Research on Oil and Gas Storage and Transportation
Special English Teaching Methods by ESP Theory

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Abstract

Special English class have been set up in national college non-English majors with the development of ESP is becoming more and more significant. The special English teachers must strengthen the teaching of ESP from theory to application and the formation of effective teaching method in the teaching practice in order to make progress in teaching of Special English. "The teaching methods of four section time" of English classroom teaching be researched based on the widely study of the theory of ESP during many years of practice. At the same time, the reform measures also been researched on oil and gas storage and transportation special English, such as the teachers and textbooks.

Key words: ESP ; Special English ; Classroom teaching ; Four teaching methods ; Oil and gas storage and transportation

1. Introduction

ESP (English for specific purpose) origins from 1960s[1] especially as American economy rising during the later Second World War when a plenty of European scientists centralize in USA promoting the development of American science research, and English became common language in international technical communications. ESP teaching gets development with the science and technology by leaps and bounds, and communication in science, technology, economic and culture is increasingly expanding among nations.

The coming of petroleum crisis caused serious hit to developed country which led by USA made up International Energy Agency, demanding any Member States must keep the storage import crude oil equivalently 90 days of last year storage, to cope with the next possible petroleum crisis in early of 1970s. The vast money wealth and knowledge were into rich of petroleum country by petroleum crisis, at the same time
English became the common medium language in science field. The ESP teaching research is promoted by requiring of new technology spread, requiring of the research of language form turning to the use of it, and the requiring of learner self.

In 1980s ESP teaching research is developed in general institutes of higher education of China. Professionalization courses have addition in English major of many colleges and universities, such as Business English, Tourism English, Journalistic English and so on. At the same time except university English course that many colleges and universities have addition special English which are related to major, such as Materials Engineering English, Architecture English, Petroleum English, Storage and transportation of oil-gas English and so on.

2. ESP Teaching Research and Development in China
According to “University English Syllabus” (Revision) which was issued by Ministry of Education in 1999, ESP is defined as “Special English” and became compulsory course. The regulation include that special English is taught by special teachers in principle, and department of foreign languages (department or teaching and research section) could cooperate or assist by specific circumstances, official affirming and establishing ESP operated in colleges or universities English teaching[2].

Definition and Importance of ESP
ESP is English course which related to certain profession or subject, set according learner’s certain aim and require. It is named “English for science and technology” or “English for Academic Purposes” at some time in our country.

EGP (English for General Purpose, General English, also known as Basic English) is widely different from ESP [3]. General English improve students’ basic skills of listening, speaking, reading, writing, translation and other basic skills by training with grammar and vocabulary as core. It grasps vocabularies of various kinds of “outline” provisions, and lays a solid foundation to deal with a variety of exams for students from primary to secondary school to university. There is nothing widely difference in exam questions types, which also revolved around listening, reading comprehension, writing, translation. No matter what CET4, CET6 or other more advanced exams, as TEM8, NETEM, TOEFL, in addition to more uncommon words, and more obscure grammar.

ESP has its own uniqueness in syntactic structure, framework and expressions chapter. Each profession has its own terminology and a lot of specialized vocabulary, even the so-called common core vocabulary, but also has its own strictly defined and precise meaning. The same word in English is not only different from ordinary meaning purposes, but also varies widely in different disciplines. There is not enough to read the original professional literature and understand the original professional materials only by ordinary English. You must have a solid and extensive relevant professional background knowledge, this is why the professional commitment of teachers on the principles of professional English lesson.

ESP is various widely of EGP in courses teaching purposes. It can improve students’ English level while they are learning professional knowledge, in addition to
helping them become familiar with the characteristics of specialized vocabulary, sentence structure and discourse characteristics. It also prepares for students in bilingual or English classes to learning and researching skills. For instance, they are able to use English in academic oral and written communication, joining discussion and asking or answering, speaking without speech and commenting on others speech, working in laboratory or practice base, reading scientific literature independently, extracting main points quickly and doing comprehensive analysis, and collecting references by using books skillfully and modern technology for learning and researching, and composing normative work report and abstract and papers, and combine their expertise to carry out scientific work.

At present, English is widely used in every fields, like politics, economy, science and technology and so on. According to statistics, more than 85% of the international papers are published in English, and the mainly academic journals in the form of English. With the expansion of China and international exchanges that economic globalization and cultural diversity is coming, if you process a strong language skill, you will more and more favor by society in engineering colleges of graduates. When some employers with graduates contract to enter into work, they has made clear that requested to choose good professional student in English, which motivation also a promote factor in the learning of a foreign language.

Therefore, research and teaching programs of ESP is useful for training complex talent to adapt to society's complex and meet the needs of social development and economic construction. Strengthen research ESP teaching theory is the essential way to improve the professional level of English teaching and get good teaching.

ESP teaching methods
Since 1960s, the teaching study development of ESP can be divided into five phases: (1) Register Analysis, research in different fields of English literature grammar and vocabulary features. (2) Rhetorical or Discourse Analysis, study how the composition of the sentence paragraphs and chapters, focusing on rhetoric. (3) Target Situation Analysis, focusing on different target scenarios learners to analyze different scenarios of language features. (4) Skills and Strategies Analysis, this stage is the language used in a deeper thought process, rather than concerned about the language. (5) student center, it is emphasize that not only need to create a good learning environment to developing students of positive and active in teaching, but also consider the social environment the demand for talent and the student in learning requirements. Only the combination of various factors, it is likely to be the ultimate goal to learn English [4].

There are three main methods of ESP teaching practice and research in abroad [5]

(1)Register Analysis have unique characteristics in different social environments that aspects of grammar, vocabulary and format of English. The Register can determine to the language environment and content, teachers can guide students to understand some regular pattern of ESP around register of ESP analysis. Register can determine to semantics is that the meaning of some words could be judged according to the context. Register Analysis have a greatly limitations that focus on sentence structure while ignoring the communicative function of language.

(2) ESP has adapt to Discourse Analysis for overcomes the limitations of Register
Analysis in teaching. Register Analysis research center is the sentence level, focusing on grammar, Discourse Analysis is pay attention to sentence outer, study what constitutes a sentence of discourse, resulting in significance.

The first sentence of each paragraph in article is basically the topic sentence (Topic Sentence). Every natural segment generally includes three or four sentences, used to explain, supplement the topic sentence. The students can understand the article content better, after understanding of discourse structure.

In practice, Actual demand of Discourse Analysis is still a large gap between the research and learners. These studies did not directly meet the urgent needs of learners, such as: published scientific articles, experimental reports, etc. In fact, the Discourse Analysis could not make learners how apply to these sentences in communication. Therefore, ESP need research how to choose the appropriate sentence to express meaning in the writing process from the perspective of the author's article.

(3) Genre Analysis Approach
Genre analysis is key to promote ESP teaching. Swales (1990) put forward a number of classroom activities and exercises style. Davis (1998) was wrote an outline about the genre, it is purpose that students can distinguish and analyze all kinds of language articles genre in learning.

After years of teaching English for the oil and gas storage and transportation, according to the actual situation, according to the research and development stage ESP teaching to genre analysis method is based on the flexibility to use a combination of methods proposed ESP "four teaching" which achieved good teaching results in oil and gas storage and transportation of professional English.

Oil and gas storage and transportation specialized English teaching follows "four phases approach", which means dividing 64 hours of lessons into four phases, each assigned teaching time can be flexibly adjusted according to general basis of English students and class teaching effects. Each phrase has different focus. Students accept a gradual transition from EGP learning mode to ESP learning mode and gradually mastered the usage norms of specialized English, including lexical features, grammatical features, language domain features, text structure and genre characteristics. Classroom "four phases approach” enable students to understand and output specific language learning strategies and teaching methods, which reflects the gradual process of learning and each essential link.

Additionally, as the "four phases approach" is applicable to other specialized English teaching, with prospectively promotional value.

The first phase focuses on vocabulary, sentence, structure and language skills. After many years of general English training and learning, students who has mastered English basic skills, such as vocabulary and grammar as well as listening, speaking, basic reading, writing and translating, learn specialized vocabulary, including General English vocabulary translation, that is translating common vocabulary into accurate meaning in accordance with professional language environment. For example: well in the oil and gas storage and transportation specialized English means the (oil and gas) wells and fire means fireproof which basically does not translate other meanings. Familiar with the translation and the use
of abbreviations, such as DEG (TEG, common liquid desiccant dehydration of natural gas), LNG (liquefied natural gas), psi (pounds / inch 2, inch pressure units, common in the API specification and the original English article) conversion relationship with atmospheric pressure, etc.

It is also important to analyses the long and difficult sentences in the text and the commonly used, representative professional English sentence, as there be ... sentences, passive voice, emphatic pattern, etc. Compare to the EGP, ESP sentences and grammar are simpler, and the key is to enable students to use these sentences proficiently and more often in English speaking and writing.

The second phase emphasizes the teaching of discourse analysis and teaches students to determine the meaning of words based on the context, select the appropriate semantics and submit an appropriate translation. Increase the introduction of professional knowledge, given that the students have accumulated a certain amount of specialized vocabulary and are familiar with sentences. They will naturally imitate sentence, expressing professional knowledge in English.

The third phase means to understand the article genre. Scientific articles are mostly expository and each paragraph has its characteristics under a lot of definitions, examples, and other sub-categories described manners, clearly and logically expressing the scientific concepts, technology and craft process, so that the students can imitate the article by genre structure analysis method to write some brief paragraphs or articles.

The fourth phase focuses on the purposes of learner-centered teaching, task-based applications, case-based teaching can provide students with the opportunity to communicate and share ideas at this stage. Arrangement of a comprehensive project tasks allows students to find information independently, cooperate with people and share responsibility in collaboration and express completion of the project in oral and written English. Teachers must assess and participate in the discussion and write the completion of the task into the final grade to improve student learning initiative.

Meanwhile, before class, during the break we can also use the time to broadcast some professional English listening materials, such as storage and transportation specialized English technology video, to temper students’ ears and guide the students to read, listen after class. Besides strengthening the interaction between teachers and students in the classroom and asking questions in English and ask students to answer in English sentences, but also by homework, telling students how to retrieve the English professional articles and arranging students to access to some specific Chinese literature, such as oil storage industry standards, etc., which allow students to translate words and professional representation sentence and exercise writing skills.

Conclusions
1. ESP teaching emphasizes "student-centered", which is actually a higher teacher requirements. Dudley Evans and St John believe that ESP teachers should be qualified to act as five roles: (1) First he is a qualified English teacher (teacher); (2) he must be a qualified course designers, and can provide students with practical teaching materials (course designer and materials provider); (3) he is a professional teacher's
partner, but also the student’s partner (collaborator); (4) he must be a qualified member on teaching and research (researcher); (5) he should also be proficient in testing and evaluation of the ESP (evaluator) and be able to analyses and summarize learning of students timely according to the teaching needs [6].

2. To achieve the points above, specialized English teachers should accept the ongoing English language training as well as self-study in order to improve their ability in using the method of self-reflection and self-evaluation.

3. The current oil and gas storage and transportation specialized English teaching materials choose original articles in English and add Chinese comments, attached with full papers translation. We found that the students are highly dependent on the Chinese translation, but refused to understand or translate the article themselves during usage, with only a simple glance at the translation. For students in this case, it is neither conducive to exercise translation skills nor to strengthen the professional understanding of the specialized vocabulary and sentence structure. Moreover, there is no Chinese annotation in practical applications when access to English scientific literature, log in English websites, or submit to a foreign journal. Considering from the international generic principle, English original articles without comment are more conducive to create conditions objectively for learning English by changing reading habits to improve specialized English skills.

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