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Teaching Trial and Analysis of English for Technical Communication

In this article is described the usage of English for technical communication (ETC), it is a novel development of English for specific purpose on the demand of the society for improving students' ability in communicating technical information
Development of Teaching Theories of ESP, analysis for ETC, teaching Technical Communications English for specific purpose, postgraduates

English for technical communication (ETC) is a novel development of English for specific purpose on the demand of the society for improving students' ability in communicating technical information. To assess the applicability of ETC teaching in China, a specially designed ETC course was delivered to five classes of postgraduates, and questionnaire and test analysis were carried out at end of the course. The results showed that the ETC training significantly developed students' skills in technical reading and writing, but not so much in speaking. This requires improving pedagogics and increasing the mutual communication so as to raise students' ability in oral English. The basic period of college English teaching in China is influenced by test-oriented education. Both teachers and students value test results more than language practice, and many students with high test scores are comparatively poor in actual speaking and writing, especially in talking business of their own profession. Therefore, how to solve these problems in the period of postgraduate education, so as to raise students' ability of technical or professional communication in English, is an important of project of research in Chinese college English education and in TEFL.

English for specific purpose, or ESP for short, is a pedagogy in which the syllabus, contents and methods are determined according to the needs of learners' specialized subjects. Ever since 1950s, EST has experienced several phases of development. At first, people tried to establish the syllabus and curriculum of EST through register analysis, that is, according to the features of grammar and vocabulary of the language used in certain specialty. A Course in Basic Scientific English compiled by Ewer and Latorre (1969) is a typical example of the syllabus on register analysis. Register analysis focused on language at sentence level, while discourse analysis shifted attention to the level above the sentence. It focused on how sentences are organized to form discourse, and the linguistic methods used to determine the modes of organization.

A Discourse Approach by Louis Trimble (1985) is representative of this approach. Target situation analysis held that the purpose of an ESP course is to enable learners to function adequately in a target situation. Therefore the ESP course design should proceed by identifying the target situation first, and then carrying out a rigorous analysis of the linguistic features of that situation. The process is usually known as needs analysis. Technical English by Pickett and Laster?1980?is typical of this approach. Based on the generalization commitment of cognitive linguistics, which seeks the general principles of language phenomena, the skills-centered approach holds that "underlying all language use there are common reasoning and interpreting processes, which, regardless of the surface forms, enable us to extract meaning from discourse." (Hutchinson 1987?13). "There is a core of language which can be identified as "academic" and which is not subject-specific." (Chitravelu, 1980). Although the contents of various specialties

are different, the types of documents they use are similar to each other. On the basis of the common-core language teaching theory, the pedagogy of technical communication, TC for short, aims at finding out the general conventions that guide the style, function, discourse and rhetoric of all the technical documents, and applying them to ESP teaching practice in all specialties. Therefore, no matter what specialty you major in or what business you undertake, so far as you have mastered the general conventions in TC, you will be able to communicate effectively in your own profession. Communicating Technical Information by Pattow and Wresch 1998 is typical of technical communication.

This is an advanced technical or professional English course for postgraduates and undergraduates at the senior level, for the purpose to raise students' ability of practical communication, esp. standardization in technical writing. The book consists of five aspects:

a) Technical Reading: introducing skills in reading technical documents and methods in information retrieval and collection;

b)Technical Writing: introducing writing skills in technical definition, experimental description, abstract, analysis and argumentation, Ethics and documentation, etc.;

c) Document Design: introducing skills of designing documents on computers, including format, designing principles and standardization, etc.;

d) Types of Technical Documents: introducing the features of various technical documents including style, rhetoric, and conventions in writing;

e)Oral Communication: introducing the purpose, objects, needs and strategic of oral communication in various situations, including business reception, conference report, techniques of presentation, interview for job application, etc.

Each chapter in the book is divided into two parts. The first part introduces the language features of technical documents and communication skills; the second part provides examples of technical documents with these features for practice. The book provides the general conventions for writing all kinds of technical documents, which can also be used as a reference book for students in writing practice.

To test the practicability of the ECT course, teaching practice was carried out for postgraduates of Grade 2001 in both Capital University of Medical Sciences and

Medical College of Zhengzhou University. Students received two hours of ETC lessons each week, and the course lasted 18 weeks. The instructors made full use of multimedia facilities in ETC teaching, combined audio input with video and text input, made systematical analysis in style, discourse and rhetoric for different genres of technical documents, carried our the practice in technical reading, writing and speaking, and endeavored to raise students ability in technical communication by all means.

Combining the methods of qualitative and quantitative analysis, the authors carried out questionnaire and evaluation analysis in 224 students from 5 classes registering the course. Of the 221questionnaires issued, 215 were collected; the rate of collection was 97.2%. Descriptive statistics was carried out with 100 random samples (20 samples from each class). The reliability of the data was determined according to frequency of choices. The contents of each item in the questionnaire and the results of the statistical analysis are as follows:

a) Which do you think is the English ability you need to improve most urgently in your work? (Multiple choice);

From the statistic results, it can be seen that coping with examination is no longer the target need for postgraduates; neither is reading or translation. Their needs for ability in speaking, listening and writing English are urgent, with speaking ranking the first;

b) Do you think it necessary for postgraduates to study ETC course?

The results show that 96% of the graduates held that it was necessary for them to study ETC course as a way to improve their technical communication, which proves the feasibility of ETC teaching;

c) Which of your following language abilities is improved through ETC teaching?

Because of the curriculum arrangement, ETC course was delivered chiefly to raise students' ability in technical reading and writing. The oral and audio lessons were delivered separately by foreign instructors. No wonder the students' speaking ability was not significantly improved in this course;

d) Do you think the teaching material in ETC course is practical?

The results show that the practicality of ETC teaching was confirmed by 85% of the Students;

e) Is ETC course difficult or easy for you?More than half of the students felt the course difficult. It is a bit beyond students' level at present. However, along with the advance of English level of the newly enrolled students, the course tends to become moderate in the future;

f) Do you think that your ability of professional communication in English has been improved by taking the ETC course? Of the samples, 79% confirmed that their ability in professional communication had been improved; however there were still 29% of the students who thought otherwise. This result probably concerns some students' special disciplines, which reflects an even higher requirement for the book's scope of application;

g) Which do you think is the ability of professional communication you need to improve most urgently in your work? (Multiple choice);

h) Which of your following abilities has been improved through your study of ETC course?

Question seven and eight reflect the comparison between the target needs and the teaching results. Question seven reflects students' target needs, the results of which show the students' high demands on technical writing and speaking, and their neglect of discourse analysis and rhetorical appreciation. Most of the science students are content with superficial understanding of texts and this is an obstacle to advanced reading and deeper understanding of technical documents.

Assessment for ETC Teaching.

To determine the reliability of the questionnaire, a placement test on students' ability in technical reading and writing was carried out at the beginning of the semester, and an achievement test was done at the end of the semester. The results of the two tests were compared and analyzed. The reading test concerns students' ability of information searching, understanding, summarizing and translating; the writing test was chiefly on students' ability in writing standard technical documents as abstracts and reports. From the comparison between the mean score of the placement test at the beginning of the semester and that of the achievement test at the end of the semester, it could be seen hat students' ability in technical reading and writing, especially writing, was significantly improved through ETC course. This is because the students knew very little of the conventions of technical writing before the course, and the ETC teaching was a great help to the standardization of the students' writing. The standard deviation of the writing score in the achievement test is smaller than that in the placement test, which means ETC teaching has reduced the dispersion degree in students' scores, and therefore reduced students' score differences and raised students' writing ability in general. The standard deviation of the reading score in the achievement test is, however, greater than that in the placement test, which means ETC teaching has increased the dispersion degree in students' scores, and therefore widened students' score differences. This explains why some students complained in the questionnaire that the course was too difficult for them to make any significant progress in reading. From the assessment, it can be seen that the result of the test analysis is in accordance with that of the questionnaire.

On the basis of the questionnaire and the test analysis of ETC teaching, it can be concluded that students have a definite target need for technical communication and it is necessary to deliver ETC course to postgraduates. Most postgraduates desire to improve their

abilities in English listening, speaking and writing, but they neglect the importance of style and rhetoric in advanced reading. The teaching materials of ETC course are practical and have raised students' ability in professional communication chiefly in the aspect of reading and writing, but not so significantly in speaking. This defect can be made up by delivering listening and speaking lessons separately by foreign instructors. It also requires the instructors of ETC course to improve their teaching methods. Student centered approach should be adopted in ETC teaching and the mutual communication between teachers and students should be emphasized in class to raise students' oral ability in technical communication.

The list of literature

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В статті описано використання англійської мови для технічної комунікації, як нестандартного розвитку англійської мови з спеціальних причин на потреби суспільства для доведення здатності студентів в комунікації технічної інформації.

В статье описано использование английского языка для технической коммуникации как нестандартного развития английского языка определенных причин на потребности общества для доказательства способностей студентов в коммуникации технической информации.

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Дослідження сучасного стану та перспектив розвитку пенсійного забезпечення в Україні

У статті розглянуті методологічні підходи до формування пенсійного забезпечення в Україні. Метою даної статті є дослідження перспектив розвитку вітчизняного пенсійного забезпечення.
пенсія, види пенсій, пенсійна реформа.

Євроінтеграційні орієнтири України, посилення соціальної спрямованості ринкових перетворень вимагають, щоб соціально-економічна політика держави та діяльність уряду щодо її реалізації були направлені на досягнення європейських стандартів якості життя та загальнолюдських цінностей. Це передбачає надійний соціальний захист населення і належне пенсійне забезпечення як один із визначальних чинників суспільного добробуту. В даному аспекті ефективність функціонування пенсійної системи та її реформування стають важливою умовою суспільного розвитку і соціальних перетворень. Досі чинна система державного пенсійного забезпечення в Україні не відповідає цим вимогам. Проведення пенсійної реформи потребує вирішення