## Project Teaching Formulate And Practice Of Plastic Molding And Mold Design Course Based On Mosocloud Class

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**Abstract:** Coronavirus Disease 2019 (COVID-19) pandemic and other emergency have caused great influence on people's travel, work, study and life. The immediate impact on educations is the educator and the educated can't face to face. How to stop work without learning, The emergence of Mosocloud Class provides a new teaching mode for college teachers to make full use of modern Internet and information technology to carry out teaching reform, improve teaching quality and motivate students' learning enthusiasm. Taking Mosocloud Class as auxiliary teaching means, this paper carries out project teaching design for plastic molding and mold design course, and carries out teaching practice from the four aspects of pre-class preview, class teaching, after-class communication and teaching evaluation. The practice shows that the teaching model can effectively improve students' initiative, participation in learning and ability to solve practical problems comprehensively applying the knowledge they have learned. Mosocloud Class transforms teaching and learning now.

## **1. Introduction**

At present, we have stepped into the era of mobile Internet, they have been popular around us such as smart phones, tablets, laptops and so on. The Internet and mobile communication devices are more and more closely connected with our life. The development of modern information technology is changing the way of thinking and learning of human beings. In particular, the recent COVID-19 (Coronavirus Disease 2019) has greatly affected people's travel, work, study and life, forcing people to change their traditional way. The influence of COVID-19 makes it difficult for students at all levels to concentrate and for teachers to teach face-to-face. Keep learning even if you can't get to class on time. As a college teacher, how to make good use of the resources and convenience provided by various existing technologies and artificial intelligence to realize online teaching of both quality and quantity has become an important topic in front of us. In addition, we devote ourselves to fully mobilizing students' ability to learn independently and propose and solve problems in an independent environment. The purpose of taking full advantage of modern information and network technology to carry out teaching reform is to help students learn actively and autonomously, thus forming a new teaching mode. In this teaching mode, not only teachers can give full play to their own strengths and personality, but also students can study independently with the assistance of the Internet, mobile phones and computers to improve their learning ability and comprehensive quality. This maximizes the interaction and communication between teachers and students, in order to achieve better results of learning. Aiming at the course of Plastic Molding and Mold Design of science and engineering, this paper takes Mosocloud Class as the auxiliary means to explore and practice the new teaching mode innovatively.

## 2. Mosocloud Class Synopsis

The Mosocloud Class is a kind of intelligent teaching assistant. It is a new interactive teaching mode that comes into being with mobile Internet. With Mosocloud Class, teachers can create classes on PC or mobile devices and easily manage their own classes, sending notices, sharing resources, assigning and grading assignments, organizing online tests, discussing and answering questions, and conducting voting questionnaires, brainstorming and other interactive teaching activities. Students can study independently anytime and anywhere on mobile devices. All course information, learning requirements, courseware, micro-video and other learning resources released by teachers can be delivered to students' mobile devices in real time, so that students' mobile devices can become learning tools from now on, instead of just tools of social interaction and games.

The teaching mode of Mosocloud Class specially designed for teaching and learning in mobile environment is different from the traditional. It makes teaching and learning more relaxed, free and interesting. On the one hand, teachers can transfer various resources to students after setting up a course in the cloud class and share, copy and update teaching resources without having to make teaching resources again, which can greatly reduce teachers' work burden. On the other hand, students can use the cloud class APP on mobile terminals to view relevant videos, courseware and other course resources anytime and anywhere, or complete assignments assigned by teachers online, interact with teachers online, answer questions and so on. It pays more attention to students' independent participation, which adds a new teaching form for classroom teaching. Mosocloud Class is a combination of classroom teaching and Internet teaching, which adapts to the new requirements of the modern network information society and various public emergencies (such as COVID-19) for teaching activities. Under the changing learning environment both online and offline, the teaching and learning between teachers and students is no longer confined to the physical space of traditional classroom, but extends from the traditional offline face-to-face communication to the online real-time interesting interaction, thus making teaching and learning more relaxed, free and interesting.

# **3.** Project Teaching Design of Plastic Molding and Mold Design Course based on Mosocloud Class

"Project teaching method" is a teaching activity carried out by implementing a complete project. Its purpose is to combine theory and practice organically in classroom teaching, fully exploring students' creative potential and improving their comprehensive ability to solve practical problems. According to the requirements of the course syllabus, the course content are integrated in a project-like manner and systematic. The entire plastic molding process and mold design content are connected in series from the four parts of products, equipment, process equipment and mold materials. The injection molding process and mold design are mainly introduced in the teaching, and the general knowledge of plastic mold design is introduced in this part. In teaching other types of plastic mold design, only the parts different from the injection mold are introduced to highlight the key points and avoid repetition.

In the specific implementation process of the project, taking the development of injection mold as the core project, seven work tasks were carried out around the project and task-driven teaching was implemented. These seven tasks are shown in Figure 1, including of plastic forming foundation, plastic forming process, plastic forming mold and injection machine, mold structure design, pouring system design, molding parts design and structural parts design.



Fig. 1 Plastic molding and mold design course project design guide

## 4. The Course Project Teaching Practice Based On Mosocloud Class

Teachers occupy most of the classroom time to teach knowledge and infuse to students in traditional offline classroom. They are the "master" of the classroom. Students listen passively in class and have a single access to knowledge and information. Because they have little time to think independently, students have limited knowledge, which leads to low teaching efficiency and is not conducive to cultivating students' independent learning ability and creative thinking. Some students, unable to resist the temptation of mobile communication tools, "abscond" in class, play games, do not pay attention to the lecture, the learning effect is worse. In the constantly changing online and offline learning environment, Mosocloud Class is used as auxiliary means to change the traditional passive learning into active learning, cultivate students' habit of active thinking, and make students become the real masters of the classroom. Therefore, we have carried out practice in the course of plastic forming and mold design.

#### **4.1 Preview Before Class**

Teachers upload the program to be taught knowledge resources each time to class created in Mosocloud Class, let the student through the autonomous learning understand the content of the teaching before the class beginning, and provide the mind map to make students clear, which facilitates the understanding of the knowledge points better explained by the teacher in the next class. Project knowledge resources include several types of basic knowledge points, extensibility, physical model display and so on. They can be in various forms, such as PPT, audio, video, recording screen, etc. The content capacity is good for students reading and watching in 2-5 minutes. Whether the students have previewed before class, The Mosocloud class can automatically record and give students certain "experience value" reward, so as to motivate students to study independently.

## 4.2 In-class Teaching

In the teaching process, the interactive teaching function of Mosocloud Class can be given full play, such as class sign-in, voting questionnaire, brainstorming, work sharing, timing answering and so on can be carried out immediately, with feedback and comments. Before class, the function built-in Mosocloud Class such as one-key sign-in or gesture can quickly arouse students' enthusiasm and enable them to quickly focus their attention on the class not the playing. Compared with traditional way of sign-in, it can greatly save the time and prevent students from signing for each other. Classroom teaching is to integrate the knowledge points updated to the students before class for a better systematic structure. According to the interpretation of the content in the course, the tests can be set at any time whose forms are questionnaire, brainstorming, vote shake random candidates and other activities, students are able to get the corresponding empirical value after the completion of the activity, in addition, the accumulated empirical value could exchange the medal in the Mosocloud Class ,which no doubt has aroused the enthusiasm of the students' learning, and to

enhance their self-confidence.

This teaching mode is transformed from traditional teacher-led to student-centered. Teachers provide teaching resources to guide students to study, analysis and summarize independently and cultivate their ability to think independently. In turn, students' questions and answers in class urge teachers to constantly update the teaching content at any time, which really realizes that teaching and learning benefit each other.

## 4.3 Communication After Class

The function of Mosocloud class is very powerful. The learning experience and methods of students can be communicated and shared through the Mosocloud Class APP after class. Teachers can built up questionnaires, group work or brainstorming in the APP to direct students to share their feelings and rewards on the online platform. It is also possible to create virtual online learning communities through the class system, where students and teachers have equal status. In a word, Mosocloud Classes provides a new way of interactive communication online, which is conducive to the instant communication between teachers and students, and among students, as well as the cultivation of their ability of independent thinking and teamwork.

#### **4.4 Teaching Evaluation**

Mosocloud Class has the functions of teaching big data analysis and quality monitoring. It has three sections, resource report, activity report and learning situation report, to evaluate and analyze the teaching effect. This greatly improves the authenticity and objectivity of teaching evaluation. The function of big data analysis can enable education managers to truly grasp teachers' teaching and students' learning status and provide reliable basis for better teaching management. Mosocloud Class, intelligent teaching assistant!

## **5.** Conclusion

The appearance of Mosocloud Class transforms the traditional classroom teaching mode taken teachers as the main body of the class into student-centered, online self-study and offline, combining to make the students from the traditional passive learning into active learning. Teacher's main role is to guide students how to learn, cultivate ability of active learning and thinking habit, make them really to become host of the classroom. By using the teaching big data analysis and teaching quality monitoring unique of Mosocloud Class, teachers can constantly update the curriculum standards and curriculum content to improve the teaching level. Education managers can truly grasp the teaching and learning status of teachers and students so as to provide reliable basis for better teaching management. Take Mosocloud Class as the innovative means of curriculum teaching reform, so that teaching and learning will never be the same!

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