

A study on the blended teaching practice model for EAP in the Guangdong-Hong Kong-Macao Greater Bay Area

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Abstract. With the talents collaborative development in Guangdong-Hong Kong-Macao Greater Bay Area, English for Academic Purposes (EAP) provides support for the cultivation of internationalized talents and international academic exchanges and cooperation, while the in-depth integration of education and information technology also promotes resource integration in various regions and besides, accelerates the integrated development of higher education in the greater Bay Area. Based on the semantic wave theory, the paper discusses the integration of online and offline teaching of EAP from the perspective of cumulative learning. The paper points out that the online and offline teaching should work together to promote the semantic wave, namely, the cycle transition of the semantic gravity and semantic density in order to ensure the cumulative construction of knowledge, hoping to bring enlightenment to the integrated development of higher education in the Greater Bay Area.

1 Introduction

In 2019, the Central Committee of the Communist Party of China and the State Council issued the "Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area", which provided a detailed description of the development foundation, strategic positioning, development principles, and development goals of the Greater Bay Area. The outline made specific arrangements for educational cooperation and talent mobility in the Greater Bay Area, such as cooperative education, construction of international education demonstration zones and talent training bases. The outline also clearly proposed to build talent "highlands", improve the international talent training model, and strengthen international exchanges and cooperation for talents.

Facing the trend of globalization and internationalization of higher education, only when universities in the Greater Bay Area keep pace with international trends, can they

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cultivate international talents with academic competitiveness. EAP teaching that is weighted towards academic communication skills and critical thinking skills is not only an inevitable trend in deepening the reform of college English teaching, but also a strategic need for the cultivation of international talents in China. In line with the national strategic layout of the Guangdong-Hong Kong-Macao Greater Bay Area, this article uses the semantic wave theory as a guide to explore the blended teaching from the perspective cumulative learning.

2 English for academic purposes (EAP)

2.1 Definition of EAP

Hutchinson and Waters divided foreign language teaching into General English (GE) and English for Special Purposes (ESP), which in turn was divided into English for Academic Purposes (EAP) and English for Occupational Purposes (EOP) depending on the purpose. EAP has been dominant in ESP for years. Therefore, ESP and EAP are often interchangeable, especially in higher education.

EAP can be divisible into English for General Academic Purposes (EGAP), which focuses on English content common to all disciplines, such as listening to lectures, searching and reading literature, writing papers, participating in international conferences and so forth, and English for Specific Academic Purposes (ESAP), which focuses on genres of specific disciplines (e.g., medical science, law, engineering, etc.) as well as English communication skills required in the workplace. With the deepening of internationalization of China's higher education, the development of EAP has been highly valued by universities, and it is increasingly important that students are able to engage in professional learning and academic activities using English.

2.2 Characteristics of EAP

EAP is a teaching course oriented to student needs. Unlike General English, which focuses on students' language foundation and skills, EAP helps students engage in their professional studies in English, such as teaching them to attend English lessons and lectures, search, read, summarize and express information in English and so on. EAP is very popular among college students and teachers for the teaching contents are closely related to students' professional needs.

Further, EAP is a foreign language teaching based on content, which believes that when language teaching is combined with subject teaching and language is used as a medium for learning subject knowledge, the most ideal foreign and second language learning conditions will be produced. When students use language as a way to understand information rather than learning the language itself, learner efficiency will be greatly improved. Therefore, compared with general English, teaching combined with subject knowledge can better stimulate students' interest in learning and provide a spur to their independent learning. However, it's worth noting that learning informational and abstract subject knowledge is a high-level academic cognitive activity, which not only requires learners to have a certain level of English, but also requires high cognitive abilities. According to Cummins, a person's language level consists of "Basic Interpersonal Communicative Skills (BICS)" and "Cognitive Academic Language Proficiency (CALP)"^[1]. The former refers to the ability to use language to communicate in daily life, and the communicative tasks are less difficult and the language is relatively simple. In comparison, the latter refers to the ability to use language to communicate in more abstract academic topics, and the communicative tasks is

highly difficult. It requires learners not only to have a certain language level, but also to enjoy strong abilities of generalization, analysis, evaluation and inference.

2.3 Construction of blended teaching practice model for EAP

EAP teaching plays a prominent role in improving the English knowledge and skills of college students in their professional fields and enhancing their international academic communication ability and competitiveness. Nevertheless, traditional EAP classes have problems such as poor classroom participation and low student autonomy, as they are often taught in large class. Moreover, many students harbor the idea that the courses are difficult and there are few learning platform. Additionally, unlike general English teaching, EAP teaching not only needs to teach subject knowledge with a high degree of difficulty, but also promotes students' cognitive interactions with a certain degree of difficulty, which undoubtedly poses a challenge to teachers. However, the current teaching in single form is not able to mobilize the motivation of students, solve the students' questions in a timely manner, making it difficult to improve the level of academic English. Thus, to increase the learning autonomy and self-efficacy among students, and thereby to enhance the learning efficiency is the problem to be solved urgently in the EAP teaching at present.

Learning Centered Teaching Method takes into full consideration all the elements of learning, especially focusing on the role of "human", and advocating the mobilization of students' initiative in the learning process. This teaching method is also used in General English teaching, but since EAP puts more emphasis on the needs of the learner, Learning Centered Teaching Method can also be called Learner-Centered Teaching Method in EAP. In recent years, information technology is constantly applied in foreign language teaching, such as MOOC, SPOC, flipped classroom, mobile learning and so forth. The blended approach, which refers to the combination of traditional classroom and online teaching, enriches the form of teaching and improves the learning experience. This kind of teaching model not only can give full play to the teacher's role, but also fully embody the initiative and creativity of student as the subject of learning.

3 Semantic wave theory

Semantic wave theory was proposed by Karl Maton, a famous Australian sociologist, to explain the inherent law of knowledge accumulation in the process of learning. According to Maton, semantic waves refer to the result of the "ebb and flow" of Semantic Gravity (SG) and Semantic Density (SD). SG refers to the degree of dependence between the meaning and the context. The stronger the SG, the greater the correlation between the meaning and the context, and the more concrete and instance-oriented the language is; on the other hand, the more abstract and conceptualized the language is. SD refers to the degree of condensation of discourse meaning. The stronger the SD, the more meaning the symbol contains; conversely, the less meaning the symbol contains. There is an inverse relationship between the SG and the SD.

In this way, in the process of knowledge construction, when learners generalize more abstract concepts from more concrete language or examples, the correlation between meaning and context becomes smaller, and the embedded meaning increases and consequently, SG decreases and SD increases; when learners place more abstract concepts in concrete contexts, the relation between meaning and context becomes larger, and the embedded meaning decreases, and thus SG increases and SD decreases. The process of knowledge learning involves the interaction of SG and SD on the semantic scale. At the peaks and valleys of the semantic waves are abstract discourse with low SG and high SD and concrete discourse with high SG and low SD.

The process of transforming abstract or highly technical concepts into concrete knowledge in contexts or cases is called "unpacking", and the process of summarizing concrete knowledge from examples and contexts into abstract knowledge or concepts is called "repacking".

The ideal learning of knowledge should be a continuous and progressive process of "abstraction → concretization → abstraction" / "unpacking → repacking"^[2]. The process of unpacking and repacking knowledge is the key to promoting students' absorption and use of knowledge. There are scholars who have applied the theory of semantic wave to teaching practice in many disciplines and it has proven to be fruitful, such as biology (Tang, 2014)^[3], history (Matruglio et al., 2013)^[4], foreign language (M. Xie, 2019)^[5](Mao, 2022)^[6]. It's thus clear that semantic wave theory is a theoretical framework with strong explanatory power for teaching practice.

4 Blended teaching practice model for EAP based on semantic wave theory

In the blended teaching practice model for EAP based on semantic wave theory, online teaching is mainly a process of knowledge unpacking from abstract knowledge to concrete knowledge, while offline teaching is mainly a process of knowledge packaging from concrete knowledge to abstract knowledge. In online teaching, students can complete the analysis of knowledge points relying on MOOC and micro-lecture, or they can also explore this topic independently with the help of the Internet. In offline teaching, teachers carry out explains, answers, comments, summaries, etc. The reason why we define online and offline teaching as the descending and ascending stages of semantic waves is that: firstly, traditional teaching attaches importance to the decomposition and discrimination of knowledge, but "students do not learn critical, creative thinking, or complex reasoning skills during intellectually unstimulating classroom experiences"^[7]. Moving the task of unpacking knowledge online can give teachers more time and energy to carry out offline teaching activities rich in critical thinking. Besides, generally speaking, when undertaking difficult teaching tasks, face-to-face teaching is more effective than online teaching. This is because compared with online teaching, face-to-face teaching allows teachers to answer students' questions promptly and effectively, comment on students' homework and performance and make summaries, making it more suitable for undertaking the more arduous task of transforming specific knowledge into abstract knowledge. In addition, compared with knowledge unpacking, repacking requires the use of more speculative teaching resources, so as to promote reflection, refinement, and summarization at a more abstract level for students. However, at present, there are fewer theme lectures, academic papers and online courses that are both critical and in line with the knowledge points, so teachers still need to use their professional knowledge to further complete the enlightenment, summary and sublimation of knowledge in offline teaching.

Of course, as an idealized model, blended teaching practice model for EAP is not set in stone. The assignment of online and offline tasks is not absolute. This does not mean that the process of knowledge unpacking must take place online, nor that the repacking of knowledge must be completed in offline teaching. Teachers can make arrangement of offline teaching according to the students' completion of online tasks. If, according to feedback from back-end and students, the online learning task is heavy and the learning objectives at this stage have not been reached, a certain amount of time can be allocated offline to complete the teaching activities of knowledge unpacking. If students have strong learning ability, high level, sufficient motivation, and fast digestion of knowledge points, then the time for unpacking knowledge can be moderately shortened, and more challenging and abstract speculative activities can be carried out online. In short, the key to the blended

teaching model for EAP is not the clear division between online and offline teaching, but the effective cooperation between the two.

Then we take corpus-based EAP teaching as an example to illustrate the application of a blended teaching model for EAP based on semantic waves. The course is divided into four steps:

(1) The teacher shows how to use the corpus in the online course, and then allows the students to read the technical English articles independently. Then the teacher explains the characteristics of words and sentences, special structures and discourse characteristics in the corpus, and students participate in online discussions and complete online assignments.

(2) The teacher comments on students' homework; the teacher introduces the concept of "discourse genre", analyzes the differences between different language types, and teaches students how to analyze the internal structure and organizational mechanism of a type of discourse;

(3) Students are required to use the methods taught in class to retrieve and identify articles of different genres and read more articles on scientific and technical English, and make preparations for offline classroom display in small groups;

(4) According to the articles they read, students analyze the linguistic characteristics, meaning expression and pragmatic characteristics of discourses, summarize the linguistic rules of such discourses, and demonstrate the learning results offline, and the teacher gives comments and summaries.

The first step of the course is the online knowledge unpacking module. Students learn technical English discourse independently and explore its language characteristics and rules, and the teacher explains it through online courses, so as to realize the transformation from abstract knowledge to concrete knowledge.

The second part of the course is the offline knowledge packing module. The teacher briefly comments on students' work and guides students to think further about the differences between technical English discourse and other discourses. Then, the concept of "genre" is introduced to analyze the differences between different language types and promote students to establish a macro and systematic knowledge network. Then, the teacher teaches students how to analyze a type of discourse and transform concrete knowledge into general laws, and consequently, realizing the process of knowledge packing from concrete to abstract.

The third step of the course is the online knowledge re-unpacking module. Students use the rules of abstract rules to retrieve and distinguish different genres of discourse, so that abstract knowledge can be transformed into practical skills. Students then read more relevant articles, applying their knowledge and testing its usefulness in the process.

The fourth step of the course is the offline knowledge repacking module. In this step, students analyze the materials found in the corpus, summarize and refine the terminological characteristics and discourse rules of such discourses, and present the results in small groups, after which the teacher makes comments and final summaries. In this process, students analyze specific corpora and use the methods of reasoning, induction and comparison to summarize their linguistic rules, realize the internalization of knowledge, thus completing knowledge repacking.

5 Conclusion

The introduction of semantic wave theory into Blended teaching practice of EAP in the Guangdong-Hong Kong-Macao Greater Bay Area is conducive to analyzing students' knowledge accumulation and measuring the effectiveness of online and offline integrated teaching. The use of semantic wave theory to study the teaching practice model provides another research perspective for the practice of EAP, and also provides a theoretical basis

for analyzing students' knowledge structure and cumulative learning for the main feature of knowledge accumulation construction is the cycle transformation of semantic waves. The online and offline integrated teaching mode guided by semantic wave theory is instructive to EAP teaching, and it also brings enlightenment for promoting the integrated development of higher education in the Greater Bay Area. The development conditions of the Guangdong-Hong Kong-Macao Greater Bay Area are superior, but due to the constraints of geographical location, the optimal allocation of various elements may be difficult to achieve. The online and offline blended teaching is conducive to accelerating the integration of resources in the Greater Bay Area, and promoting its integrated development of higher education.

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