Research on the application of "O2O" teaching mode based on mobile communication platform in the course of air transportation geography

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Abstract. Although smart phones have greatly changed people's way of learning, it will also affect classroom teaching if it is not used normally. At present, this paper proposes an innovative teaching mode, which can connect classroom learning and extracurricular learning through mobile communication platform. The O2O teaching mode not only solves the problem of improper use of mobile phones, but also expands the breadth and depth of students' autonomous learning. First of all, this paper analyzes the teaching organization of O2O teaching mode in the aviation transportation geography course. Then, this paper puts forward some problems in O2O teaching. Finally, some suggestions are put forward.

Keywords: "O2O" teaching mode, mobile communication platform, the air transportation geography course

1. Introduction
At present, smart phones have become an indispensable tool in national life, which has changed the way people use the Internet. Mobile phones have many advantages, such as ubiquitous and instant. At the same time, the phenomenon of mobile phone invading the classroom is very serious. The smart phone based on mobile communication platform has become a key issue in Colleges and universities, which can improve the efficiency of students' learning. However, smart phones will also bring some negative effects to traditional classroom teaching. At present, the mobile network based on the mobile communication platform has covered the whole campus, so we have a good user base [1]. The online to offline Internet development mode (online to offline, O2O) has become the main mode in education, which can facilitate students' better learning. The teaching mode based on O2O can better adapt to the application of air transportation geography course, which is also an important trend of future education.

2. Teaching organization mode of O2O teaching mode
The learning period of O2O teaching mode can be divided into online and offline, which is mainly reflected in three parts: before class, in class and after class. We have constructed O2O teaching mode, as shown in Figure 1.
2.1 Before class period
Before class, the tutor should first announce the learning content and key points of the next class. Tutors can publish engineering application cases and reference materials in the platform bulletin board. Therefore, through the bulletin board, students can preview the course content and learn independently in advance [2]. Through questioning and discussion, students can complete the two dimensions of memory and understanding. Finally, through the application case, we can query the relevant information, which will deepen the understanding of students.

2.2 In class period
In the face-to-face class, the teacher can use 0.5 class hours to supplement in-depth and sort out knowledge points. Through the discussion of key and difficult problems, we can ask questions about students' self-study status, which will deepen the understanding depth and breadth of students' self-study. Finally, through the application case, the teacher can let the students discuss and understand the above problems in groups [3]. Through formal grouping, we can improve teachers' participation. Finally, teachers can make a summary and comment, which takes up one class hour.

2.3 After class period
Assistant teachers should finish the upload of test questions on the online platform in advance, and students can download the assignments in the bulletin board. At the same time, students can complete online tests, which will be more conducive to students to complete the final homework [4]. Through the online discussion section, students can consult with the Assistant teachers online.
3. The problems of O2O teaching mode in the course of air transportation geography
This paper is based on the field survey. 600 formal questionnaires were sent out, 587 effective questionnaires were sent out, and the effective rate was 97.83%.

3.1 Conflict between the old system and the new model
O2O teaching mode is a new teaching mode, which inevitably requires a series of new teaching management systems. Therefore, the traditional assessment system, teaching effect assessment methods, and teachers' workload assessment will change to some extent. However, the old system based on the traditional classroom teaching is difficult to change in a short period of time, which will limit the effect of the new model [5]. According to the survey results, the main problem is student assessment system, accounting for 65.6%. The second is teacher workload verification, accounting for 57.8%. Details are shown in Figure 2.

![Figure 2. Conflict between the old system and the new model](image)

3.2 Nonconformity between old capacity and new requirements
Compared with O2O teaching mode, the teaching ability of traditional teaching mode is not suitable for the teaching method of experience, which will seriously affect the teaching quality. O2O teaching mode has more requirements for teachers, such as computer ability, network management technology, task-based teaching, etc. According to the survey results, the main important ability is O2O teaching ability, accounting for 67.9%. The second is technical ability of network management, accounting for 55.8%. Details are shown in Figure 3.

![Figure 3. Nonconformity between old capacity and new requirements](image)
4. Measures of O2O teaching mode in the course of air transportation geography

4.1 Create a good interactive teaching environment
O2O interactive teaching method can help students to accept more easily, which needs to create a good interactive teaching environment. Through learning and transformation, students will better improve themselves. Therefore, through O2O course, colleges and universities will create a better interactive teaching environment, which will include online teaching environment and offline teaching environment a good interactive teaching environment will improve students' interest in autonomous learning. Therefore, teachers need to be good at using rich, vivid and vivid body language, which will better influence and attract students' attention. Teachers should actively organize offline interaction, which will be more flexible to grasp the teaching progress. By focusing on the knowledge of interactive teaching, we will better grasp the flexibility and openness of offline interaction. The teacher team should perfect its own information system, which will make the teaching content better. By uploading high-quality micro class videos and GIF pictures to the online teaching platform, students can choose their own teaching content. O2O interactive teaching method can reduce the gap between teachers and students, which will increase the opportunity of communication between them.

4.2 Changing students' learning style
College students must change the traditional way of learning. By changing the passive recipient status of knowledge, college students will become the active constructors of knowledge, which will ensure the main position of students. First of all, students should consciously participate in independent learning training. By mastering the right methods and skills, college students will become masters of learning. Secondly, students should arrange their study time and place according to their own situation. According to the level of knowledge construction, students can choose teaching video independently and control the playing progress, which will let students better control the autonomous learning. At the same time, students can make corresponding adjustments at any time according to their own learning situation. Finally, students can organize interactive learning groups. Through online and offline teaching activities, students can share their learning results and experience.

5. Conclusions
Therefore, we should deeply study the characteristics of mobile communication platform, which will better affect students' learning behavior. Through the study of O2O teaching mode, we can better use it in theory teaching and practice teaching.

References
[1] Liu Yawei. Research on O2O teaching mode and management mechanism based on the concept of flipped classroom [J]. New curriculum research, 2015 (11).
[2] Ding Yunhua. Application of online and offline (O2O) interactive teaching method in Curriculum Teaching [J]. University education management, 2016 (1).
[3] Zhang Hui. Discussion on the application of microblog in Distance Education [J]. Modern education technology, 2015, 25 (2): 53-60.
[4] Lu Heyan. Study on learning characteristics of microblog from the perspective of cognition [J]. Research on audio-visual education, 2010, (10): 78-80.
[5] Miao Rong, fan Lujun. Construction and practice of flipped classroom in the context of MOOC [J]. China's audio visual education, 2013, (5): 8-14.