# A Correlative Study on English Learning Motivation and Self-efficacy of Senior High School Students

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**Abstract:** College Entrance Examination is one of the most important examinations in China, which is not only related to the fate of students themselves, but also a family. In the exam, English, mathematics and Chinese occupy more scores than other subjects, while English is more special. Based on the importance of English learning and College Entrance Examination, the author went to a county in Shanxi Province to investigate the English learning situation of Grade three students in a local senior high school, and the English learning situation of Grade three former students in another senior high school. The paper provides empirical support for the existing English learning motivation theory, and hopes to find some problems from it.

## 1. Introduction

Learning motivation is one of the important factors that affect the learning effect. The study of motivation in scientific psychology can be roughly divided into three stages: the mechanical motivation view in the first half of the 20th century, the change from the mechanical view to the cognitive view in the 1960s and 1970s, and the establishment of cognitive view and social cognition in the 1980s. [1]. Studies on the motivation of foreign language learning have arisen abroad in the late 1950s. As a pioneer in the study of foreign language learning motivation, the famous Canadian applied linguist Gardner published a paper entitled “Motivation Variables in Second Language Acquisition” with his colleague Lambert in 1959 [2]. Gardner and Lambert studied and designed the language learning motivation measurement tool, Attitude/Motivation Test Battery (AMTB), which has become the most authoritative measurement tool for foreign language learning motivation. [3] The study of learning motivation in China began in the early 1980s [4], mainly explaining the motivation of learning from the perspective of psychology. The study of foreign language learning motivation appeared in the mid-1980s. The academic circles generally believe that Gui Shichun is the first to explore the motivation of English majors from the perspective of social psychology [5]. Wu Yi’an et al. pointed out that “Since learning motivation is a meaningful predictor of academic achievement, it is worthy of further discussion and efforts to cultivate positive learning motivations for students. [6]. From the year of 2004 to 2013, foreign language learning Motivation research covers different levels of education, including the study of foreign language learning motivation of graduate students [7], the study of foreign language learning motivation of undergraduates [8] [9], the study of foreign language learning motivation of vocational students [10], the study of foreign language learning motivation of middle school students [11] In the academic world, there is no research on the motivation of English learning for high school students. Based on this research gap, this study investigated the senior high school freshmen of a county-level high school in Yuncheng, Shanxi Province, and the former high school students in another school. The English learning situation was investigated. Two scales were used in this survey. One is the English Learning Motivation Scale, which is used by students whose English is a foreign language. The author has slightly modified it to make it more suitable for domestic high school students. The other is a universal self-efficacy scale. There are many kinds of learning

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motivation theories. On the basis of each theory, the study is more inclined to Bandura's self-efficacy theory. Through this survey practice, to determine whether it can provide empirical support for Bandura's self-efficacy theory.

## 2. Experiment

The experiment adopts 2×2×2 experimental design, which is divided into three dimensions: fresh graduates/former students, liberal arts/science, excellent/underachiever, to examine whether students' learning motivation is affected, and then further explore the relationship between learning motivation and self-efficacy.

### 2.1 Scale design

#### 2.1.1 English learning motivation scale

The English Learning Motivation Scale was selected as the EFL (English as foreign language) learning motivation scale, which was slightly modified to make it more suitable for senior high school students in China. The scoring method adopts the Likert 5-point method. The higher the score, the higher the motivation level of the English learning motivation of the respondent, a total of 25 questions, the lowest score (all 1), 25 points, the highest score reaches to 125 points, the median value 75 points. After testing the scale, there was a significant correlation between the student's English learning score and the scale($\alpha$=0.01).

#### 2.1.2 Self-efficacy comprehensive scale

The Self-efficacy comprehensive scale includes a subscale that measures three different levels of self-efficacy, namely:

(1) The General Self-Efficacy Scale (GSES) was compiled by the German clinical and health psychologist Ralf Schwarzer and his colleagues in 1981. The Chinese version of the GSES subscale consists of 10 projects involving sense of effort, talent, environmental sense, goal achievement and self-expectation. The internal consistency coefficient is 0.87, the retest reliability is 0.83, and the split-half reliability is 0.82. It measures the widest self-efficacy in non-specific fields;

(2) The Academic Self-Efficacy Subscale, compiled by the Peking University Insight Group on the basis of Adaptive Efficacy in the Adaptive Learning Model Scale (PALS), which consists of 12 items measuring the self-efficacy of general learning ability in the academic field.

(3) The self-regulating efficacy subscale, from the "Self-Efficacy for Self-Regulated Learning" in the "Children's Self-Efficacy Scale" compiled by Bandura, consists of 9 items, measuring the self-efficacy of various self-regulating behaviors.of individuals in learning. The three subscales are all scored by Likert five points. The higher the score, the higher the level of self-efficacy.

### 2.2 Experimental process and steps

#### 2.2.1 Data collection

In this study, 4 classes were selected from a county-level high school, which including 2 liberal arts classes and 2 science classes. Other 4 classes are also selected from another school specializing in recruiting former students, which including 2 liberal arts classes, and 2 science classes. A total of 320 questionnaires were distributed in the experiment, and 262 were left after the invalid questionnaires were excluded. The experiment was conducted on the same day, with a time of about 4 hours, and one school went to another school after it was done. The student's answer time is completed within 30 minutes. Before the experiment, a simple answering explanation will be given, and no guidance communication will be conducted during the answering process. All 4 classes are randomly selected. The data obtained are organized as shown in Table 1 and Table 2.

Table 1 statistics of surveyed people

| | Fresh graduates | Former students | Liberal arts | Science | excellent | underachiever |
|---|---|---|---|---|---|---|
| n | 120 | 142 | 120 | 142 | 126 | 136 |
| total | 262 | | 262 | | 262 | |

Table 2. Scores of previous students' English scores, English learning motivation scales, and self-efficacy

| Fresh/former graduates | | N | Minimum | Maximum | Mean | standard deviation |
|---|---|---|---|---|---|---|
| Fresh graduates | English learning scores | 120 | 19 | 124 | 80.675 | 20.6525 |
| | English learning motivation score | 120 | 30 | 104 | 72.492 | 15.7411 |
| | Total score of self-efficacy | 120 | 57 | 146 | 95.583 | 19.2522 |
| Former graduates | English learning scores | 142 | 26 | 119 | 81.768 | 16.9992 |
| | English learning motivation score | 142 | 38 | 115 | 74.218 | 15.4594 |
| | Total score of self-efficacy | 142 | 52 | 144 | 97.951 | 17.8092 |

### 2.2.2 Data collation and analysis

(1) Comparison between academic performance, motivation, and self-efficacy

Through the analysis and comparison of the acquired data, it is found that the scores of students' English achievement and English learning motivation scale are significantly correlated ($\alpha$=0.01), the correlation coefficient is 0.281. There was a significant correlation between the English learning motivation scale score and self-efficacy comprehensive scale ($\alpha$=0.01) and the correlation coefficient was 0.476. However, the correlation between students' English scores and self-efficacy was not significant, and the correlation coefficient was very weak, only 0.106. These data indicated that:

The validity of the English Learning Motivation Scale. The scale can indeed measure students' English learning motivation, and the discussion about validity is not within the scope of this study.

There is an impact between English learning motivation and English achievement, and how much dose the influence and how to influence need for further data analysis.

There is a cross between the English Learning Motivation Scale and the Self-Efficacy Comprehensive Scale, and some of them may measure common psychological traits. Therefore there is a significant correlation.

### 2.2.3 The relationship between learning motivation and self-efficacy

(1) Compared the learning motivation score with the total score of self-efficacy and three subscales. The correlation coefficient is shown in Table 3 below.

Table 3 Correlation coefficient between learning motivation and self-efficacy

| | General Self-Efficacy | Academic Self-Efficacy | self-regulating efficacy | Total score of self-efficacy |
|---|---|---|---|---|
| English learning motivation score | 0.396 | 0.413 | 0.391 | 0.476 |

α=0.01

It can be seen from the above table that the learning motivation scores and the three subscales of self-efficacy are significantly correlated. The correlation coefficient between learning motivation scores and general self-efficacy is 0.396, the correlation coefficient with academic self-efficacy is 0.413, and with self-regulation efficacy 0.391.

(2) In order to further explore the relationship among them, the learning motivation score is set as a fixed factor, and the four types of self-efficacy (including three subscales and one total scale) are set as dependent variables, and the analysis between them is Linear relationship. As shown in Table 4.

Table 4 Linear relationship between learning motivation scores and self-efficacy

| | F | Sig. | R Square | Adjusted R Square |
|---|---|---|---|---|
| General Self-Efficacy * learning motivation | 1.936 | 0.00 | 0.401 | 0.194 |
| Academic Self-Efficacy * learning motivation | 2.049 | 0.00 | 0.414 | 0.212 |
| self-regulating efficacy * learning motivation | 2.024 | 0.00 | 0.411 | 0.208 |
| Total score of self-efficacy * learning motivation | 2.545 | 0.00 | 0.468 | 0.284 |

It can be seen from the above table that learning motivation has a certain predictive effect on self-efficacy, and it has the best predictive effect on the total subscale. It also has a good predictive effect on the three subscales.

## 3. Results and discussion

### 3.1 Results

Through experiments, on one hand, it can be seen that there is a significant correlation between the motivation and achievement of English learning in high school students. As for the relationship, whether it meets the motivation relationship of inverted U shape requires further experiment and data analysis. On the other hand, there is no significant difference between fresh graduates and previous students in English learning motivation. According to this, further research can be carried out. What is the reason for no difference? Is the motivation of high school students' English learning just to get a better score for the college entrance examination, so there is no difference between the two? There are differences in learning motivation between excellent students and underachievers, indicating that differences in learning motivation do affect academic performance. The specific relationship between them requires further data analysis and experimental design.

Additionally, we can learn from the relationship between learning motivation and self-efficacy. There is a significant correlation between learning motivation and self-efficacy. The analysis of the three subscales also shows that learning motivation is also significantly correlated with the three subscales. At the same time, it can be seen from further data analysis that learning motivation has a good predictive effect on self-efficacy. However, there is no significant correlation between self-efficacy and academic achievement. Is it possible to believe that there is a mediating effect between learning motivation and self-efficacy and English learning performance, which requires further data analysis.

### 3.2 Discussion

The experimental results were partially in line with the expectations of this study and some did not. Therefore, the problem that needs to be further solved is why there is no significant difference in the motivation for English learning between the fresh graduates and former graduate students. What is the reason for that? Can the conclusion that there is no difference in English learning

motivation can be extended to all courses in high school? These issues can be further advanced in subsequent studies. The role of self-efficacy in learning motivation and academic performance needs to be further analyzed. Whether it is the motivation of learning that plays a mediating role in academic achievement and self-efficacy or a regulating role? Further analysis of data is needed. At the same time, the main influencing factors in learning motivation are also worth to analyze.

## 4. Conclusion

Assumptions about English learning motivation and academic performance have also been proven in high school students. The hypothesis that former students have higher English learning motivation than the fresh graduates has been negatively answered. The linear relationship between learning motivation and self-efficacy has been proved, and the former has a good predictive effect on the latter.

This study obtained data that the English learning motivation and self-efficacy of the high school students in two schools in a county through field investigation. The hypothesis about the high school students' English learning motivation and English achievement was confirmed, and the assumption that fresh graduates have higher learning motivation was overthrown. The next research plan addresses the unresolved issues in this study, and at the same time, in order to further in-depth study, the study obtained their contact information with the consent of the respondents themselves. Tracking studies can be conducted for these students. For example, whether their English learning motivation will change as their academic qualifications increase or their age increases. Alternatively, they can use their current English learning motivation scores to predict future work or industry, and whether high English learners will be more engaged in English or foreign language related work in the future. These contacts provide a possibility for future follow-up studies.

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