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## Computer Aided Translation Technology Application in ESP Teaching

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### Abstract

With the development of computer and the Internet, traditional teaching methods have been greatly challenged, so does ESP teaching. In order to cope with the new trend and the changes happened in classroom teaching and learning, teachers should turn their eyes on more effective methods especially the ones integrated with computer and the Internet technology. English for Specific purposes (ESP) has a long tradition, as a movement designed to respond to non-English majors' needs both for academic and cross cultural communication purpose in specific scientific fields and professional settings. The purpose of ESP teaching may lay both in explaining basic language knowledge used in a particular subject and promoting the abilities to use English as a tool or a way to learn the special subject. How to teach ESP and are there any new methods can be applied into classroom teaching are remain the hot topic which have been discussed recently. Nowadays, in this information age, many scholars devote themselves to the exploration of computer aided teaching in particular subjects, and computer aided translation is of great importance in ESP teaching. It is a subject involves the basic concepts of computer-aided translation technology, helps students learn to use a variety of computer-aided translation tools, enhances their ability to engage in various kinds of language service in such a technical environment. This study explores the method of applying basic principles of computer aided translation in ESP teaching, including using searching engine or an appropriate electronic dictionary to translate a term, using

proper software to construct a terminology database, using corpus to refine an academic writing and etc.. It can not only combine modern technology with traditional teaching but can also enhance the ESP learners' ability in reading and translating, and to make them increasingly autonomous .

**Key words:** ESP teaching; Application; CAT technology

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### INTRODUCTION

ESP refers to English for Specific Purposes or English for Special purposes. It is a newly emerged branch of English language study, targeting to the special need of the learners which will be met in the future work or study, and better not to be confused with specialized English. It is different from the English for General Purposes, which mainly focusses on the learners' listening, reading, speaking, writing and translating basic skills in spite of their majors. ESP courses help the learners to promote their English language skills, and at the same time enlarge their professional knowledge. It is oriented towards applying the use of English in the professional areas and covers a wide range of subjects. Most of the teachers in China who teach ESP courses are English teachers who lack of professional knowledge of a subject. Under this circumstance, the learners usually get knowledge of English language and only general information of a subject instead of the academic ones. To ameliorate the situation, teachers are supposed to instruct students to be autonomous learners to master several skills in learning English which may help in the long term of using English. On the other hand, nowadays, growing

access to computers and smart phones has fueled an enormous amount of education and translation software development. People tend to use them both for educational and entertainment purposes for their convenience and high efficiency. It is wise to make the best use of the trend and guide the ESP learners to get the basic knowledge and know several principles of computer aided learning which is a form of self-instruction. This paper introduces basic technology of computer aided translation that can be applied in ESP teaching hoping to offer an approach to teaching.

## 1. ESP TEACHING: DEFINITION AND CHARACTERISTICS

ESP teaching refers to the teaching with a specific goal in a subject of a field. To develop a better understanding of ESP teaching, we should give priority to how ESP is defined. Dudley-Evens and St. John (1998) offered a modified definition on the basis of that gave by Strevens in 1988 who defines English for Specific Purposes (ESP) by making a distinction between four absolute and two variable characteristics. Dudley-Evens and St. John expressed their view on the ESP from two perspectives: absolute characteristics and variable characteristics. For the absolute characteristics: ESP is defined to meet specific needs of the learner; ESP makes use of the underlying methodology and activities of the disciplines it serves; ESP is centred on the language (grammar, lexis, and register), skills, discourse, and genres appropriate to these activities. Variable characteristics are: ESP may be related or designed for specific disciplines; ESP may use, in specific teaching situations, a different methodology; ESP is likely to be designed for adult learners; ESP is generally designed for intermediate and advanced learners. According to the definition, ESP teaching should not only meet specific needs of the learners, but also aim at fostering the learners' capability of using English in the academic study or future work and communicating in a way will be recognized and appreciated by the counterparts. As professor Cai Jigang declared in 2004: 将语言教育与学习者需求结合起来是专门用途英语教学的灵魂和精髓。(The soul and the essence of ESP teaching is the combination of language education and the learners' individual need.) The idea can be an inspiration to teachers to design ESP courses in perspective.

On the concept of ESP courses, some experts defined it from different perspectives, but there is not a clear definition till now. The most acknowledged one by the scholars is the one put forward by Hutchinson & Waters in 1987. It is defined as an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning. Robinson (1991) distinguishes between EOP (English for Occupational

Purposes) and EAP/EEP (English for Academic Purposes/English for Educational Purposes). EOP involves work-related needs and training while EAP involves academic study needs. These two categories of EAP and EOP are widely accepted in ESP teaching.

From the views above we can draw a conclusion easily that S (specific/special) in ESP (English for specific/special purposes) refers to specific/special needs of the learners instead of English language itself. Compared with EOP, ESP courses are specially designed to the learners coping with the unique characteristics of a field. It centered more on language in context related to professional study and situations assimilated to the future work rather than grammar, structure, culture and language focuses. ESP teaching usually with the characteristics as follows.

ESP courses should be professionally oriented. The learners are of an academic background of a field, and they always study English with a purpose of applying what have learned in school to future work that may belong to a certain field. The context and situations of language usage vary from different fields. When offer an ESP course to the learners, the contents of the course are better to have a clear scope of application to cope with the needs of a particular industry.

ESP courses should be designed as a subject in a field. ESP courses to integrates the knowledge of language and a particular field with a special course pattern. They are designed to the intermediate and advanced learners who are supposed to have mastered basic skills in English study. The learners are expecting to have their English applying to further study or future work in an international environment with a recognized benchmark. Thus it is a huge challenge to teachers to select approaches in teaching vary according to each field, and to be equipped with the general information of the corresponding industry in order to meet the demands of the working environment.

The course-book used for ESP courses should contain authentic materials that can provide a real environment for the future professions. As we know, the characteristics of English used in different fields vary a lot from the meaning of some terms to the understanding of the whole context. Only the authentic materials used in real situations can reveal the true characteristics and rules of specialized contents of English language. It is another challenge to teachers to be flexible to adapt teaching techniques and methods both the requirements of course curriculum and the learners' different study background. What should also be taken into consideration is that there will not be a single course-book can meet all the needs of learners with different English levels. Grading elaborated authentic materials can be a beneficial supplement to the course-book.

The specific purposes English language teaching in China started late, and now gradually gaining recognition

and application in the education sector and many colleges. Newly revised College English Teaching Guide in China which still calls for public review gives priority to the English language competence in further study and future work in the teaching objectives section. Hence, it is of vital importance in training the learners to be capable both in future study and work in an international environment.

## 2. GENERAL DESCRIPTION OF COMPUTER-AIDED TRANSLATION

Erhard O. Lippmann gave a description of Computer-aided translation in 1971 that Computer-aided translation (CAT) is basically a storage and retrieval operation which is carried out on line with a computer during the time in which a translator is producing a translation. The translator can use an integrated system of dictionary access and updating routines, text processing facilities of a time-sharing computer. According to Wikipedia, Computer-aided translation is a form of language translation which a human translator uses computer software to support and facilitated the translation process. Computer-aided translation is sometimes called machine-assisted, or machine-aided translation (not to be confused with machine translation). Computers and the Internet are the two key factors that can be applied to facilitate translating process under CAT system.

As for ESP teaching and learning, using CAT technology to facilitate studying process actually does not require the users to be equipped with a profound knowledge of the computer technology. Only by understanding the basic concepts in CAT and the auxiliary means of information technology is likely to promote the language study especially in reading, writing and translating significantly. In this paper, we will conduct a discussion on CAT technology accessible to teachers and will divide it into four parts: Internet information tools, E-dictionaries and reference books, corpus and computer-aided translation tools (translation memory and terminology management).

In the information age, as a database and encyclopedia, the Internet can offer us a variety of information resources that are indispensable pillars for understanding the materials and consulting language phenomenon. Generally speaking, Internet information tools can be classified into certain types, among which search engines and online machine translation are the most important ones. As we all know, search engines are the directory entries when people use the Internet to get information by typing a keyword. Regarding to the basic methods of the search engines most of us have got some techniques, but refer to the classification and advanced search skills some of us may need instructions. The instructions may help the learners choose a proper search engine and make good use of them. What worth mentioning is sometimes searching for

pictures for new words or terms may be of great help to get the detailed information to know what the thing exactly is. As for machine translation, because it failed to satisfy the basic requirements of translation quality, it can only enable users to get information accurately from the mass of data. So, we won't talk too much on machine translation.

Thumbing through the pages of thick traditional dictionary, and sometimes having to go over several dictionaries, can hardly meet the needs of translation work and language study nowadays. Electronic dictionaries and reference books may be of great help with its convenience and efficiency. There are several ways to classify electronic dictionaries, and we just divide them into two major types according to their openness. The first type is often the recompiled electronic version of a traditional desktop dictionary like Oxford, Collins, Webster, and etc.. The second type is more open with the mechanism of updating information provided by users and contains more than one dictionary data files like Youdao dictionary and Jinshan dictionary. By the way, these are not always as dependable as traditional ones for some of the items are not authentic interpretations. If we say dictionaries tell us the meaning and the usage of the words, reference books tell us the time and the way of doing a certain thing. Electronic reference books usually contain encyclopedias, yearbooks, handbooks and manuals.

Corpus is the trace of our language with support of information technology. For such a large-scale language resources, only by computer and corpus tool we can get a better application and analysis into language phenomenon. If we collect language without selection and screening, and put words together directly then it is of no use and can not be called a corpus. So, it is a limited combination with samples of language in daily use. People can search the use of a word or certain language phenomenon by using corpus tools. Corpus tools and analyzing methods are quite different from that of the Internet. It is superior to Internet tools in pertinence, technicality and accuracy but inferior in effectiveness and applicability. The use of language is a dynamic process, when consult a new language phenomenon, it is better to combine the searching in corpus and the Internet.

In a narrow sense, computer-aided translation tools refer to translation memory and terminology management. Translation memory goes like this in Wikipedia: It is a database that stores "segments", which can be sentences, paragraphs or sentence-like units (headings, titles or elements in a list) that have previously been translated, in order to aid human translators. It is a method of capturing, storing and reusing translation units. Terms are those words have a specific meaning within their domain, unrelated to their everyday usage. Terminology management is the process of categorizing and defining the terms of a certain industry. Computer-aided translation tools may of great significance of science

and technological translation with high percentage of recurrences of terms.

### 3. INTEGRATION OF CAT TECHNOLOGY WITH ESP TEACHING

As what we have discussed above, ESP courses are designed for intermediate and advanced learners to meet their special needs. The learners in college now will become engineers, researchers or specialists in the related industry tomorrow. In most cases, they may use English to communicate with the future counterparts in work by reading and writing. The process requires workers first to be familiar with work-flow and specific situations in a certain field; second, be able to decode the meaning of specific lexical and syntax constructions; last, to be competent to get the work done independently for their colleagues may busy solving their own tasks and there probably will be no one to be consulted. In this case, the learners would like to apply what they have learned on English language at school to an international working environment.

Recently, with the development of the information technology, CAT principles and CAT tools have roused many experts' interests in China. Many of them would like to advocate a reform in translation and translation teaching. However, application of CAT technology would also with great help in ESP teaching and worth promoting. With the characteristics of ESP teaching, teachers should be creative in methodology and transfer the role from a teacher to a helper or an instructor. Teachers should make full use of the interests of the learners on net and smart phones and at the same time persuade them to get basic principles of CAT technology and use several skills to search for useful information themselves to assist their studies rapidly and efficiently. In class, teachers can integrate CAT technology with teaching by adopting the following teaching modes.

Net-based teaching model. In recent years, more and more language teaching classrooms are constructed with multimedia equipment and network. Due to its easy access, teaching aided with computers and the Internet will enjoy high popularity among the learners. Teachers should first show basic techniques of using search engines, electronic desktop dictionaries and corpus on line to help learners to study ESP courses and more importantly to foster their problem-solving abilities. With the help of them, learners can get a better understanding of a reading material as well as revising a writing by looking into the meanings of the words and relevant information by themselves. What teachers should do next is to assign several group tasks to learners and give them time to have a discussion. At the same time, teachers can walk around the classroom to give instructions to each group. After the discussion, if network platform

permitted, students can ask questions and talk about the topic on line. In this case, every attendant in class can involve in the course actively with high interests and teachers are transferred to helpers.

CAT tools- based teaching mode. The resources for CAT tools are huge, but some of them are in charge with a high price. In view of small amount of colleges can afford the cost, we just talk about the ones free of charge like Wordfast, Across, MemSource and etc.. The difficulty is operational method varies, so it is a challenge for teachers to master the skills of using them. Once master a tool's use the teacher can install it to teacher's computer and show the operation to learners. ESP learners are expected to construct translation memory and the database of terms with the help of the tools. Due to the variety of learners' background knowledge and their different English levels, it's not possible for teachers to give a term list to all students properly. Instead, learners themselves can construct their own vocabulary in an ESP course to review them frequently and to offer reference to others in some cases. Under such teaching mode, teachers are supposed to involve students into practices time and time again if needed for in most cases only giving instructions to the operation of CAT tools may not help. By practicing students can develop a better understanding of the tools and may use them in practice efficiently one day in work. At this time, teachers become instructors.

Case study teaching model. As what we have discussed in the former part, ESP learners will may become a specialist in a certain field in the future, and they would like to communicate with counterparts in an international working environment. As college students, they just studied several subjects related to their major and know little about future work. Its teachers' responsibility to give an overall view of work flow. Inspired by CAT principles, learners can do group study activities as collaboration work of translation. Teachers are better to set specific situations that the learners may meet in their future work and involve them into each stage, every participant serves as a team member of a project or a cooperative partner. During the process they can not only experience the working environment to acquire the language, but also point out each other's mistakes and get a deep impression of language usage. Teachers right now are conductors.

### CONCLUSION

To be concluded, ESP teaching should be conducted in creative methods to get effective results. Traditional ways are hardly to meet learners' needs and study mode in the information age. In order to reach a better teaching effect, teachers should always advance with the times and adjust themselves to the changing situations. Integration of ESP teaching with CAT technology brings advanced technology to classroom teaching may constantly change the traditional teaching model and will probably bring



a profound influence on ESP teaching. What teachers should do to be to develop more methods that are easily accessible to learners to assist their ESP study with CAT technology and enlarge its positive function in teaching to maximize its advantages.

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