Application of Multimedia and Network in Specialized English for Automation

Xiyan Wang, Tianhao Wang

Foreign Language Institute, Northeast Dianli University, Jilin, 132012 China

Abstract—**Specialized English is different from College English course in many ways. From the aspects of vocabulary, passage and translation, the author discusses about the characteristics of specialized English. Based on the current status of specialized English teaching in college, we should improve the teaching effects by making use of the multimedia and network.**

Keywords-multimedia and network; specialized English; automation.

I. CURRENT STATUS OF SPECIALIZED ENGLISH OF AUTOMATION

Specialized English is the scientific English used in a special major. In Northeast Dianli University, the specified English of the automation major lasts one semester. But in some other universities, this course lasts three semesters at most. Compared with others universities, the teaching period of this course is less. In fact, in most universities specified English is as important as other professional courses. However, students don't pay much attention on this course.

The purpose of the specialized English course is to understand and translate the professional materials with much professional knowledge as well as some specialized terms. With the development of automation technology, many outstanding simulation software, research papers of the front-line science, high performance equipment of automation, as well as some textbooks of this major are all written in English. With the wide spread of the bilingual teaching, students are more aware of the importance of specified English. Without the basic specialized vocabulary, a student with the CET 6 certificate can't get the general idea of the instructions in English. There are also many graduates who feel great pressure when dealing with many materials of different professional fields in English. When they come to write some papers or abstracts in English, they find it so difficult.

The students are required to write the abstract in English in their theses for graduation. It is the first time for them to apply the professional terms in writing. However, most students do bad in it. Many of them use the translation software to translate the abstracts from Chinese to English roughly. There are many grammatical mistakes in these theses, not to mention the precise description. Even in some outstanding theses of many universities there are many mistakes in English.

The multimedia and network is applied in English teaching in most universities. It could solve the problem by arousing the interests of learning specialized English and by enriching the vividness of the class. If we can apply the various information into the specialized English course, the teaching effect will be improved. [1]

In a word, it is necessary for us to strengthen the specialized English teaching. Teachers should improve the teaching methods with the multimedia and network to arouse students' interests to achieve better teaching effects.

II. THE APPLICATION OF MULTIMEDIA IN SPECIALIZED ENGLISH TEACHING

Applying the network and multimedia in the specialized English teaching is a new educational device. It can construct a student-centered curriculum environment. The high efficiency of the network and multimedia could make the English classes active. The students could be vigorous in class. The application of multimedia in specialized English teaching could be done in the following aspects:

A. Vocabulary of specialized English.

Vocabulary is the foundation of translation. So vocabulary teaching is the most important part in specialized English teaching. Though specialized English consists of large amount of professional terms, these terms are derived or transformed from the basic English vocabulary. For example, *feedback, openloop, conductor, semiconductor* and so on. Therefore, the same word used in the daily life and the professional passages are different in meaning and usage. Difference in meaning when these words are used in the professional way is another focus of teaching. For example, the polysemy of nouns is common. In the sentence like *Connect the black pigtail with the dog-house*, the pig and the dog are not animals we can see in the daily life but the lead cable and the shield cover in the professional field. [2]

Therefore, one of the most distinctive features of specialized English is its technical terms, which not only account for a large part of English vocabulary, but also are the most important source of newly coined words in modern English, ranging over an extensive area of various fields. The mastery of them will benefit us a great deal in the translation of specialized English.

According to the classification of technical words, there are singles words, compound forms and set phrases. Most words are formed by derivation, compounding, blending, shortening and borrowing.

Affixation is an important means of coining new English words and technical terms, with prefix and suffix as inseparable elements of the words being coined. The

advantage of affixation is evident. It is the most flexible means of forming new words and its potential of creation is almost boundless, therefore it is extensively used in the formation of technical terms. Besides prefixes and suffixes of English origin, there are some foreign borrowings, noticeably the Latin ones, like *bio-, thermo-, electro-, aero-, carbo-, hydro-, -ite, -mania* and etc. if we are familiar with these prefixes and suffixes, many technical terms of such formation can be translated appropriately. For example, we can divide the word *miniultrasonicprober* into several parts like *mini, ultra, sonic* and *prober*. In this way, we can translate the word with the understanding of each part. The same way could be used in translating the words like *macrospacetransship, bathythermograph* and so on.

Two or more words combined into a new word is called compounding. English technical terms formed by compounding usually take the form of combining with a hyphen or without it, like the words *salt-former* and *waterlock*. Most of such compound words could be translated literally. Sometimes there are some exceptions, such as the *dog-house* we just mentioned above. When we are confronted with unfamiliar terms and are not sure of their meaning, we should frequently consult dictionaries of relevant specialties.

An acronym is a word formed from the initials or other parts of several words. Acronyms are widely used to coin English technical terms. With the rapid development of science and technology, more and more acronyms are being used in various fields. For example, CAD for computer aided design, AC for alternate current and so on. Simple and brief, acronyms sometimes could cause ambiguity in meaning. Therefore, it is up to the translator to discern their actual meaning in different contexts.

According to the characteristics of the technical terms, we could adjust the ways of teaching with the help of the multimedia and network.

We can find that the courseware disks are mostly ready in the teaching materials. According to the different levels of students and the equipment, these disks are usually lack of the systemic introduction of translation. Therefore, it is necessary to make the proper courseware with the multimedia by teachers. This courseware should be designed according to the teaching plans, the English levels of different classes, and the teaching content.

In these courseware, the pictures, the sound, the animation and the videos should be made fully use of to stimulate the students' brains and to make the abstract knowledge into concrete and interesting. The content of the courseware should be focus on the introduction of the translation theories and the details of translation skills. Students always feel puzzled about the formation of the technical terms. Teachers could make use of the courseware. The vocabulary courseware could be designed from their familiar words to the new technical terms. The formation could be showed step by step. Students will find it easy to memorize the new technical terms.

This new courseware is convenient in two aspects. On the one hand, this new teaching form could save a lot of teaching time and is flexible in teaching the students of different levels. The boring technical terms are designed into the modernized forms. All this could arouse the interests of the students in such a relaxing environment. On the other hand, the teachers could design many chained addresses in the courseware. These chained addresses are chosen by the students according to their interests and different levels of English. Under the direction of the teacher the students could do the tasks in a lively language environment.

B.   Understanding the sentences and passages with technical terms.

There are many noun phrases in the scientific papers. This feature could make the paper brief, objective and precise. A lot of noun phrases are used to emphasize the fact not the action.

The scientific papers focus on logic analysis. Most sentences are in the passive voice. Because much use of the first and the second person leaves the impression of being subjective. The important information could be put ahead in the sentences of the third person in the passive voice.

There are many infinite verbs used in the scientific papers. The participle phrases replace the attributive clauses and the adverbial clauses. The nominative absolute are used to replace the adverbial clauses or the coordinate clauses. The infinitive and the preposition phrases are widely used to make the sentences brief and short.

Students should be familiar with the main characteristics of the scientific papers listed above. Then they could be directed when doing the long reading comprehensions. First, they should pay attention to the sentences in the passive voice. Second, the meaning of the long sentence should be understood according to the context. The long sentences should be analyzed according to the grammar structures. Third, students should understand the whole passage generally and deeply. If students could understand the passages fast after following these steps. They can also learn the passage according to the structures of the passages.

With the help of the multimedia and network, teaching effects would be better. For the students from the non-English majors, their interests in English become less when they find the traditional English classes are boring. They would feel nervous when they find translation difficult in front of the teachers. Adding more information to the class by multimedia could arouse this interest in study.

Teachers could also show the analysis of the sentences by the power points. Students would understand the long sentences easily in such a concrete way. Different levels of the passage could also be shown in such a way. The thinking patterns and the viewpoints of the author could be analyzed with the direction of the teachers. For some scientific papers, the operation of a certain machine or equipment could be displayed with some videos. It could help the students to understand such passages deeply.

Meanwhile, the time of English classes is so limited that students can't finish enough exercises in class. Teachers could put the unfinished tasks or the homework on the blogs or BBS by network. Students could also revise the teaching content by network in their free time.

C. Translation of the specialized English

Students should understand the main idea of the passage when translating the passages. We should distinct the meaning of the words and the grammar. When analyzing the texts, teachers should add some examples to the abstract passages. As to the characteristics of technical terms and the skills of translation, students should do more exercises on translation with the basic translation theory. During translation the skills and the technical terms could be grasped step by step. As to the cultural differences, the differences between English and Chinese could be neglected by many students at first. These mistakes could be corrected when students do more and more translation with the help of the teacher.

When teachers apply the multimedia and network in the specialized English. The following points needs great attention. First, teachers should adapt themselves to the new teaching ideas towards translation. Translation should be emphasized in specialized English teaching. It is a useful skill when students work in the society. Translation is as important as other abilities in English, such as listening, speaking, reading and writing.

Second, in the courseware, the size of the letters should be clear for the students. The time of the videos and animations should be set by the teacher in advance. [3] Film editing is a technical task for most teachers. English teachers should improve themselves in relevant field.

Third, the translation teaching should emphasize the autonomic learning by the students. As the technology grows rapidly, students will come to the latest information when doing research or surfing on line. As a translator in the IT times, the traditional ways to collect information in the familiar fields are not efficient. Students should learn how to collect information with the network, how to use the E-dictionary, how to maintain the translation software and websites.

III. CONCLUSION

The application of multimedia and network in specialized English teaching is relatively new in the teaching reforms. Translation is an important part in English teaching. Based on the characteristics of the technical English, teachers should adjust the teaching style to more vivid one. To arouse the interests of the students, the multimedia and the network should be made fully use of. To cultivate the language ability and the autonomic learning is the purpose of English teaching. Because of the limited space here, the author discussed the current status of the translation teaching as well as the application of multimedia in the specialized English classes in this thesis. More researches should be done in the detailed teaching strategies and other aspects.

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