

A Research on English Learning Strategy for English Major Undergraduates--a Case Study on the Students in a University of Science and Engineering

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Abstract

As English education is gaining ground, English learning strategies should be given increased attention and in-depth study. The author uses a modified version of the Strategy Inventory for Language Learning(SILL) to conduct a survey on juniors of English major in a quest to reveal English-major undergraduates' use of learning strategies. The research finds that the participants generally use learning strategies and the frequency differences among the 6 strategies are relatively small. The research also shows that the overall English learning strategies and TEM-4 test scores are not significantly related, and that cognitive strategy is the only strategy that is related to TEM-4 test scores. The research can serve as reference for future studies on learning strategies and its relation with TEM-4 test scores.

Keywords: English learning strategies; SILL; TEM-4 test scores; English major

1. Introduction

With the rapid development of globalization and the acceleration of world integration, English has become a bridge of global economics, trade and cultural exchanges. In order to promote the "Going Out" strategy, China actively develops English education, which makes English an increasingly importance in China's education. In 2015, the national standard for teaching quality of English majors clearly stipulates that students' autonomous learning ability includes the ability to summarize and adopt effective learning strategies to improve their learning methods (Zhong Weihe, Pan Mingwei, 2015). In other words, learning strategies play an important role in the learning process.

Learning strategies have been studied for many years, and many scholars have given them definitions. Aaron Carton (1996) found that different foreign language learners vary in reasoning methods to learn foreign languages, which sets a precedent for the study of learning strategies. Oxford (1990; 8) defined learning strategy as "a specific method adopted by learners to make learning easier, faster, more enjoyable, autonomous, efficient and more suitable for new situations". Later, Oxford (2017) also stressed that self-control was an unwritten requirement for flexible use of strategies. Wen Qiufang (1993) believed that learning strategies were a series of actions taken by learners to improve their English proficiency. These researchers also classify learning strategies from various perspectives. Oxford (1990; 14) classified foreign language learning strategies into two categories: direct strategies and indirect strategies. Direct strategies include memory, cognition and compensation, while indirect strategies include emotion,

metacognition and social interaction. And the Chinese scholar Wen Qiufang (2001; 105) divided learning strategies into four categories: management strategies, formal training strategies, functional training strategies and mother tongue strategies. Although their criteria of classification were different, Ni Qingquan (2008; 135) pointed out that the similarities of the above classifications lay in that they both involved "management strategies or metacognitive strategies with management functions". Oxford's classification of learning strategies covers and complements the key points of other scholars, which is more comprehensive, objective and standardized. Therefore, this study adopts the definition and classification of Oxford to explore learning strategies.

Learning strategies play an important role in the learning process, and learning achievement is also one of the important criteria of learning strategies. The relationship between the two is worthy of deep attention. There have been different scholars using Oxford's language learning strategy scale, but producing opposite results. The joint research of Li Wen and Zhang Jun (2018) showed that there was a significant positive correlation between English learning strategies and English grades, while Dong Hui (2009) drew the opposite conclusion.

2. Research Methods

This research is a quantitative study on the relationship between English learning strategies and English grades. It takes junior English majors in a University of Science and Engineer as the research subjects, Oxford's SKILL scale as the research tool, and the grade of TEM-4 as the index to measure English achievement.

2.1 Research questions

The research questions of this study are as follows:

1. How do English majors use English learning strategies? 2. Is there any correlation between English learning strategies and English achievement? 3. Which of the six sub strategies are most relevant to English performance?

2.2 Research subjects

The subjects of this study are 41 junior English majors, all from a University of Science and Engineer in Beijing. The reason why we choose junior college students is that they have all participated in TEM-4.

2.3 Research tools

In order to investigate the use of learning strategies by English majors, the author designed a questionnaire based on Oxford's SKILL scale. The questionnaire includes personal information and learning strategies and uses Likert 5-point scoring method. The learning strategy scale is divided into six dimensions (memory, cognition, compensation, metacognition, emotion and social interaction). The total reliability of the scale is 0.853, and the reliability of each subscale is higher than 0.80, which proves the high reliability of the questionnaire and thus it can be used for practical research to explore the relationship between strategy and learning achievement. In addition, the author chose TEM-4 as an indicator to measure English proficiency, because the test is a large-scale national English test implemented by the Ministry of Education. All English majors must take part in the test, which is authoritative, has standardized procedure, covering listening, reading, writing and translation. The test content is comprehensive and can effectively reflect the English proficiency.

2.4 Research data

The author collected a total of 41 questionnaires, of which 41 were valid. After that, the author used SPSS statistics 20.0 to make descriptive statistics, correlation analysis and regression analysis on learning strategies and the grade of TEM-4. (1) Descriptive statistics was adopted to analyze the use of English learning strategies and sub strategies of English majors. (2) Correlation analysis was used to test whether there was a correlation between learning strategies and the TEM-4 grade. (3) Multiple linear regression was adopted to analyze whether there was a

significant correlation between each sub strategy and the grade, that is, whether each sub strategy had an impact on the scores. If so, the author would find out which sub strategies had that impact.

3. Findings and Discussion

3.1 The use of learning strategies

In this study, the average representing the use of learning strategies was 3.6048. According to Oxford's (1990; 300) SKILL scale, this value indicated that the subjects "frequently used learning strategies". Among the six sub strategies, memory strategy was the most frequently used, emotion strategy had the lowest frequency, and the degree of dispersion was small ($SD = 0.40216$), which indicated that there was no significant difference among the subjects. The most common use of memory strategies indicated that the subjects often associated new knowledge with acquired knowledge, and learned English by copying or reciting and reviewing what you had studied. Emotion strategies were the least used, which indicated that the subjects paid less attention to emotional problems in English learning. For example, when they were anxious or afraid, they were less likely to take relaxation and self encouragement to relieve their negative emotions. The results showed that: the students frequently used compensation strategies. When they encountered unknown words or sentences, they would guess the meaning. When they couldn't think of the correct words, they would use synonymous substitution to express their meaning. In the conversation, they predicted what the others would say according to what had been said. The students used cognitive strategies frequently. They used exercises and reasoning analysis to promote learning, such as summarizing the rules of English, and mastered the learned English knowledge through different output methods (translation, writing, speech, etc.). In reading, they first read the article to understand the general meaning, and then re-read the article intensively. The students also used metacognitive strategies to plan or evaluate their own learning, such as setting clear goals or plans to improve their English learning ability and learn from mistakes to improve their English level. They tried to find ways to use English. Social strategy was the questioning, cooperation and empathy of students in the learning process, which was also used frequently. For example, the students sought the help of native English speakers to correct their mistakes in English output. When they did not understand the speaker, they would ask them for a pardon or to slow down. They also talked with their classmates in English after class. These four sub strategies had different functions and forms, but the frequency of students using them didn't vary in an obvious way. After a long period of professional study, English major senior students had relatively similar learning methods and strategies.

Table 1 The Descriptive Statistics of Learning Strategies

Strategies	Average	Standard deviation	Number of students
Memory strategy	3.7886	0.46551	41
Cognition strategy	3.5962	0.48289	41
Compensation strategy	3.6707	0.51436	41
Metacognition strategy	3.5528	0.59329	41
Emotion strategy	3.3496	0.59606	41
Social strategy	3.6707	0.51301	41
General strategy	3.6048	0.40216	41

3.2 Correlation analysis

3.2.1 General English learning strategies and the scores of TEM-4

The passing rate of the examination this year is close to that of the past years, which can reflect the overall score of the college students. The normal distribution test was carried out on the scores of the four English majors, and the results were in accordance with the normal distribution.

In order to test the relationship between TEM-4 scores and overall learning strategies, the author adopted Pearson correlation analysis between the two, and the results showed that there was no correlation ($r = 0.092$, $P > 0.05$). This suggested that the use of learning strategies should not affect the grade, and different grades did not mean different learning strategies adopted. Learning strategy was only one of the factors that affected the grade, and high academic performance did not only depend on reasonable learning strategies. Therefore, learning strategies were not the exclusive characteristics of high achievers.

3.2.2 Sub-strategies and the scores of TEM-4

The emphasis of each sub strategy is different, and their roles also vary. In order to explore the impact of each sub strategy on the score or whether there is a correlation between the two, the author made a multiple linear regression diagnosis on the sub strategies and the TEM-4 scores. The results showed that except for cognitive strategies, the regression coefficients of other predictive variables did not reach a significant level ($P > 0.05$). Only cognitive strategies were significantly correlated with the score ($\beta = 0.496$, $P < 0.05$). The results showed that cognitive strategies could improve the scores, which was consistent with the conclusion of previous studies. This also reminded us that we should pay special attention to the cultivation of students' cognitive strategies in daily teaching, and actively help the students adjust their learning methods.

Table 2 The Influence of Each Sub-strategy on the Score of TEM-4 (n = 41)

Variables	<i>Beta value</i>	<i>T value</i>	<i>P value</i>
Constant		4.333	0.000
Memory strategy	-0.139	-0.604	0.550
Cognition strategy	0.496	2.312	0.027
Compensation strategy	0.041	0.200	0.843
Metacognition strategy	-0.169	-0.704	0.486
Emotion strategy	-0.123	-0.609	0.547
Social strategy	0.025	0.114	0.910

4. Conclusion

The results show that there is no significant correlation between English learning strategies and TEM-4 scores except cognitive strategies. The underlying reason lies in the fact that there are many factors that affect learning performance, such as learning style, willingness, motivation, ability, duration and engagement (Chang Xin, Kang Tinghu, Wang Pei, 2005; Li Qiang, Lu Yaoxuan, 2019). English learning is affected by many factors, and learning strategy is only one of them, which affects students' English level together with other factors. In addition, with the vigorous development of information technology and the Internet, electronic information technology has become a powerful assistant for students to learn English. When students treat language learning negatively, the communication learning environment of the Internet can encourage them to persist in learning (Reinders & Benson, 2017). Only on the basis of persisting in learning can learning strategies play a further role.

Although there is no significant correlation between general English learning strategies and CET-4 scores, the significant correlation between cognitive strategies and CET-4 shows that cognitive strategies play an important role.

In teaching, we should pay attention to the cultivation of students' cognitive strategies, urge students to actively increase practice, accept and send English information, create input and output structure, carry out analysis and reasoning, so as to improve their academic performance more effectively. We also deeply reflect and realize that our research design still has shortcomings, and we need to control single variable more effectively. Due to the limited conditions, the sample size of this study is small. Future researchers can try to expand the sample size, and make horizontal and vertical comparison between students of different grades and majors to further explore learning strategies.

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