Teaching Reform and Practice of Flipping Class

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Abstract. 21st century is a market-oriented time of market economy, and social production activities should adapt to the laws of the market. College education cannot be separated from social independent activities, and design professional teaching needs to be closely linked with society and the market. The “Indoor Environmental Design Course” is also joined the ranks of education reform. The curriculum reform is centered on “turning the classroom”. The main body of the teaching shifts from the teacher’s direction to the student’s main body. The goal is to learn from the students’ gains and active learning. It is practiced in four aspects: problem analysis, teaching system, curriculum, and practical feedback. With the environment unchanged, effective adjustments and updates were made to the problems and obstacles that occurred in the past teaching process. We need to achieve "integration" between teachers and students, achieve a true sense of "teaching" and "learning" organic combination.

The status of a domestic indoor environment design course

Indoor environment design, as the main course of art design, has long been a “point of view” of the traditional teaching model and the state of the spoon-feeding teaching, and in recent years the employment status of graduates shows that the relevant design industry generally requires its introduction of design talents have rich experience in project practice. The main problems in the analysis and research are as follows.

The disconnect between theory and practice

The traditional teaching model of "first practice after theory" leads to a disconnect between theory and practice. The abstractness and generality of the theory make students feel empty and ineffective. Students often lack the concrete knowledge of theoretical knowledge, understand vagueness, and have no way to start in practice, and they cannot combine abstract theories with concrete design cases, resulting in students lacking the ability to actively think and solve problems.

Student practice has no real experience and lacks the ability to solve practical problems. In the current theoretical teaching, the cases cited by the teachers, students often do not have the opportunity to experience on-site, it is difficult to think of the theory linked to reality and integration. In the design practice stage, the subjects are mostly virtual and cannot fully experience the design process and cannot grasp the specific problems encountered in the design practice.

Students' individual assignments are not conducive to training students' teamwork ability. For example, in a large-scale design project such as a catering space, the ability to train students in teamwork is particularly important because of the large number of jobs involved and the need for multi-sectoral cooperation. In the past teaching, student work was often performed by individuals alone. There was not enough collaboration among students and lack of teamwork.
Employment barriers in the workplace

The design-related industry generally believes that graduates of interior design do not have practical projects and there is no practical experience, so they cannot immediately bring economic benefits to the company.

The knowledge structure of graduates of interior design without project experience stays in the state of “ivory tower”. The expression of interior design cases deliberately pursues the form of expression, while ignoring the actual situation, and the production of construction drawings deviates from reality.

Graduates usually lack good communication skills, and their personal design concepts and solid lines cannot meet the actual needs of customers. Most companies or companies are still worried about the lack of practical experience. After graduates have the ability to independently execute projects, they faced the market temptation to change jobs or change jobs. Therefore, most companies are not likely to accept graduates without project experience.

Indoor environmental design reform analysis

Teaching system

Characteristics of students majoring in art-focus on self-centeredness, lack of team spirit; Strong dynamic weak static, self-control is relatively weak; direct emotional feedback is strong, creativity is outstanding; focus on self-realization, the pursuit of unique.

Course linking-analysis of the interoperability between professional and its conclusion that the main direction of this education reform is to guide students to seek design elements derived from life, naturalization, multi-dimensional thinking, dynamic emotional performance, to achieve the "scene" blend of creative effects. In order to cultivate students meaningful innovation and personalized exercise. At the same time, by using "Gagne's Cognitive Learning Theory of Information Processing" and " Wittlock ’s Generating Learning Paper", the analysis and research have led to a set of effective teaching systems.
Class interaction

Research and Analysis

On-site research and analysis will exercise students’ self-determination and analysis abilities and emphasize the subjectivity of students in the learning process. Students learn independently and teachers comment.

Classroom Performance

Video animation, rational judgment combined with perceptual creation, emphasizing the importance of “situation” for learning new knowledge. From innovative thinking to practical space, we focus on the cultivation and training of students’ practical abilities, the difficulty and intensity of active learning, teacher-student interaction, and teacher commentary.

Diversified design reference materials, breaking the limitations of professional one-on-one teaching, allowing students to think multi-dimensionally and systematically. Communication was published to inspire students to learn in multiple dimensions and actively mobilize students to participate in teaching. Emphasizing that learning is not a mechanical acceptance of new knowledge, realizing “teaching and learning” in the true sense. Teacher-student interaction, teacher and student reviews.

After-school homework

Comprehensive exercises, undertake related professional courses previously learned, comprehensive operations and exercises, form a complete "learning and practice" system, emphasizing the inherent relevance of old and new knowledge. Develop student system ability to learn and practice participation. Teacher-student interaction, teacher and student reviews.
Table 1. Educational reform process.

<table>
<thead>
<tr>
<th>Form</th>
<th>Traditional form</th>
<th>First teaching reform</th>
<th>Second teaching reform</th>
<th>Flipping Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Topic</td>
<td>Team work</td>
<td>Team work</td>
<td>Team work</td>
<td>Team work</td>
</tr>
<tr>
<td>Topic</td>
<td>Unified proposition</td>
<td>Free proposition</td>
<td>Free proposition</td>
<td>Free proposition</td>
</tr>
<tr>
<td>Design</td>
<td>Sketch=Interior space design, 1set(Floor plan, Elevation plan, Lighting plan, Profile plan) +Space effect diagram</td>
<td>Sketch+Computer graphics =Interior space design, 1set(Floor plan, Elevation plan, Lighting plan, Profile plan) +3D Space effect diagram</td>
<td>Sketch+Computer graphics =Interior space design, 1set(Floor plan, Elevation plan, Lighting plan, Profile plan) +3D Space effect diagram+Display exhibition</td>
<td>Sketch+Computer graphics+Animation production =Interior space design, 1set(Floor plan, Elevation plan, Lighting plan, Profile plan) +3D Space effect diagram+Display exhibition+Modeling</td>
</tr>
<tr>
<td>Exhibitio n</td>
<td>Sketch+CAD</td>
<td>CAD+3D+PPT</td>
<td>Portfolio+PPT</td>
<td>Display exhibition+Modeling</td>
</tr>
</tbody>
</table>

Teaching Feedback

Knowledge system

Professional backbone knowledge and practical hands-on approach, through the entire set of knowledge systems, the plane, interior design and outdoor design, computer, hand-painted courses are effectively linked together to deduct and create, improve the "design bottleneck" state, highlights the importance of system learning.

Ability training

Professional technology has been strengthened, and the ability of computer-aided design has been generally improved. This has laid a solid foundation for participation in social professional practice. Heuristic teaching ideas are dominant. From imagination design to practice space, high-compression-type assignments not only do not overwhelm the students' enthusiasm for learning, but also stimulate everyone's interest in learning, innovation and personal development.

Practice exercises

Rational and practical, comprehensive exercise:
"The interior design course makes me feel that design is not like homework, but it is the brush that expresses our ideas." - Li Moran

"By the way of grouping different from the last semester, I studied with new partners. During the cooperation, I exchanged opinions and ideas. Through communication and exchange, we overcome a lot of difficulties together. I believe in the future design. It is also profitable" - Macho

"This semester has gained a lot, not only in terms of drawing, but more importantly, learning attitude, design cannot be idle and troublesome, although the process is more difficult, four creative revisions, 10 shading, but one semester down, feel their own professional Learning is more practical and more in-depth." - LiTian
Flip classroom teaching harvests

A new round of education reform is under way. The soundness of the teaching system and the improvement of the teaching model need to be explored continuously. This reform is just the beginning of a change in the concept of teaching in our school, and through several rounds of teaching I also deeply realized the importance of heuristic teaching. How to take student-centered “turning” thinking in the actual work process is an important mode and innovative method of modern teaching.

The flipping classroom of "Indoor Environment Design" is intended to emphasize the respect of student's personality development, train the students' self-determination and analysis ability, and emphasize the student's subjectivity in the learning process. Break the limitations of professional one-on-one in the past teaching, allowing students to think multi-dimensionally and learn systematically. From the exploration of innovative thinking to the practice of space, while emphasizing the cultivation and training of students' practical abilities, the interaction between teachers and students fosters the ability of students to learn systematically and practice participation.

It is hoped that the teaching reform of the “Interior Design Environment” course will become an important entry point for the teaching reforms of other specialized courses in the direction of art design. It will provide high-quality, high-level technical and applied talents to meet future social development and workplace needs. Advantages of teaching sustainable development.

References

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