Reform of Higher Vocational English Teaching Based on Mobile Moodle Platform

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Abstract. Teaching reform is a new curriculum resource based on the Internet and information technology (IT). In higher vocational English teaching, a new model of “Teaching after learning, teaching based on learning” has been implemented in teaching reform. In particular, supported by the mobile Moodle platform, the reform of higher vocational English teaching has played a positive role in facilitating the improvement of listening, speaking, reading, writing, and translation levels in students. In this paper, based on the current higher vocational English teaching practice, the development of English teaching reform supported by the mobile Moodle platform is explored. In addition, the contents of English speaking, reading, writing, translation, etc. are combined to discuss how to use the Moodle teaching reform to improve the English teaching effectiveness.

Keywords: Higher Vocational English, Moodle Platform, Teaching Reform, WeChat

1. Introduction
With the development of educational informatization in China, the development of English information classroom in higher vocational education is also in continuous improvement[1], and teachers and students have welcomed the teaching reform mode. The teaching reform highlights the characteristics of online autonomous learning by students [2-3]. Students can watch the course video in their spare time and complete the tasks of learning, testing, interaction, and communication online[4]. Through the mobile Moodle platform, students can carry out English learning anytime and anywhere. Teachers release the courseware to the platform[5-6], and students choose learning content according to their interests, learning objectives, knowledge gaps, etc., thus forming a new learning model that runs through the English class in higher vocational education, online and offline.

2. Overview of the moodle platform
Moodle platform is a textbook management system developed by Martin Dougiamas, an Australian
education expert. The system is based on constructivism education theory and is open to all countries in the world for free. Moodle platform has the characteristics of a friendly interface, simple operation, and complete teaching function. It has been widely used in network education at home and abroad and has become the leading platform of network education resources. Based on the Moodle platform, the mobile WeChat developed the moodle365 website, which can be accessed by mobile phone, PC and tablet, and is the entrance of the mobile Moodle platform. At present, many domestic colleges and universities have borrowed resources from the Moodle platform, which provides essential resource support for the development of independent learning and teaching reform in students.

As for the overall framework of learning, Bloom's goal classification only involves several fields of cognition, emotion, and skill, but ignores the whole situation and integrity of learning behavior. Therefore, we can refer to the four field goal classification method by Hornstein, and combine the stage characteristics of the three modes of pre-school knowledge transfer, classroom knowledge internalization and post-school knowledge transfer of Higher Vocational English, and finally form the overall classification framework of teaching objectives suitable for the English teaching mode of higher vocational education is shown in Figure 1.

\[
\begin{array}{cccc}
\text{Cognition} & \text{emotion} & \text{Skill} & \text{Behavior} \\
\text{Before class} & \text{In class} & \text{after class} \\
\end{array}
\]

**Figure 1.** Overall classification framework of teaching objectives of the mobile Moodle platform

3. **Design and management of higher vocational english teaching reform based on the mobile moodle platform**

The mobile phone WeChat official account of the entrance to Moodle 365 is applied as the primary way of information distribution and communication. The Moodle learning platform is set up on the platform of the Moodle to realize the network learning function of English. The online course design of mobile Moodle platform includes the following contents: Publishing preview tasks, including pre-class words and group translation tasks; publishing online courses and their auxiliary learning contents, which have certain expansibility, including communication and interaction between teachers and students in the learning process; course evaluation, mainly including assignment submission, evaluation, and on-site display. Classroom learning resources mainly include the on-site explanation, interaction, demonstration, and classroom activities of students.

In the state of English Teaching in higher vocational colleges \(T(s,a,s')\), i.e., the state transition function is the unknown training content \(\theta^{s,a,s'}\). Based on the mobile Moodle platform, the state of
English teaching in higher vocational education is defined as follows, i.e., some can observe the state of higher vocational English teaching. The \(<S_p, A_p, Z_p, T_p, O_p, R_p>\) six tuple approach is described, where \(S_p\) is a discrete state \(S\) and \(\theta^{a,i}\) cross product; MDPs the collection of English teaching contents in higher vocational education \(A\) and \(A_p\) is be consistent; \(Z_p = S\). State transition function \(T_p(s, \theta, a, s', \theta) = P(s', \theta | s, \theta, a)\) it can be decomposed into the product of two conditional distributions:

\[
T_p(s, \theta, a, s', \theta) = P(s', \theta | s, \theta, a) = P(s | s, \theta, a) P(\theta | s, \theta, a)
\]

(1)

Where \(\delta^{ij}\) stands for a Kronecker function, which meets the following requirements:

\[
\delta^{ij} = \begin{cases} 
1, & \theta = \theta' \\
0, & \text{otherwise}
\end{cases}
\]

(2)

According to the basic definition of the mobile Moodle platform, it can realize the effective transformation of English teaching states in higher vocational education, which can be transformed into English teaching states in higher vocational education. In this problem, because the state is unknown, the probability distribution of the state is regarded as belief. By introducing this concept, we can realize the English teaching behavior in Higher Vocational Colleges through the belief monitoring method. Based on the Internet plus update rule, we can get the following update of belief \(b(\theta)\):

\[
b^{i,a,i}(\theta) = \eta b(\theta) P(s | \theta, s, a) = \eta b(\theta) \theta^{a,i}
\]

(3)

Where \(\eta\) represents the normalization factor.

Moodle platform has perfect data statistics functions, including network logs, test reports, and various kinds of network questionnaires. These resources play an essential role in supporting the implementation of Higher Vocational English teaching reform and are an vital way to encourage students to engage in personalized English learning and improve the pertinence of teaching evaluation. Course management is divided into the following contents: Moodle platform online course management. After entering the editing page of the Moodle platform, the teacher will see two sections: “add resources” and “add activities”. “Add resources” mainly shares resources, including some audio, graphic, and video information related to learning web pages, knowledge links and learning files, which can help students to preview before class. “Add activities” mainly include online learning instant test, activity voting, and scoring; making SCORM courseware; developing Wiki Collaboration, etc. Wiki Collaboration realizes the function of multi-user editing page together; online instant test includes all kinds of Vocational English exercises, including multiple-choice questions, filling blank questions and some gestalt filling blank questions; some one-to-one online communication; online listening, speaking and writing. In the discussion area, students can discuss online in the form similar to the traditional BBS; the homework section is used for students to upload homework; voting and
questionnaire survey are tools of online learning survey to collect students' opinions and suggestions on Higher Vocational English teaching and learning.

In the mobile Moodle platform, Wiki Collaboration is the most widely used function, in which students can complete listening, writing, reading, and many other contents, and can also participate in voting, questionnaire, and online test. From the perspective of students' application practice, the wiki is extensively used in the translation study of students' group cooperation, which is conducive to the realization of students' “intensive listening” in the audio-visual link. Besides the test function is used for routine learning detection, ten AB review questions are designed as a group, and students can complete these exercises in a fragmented time. The function of voting is that after students finish the preview task, they suggest teachers to explain what content in a class by voting, which is helpful to improve the pertinence of English Teaching in Higher Vocational Colleges and find out the key and intricate knowledge in teaching. The questionnaire can test and evaluate students' periodic learning achievements to help teachers improve the existing teaching mode and teaching links.

4. Application of mobile moodle reform in higher vocational english teaching

English Teaching in higher vocational colleges has its particularity. In addition to the cultivation of students' ability in practical English, it is also necessary to optimize the English teaching mode in combination with the characteristics of their professional development. Among the teaching reform resources of the Moodle platform, there are many video resources with rich content and flexible forms. Video learning can create a more real learning situation for students to make up for the lack of English communication situations in their native language environment. For example, in the English course of student career planning, the Moodle platform can help plan careers, and jobs' speech is very popular with students. In the application of teaching reform, teachers can preset the following questions for students: How did jobs grow up? What is his/her opinion on career planning? What inspiration does his speech have for your career planning? Students can have a more systematic understanding of the above issues through pre-class learning, and at the same time, think about their career development planning. By using Moodle resources, it is possible to play subtitle free speech videos for students, which can help them to listen carefully and complete listening assignments. In such a professional situation, the combination of vocational English teaching reform and vocational education features, thus implementing the online learning, offline interaction, situational exploration, resource sharing, and other diversified modes, which is conducive to improving the implementation effect of Vocational English teaching reform.

In the analysis of the functions and types of teaching evaluation, we can see the process orientation and development orientation of teaching evaluation. Based on this, combined with the characteristics of Higher Vocational English teaching model, this study is mainly based on the comprehensive evaluation method of the combination of diagnostic, formative and summative evaluation. It focuses on formative evaluation to form the cognition, emotion, skills, and behavior of students for developing the comprehensive evaluation framework. It will be further discussed and constructed with the help of the concept of development evaluation. According to the function and type of teaching evaluation, combined with the idea and method of developmental evaluation, this study attempts to build an evaluation framework of Higher Vocational English teaching mode, as shown in Figure 2.
Vocational English teaching makes full use of new teaching methods, resources, and information technologies. It is an optimistic way to improve the quality and efficiency of English teaching in higher vocational colleges.

5. Conclusions
In conclusion, the teaching reform of mobile Moodle platform has offered great convenience to the development of English teaching in higher vocational English teaching, which has also put forward new requirements for the development of campus network and IT literacy of teachers. Some higher vocational colleges have yet to popularize the Moodle teaching reform due to network issues. However, from the overall trend, the application prospect of the Moodle platform in the future is still optimistic. It is believed that with the joint efforts of English teachers and network technicians, the English teaching reform based on the mobile Moodle platform will be further improved and become an important way to improve the quality and efficiency of English teaching in higher vocational colleges.

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