

The Application of Learner Autonomy Theory and Model into ESP Technology-assisted Curriculum Construction

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Abstract

ESP teaching will become the chief English teaching current in the 21st century. According to the scientific principles of ESP teaching, we project group combined English comprehensive abilities development with the basic knowledge grasp of civil engineering in science, reformed the college English teaching in science and engineering university. In teaching model, we adopted the theory and model of learner autonomy to carry on ESP teaching practice, and achieved better teaching consequence. The article firstly reviews relevant theories about ESP and learner autonomy. Secondly, the article focuses on the research contents of ESP curriculum construction and reforming experience in previous period, aiming to illustrate by practical examples the practicability and extensibility of the theory and mode of learner autonomy in ESP teaching. Finally the article sums up the reform effects on students' college English learning and teachers' thoughts towards this reformed teaching model.

Keywords: ESP curriculum construction, learner autonomy, teaching reform

1. Introduction

With the rapid development of science and technology, social interactions are increasing often. Great number of competitive inter-disciplinary talents are needed in different professional fields, especially in many work situations, both English and professional knowledge are required to deal with working matters. Under the condition that the teaching of general purpose English has not been able to meet this need, the teaching of "English for Specific Purpose" has come to appear its importance. It has been considered as a separate activity within English language teaching (ELT). It is believed that for some of its teaching ESP has developed its own methodology and its research draws on research from various disciplines in addition to applied linguistics (Bojovic, 2006).

The purpose of this study is to explore the ways by which Chinese science and engineering university can teach college English more effectively and practically. This paper describes relevant theories about ESP and learner autonomy, then research contents of ESP curriculum construction and reforming experience in previous period, finally the reform effects on students' college English learning and teachers' teaching, aiming to illustrate by example the practicability and extensibility of the theory and mode of learner autonomy in ESP teaching.

2. Theoretical Background

2.1 English for Specific Purposes

Generally speaking, English for Specific Purposes (ESP) has been seen as part of English Language Teaching (ELT), and ESP research as a component of applied linguistic research. However the "openness to the insight of other disciplines" (Dudley-Evans et al., 1998) makes ESP different from the general English teaching. An ESP practitioner usually must "engage with other disciplines through teaching", and "draw on the insights of researchers in other disciplines" (Dudley-Evans et al., 1998). Therefore an ESP practitioner not only has to take on the responsibility as a teacher, but also to cooperate with subject experts to find out what students' needs are and what kind of tasks they will need to carry out in their professions.

There are various experts' definitions of ESP discipline. As Hutchinson and Waters (1987) defined it, "ESP must be seen as an approach not as a product. ESP is not a particular kind of language or methodology, not does it

consist of a particular type of teaching material. Understood properly, it is an approach to language teaching which aims to meet the needs of particular learners. ...ESP then is 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) stated that ESP is normally goal directed. That is, students study English not because they are interested in the English language (or English-language culture) as such but because they need English for study or work purposes. An ESP course is based on a needs analysis, which aims to specify as closely as possible what exactly it is that students have to do through the medium of English.

Strevens (1988) claimed that ESP has four absolute characteristics: it is designed to meet specified needs of the learner; it is related in content (that is in its themes and topics) to particular disciplines, occupations and activities; it is centered on language appropriate to those activities in syntax, lexis, discourse, semantics and so on, and analysis of the discourse; it is in contrast with "General English".

Furthermore Dudley-Evans and St. John (1998) found that ESP methodology lies on two aspects: the first is that all ESP teaching should reflect the methodology of the disciplines and professions it serves; and in more specific ESP teaching, the nature of the interaction between the teacher and learner may be very different from that in a general English class. The second is that language should be a defining feature of ESP. A key assumption of ESP is that these activities generate and depend on registers, genres and associated language that students need to be able to manipulate in order to carry out the activity. They also noted two absolute characteristics of ESP: the first is that ESP is designed to meet specific needs of the learner; the second is that ESP makes use of the underlying methodology and activities of the disciplines it serves.

It seems that all researchers bear the opinion that ESP is an English lesson focusing on specific learners' learning purposes and needs. It's a multi-subject research field, not only involves language itself and relative linguistic theories, but also learners' professional knowledge. Its teaching purpose is to cultivate and promote learners' English using ability in their professional field.

During the past few decades, the practice of ESP has developed considerably. There are various descriptions telling the development of ESP. Howatt (1984) argued that ESP can be traced back to the 16th century when the Huguenot and other Protestant refugees fled to England. During that time, the refugees had the need for commercial English, and this need led to a focus on Business English in the very early ELT studies. McDonough (1984) mentioned that "Beginning in the early 1960's, there were many reports from around the world of a growing dissatisfaction with the language teaching practice then current, where all learners were served up with literature regardless of their aims, needs, or interests." And Hutchinson and Waters (1987) identified that the second half of the 20th century brought remarkable expansion in all spheres of human life and English language learners had specific objectives related to their work.

In China, after the Second World War, ESP once came to college campus, yet, ESP teaching was really popularized in 1970s (Sun, 2007). Even though ESP teaching has practiced in tertiary educational institutions for more than a decade, compared with the system research and development of the west countries' ESP, its effectiveness has been far from satisfactory and related researches have also lagged behind.

ESP research originated from the west in 1960s, and started in China in 1980s. ESP educational system has formed completely in the west now. There are ESP teaching practice, category analysis, language database analysis research. In China, there're two types of ESP researches, one is macroscopically recapitulative information research, the other is the research into ESP branches, mainly including business English, also including law English, finance English, etc. The research into ESP teaching practice occupies about 40% of the ESP total research (Yichao et al., 2010).

2.2 Learner Autonomy

Now we will look back "learner autonomy" disciplines which we engaged with ESP. Learner autonomy was firstly defined by Henri Holec in early 1980s as "the ability to take charge of one's own learning", noting that this ability "is not inborn but must be acquired either by 'natural' means or (as most often happens) by formal learning, i.e. in a systematic, deliberate way" (Holec, 1981). Dickinson (1987) enlarged the definition as: learner can determine his own learning, take total responsibility for the implementation of the determination, the specific responsibilities taken are including self-chosen learning contents, methods, tempo, time, place and materials, be able to self-control and self-test. Boud (1988) claimed that learner autonomy is not only educational aims, but also the ways and means of educational practice.

A large body of empirical research in social psychology shows that because of "feeling free and volitional in one's actions" (Deci, 1995), autonomy is a basic human need. Little explains that autonomy is nourished by, and

in turn nourishes, our intrinsic motivation, our proactive interest in the world around us. Autonomous learners draw on their intrinsic motivation when they accept responsibility for their own learning and commit themselves to develop the skills of reflective self-management in learning; and success in learning strengthens their intrinsic motivation. Precisely because autonomous learners are motivated and reflective learners, their learning is efficient and effective. And the efficiency and effectiveness of the autonomous learner means that the knowledge and skills acquired in the classroom can be applied to situations that arise outside the classroom.

Adopting autonomous learning method, on one hand, may reduce class hours, give an overall consideration about teaching contents and activities inside and outside classroom, make the best of educational resources, relieve the shortage of teachers. On the other hand, it may basically solve the problem of teaching philosophy, teaching model so as to promote learners' comprehensive English using ability.

Weiguo (2001) synthesized learner autonomy research achievements in China and abroad, put forward his new understanding: learner autonomy can be regarded as both an ability and a learning activity. As an ability, autonomous learning experiences a developing process from heteronomy to autonomy. Generally speaking, in the process of learning, the more instruction, supervision and enlightenment are given by the adult interacting with learners, the more learning experience they get so as to be able to more explicitly sense, direct and adjust their own learning process. Therefore the formation of learner autonomy cannot be separated from instruction, the external condition. As an activity process, learner autonomy cannot dissociate from teacher's instruction completely either. Under the current educational conditions, learners have to rely on their teacher to ensure their learning contents, obtain their learning strategy, supply their learning feedback. When meeting with the learning difficulty they cannot solve by themselves, learners especially need instruction and help from their teacher. Therefore, learner autonomy needs both internal and external conditions.

3. Research Contents

The main research contents are to combine English language knowledge and skill teaching with civil engineering professional basic knowledge teaching, conduct art and science cross-subject research, explore new developing model of College English teaching in science and engineering university so as to push forward college English teaching towards the direction of cultivating talents elite healthily and effectively. In ESP teaching research, we actively bring in learner autonomy theory and teaching model according to teaching practice and learner-cultivating aims, and have achieved some positive teaching effects.

3.1 Method

3.1.1 Instrumentation

In this study, the pilot project is administered in selected classes of Civil Engineering Department, Dalian University of Technology, Dalian, China in order to fulfill the case study. The advanced college English teaching system is taken into use that computer-aided language teaching can be realized inside the classroom, learner autonomous learning practiced outside the classroom with centralized management and supervision by teachers on campus LAN. The project time duration was one year, actually we did it much more than one year.

Under the direction of ESP teaching theory and autonomous learning theory, pilot project established "internet teaching and learning + multimedia classroom teaching+ learner autonomy outside classroom", i.e. the teaching model of "learner autonomy under teachers' instruction".

3.1.2 Subjects and Participants

The student participants were those of Grade 2008, majoring in Civil Engineering, they were in the level of College English Band One. In their second year of college English learning, their college English listening and speaking class was completely instructed in new teaching style.

The teacher participants are 5 from College English Department, 3 from Civil Engineering Department. With the help of the Civil Engineering teachers and experts, College English teachers reformed the teaching model of college English listening and speaking course and have been compiling ESP spoken English teaching materials.

3.1.3 Goals

To learners:

The education as such is to cultivate learner's quality. We take learner-centered educational thought, with the help of computer-aided language learning, explore the teaching theory and method of cultivating learner's grasping learning ability, try to help learner have autonomous learning ability. On the one hand, largely increase learner's approaches of hunting language knowledge, get rid of the hindrance caused by time and geographic reasons during this process; on the other hand, cultivate learner's relatively-independent learning ability and

analytical ability, change traditionally complete feeding teaching and learner's passively-accepted learning situation, bring out learner's English learning enthusiasm that learner can be impelled to turn to active learning from passive learning.

To teachers:

The teachers in research team convert from single-English-language type to compound type. To some extent, we have done it. One way is through self-training and learning from the experts and teachers of civil engineering department in our university, the other way is to intercommunicate with foreign experts. Now we are compiling "Practical civil engineering English conversation" teaching material, and the teachers' research range has enlarged to ESP field.

3.1.4 Principles

A. The Principle of Combining Theory Research with Practice Exploration

The teaching mode research of College English autonomous learning under teacher's instruction and the research of ESP teaching reform in science and engineering university, reflect the educational principle and opinion of modern social development. We need to consistently study and research relevant international scientific educational theories in order to direct teaching practice. We need to sum up experience on the basis of great number of teaching practice, explore the rules of college English teaching under the new environment,

B. The Principle of Integrating the Commonness-fostering Plan with the Individuality Fostering Plan

Starting from adjusting the commonness-fostering plan which is all the students in the pilot project oriented, integrate two types of plan, attach importance to the individuality-fostering plan, teach students according to their aptitude, build up better English learning environment which is proper for students to develop their individuality so that it can meet excellent talents' language-learning needs.

C. The Principle of Combining the Grasp of Basic Language Knowledge with the Cultivation of Language Applying Ability

During the whole process of carrying out teaching reform, cope well with the balance of grasping the basic language knowledge and cultivating language applying ability, explore the scientific proportion between them that the teaching contents, teaching means and ways established can fit to the requirements of college English teaching.

D. The Principle of Combining Teacher's Teaching Inside the Classroom with Learner Autonomy outside the Classroom

Break down the misunderstanding that instruction in classroom is the main channel, outside the classroom is sub-channel, instruction outside the classroom is bound to conflict with that inside the classroom. Set up the educational opinion that two ways of instructions are both the main channels of cultivating talents, put both of them into teaching plan that two channels are really playing roles in teaching complementation and mechanism interaction.

E. The Principle of Combining Pilot Project with its Popularization

Under the ESP teaching environment, the research on college English teaching mode involves much difficulty on both theory and practice, and many problems are under the exploration with uncertainty. The practical situation during the research should be considered, take the classes in pilot project as the breaking point, timely summary of experience needs to be done, gradually develop College English ESP teaching reform.

3.2 Research Task

There are three periods in our teaching reform:

(1) Take an English proficiency in-band test among the freshmen, to learn their special abilities in listening, speaking, reading, writing, translating, and other aspects, and their comprehensive language using proficiency. Investigate students in the pilot project about their learning goals, learning interests, learning motivation and suggestions on foreign language learning; at the same time, associating with their basic computer course in the first semester, get to know these freshmen's computer knowledge and applying ability and so on.

(2) Guide students in different classifications, teach them in accordance with their aptitude; teachers in the pilot project take professional knowledge training in order to convert ourselves from single language teachers to compound language teachers.

In the classes of pilot project, fully start the new English teaching mode of "internet teaching and learning +

multimedia classroom teaching + learner autonomy outside the classroom". On the basis of the first step, adjust and improve every teaching link according to our teaching situation; ensure the teaching mode to be proper for the students in the pilot project, gradually enlarge the number of students' learning information; take periodical assessment to learn student's learning effects in different periods; take comprehensive ability test and subtest, analyze data horizontally and vertically to have more scientific, more objective and more persuasive research result.

At the same period, all the teachers take at least one class majoring in civil engineering, to learn basic civil engineering professional knowledge from teachers or experts of this major by means of attending professional classes or lectures or teach ourselves in spare time. Finally compile a "Practical Civil Engineering Spoken English Conversation" teaching material by the teachers of pilot project and writing teaching research essays on ESP.

(3) After the ESP teaching pilot project research, a questionnaire will be delivered among the students and teachers in the pilot project, to learn the effectiveness of the reform from the curriculum design, the organization of teaching contents, working and learning conditions, the future popularization of ESP teaching model, etc.. The relevant data will be analyzed so that the next ESP teaching can be given enough preparations. The research experience will be summed up by means of writing a research report, reporting essay in relevant academic conference.

3.3 Explore Diversified Teaching Methods, Construct the Mode of Learner Autonomy under Teacher's Instruction

Teaching organization: Under the direction of the multi-teaching mode principle of "fostering student's ability of learner autonomy under teacher's instruction", the project group prepared lessons collectively; at the same time, on the premise of the same teaching aims and requirements, respected teachers' and students' practical needs, encourage teachers to conduct individualized classroom teaching. In practical teaching, we synthetically utilize "Multiple Intelligence cooperative teaching", "task-based teaching", "communicative teaching" and so on teaching methods.

Content-based Knowledge Board

Classroom Teaching Section: (foundation and improvement periods)

Foundation period:	College English Band 1	48 teaching hours
	College English Band 2	48 teaching hours
	College English Band 3	48 teaching hours
Improvement period:	College English Band 4	48 teaching hours
	College English Band 5	64 teaching hours
	College English Band 6	64 teaching hours

Notes: College English improvement period includes Band4 (starting ESP college English teaching), Band 5 and Band 6 are comprehensive ability teaching periods and part of professional courses teaching, eg. Business English, English communication, etc.

Learner Autonomy Section:

Band 1 online autonomous listening & speaking	24 hours/per semester
Band 2 online autonomous L & S	32-64 hours
Band 3 online autonomous L & S	32-64 hours
Band 4 online autonomous L & S	32-64 hours

Teaching environment: College English ESP teaching reform has realized 100% all-round three-dimensional teaching. Teachers foster students' language learning ability, especially listening and speaking abilities, by means of modern multimedia. Teachers take use of electronical lesson plan to teach, self-made electronic teaching courseware in order that teaching efficiency and teaching effect are improved.

Adequately utilize modern educational technology to achieve the effect of increasing the number of information in the classroom, reducing lesson hours; and stimulating students' listening and speaking learning interest that they can change their passive learning to active learning, improve both teaching and learning effects and qualities.

Teaching contents: In foundation period (including Band 1, Band 2 and Band 3), project group chooses “New Horizon College English” textbook and teaching system. In improvement period, self-compiled spoken English teaching material will be used in both inside and outside classroom to realize the teaching goal of specially fostering and improving students’ listening and speaking ability, and practical English applying ability.

Teaching evaluation: The project group realizes global tracking evaluation according to management system, record students’ learning contents, speed and effect in each semester into database. Based on these data, teachers form each student’s estimation value in the end of the semester which covers his whole semester’s learning performance, combine teacher’s assessment in daily teaching performance, peer assessment result, final spoken test and mid-term, final exam, in the end form a student’s final mark in a more scientific proportion, offer us a valuable reference about the effects of students’ learning activities.

4. The Result of the Research

In the two semesters of the pilot project research of new teaching mode, we insisted on adopting new teaching methods, teaching evaluation, the teaching result has certain reference value for teaching reform.

The statistics of autonomous learning in “New Horizon College English” teaching system

time duration:	2010.2-2011.1
accumulated number of participants:	2770 persons
accumulated system open hours:	3072 hours
average learning hours/per person:	206 hours
average instruction hours/per teacher:	768 hours
interactivity between teacher & students:	once per week

More than one year’s teaching practice offered research teachers the understanding that because of long term Examination-oriented situation, students didn’t have more opportunities to accept more listening and speaking trainings, new teaching model offered students various listening and speaking elements that their abilities have been improved as well. These abilities include not only listening and speaking, but also learner autonomy and other comprehensive abilities. In the end of the year 2009, 170 students starting from Band 1 in pilot project participated National Examination of CE4, 93% of them passed the exam. Under the new teaching system, students’ learning score, together with listening and speaking ability, is improving at the same time, and students’ ability of learner autonomy are also obviously improved as well.

The new teaching practice also led up to our understanding that College English teaching should develop towards individualized, active learning, learning without the limitation of time and place, should reflect the principle of practical, interesting, and flexible English teaching, which can fully stimulate and play both teachers’ and students’ initiative. Therefore, establishing “college English learner autonomy under teacher’s instruction” in our university is an effective way to improve learner’s individualized and autonomous learning.

The research teachers realized through practical pilot project research that utilizing such a mode to take college English teaching in the university of science and technology has advantages as following:

- 1) Applying modern teaching technology into language teaching, tremendously increased students’ language learning interest;
- 2) The teaching contents for both inside and outside classroom supply students as many learning channels and as much information as possible, which helped students improve their ability of actively hunting knowledge and knowledge-applying skill.
- 3) The teaching method of combining classroom teaching with extracurricular autonomous learning, combining textbook with network, helped students foster and increase their comprehensive language-applying ability, especially listening and speaking ability.
- 4) Learner-centered classroom helps learners actively involve themselves into their learning process. This learning mode requires students to study online following the curriculum schedule, each student controls his own learning tempo and time according to his own condition, which helps cultivate students’ ability of learner autonomy effectively.
- 5) Through campus LAN and multimedia method, teachers can invoke each learner’s learning record at any time, and conduct individualized teaching plan in accordance with each learner’s concrete situation so that it avoided neglecting learner’s personal needs caused by traditional commonness teaching, helped teachers realize teaching students in accordance of their aptitude. This is feasible and replicable.

References

- Bojovic, M. (2006). Teaching Foreign Language for Specific Purposes: Teacher Development. *The 31st Annual ATEE Conference*, 487-493.
- Boud, D. (1988). *Developing Student Autonomy in Learning*. London: Kogan Page Limited.
- Deci, E., & Flaste, R. (1995). *Why we do what we do: understanding self-motivation*. New York: Penguin.
- Dickinson, L. (1987). *Self-instruction in Language Learning*. Cambridge: Cambridge University Press.
- Dudley-Evans, T., & St. John, M. (1998). *Developments in ESP: A multi-disciplinary approach*. Cambridge: CUP.
- Holec, H. (1981). *Autonomy and Foreign Language Learning*. Oxford: Pergamon Press.
- Howatt, A. P. R. (1984). *A History of English Language Teaching*. Oxford: Oxford University Press.
- Hutchinson, T., & Waters, A. (1987). *English for Specific Purposes: a Learner-centered Approach*. Cambridge: CUP. <http://dx.doi.org/10.1017/CBO9780511733031>
- Little, D. (2007). Learner Autonomy: Drawing together the threads of self-assessment, goal-setting and reflection. Retrieved August, 2012, from http://archive.ecml.at/mtp2/Elp_tt/Results/DM_layout/00_10/06/06%20Supplementary%20text.pdf
- McDonough, Jo. (1984). *ESP in Perspective: A Practical Guide*. London: Collins ELT.
- Robinson, P. (1991). *ESP Today: a Practitioner's Guide*. Hemel Hempstead: Prentice Hall International.
- Strevens, P. (1988). *ESP after twenty years: A re-appraisal*. In M. Tickoo (Ed.), *ESP: State of the Art* (pp. 1-13). Singapore: SEAMEO Regional Centre.
- Sun, H. (2007). Reflections and Suggestions on the Development of ESP Teaching in China. *Journal of Cambridge Studies*, 2(1), 36-42.
- Weiguo, P. (2001). On Learner Autonomy. *Journal of East China Normal University (Educational Science Edition)*, 6(2), 78-83.
- Yichao, J., & Na, L. (2010). Domestic 20 Years' Research on ESP: Review and Reflection. *Journal of NingBo University (Educational Science Edition)*, 32(2), 104-109.