A Study on the Information-based Teaching Model of College English Pronunciation Course -- SPEL Pronunciation Correction Method

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Abstract: In response to the disparity in English pronunciation proficiency observed among first-year English majors, and drawing upon the technological advancements of the information age, a novel teaching model has been formulated for English phonetics courses. This model is designed with the intent of addressing the limitations inherent in traditional phonetics teaching and emancipating instruction from the confines of the conventional classroom setting. Its primary objective is to facilitate a transition from passive to autonomous learning. Furthermore, it endeavors to reorient the pedagogical approach from one characterized by mechanical rote-learning to a more dynamic and interactive educational experience, incorporating elements of self-reflection alongside external evaluative measures.

Key words: English pronunciation, information technology, SPEL pronunciation correction method

1.Course content analysis and learning situation analysis

English pronunciation course is a basic course specifically designed for first-year English majors to cultivate students' proficiency in English pronunciation, starting from the correct pronunciation of phonemes, including vowels and consonants. This course is crucial for enhancing students' English speaking and listening skills, laying a solid foundation for English learners.

Phonetics issues has become a prominent and urgent challenges for freshmen majoring in English as English pronunciation and listening were often ignored when they were in high school. It leads to a significant disparity between high school and university English curricula and requirements. Coupled with the influence of dialectal pronunciation, many English majors exhibit unclear and non-standard pronunciation in phonetics and speaking class upon entering university. Inaccurate pronunciation hampers students' ability to distinguish sounds but also severely impedes the improvement of their listening skills which directly affects the communication effectiveness, undermines their confidence, and consequently hinders the overall enhancement of their English language proficiency.

College students and adults have passed the critical period for language learning as generally recognized by education theories (ages 4-12), and their language abilities cannot rely solely on the reflection and external language input. Therefore, for these foreign language learners, more emphasis should be placed on the scientific and systematic learning, and the reasonable design of teaching activities should be combined with language output methods such as context creation and speech input. It is essential to design teaching activities rationally to enable students to choose learning partners autonomously and engage in multidimensional learning in an encouraging environment. Only in this way can learners have methods to rely on, rules to follow, and gradually achieve or even surpass the learning objectives of the course with confidence.

2.Course Objectives and SPEL Method

The objectives of this course are to correct English pronunciation, enabling students to accurately articulate English phonetic symbols and vocabulary, thereby enhancing English communication and listening skills while fostering students' independent learning abilities. Particularly, to facilitate continued learning outside the classroom and in daily life, simulated language input scenarios are incorporated to align with the pervasive learning goals of the information age. In response to learner needs and course objectives, a comprehensive, scientific, and effective method is required for university English phonetics courses. The SPEL Pronunciation Correction Method integrates learning and pronunciation methods into a comprehensive approach. Its name, SPEL, represents the initial letters of the English words emphasizing the aspects of the method: "Self-awareness," "Partner," "Exposure," and "LAST" method. The "LAST" method refers to specific pronunciation techniques, with each English letter representing the initial letters of words related to pronunciation, emphasizing the specific positions and movements of "Lips," "Airflow," "Sound," and "Tongue," which are crucial elements for developing correct pronunciation and natural intonation. Specific methods include:

"Self-awareness" emphasizes conscious attention to pronunciation processes and methods within the oral cavity. Students are encouraged to practice using recording software and mirrors for post-class exercises.

"Partner" emphasizes the supervisory role of partners in the phonetic learning process. It is challenging to identify one's own pronunciation errors, as the saying goes, "Onlookers see more than players." Timely feedback and evaluation from learning partners can significantly aid in improvement, leveraging the power of mutual evaluation to achieve better results with less effort.

"Exposure" underscores the importance of context in language learning. The more comprehensive the language input, including sound and semantics, the stronger the language proficiency. Hence, video design and production are indispensable safeguards for phonetic learning.

The "LAST" method details the specific techniques for English phonetic pronunciation. Detailed requirements such as lip distance, airflow intensity, vocal cord vibration, tongue position, height, and even mouth shape must be met to accurately pronounce English phonetic symbols and words.

3.Course Design Philosophy

In order to implement the method and achieve the course objectives, the university phonetics course is divided into three parts: theory, practical teaching and post-class group exercises. These components are coordinated and interconnected to ensure the integrity of the course. English is the primary language of instruction, and teachers are committed to actively engaging students in learning, instilling a growth mindset throughout all activities. In addition to guiding students through the learning content, students are encouraged to ask questions, participate in creative activities, and apply their language skills in simulated scenarios. These activities help students develop skills that will enable them to continue learning in everyday life outside of the classroom. In addition, each student is exposed to native English speaking teachers and each student has the opportunity to observe how the language is really used. Combining Chinese and Western educational methods, teachers at Chinese-foreign cooperative institutions have developed a curriculum to stir up students' interest and equip them with the skills for independent learning both inside and outside the classroom.

(1) Teaching Strategies Design

The course adopts the trinity teaching design of "Teach-Learn-Assess." In the aspect of teaching, English native-speaking teachers' lectures are supplemented with teaching videos to enhance the visibility of pronunciation methods. The videos present live demonstrations combined with dynamic animations, improving the visibility of pronunciation methods. Through videos, students can intuitively understand pronunciation methods and solve the problem of teachers' inability to demonstrate tongue positions and airflow changes inside the mouth in traditional phonetics classrooms. Pronunciation positions, including tongue tips and lip shapes, are detailed, enhancing scientificity and providing students with methods to follow rather than mere imitation.

In the aspect of learning, a combination of self-learning and peer learning is employed. Videos help students break the constraints of time and space, enabling them to engage in independent previewing, learning, and reviewing anytime, anywhere. This helps alleviate the contradiction between expanding teaching content and compressing class hours, creating a better language input environment and increasing learners' opportunities for independent learning. The software platform provides a shared learning section where students can observe each other's learning progress and scores, and participate in pronunciation accuracy competitions. This interactive design enhances the fun of learning and stimulates students' motivation.

In the aspect of assessing, the teacher's classroom assessment is combined with the voice software assessment. Through timely diagnosis and feedback, immediate self-correction can be realized, and the interactivity of language learning and the objectivity of evaluation can be increased. This method completely changes the dilemma that teachers cannot correct students' pronunciation one by one in the English speaking course, and provides students with a more effective learning path.

(2) Video Production and Speech Matching Software Development

The key to video production lies in enhancing the visualization of speech to promote speech reinforcement, which is of significant importance in creating microlecture videos for phonetics instruction. Consequently, there is a high dependence on video quality. Videos utilize a combination of live demonstrations and animated designs that incorporate dynamic graphics. The live demonstrations include both foreign teacher demonstrations and student-led practice sessions. Foreign teachers explain pronunciation positions and methods, while students demonstrate pronunciation. Content in the videos is organized into groups for comparison, focusing on commonly mispronounced or confused phonemes. Emphasis is placed on explaining correct pronunciation methods and providing guidance on common mistakes, using real-life examples to illustrate the awkwardness of mispronunciation, thereby highlighting the importance of pronunciation and enhancing learning interest and relevance. The specific production process involves dual-camera recording of live speech demonstrations and embedding bilingual subtitles (English and Chinese) using Premiere Pro editing software. Additionally, graphic technology is used to illustrate dynamic diagrams of tongue positions and movements, airflow directions and patterns, and vocal cord vibrations within the oral cavity, providing learners with a clearer understanding of the articulation process.

The development of speech matching software aims to visually represent the pronunciation of native English speakers through waveform displays. Learners can record their own pronunciation and input it into the software to generate their own waveform. The software compares the two waveforms, providing information on types and degrees of mismatch in pitch, duration, etc., and offers a matching score to visually display pronunciation problems, providing learners with direction for improvement.

(3) Flipped Classroom Design

In the flipped classroom mode, for students, in the pre-class preview stage, they can learn independently by watching videos and courseware to master the correct pronunciation method. Then, through the speech testing software, they can independently evaluate their own preview effectiveness and identifying their pronunciation problems and learning difficulties. If they fail to meet the expectations, they can watch the video repeatedly for self-correction, or learn together through communication and interaction with their classmates or partners. Subsequently, they reassess their progress through the software until the expected learning effect is achieved. Even if the expected effect of self-study is not achieved, students can still record their own problems for in-class learning. During class, students should focus on the unsolved problems in the preview and carry out targeted learning and practice. In class, teachers and students conduct evaluation and self-

evaluation process, and finally form the feedback of learning effect. After class, students can review and self-diagnose their learning progress through peer evaluation and software evaluation to guarantee continuous progress.

For teachers, before class, they need to determine teaching priorities according to the subject content and their own teaching experience, and design the corresponding teaching activities. In the course of teaching, teachers need to check the effectiveness of students' preview, and observe students' pronunciation mistakes and emotional needs, so as to reasonably identify the root causes of pronunciation issues. Speaking ability is often related to physiological structure and personal character, so teachers should avoid hurting learners' self-esteem, and carefully record the pronunciation problems identified, and strive to quickly give solutions, and implement effective guidance.
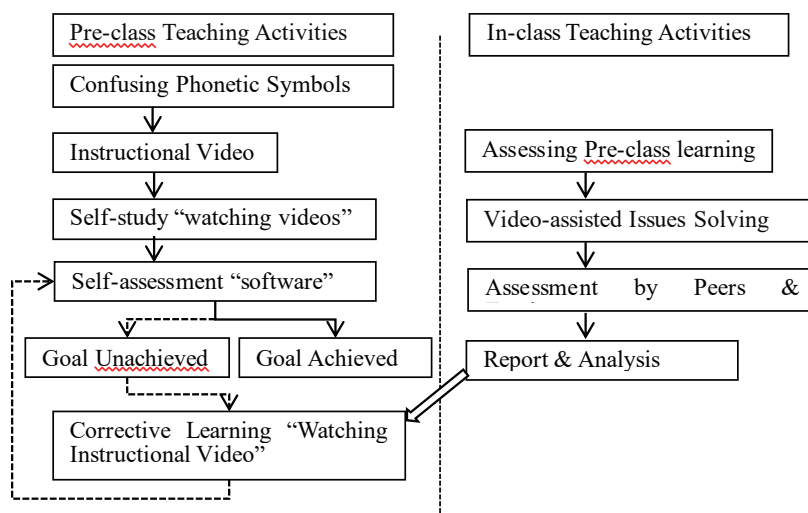

Figure 1 Flowchart of flipped classroom instruction

This teaching method means that teachers give priority to theoretical guidance and teaching design, and the emphasis is on extensive practice and independent learning of students after class. Practices are carried out in a way that combines listening and speaking. In the teaching process, students are at the center of activities, and teachers play the role of demonstration, auxiliary guidance, organization and correction, and summarize after teaching and practice. The role of teachers in the classroom has changed from knowledge transmitting to ideas provoking, focusing on learning methods. Guided by "discovery -- analysis -- problem solving", teachers' evaluation and mutual evaluation among students have been carried out. Through the connection before, during and after class, learners shift from passive learning to goal-driven and effect-driven learning, from which they can experience learning enjoyment and enhance their sense of self-acquisition and achievement.

4.Conclusion

The development of modern information technology has brought many opportunities and challenges to English pronunciation teaching. It not only enriches teaching resources and means, but also promotes the innovation of teaching methods and the improvement of teaching effects. By making use of modern information technology, we can better meet the personalized learning needs of students, and enhance the effectiveness of English pronunciation teaching.

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