

Teaching Design of College English Listening under Flipped Classroom Mode——A Perspective from Cognitive Coupling

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ABSTRACT

This paper makes a tentative study of the College English listening under flipped Classroom mode from the perspective of cognitive coupling. College English listening learning from the cognitive perspective is analyzed and then principles in the design of College English listening flipped classroom are put forward. The new teaching design is an effective way to boost the efficiency of flipped classroom and it facilitates students' deep learning.

KEYWORDS

College English Listening; Flipped Classroom; Cognitive Coupling

1 Introduction

Listening is at the center of people's daily communication activities and is a major channel through which learners receive comprehensible input. Listening comprehension is the process of constructing meaning between two parties in the process of communication. Since listening is characterized by context-dependence, fast speed of speech, and the need for immediate response, it is often regarded as one of the most difficult skills to master in the development of English language proficiency. Listening is crucial in language acquisition, and learners need to learn how to listen.

In the traditional teaching mode of college English listening course, students' cognitive factors are often neglected, just as what Guan Wei pointed out: "the internalization of knowledge, which needs a lot of practice and teacher's timely guidance, is missing in the teaching process, and students' professional skills are not indeed improved". What's more, traditional listening classes tend to focus on the product, rather than the process of listening, which amount to a form of test rather than actually teaching students how to go about a listening text. Thus, students' English skills, especially listening and speaking skills, are weak, and their learning initiative is low, making it difficult for them to adapt to the demand for internationalized talents in economic and social development.

With the development of modern information technology and the updating of teaching concepts, the flipped classroom teaching mode has been gradually applied in College English listening teaching. The Ministry of Education's *College English Teaching Guide* encourages teachers to implement blended teaching modes such as flipped classroom based on classroom and online courses, so as to enable students to move towards active learning, independent learning and personalized learning. Flipped classroom, as one of the six important educational technologies affecting learning, teaching and innovation research (Horizon Report 2014), improves teaching effectiveness through the reorganization of teaching process, teacher-student interaction and other forms.

Domestic scholars generally believe that the flipped classroom teaching mode is more in line with the cognitive development of learners, and it is a powerful tool to solve the drawbacks of traditional teaching. At present, many colleges and universities have carried out the practice of English flipped classroom which yields to improvement in teaching, but there are still many problems and the expected effect has not yet been achieved. Therefore, the research team in our institute made a tentative study of the College English listening flipped Classroom design based on cognitive coupling.

2 College English listening learning from the cognitive perspective

The research team found that the cognitive structure of English listening is an orderly system in which learners perceive English speech, words, sentences, etc. through listening and form listening schemas in their minds according to certain rules. The initial schema of this system and its construction process are not only acquired through listening, but are formed through a combination of listening, speaking, reading and writing, and are related to their existing knowledge. The learning process is the process of continuous change and construction of cognitive structure, and the construction of cognitive schema is the key to improve English listening. The two decisive factors for optimizing students' listening cognitive schema are the learning environment (including the physical environment, the textbook and the harmonious psychological environment in the classroom) and the individual characteristics of the learners. The teachers in the research team started to reform the teaching design of college English listening flipped classroom by studying the individual characteristics of learners and optimizing the learning environment.

3 Present situation in English listening teaching and learning

Since the College English listening flipped classroom teaching has been gradually carried out, students' interest in English listening learning has been improved, and the classroom atmosphere is more active and open than before, but there are still certain problems. Through questionnaires and interviews of 220 students, we found the cognitive characteristics of students' listening and the main problems in English listening teaching and learning:

(1) Students lack phonological knowledge, especially having difficulty in grasping difficult phonological points, such as: stress, weak forms, incomplete plosion, the division of thought groups, continuity, the classification of ascending and descending tones and intonation. (67% of students)

(2) Some of the tasks designed by teachers are of inappropriate order of acquisition difficulty and do not conform to cognitive patterns (52% of students)

(3) The tasks designed by the teachers are sometimes detached from real life and less interesting to students (55% of students)

(4) Teacher-student and student-student exchanges in the classroom are not sufficient (66% of students)

(5) Students' insufficient reflection on post-listening (75% of students)

(6) Lack of effective evaluation system for learning effect (74% of students)

(7) The functional design of the Cloud Class App needs to be more in line with the characteristics of the English subject (37% of students)

(8) Lack of time for students to reflect on the teacher's intensive lectures in the in-class session of the flipped classroom, resulting in students' poor performance in the subsequent group discussion or presentation session. (69% students)

In addition, it was found that students' independent learning ability in English was poor.

4 Theoretical basis for the teaching reform

4.1 The Input Hypothesis

According to the linguistic input hypothesis proposed by the applied linguist Stephen D. Krashen (1982, 1985), acquisition occurs only when the learner is exposed to comprehensive input, i.e., input in a second language that is moderately higher than his or her existing L2 competence. i stands for the learner's current level of proficiency, and $i+1$ stands for language material slightly higher than the learner's current level of proficiency. (The language input can neither be far beyond the learner's existing language competence, i.e., $i+2$, nor below or close to the learner's current level, i.e., $i+0$ or $i-1$.) In this way, the learner can acquire further competence gains from newly provided resources that are not too complex to handle. Such level of input is called comprehensible input, and the accepted difficulty is $i+1$.

4.2 The Output Hypothesis

M. Swain's Output Hypothesis proposes that comprehensive output has three major functions which improve the accuracy of language: the noticing/triggering function, the hypothesis testing function and the metalinguistic reflective function. The hypothesis holds that: speaking and writing more of the target language is conducive to the development of fluency; language output forces learners to shift from semantic processing to syntactic processing; speaking and writing more of the target language allows learners to test their own assumptions about the target language and thus improve the fluency of language.

Prof. Wen Qiufang creatively developed Swain's Output Theory and put forward the "output-driven hypothesis". From the perspective of cognitive psychology, the efficiency of foreign language acquisition not only relies on high-quality input, but also depends on the output-driven learning process; According to the "gradual reduction of scaffolding" proposed by Prof. Wen Qiufang, English teachers need to understand the learning situation, find ways to explore students' potentials, and gradually let go of their students to improve their learning autonomy.

4.3 "Mastery Learning" Teaching Theory

This theory was produced in the United States at the end of the 1960s by the American psychologist and educator B · S · Bloom .

It is a form of effective teaching that combines group teaching with individual teaching. The basic idea of Mastery Learning is that as long as the right materials are provided and taught along with adequate study time and appropriate assistance, then almost all students will be able to achieve the learning goals. The theory embodies the idea that many students do not do well is not because of their intelligence, but because they are not given the teaching and learning time that is appropriate to their different characteristics. At present, many students have a weak foundation in English and have little initiative or motivation to learn. Under the guidance of the theory of Mastery Learning, teaching reforms are being carried out to tailor teaching to the needs of the students and to try to enable almost all students to master the contents of the teaching.

4.4 Blended Learning Theory

Blended learning refers to the use of a variety of learning modes, such as: the combination of traditional classroom teaching and digital learning, the combination of teacher-delivered teaching, students' independent and cooperative learning. In the process of blended learning, it is important to give play to the role of teachers' guidance, inspiration and supervision, while also emphasizing

the importance of giving full play to students' autonomy, creativity and personalized development. It is not possible to use a fixed type of teaching method in a uniform way, instead, different learning methods based on different courses, teaching resources and learning problems should be combined to get the maximum effect.

4.5 Informal Learning Theory

The basic idea of Informal Learning is that learning new skills and knowledge happens in many different ways in a variety of settings. Structured or formal learning typically takes place in a formal classroom, in contrast, informal learning can happen at anytime and at any place. Some studies have shown that about 20% of learning comes from formal learning and about 80% of learning is from informal learning. In formal learning, what students really learn is knowledge; while in informal learning, what they learn is a kind of habit, skill and ability. Due to the interactive nature of online learning, it is possible to discuss with teachers and classmates anytime and anywhere, and even get help from strangers through wireless networks, which is consistent with the characteristics of informal learning.

5 Principles in the design of College English listening flipped classroom

Problems in the current design of College English listening flipped classroom are as follows: over-emphasis on the form of flipping, neglecting the objectives of teaching activities; poor authenticity of activities design; lack of cultivation of analyzing, reasoning and evaluating skills; inappropriate order of acquisition difficulty of task design; disconnection between listening and other language skills training; poor supervision and assessment of students' independent learning tasks, and so on.

The principles that should be followed in the design of teaching activities in the listening flipped classroom are summarized: setting clear and scientific teaching goals to promote students' cognitive coupling, grading the difficulty of tasks to meet the requirements of cognitive classification, designing authentic tasks, strengthen communicative interaction, combining the activities of listening with those of speaking, reading, writing, and translating, and focusing on the monitoring of independent learning and the evaluation of activities. Following the principles, the teachers hopes that the learners become active explorers, achieve the cognitive coupling state to enhance English proficiency and innovation ability.

6 New design based on the cognitive coupling

The teachers in the research team constructed a flipped College English listening teaching model based on Cloud class APP platform, with an aim to promoting students' cognitive coupling and English listening competency .

The procedures are as follows: before class: students learn independently of the materials, finish the self-study tasks and communicate with teachers and students on the platform.

In class: the teacher makes a short lecture and leaves time for the students to rethink profoundly and consolidate knowledge. With the help of Cloud Class platform, students are assigned to several groups to take part in activities such as brainstorming, individual and group presentation, group discussion, inter-group debate, and sharing of works. Before the end of class, students take online quizzes and evaluations; they can access answers to test questions and evaluations from teachers and classmates.

After class: students write a reflection journal. The Q&A area is always open after class to receive

students' questions and share learning outcomes. Teachers can understand the students' learning situation, status and learning effect through the feedback data of the platform.

There are six objectives of the new listening teaching mode: cultivate students' individualized development, construct contextual learning situation, provide authentic materials, conduct effective communication, render cross cultural elements and enhance critical thinking. To achieve these goals, students need to adopt a combination of "top-down" and "bottom-up" listening strategies. Encourage students to listen and think, make logical reasoning and put "listening, memorizing, speaking and writing" throughout the whole listening classroom, so that students can listen and understand with questions in the process of listening comprehension, and consolidate their cognition with emphasis on communication. At the same time, we implement cognitively coupled online + offline assessment before, during and after the lesson.

In order to promote students' cognitive coupling, it is necessary to optimize the design and evaluation of the flipped classroom: first, the design of the listening flipped classroom should follow the law of cognitive goals classification: before the class, it is primarily set on the three goals of remembering, understanding, and applying, and in the class, it is mainly set on the three advanced goals of analyzing, evaluating and creating. And the teaching activities and tasks are focused on the achievement of the goals of the activities.

In the early stage of the practice, two points need to be noted: 1) The Independent Learning Task Sheet is carefully designed and sent to students a week in advance. In designing the tasks, the theory of the "Zone of Proximal Development" should be applied by teachers to understand students' current level, including their existing knowledge and experience, interests, and the characteristics of their thinking development, etc. Then the teachers should reasonably design students' unit learning objectives and independent learning tasks, set different types of scaffolds, and help students realize a smooth transition from prior knowledge to new knowledge. The design of the Independent Learning Task Sheet adopts a task-driven, problem-oriented approach. In addition, the teachers should make good use of modern information tools to collect questions to help students construct knowledge and develop advanced thinking skills. 2) Incorporate the "PADD" Model (Presentation, Assimilation, Discussion and Dialogue) advocated by Prof. Zhang Xuexin of Fudan University into the flipped classroom. In the flipped classroom, the four elements of PADD are incorporated, and the teacher leaves time for students to learn alone, so as to promote the internalization of their knowledge and cognitive level; After class, the reflective task of "learning gains + learning tests + learning difficulties" are given to promote students' cognitive coupling and enhance their ability to think and innovate. Reform the original evaluation system of teaching and learning effects, and design a targeted online + offline evaluation scale. It not only assesses students' learning effect, but also examines students' cooperation ability, organizational ability, personal time management ability, expression ability, emotional attitude, thinking ability, innovation ability and so on.

The teaching mode, through the construction of intelligent personalized learning system, not only optimizes the design of classroom tasks but also fully mobilizes the enthusiasm of students' learning. In this way, students have more freedom and space for learning, and the whole teaching content is in line with the cognitive status of students. The big data of teacher-student interactions obtained on the Cloud Class platform during the teaching process also facilitates students' learning.

7 Conclusion

The new teaching design demonstrated the predicted cognitive-coupling effect: There was less of an effect of text difficulty when listeners listen to a task and it promoted students' deep learning.

Since the research on College English listening flipped classroom under the cognitive perspective is still in its infancy, the systematicity and depth of this project's research need to be strengthened and the design of online and offline evaluation needs to be more scientific.

About the Author

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