

# *Research on Project-driven Immersive Practical Teaching Style*

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**Abstract**—There are some deficiencies in the traditional practical teaching. For examples, students remember numerous knowledge points, but can't grasp the relations between them and don't know how to use them and where can they be applied; students passively learn knowledge, and their interests and personalized needs are suppressed. Aiming at the problems, this paper put forward a novel project-driven immersive practical teaching reform style which based on constructivism and collaborative theory and took full advantages of project-driven teaching and immersive teaching. In course of applying this style in Web Design and Website Building practical teaching, the teaching effect is remarkable and it is proved that this style can effectively stimulate students' learning interest, initiative and creativeness, greatly improve students' practical ability, so that they can put what they have learned into practice and better adapt to the needs of future work. Universities, students and enterprises are win-win in this teaching style.

**Keywords**—Project-driven; Immersive; Practical teaching style; Web design; Website building

## I. INTRODUCTION

With the transformation of our school to application-oriented university, strengthening practical teaching links, deepening reforms of practical teaching and vigorously improving students' practical application ability have become the focus of attention of almost all teachers. At the same time, with the rapid development of e-commerce and the arrival of the "Internet plus" era, higher vocational skills and qualities are required for students majoring in e-commerce and marketing. Web design and website building have become necessary vocational abilities for them.

In order to improve the quality of practical teaching, help students realize the transformation of knowledge to ability, and effectively improve students' practical abilities, we analyze problems existing in traditional practical teaching, take full advantages of project-driven teaching and immersive teaching, explore and practice a project-driven immersive practical teaching style (PdI Style). This style builds immersive learning situations through actual projects of enterprises, guided by the knowledge and capabilities required for the project implementation, and helps students through team collaborative learning to improve their knowledge, professional skills and qualities required for future employment.

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## II. PROBLEMS OF TRADITIONAL PRACTICAL TEACHING

An application-oriented university lays emphasis on application, and the objective of its personnel cultivation is that make students possess high vocational qualities and strong professional abilities, and could be competent for actual jobs immediately after graduating. However, the vocational qualities and professional abilities of students cultivated by the traditional practical teaching style are far from the actual needs of enterprises. The deficiencies of the traditional practical teaching style are as follows.

### A. Students don't Know How to Use Knowledge

The traditional teaching is a knowledge-oriented teaching, its orientation is imparting knowledge, focuses on how much knowledge points students grasp but not how much of them can be used. This kind of orientation makes students lack enthusiasm, initiative and creativity in learning and most students only remember every knowledge point, but don't know the relationship between these knowledge points, nor do they know where these knowledge points can be used, and how to use them. So a large number of students are trained to be the one with high marks but low abilities. However what application-oriented university emphasizes is the students' practical application abilities, that is, the abilities that students use the knowledge they have had to solve the actual problems.

### B. Students Passively Learn Knowledge

In theory students should always be the subject of the whole teaching process. However, there is a dislocation of teaching subject in the traditional teaching: the subject position of students is often replaced by teachers quietly. Teachers' indoctrination is mandatory and one's own wishful thinking, however students only can accept it passively. In this circumstances, what the teachers give is not necessarily what the students need, and the individual needs of students are suppressed, the study of students is passive.

## III. PROJECT-DRIVEN IMMERSIVE PRACTICAL TEACHING STYLE

### A. Project-driven Teaching

Project-driven teaching is a teaching method based on constructivism, which designs the learning content into multiple research-based learning projects and innovative experimental projects, highlights the student-centered teaching

concept, stimulates students' interests in learning, encourages students independently to explore in the process of completing projects, develops students' ability to independently explore, analyze and solve problems and to transform theoretical knowledge into practical abilities and cooperative ability [1-3]. Project-driven teaching puts the cultivation of high quality applied talents into practice teaching, which can effectively stimulate students' interest in learning and improve their innovative and practical abilities [4].

### *B. Immersive Teaching*

Immersive teaching is to immerse students in the target language environment in language teaching [5-8]. The term "immersive" in this article refers to immersing students in specific projects. Immersion can take many forms, such as work situation, role situation, task situation, etc. No matter which form is adopted, the key is to create a situational atmosphere in which students can devote themselves wholeheartedly. By creating such an atmosphere, students can take the initiative to explore knowledge, construct knowledge and apply knowledge. We learn from the idea of immersion and create learning situations for students through project tasks.

### *C. Project-driven Immersive Practical Teaching Style*

Two key points of project-driven immersive practical teaching are the introduction of project and the creation of immersive situation. Firstly, we need to introduce a project with moderate difficulty as the driving force of teaching. Secondly, we need to create a learning situation that students can immerse themselves in through the design of teaching process.

#### *1) Project Introduction*

The projects used to drive teaching can come from two aspects: one is actual website construction projects from actual enterprises, and the other is virtual projects designed by teachers according to the actual projects of the actual enterprises. The key is that the difficulty of projects should be moderate. If the project is too difficult, it is easy for students to lose confidence and thus lose the interest and motivation to study. If the project is too simple, the purpose of training students' practical ability cannot be achieved. Therefore, the project difficulty should be moderate. On the one hand, the projects should be challenging; On the other hand, students should be able to achieve it through their own efforts. Only in this way can the morale and courage of students be aroused, the enthusiasm and initiative of students be stimulated, and the sense of achievement and satisfaction be obtained in learning.

Project introduction can also be carried out in two ways: one is to respectively introduce virtual projects and actual projects in two stages; the other is to introduce the two kinds of projects at the same time and implement them by different level student teams. The teams with strong ability can do the actual projects of enterprises, while the teams with weak ability can do the virtual projects designed by teachers.

#### *2) Basic Ideas of Teaching Process Design*

In order to create a learning situation that students can immerse themselves in, we divide the teaching process into the following three stages.

The first stage of course teaching is the cognitive stage. The task of this stage is to make students know the course, define the task and understand the method.

First of all, through the following four "to make clear", let the students have an overall concept to web design and website building course, have an overall understanding to course learning tasks and the goal to achieve, thus have a clear study direction. Only when the direction is clear can students know what to do, and at the same time only a clear achievable goal can stimulate students' learning enthusiasm and participation.

- To make clear the importance of website construction to enterprises, so as to make students clear the importance of course learning.
- To make clear the actual needs of knowledge, skills and qualities of enterprises for talents, so as to make students clear learning objectives, employment-oriented, and trigger students' demand for knowledge learning. When learning becomes students' own needs and students have practical goals and directions, learning will be motivated.
- To make clear the relationship between this course and other courses, such as principles of computer network, management information system, principles and application of database, e-commerce, Product Photography and Web Design, online marketing and online advertising, etc., so that students could have a systematic macro understanding of their future career needs of knowledge and skills.
- To make students clear the basic and the extended objectives to be achieved by the course. Class hours are always limited, and technology is constantly developing. Students should be clear about the basic and the extended goals to be achieved in course learning, as well as the trend of future technology development, so as to clarify the tasks and future direction of efforts.

Secondly, the teacher guides the students step by step to decompose the knowledge and skills required by the project tasks into knowledge points, micro-knowledge and micro-skills, and then guides the students to conduct independent knowledge construction with the deconstructed knowledge and skills. Different from the traditional teaching style, the knowledge and skills to be learned and mastered by PdI style students are all centered on practical project work tasks. Before learning, students have a clear understanding of why to learn, where to use after learning, and what kind of effect to achieve. When students have clear goals, they will have initiative and enthusiasm in learning. At the same time, these knowledge and skills are not instilled and taught by teachers, but are independently constructed and acquired by students through teamwork in order to complete project tasks. In this process, students' learning and practical abilities can be effectively exercised and improved.

Finally, let the students know the learning methods, ways and tools that can be used to achieve the course objectives, such as collaborative learning, knowledge mapping, online classroom, etc., so that make the students know how to do.

As soon as knowing what to do and how to do, the next step is just to act. At this time divide students into groups and enter the second stage of the course.

The second stage of course teaching is the independent knowledge construction based on project-driven and problem-oriented.

This process, on the one hand, is driven by an actual website construction project task assigned by the first stage of course teaching. Students should complete the project at the end of the course through course learning and group cooperation. The quality of the completed project will decide the score of the final examination of students. The project runs through the teaching of the course and creates an immersive task and work situation for students to learn the course, which drives students to independently explore and construct knowledge for completing the project tasks. The whole process of knowledge construction of students is based on the actual application of knowledge, so that students can truly apply what they have learned to use.

On the other hand, knowledge and skills required for project tasks are decomposed into various knowledge points, micro-knowledge and micro-skills. Then, guided by problems and supported by micro cases, students are guided and helped to complete the independent construction and practice of knowledge points and micro knowledge after deconstruction and transform knowledge into skills through practice.

The specific designs of teaching process in the second stage are as follows:

**Before class:** students explore questions and tasks independently; the teacher guides the students to learn, summarize and sort out the knowledge points they need to master through micro class, online class, open class, group discussion and other ways with questions and tasks, and draw the knowledge map. By sorting out and refining knowledge, students can realize systematic thinking and understanding of knowledge, guide students to make full use of modern information technology to solve practical problems in learning, and exercise and improve their learning ability.

**In class:** students discuss and demonstrate their practical application results in groups. Each time, 2-3 groups will present their knowledge mapping, technical application skills, learning experience and doubts, etc. Students will discuss with each other and further apply the results and deepen their understanding in practice.

In this process, teachers should make comprehensive comments and guidance from PPT production, language expression, thinking logic, knowledge understanding, adaptability and other aspects. On the one hand, teachers should be good at finding the merits on students, and give timely recognition and encouragement, which can not only enable students to obtain the necessary sense of achievement and satisfaction through their own efforts, and keep the motivation and enthusiasm for learning, but also allow other students to learn and grow together. On the other hand, teachers should also be good at finding and raising problems, guiding students to think and seeking solutions together. In this process, students are the subject of behavior, and teachers are

always the leaders and helpers. Students should be guided to discover and learn from each other independently. Teachers are only responsible for guiding and supplementing. As for the doubts and problems in students' independent exploration before class, teachers do not immediately give answers, but guide students to think and discuss, and try their best to find methods of solving problems through discussion and sharing among students. For example, take students' problem homework as a case to guide students to analyze and correct mistakes. Students are more likely to be attracted to practical problems in their own practice. In the process of analyzing and solving problems, students' practical abilities can be better exercised and their understanding of knowledge can be deepened. In addition, teachers should analysis and correct the cognitive errors in the process of learning and discussion of students, answer the problems that students couldn't solve, summarize and emphasize the emphases and difficulties, help students to strengthen the mastery of knowledge, and also appropriately leave some questions to students, so as to students to find the answer in the further exploration and practice after class.

In this process, students' professional quality and professional skills required for future employment can be comprehensively exercised and improved. In a word, only when the subject of teaching activity is return back to the students can the students get real exercise and growth.

**After class:** teachers sort out and summarize the knowledge and problems explored and discussed before and in class, improve and modify the knowledge map, and apply it in practice. Teachers can refer to the concept of data dictionary and give some practical skills and experiences in the form of data dictionary.

The third stage of course teaching is evaluation and feedback.

● **Evaluation contents**

This stage is the stage of curriculum assessment, which will evaluate and feedback the effect of students' curriculum learning from the aspects of knowledge construction and practical application.

● **Knowledge construction:** at the end of the course, summarize and integrate all knowledge maps formed in the course of learning, complete the final overall construction of knowledge of the course, display, communicate and evaluate feedback.

● **Practical application:** each group displays the project tasks assigned by the first stage of the course teaching and evaluates and gives feedback on the quality of each group's project completion.

● **Evaluation Methods**

The method of combining multivariate evaluation and graded evaluation will be adopted.

● **Multivariate evaluation** includes three parts: intra-group mutual evaluation, group mutual evaluation and teacher evaluation. The intra-group mutual assessment mainly examines students' awareness and ability of teamwork, as well as their communication and communication abilities,

through their working attitude, participation and contribution to teamwork. Group mutual evaluation and teacher evaluation mainly evaluate the quality of completion and presentation of project tasks of each group.

- Grading evaluation refers to the classification of students' grades into the basic level and the extended level. The basic level mainly assesses the completion of the basic requirements of the teaching syllabus, while the extended level is used to assess the students' extended learning ability.

#### IV. SUMMARY

Web design and website building is a very practical course. Practice has proved that project driven immersive practice teaching style with a guiding ideology of driven by project, orientated by problems, immersed by situation, subjected by abilities, can effectively stimulate students' subject consciousness, fully mobilize the enthusiasm and initiative of students, help to cultivate students' team cooperation consciousness and ability, the rigorous work style, and standardize the behavior of the habit, can effectively improve students' actual ability of systematically analyze and solve problems. Through the study and practice of the course, students have a deeper understanding and more comprehensive improvement of the knowledge, skills and qualities required for future practical work. Through this style, the seamless connection between talent training and the actual needs of enterprises is realized, and good teaching effects are obtained to achieve a win-win situation among schools, students and enterprises.

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