing the interaction between teachers and students and among the students, creating a good learning atmosphere, and improving the classroom teaching effect and quality.

References

- [1] Du Yanfei, Zhang Xuexin. "PAD Class": Practice and Reflection on the Reform of Classroom Teaching Model in Colleges and Universities [J]. Continuing Education Research, 2016, 3:116-118.
- [2] Chen Ruifeng, Zhang Xuexin and Zhao Lingling. Analysis of the Promoting Effect of PAD Class Teaching Model on Innovative Learning [J]. Educational and Teaching Forum, 2018, 48:174-176.
- [3] Qiu Yanchun. New Classroom of Eco-translation: "Two Courses, One Workshop, Three Docking" Practice and Exploration [J]. Journal of Dali University, 2019, 1:41-46.
- [4] Qin Xue, Zhang Chunbo, Qin Xin. The Practical Significance of the PDA Class in Colleges and Universities from the Cultural Perspective, [J]. Teaching and Educating People, 2018, 6:72-77.

- [5] Liu Mingqiu. Feedback Analysis of the Effect of PAD Class in Biology Teaching [G]. Microbiology Bulletin, 2018, 1:487-494
- [6] Guiyan, Zheng Lu. Summary of the Applied Research on the Teaching Methods in PAD Class [J]. Intelligence, 2018, 6:116.
- [7] Yang Guang. Reflections on PAD Class and College English Teaching [J]. China New Communications, 2018, 9:192.
- [8] Chen Ruifeng, Zhang Xuexin. Optimizing the Teaching of PAD Class to Enhance Students' Learning Autonomy [J]. Education and Teaching Forum, 2018, 43:169-171