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Research Article

Teaching Method of English Autonomous Learning Based on Metacognitive Strategy Theory

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Abstract

Autonomous learning ability is the basic ability of the talents to keep a foothold in the society. The educational concept of autonomous learning has become the common understanding of the educational circles. Based on metacognitive strategy theory, this study attempts to introduce task-based teaching method into college English teaching, and constructs a task-based teaching model of English autonomous learning based on metacognitive strategy theory. The method of contrastive analysis is used to analyze the teaching effect of this teaching model. The result shows that the task-based teaching model of English autonomous learning based on metacognitive strategy theory is conducive to stimulating students' intrinsic learning motivation, training and improving their cognitive level and metacognitive strategy, which can make full use of learning resources to effectively promote the cultivation of students' autonomous learning ability. This study provides a theoretical and practical basis for the promotion of college English teaching and the cultivation of students' autonomous learning ability.

Keywords

Metacognition • English Autonomous Learning • Task-Based Teaching • Analysis of Teaching Effect

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Nowadays, as the update speed of information unceasingly accelerates and the international competition is becoming increasingly fierce, the society has put forward higher requirements for the talents' quality that needs them to have the lifelong learning ability. Autonomous learning has gradually become the basic ability of people to keep a foothold in the society, and China has actively advocated the creation of a learning society (Duque Micán & Cuesta Medina, 2017). College students are the successors of China's future career and the cultivation of their autonomous learning ability has been put on the agenda, which has become an important research topic in the educational circles.

The newly issued "College English Curriculum Requirements" has made it clear that the thought and practice of cultivating students' autonomous learning ability is one of the important goals of teaching model reform (Pitak-Arnnop *et al*., 2012). The concept of autonomous learning can be traced back to the 1960s. Autonomous learning is based on the theory of constructivism and humanistic learning (English, 2016). There is no final conclusion about the definition of autonomous learning. Benson's definition provides a comprehensive description of autonomous learning, pointing out that autonomous learning is the control ability of self-learning, which can be divided into learning management, cognition process and learning content control (Sampson & R, 2012). Pang Weiguo holds that autonomous learning should include the intrinsic motivation factor of learning, namely, the desire to learn, the cognitive strategy factor of ability to learn, metacognitive strategy factor of adherence to learning and learning resources utilization (Gao *et al*., 2012). The domestic and foreign research achievements on autonomous learning are quite rich, covering the definition and connotation of autonomous learning, the cultivation path, model and strategy of autonomous learning, the roles played by teachers and students in autonomous learning (Armanet & Obese-Jecty, 1981), providing theoretical basis and guidance for the teaching of autonomous learning. Metacognition is the cognition and consciousness of cognitive subjects to their own cognition process. Metacognitive strategies can be understood as management measures taken by learners in the learning process, including making learning plans, self-evaluation and self-supervision (Nation *et al*., 2007). Some researchers have shown that metacognitive strategy is the key to promote self-learning and teaching is the main way to cultivate students' autonomous learning ability and metacognitive strategy (Templeton, 1991). The task-based teaching method is a teaching method based on the theory of constructivism. Through the task organization teaching, it can change the information flow of teachers as the main body in the traditional classroom, and encourage the learners to participate so as to realize the benign interaction between teachers and students (Liu, 2001).

Based on the above analysis, it can be found that both autonomous learning and task-based teaching emphasize student-centered idea and have similar teaching ideas. Therefore, this study tries to introduce task-based teaching method into college English teaching. Based on Willis task-based framework, this study constructs a task-based teaching model of English autonomous learning based on metacognitive strategy theory, and analyzes the teaching effect of this teaching model from the aspects of students' academic achievement and autonomous learning situation by means of contrastive analysis. The result shows that this teaching model is helpful for students to develop their autonomous learning ability.

Implementation of Task-based Teaching and Cultivation of Autonomous Learning Ability

Task design

Task design in the task-based teaching plays an important role in the whole teaching. In the process of task design, it is necessary to define the learning goal of task-based teaching first, and then choose reasonable input materials that can provide students with real target language so as to stimulate their interest in learning. In addition, it is necessary to set up task activities according to the actual conditions of the students, monitor closely in the process, and adjust the difficulty degree of the task activities in time. Finally, the objective and fair evaluation of the task should be carried out by the combination of various evaluation methods.

Willis task-based framework

Task-based framework for Willis teaching is a classroom activity model of task-based language teaching put forward by Willis, a famous English pedagogical expert. Figure 1 shows task-based framework for Willis teaching, which provides good instruction for language teachers.

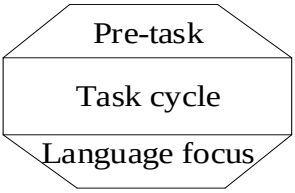

Figure 1. Task-based framework for Willis teaching.

Construction of task-based English autonomous learning model based on metacognitive strategy theory

In order to better combine Willis teaching framework with English teaching and improve students' English autonomous learning ability, this study designs college English classroom teaching in detail based on the framework and metacognitive strategy theory, as shown in Figure 2.

Task presentation. The purpose of task presentation is to help students understand the task requirements so that students can understand what learning goals should be grasped by the completion of the task, which is one of the important links to cultivate students' autonomous learning ability. The teacher may introduce students into the task situation through the pictures and topics related to the students' life and task to complete the introduction of task. The introduction of the task goals can be completed by allowing the students to make a preview or direct notification through the teacher. Finally, the arrangement of relevant tasks is completed.

Task preparation. In the task preparation stage, the students are required to consult or collect the information contents related to the task through the network after the class in group or other ways, or teachers may introduce the background information of the task through the visual form such as pictures and videos. Besides, students complete the language knowledge and skills required in the task with the teacher's introduction of examples, recall and activation of the original vocabulary.

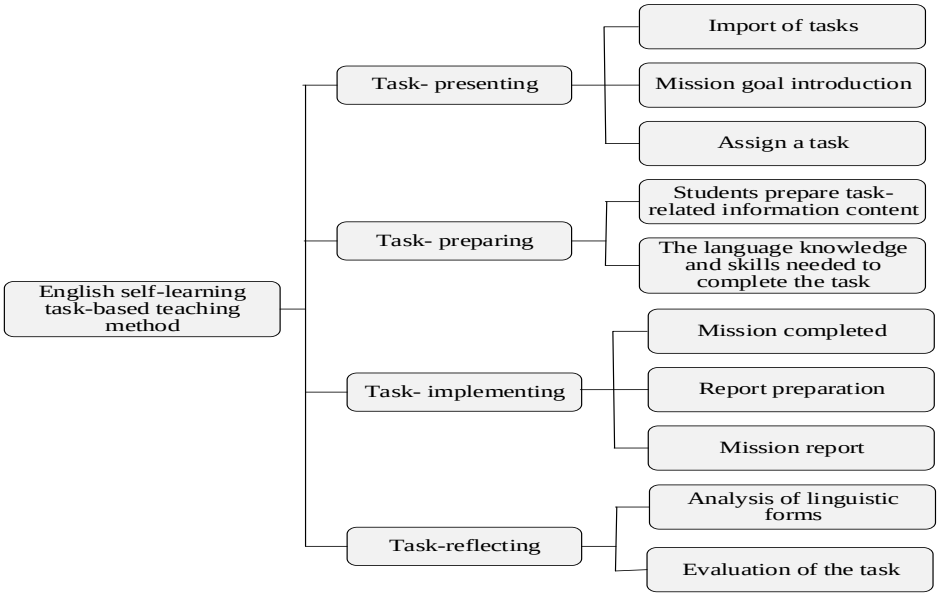

Figure 2. English autonomous learning task-based teaching model.

Task implementation. The task implementation can be divided into three stages. The first stage is the task completion stage in which the students complete the tasks assigned by the teachers according to the pre-divided groups, and the teacher mainly acts as the supervisors of teaching to urge the students to carry on the discussion around the learning task, making the students stay in an independent free learning state. The second stage is the preparation stage of the report. The members of the group work separately and cooperate with each other to discuss and complete the learning report according to the form arranged by the teacher. The teacher only acts as a mentor and gives appropriate prompt when the students can't solve the problems. The third stage is the task report stage. At this stage, the group representatives are assigned to report on the completion of the group's tasks, and each group carefully listens to the report, records and summarizes them, and the teacher comments on the report. Therefore, the task implementation stage is the most important link to cultivate students' autonomous learning.

Task evaluation. The main purpose of task evaluation is to make students understand their own learning situation, consolidate and deepen the understanding of knowledge, which can help students develop self-learning. Evaluation can be divided into two parts: the analysis of language forms and the evaluation of task. Through the analysis of students' learning materials, teachers can guide students to pay attention to language

forms in the course of task supplemented by appropriate exercises. There are various forms of task evaluation, including group mutual evaluation, student mutual evaluation and student self-evaluation, among which student self-evaluation is an important strategy to cultivate students' autonomous learning ability. Teachers can design student self-evaluation table to enhance their self-evaluation ability.

Analysis of Task-based Teaching Effect of English Autonomous Learning Based on Metacognitive Strategy Theory

In order to test whether the task-based teaching model of English autonomous learning based on metacognitive strategy theory is helpful to improve students' autonomous learning ability, this study chooses two classes as experimental classes (68 students in total) and twp classes as control classes (75 students in total) in the first grade of a university. Task-based teaching model of English autonomous learning based on metacognitive strategy theory and traditional teaching model are adopted on students to compare and analyze their academic achievements and autonomous learning.

Statistical analysis of academic achievements

In order to clearly compare the academic achievements of the two teaching models, the experimental class and the control class are tested before and after the experiment. The result is shown in Figure 3.

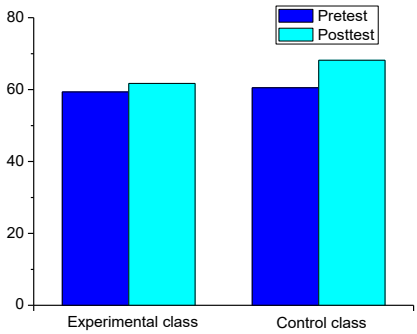

Figure 3. Comparison of pre-test and post-test results in control class, experimental class.

It can be seen from the figure that although the posttest scores of the experimental class and the control class are improved compared with the pretest ones, the average score of the experimental class is improved by 7.54 points, and the difference is significant. This indicates that the task-based teaching model of English autonomous learning based on metacognitive strategy is helpful to improve students' academic performance. In order to further prove that this teaching model can improve students' English autonomous learning ability, this study carries out investigation analysis on the students' autonomous learning ability.

Statistical analysis of students' autonomous learning

This study investigates and analyzes students' autonomous learning from four aspects: learning resource utilization, intrinsic motivation, cognitive strategy and metacognitive strategy, and adopts a 5-level scoring method. Totally, very, quite, a little and not at all correspond to scores of 5, 4, 3, 2, 1. Table 1 shows the total scores and the average scores of learning autonomy of the control class and the experimental class before and after test.

Table 1
Statistical Study of the Total Score of Learning Autonomy and Average Scores of the Pre-test and Post-test in the Control Class and the Experimental Class

Item	Variable	Average value		Standard deviation		Z	
		Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Intrinsic motivation	Experimental class	17.08	20.32	3.37	3.55	-0.32	4.96
	Control class	17.24	17.15	3.53	3.97		
Cognitive strategy	Experimental class	16.84	19.52	4.14	4.88	0.11	3.32
	Control class	16.78	16.95	3.95	4.13		
Metacognitive strategy	Experimental class	22.12	26.84	4.93	5.73	0.26	5.01
	Control class	21.90	22.31	4.72	4.88		
Learning resource utilization	Experimental class	14.70	17.42	3.31	2.96	0.26	4.66
	Control class	14.55	14.96	3.16	3.25		
Total score	Experimental class	70.77	84.11	10.77	10.22	0.14	6.87
	Control class	70.49	71.42	10.92	11.66		

It can be seen from the table that there is no significant difference between the experimental class and the control class in autonomous learning before the experiment, and the questionnaire shows that there are many problems in the course of English learning. After the experiment, there is significant difference between the experimental class and the control class by Z test. The scores of the experimental class are significantly higher than that of the control class and student's interest in learning of the control class gets improved significantly. In terms of cognitive strategies, students' finishing machining strategies and language expression abilities have been improved significantly driven by the task, and students can develop the habit of preview and review. The most significant improvement in metacognitive strategy is reflected by that students focus their attention, make a reasonable learning plan, make reasonable use of classroom time, and learn to summarize by stages for the need to complete the task. In addition, the ability of students to use various learning resources to complete English learning has been significantly improved.

Conclusions

Autonomous learning ability is the foundation of students' lifelong learning and lifelong development. This study explores the teaching methods of English autonomous learning and the specific conclusions are as follows:

(1) By reading the relevant references at home and abroad, this study introduces task-based teaching method into college English teaching based on metacognitive strategy.

(2) A task-based teaching model of English autonomous learning based on metacognitive strategy theory is constructed, and its specific steps are analyzed in detail.

(3) Contrastive analysis is used to analyze the task-based teaching effect of English autonomous learning based on metacognitive strategy theory. The result shows that this teaching method can effectively promote the cultivation of college students' English autonomous learning ability.

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