# Research on English Teaching Model of JiTT in Higher Vocational College Based on Mobile Teaching Assistant

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Abstract: Just-in-Time Teaching (JiTT), translated as "Timely Teaching", is a new kind of teaching and learning strategy that appeared in American college in the late 20th century. In recent years, JiTT has been gradually applied in higher vocational education. The specific research content of the project is taking "JiTT" as a kind of teaching mode change, taking the advantage of mobile information resources as well as teaching assistants, giving students a strong control over the autonomous learning. Students can watch videos before or in class by mobile teaching assistants, through teaching guidance and technical tools for self-organization of inquiry-based learning, through group discussion and teacher answering questions in class to internalize knowledge, and they are encouraged to collaborate with other students in learning. In building a learning environment, teachers should also consider how to supervise students' learning behavior and provide timely feedback to students who have problems. In the course of classroom teaching, teachers should rearrange the traditional classroom, break the pattern of "teachers in the upper and students in the lower ", and create a harmonious and equal learning environment. This model has great inspiration for the English teaching in higher vocational colleges.

### 1. Introduction

One of the first to put forward JiTT teaching strategy was some physics teachers from the American Air Force College and the Purdue University. In 1999, 4 physics teachers from these two universities co-authored the first monograph entitled "Just-in-Time Teaching:Blending Active Learning with Web Technology" . This book gives a detailed introduction to the connotation, characteristics, implementation process, application method of timely teaching, as well as its applicable teaching and learning objects. The lead author of "Just-in-Time Teaching" Novak gives the definition of JiTT: JiTT is web -based study assignment and active learner classroom, a new type of teaching and learning strategy on the basis of both interaction.

One main author of "Just-in-Time Teaching" prof. Novak is a nearly 40 years teaching teacher at the university, he found that in the process of physics teaching for many years, although the students have his lesson once a week, every time 3 ~ 4 hours, classroom teaching makes students feel boring, often difficult to inspire their interests in learning, so he has been thinking about the reasons for this in undergraduate teaching at the university. He believes that this is not a particular problem in one country, but a common problem in almost all countries' undergraduate teaching. How to realize effective teaching is not only the problem faced by higher education, but also the problem faced by the whole educational field. The Internet has become increasingly popular in the era, network could be used in information transmission which has unparalleled advantages, such as fast, rich and unlimited sharing, we can put it into the teaching of undergraduate course, change the original teacher speaks, students listen to, the traditional approach of infusion, into the communication between teachers and students at any time and anywhere, which will greatly stimulate students learning initiative and enthusiasm, so as to change the traditional education idea, teaching idea and teaching model, to achieve effective teaching (i.e., enhance the discipline teaching quality). This is the starting point for the creators of Timely Teaching and the background of Just-in-Time Teaching.

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## 2. Current research situation at home and abroad

#### 2.1 Current research situation abroad

Compared with the current situation of theoretical research in China, JiTT's research in foreign universities is becoming more and more perfect and mature, covering many courses in natural science and humanities. Novak proposed that the JiTT is the best choice in the current undergraduate teaching mode, and one of the core contents described in detail. Novak and other auhors designed the five content sections of the JiTT network and divided the teaching evaluation into three fields, trying to make quantitative and qualitative evaluation from a broader perspective. They emphasized the role of technology and the importance of interaction between teachers and students. Besides that, there are applications in the teaching practice research, for example, explores the application of JiTT in biological teaching, and evaluate from attitude, motivation, student learning habits, interaction and cognitive target. The key "feedback chain" is analyzed, and the successful implementation in computer science curriculum is introduced in detail, from positive and negative aspects. The main content of the present study is the "kaleidoscope" project of the construction of digital library, such as Nowak, puts forward the construction of digital library needs to collect the information of the past and, at the same time to improve evaluation technology, realize resources sharing. Overall, study abroad has made certain achievements, the research content involves JiTT connotation, implementation process, practice, teaching evaluation and so on, the researchers have experts and subject teachers, the depth of research gradually focus on the application effect in practice teaching and evaluation.

#### 2.2 Current research situation at home

The introduction of JiTT into the field of education in China is a bit later than that in foreign countries. In recent years, JiTT has been applied to the teaching of higher vocational education. Such researches on timely teaching methods in China mainly focus on introducing JiTT's connotation, implementation steps, characteristics, case studies, and Inspirations to university teaching in China, so as to further promote the reform of university teaching in China. In general, from the papers published about JiTT to the current situation analysis, the domestic research on JiTT teaching mode is still in the preliminary stage, there is no mature, comprehensive and systematic research, practice and teaching evaluation in higher vocational subjects in JiTT, teaching evaluation dimensions and support platform design research are relatively small, lack of the research teaching mode as a whole system.

## 3. Mobile teaching assistant "Moso Teach Cloud Class"

Moso Teach Cloud Class is officially launched by Moso Teach technology on November 20, 2014. which is a mobile APP teaching assistant, teachers can use this APP, create a class by inviting code and let the student in the class join the cloud class, all the students' smart phones connect immediately into an immediate feedback of teaching network, teachers can easily carry out teaching activities, and manage each student in cloud class. Using the cloud class, teachers can improve communication and interaction efficiency with students, and carry out micro-course or flipped classroom teaching. Teachers can send course notices, push courseware, micro-video, pictures, audio, documents and other resources to students' mobile devices, and remind students to learn. In class or after class, teachers can carry out teaching activities such as voting, questionnaire and brainstorming, which will make the class more lively and interesting. With the interactive digital teaching materials of cloud class, teachers can also realize the evaluation of each student's learning progress tracking and learning effectiveness. Use "Moso Teach Cloud Class" flip the classroom teaching practice and research are numbered, this research creates the higher vocational English learning, and lay a solid foundation to improve the English ability of students and employment.

This project integrates the JiTT teaching model into higher vocational English teaching, which has the following significance:

It is helpful to promote the integration of information technology and curriculum and improve the quality of English Teaching. In this project, JiTT combines the advantages of traditional classroom teaching with the new way of communication provided by mobile teaching assistants. It is a teaching and learning strategy based on the interaction between web-based learning tasks and active learners' classroom. The cultivation technique is applied to the teaching in higher vocational education is conducive to students' learning initiative, innovation spirit and practice ability, JiTT can give full play to the advantages of information technology, let students use mobile phone, tablet computer and other emerging mobile media to learn, to adapt to the current students' way of life, help to improve the quality of English teaching.

It is helpful to establish a new teaching model with the integration of "teaching, learning and doing". The current vocational education emphasizes students should have sufficient theoretical support, and requires the students to have a strong ability to work in practice, as a higher vocational colleges, through the investigation of employment of students, we fully understand the demands and requirements of the enterprises, construct flipped classroom teaching mode in Higher Vocational Public English, and the "teaching, learning and doing" is blended in among them, which helps to improve the students' interest in English learning, English learning enthusiasm and initiative. Teachers are the dominant and students as the main body to guide students to develop in the direction of autonomous learning, personality learning and practical learning. It lays the foundation for improving the students' practical operation ability and employment, and also leads the innovation of the learning style.

It helps to promote the reform of English Teaching in Higher Vocational Colleges. Compared with the traditional classroom teaching mode, JiTT teaching mode has great advantages. It combines the direct teaching and mixed teaching mode in the traditional classroom, and applies the classroom time to the extreme. We should carry out research on JiTT teaching mode, explore suitable models for classroom teaching in China, and provide theoretical and practical experience for effectively guiding our teaching reform experiments.

In practice, the emergence of mobile teaching assistants enables learners to break through the limitations of time and space, and truly achieve ubiquitous learning and constantly improve their English level with trivial time. This new study method can truly change the traditional teaching mode, learning can not rely on teachers, and students' feedback in the learning process can accelerate the development of mobile learning to more mature direction, optimizing the mobile learning teaching methods, perfecting the mobile learning of learning resources, promoting the technical support of mobile learning, makes mobile learning in English teaching based on the smart phone has more practical value. Meanwhile, the use of smart phones for English learning can stimulate learners' learning motivation and interest, improve learners' enthusiasm, and fully display personalized new learning styles.

The development of a new round of curriculum reform and information technology, for our education, educational ideas, educational objectives, teaching content, teaching form, teaching method and teaching means have put forward the new challenge, this requires our teachers based on traditional teaching advantages, changing teaching behavior, teaching strategies and the new teaching method in practice, make students vivid, lively, and active learning, dare to explore, innovate, develop students' personality and potential. However, the current information technology's actual use and effect are often not satisfactory. Information technology is only on the surface, and has not really blended with the subject teaching. Therefore, we aim at the research of JiTT in Higher Vocational English teaching mode of mobile teaching assistants, based on the purpose, in the "JiTT" under the guidance of the reconstruction of efficient classroom, the choice of this topic, will have far-reaching significance of development of our school to improve the quality of teaching and school development.

## 4. Ways to design and solution to the problem

The JiTT teaching mode is a new teaching mode which combines "web-based learning task" and "learner's active learning classroom" through computer network. The model involves three stages in

the implementation of the five steps, the first, second and third steps belongs to the first stage of "web-based learning tasks" (preview and in class); the fourth step belongs to the second stage and belongs to the learner's active learning class (discussion and demonstration); the fifth step is the third stage of "web-based learning tasks" (problem inquiry).

JiTT teaching mode has obtained the very good effect since its birth, but because of its pure theory is mainly aimed at the stage of undergraduate teaching and development, so the applicability and practical completely follow in high vocational education is obviously not appropriate. The following problems should be paid attention to the design of JiTT teaching mode in higher vocational education.

Teachers publish curriculum resources and Warm-up Questions on mobile teaching assistants. Teachers design learning tasks, providing micro videos and learning resources, learning resources associated with this class content mainly includes animation, video, audio, images, etc., to help students clear class content, goal, method of autonomous learning and learning test, etc. Micro videos and learning resources are uploaded to the "Moso Teach Cloud Class" in advance, and students are informed to use mobile phone terminal to watch video, complete the relevant work. For the contents students could not understand, they can make sense of by watching videos and communicate through discussion area with the teacher or other students, to understand questions. At the same time, students should complete the targeted exercises assigned by the teacher to deepen their understanding of the content. In this part, the most important thing is the teacher's collection of students' work, careful analysis, emphasis and difficulty in understanding students self-study, and the discussion of heated discussed questions. The task should pay attention to the practice, accord with the talent training plan and the professional post requirement. Teachers should be good at grasping the latest topics in English when designing classroom teaching tasks, and can improve students' professional sensitivity. The choice of the task should be close to the real work, have certain difficulty, arouse the student's curiosity and the inquiry enthusiasm, fully arouse the student's study enthusiasm.

Students carefully preview and give feedback to teachers through mobile teaching assistants. Students should use mobile teaching assistants to give feedback to teachers on their previews and preliminary solutions of tasks according to the preview requirements assigned by teachers before class. Resource selection focuses on diversity and enhances guidance on how students use resources. Due to the professionalism of higher vocational education, website not only provides related network resources, but also provides information for related industries and enterprises, so as to help students accomplish their tasks more effectively, to know the task is the embodiment of the work in the real situation in the future. At the same time, according to the students' different knowledge base and skill level, enhance the guidance of how to use network resources scientifically and effectively.

Teachers make relevant adjustments according to students' feedback. The teacher should pay attention to the change of role when setting "learner's active learning classroom". Using the JiTT mode in higher vocational education, the teacher becomes the instructor of the classroom and assists the students in the discussion, solution and demonstration of the task. Focus on exploring students' different talents and encourage students to express their ideas bravely and make bold innovations.

The teacher sets "learner's active learning class". On the basis of completing the above feedback loop, the JiTT model also requires teachers to use group discussions, demonstrations or experiments to help students create active learning classes. In the process of these activities, teacher's role, a shift from the traditional elites to guide and spiritual guide, make students become the main body of the classroom, so as to fully arouse the enthusiasm of students in the learning process, initiative and creativity.

Assessment and evaluation mechanism of JiTT teaching mode. When applying the JiTT teaching mode in higher vocational education, the evaluation mechanism should be appropriately increased for students to complete tasks and classroom activities. At the same time, it also needs to evaluate teachers' task themes and lead students to create "active learning classroom" effect of students, so as to improve the application effect of the JiTT teaching mode.

## 5. Conclusions

This project based on mobile teaching assistants JiTT research and practice of higher vocational

English teaching mode, give full consideration to the characteristics of higher vocational education and higher vocational students' individuality demand, now China continues to carry out the comprehensive quality education, a variety of student work, social practice, sound body training, all kinds of competitions, theatrical performances and other activities are often lets the student can't study in fixed class, as a result, the students really need to learn by the mobile teaching assistant, its great flexibility in advance can make their own arrangement --- learn or make up a missed lesson, do courses and activities, learning anytime and anywhere, and comprehensively improve the students' comprehensive quality. Flip the classroom content of higher vocational colleges should combine the actual situation of the school, perfecting the innovation teaching process and effects, building a new English teaching pattern in conformity with the characteristics of vocational education, to cultivate high-quality skilled talents for economic development.

In recent years, the large-scale development of 4G network and WiFi has provided environmental support for students to use mobile teaching assistants. At the same time, college students who are at the forefront of the times are highly receptive to new things, and it is easy for them to learn to use "cloud class" mobile teaching assistants. All in all, in both the students' level and technology level, " cloud class" mobile assistant is advanced, convenient, personalized and entertaining, therefore the applications of mobile teaching assistants to JiTT is an inevitable trend in English teaching.

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