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Study on the Relationship between Self-efficacy and Learning Engagement of English Majors

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Abstract: In recent years, learning engagement and self-efficacy have received more and more research interest. Research has found that both self-efficacy and learning engagement are closely related to academic performance. However, few existing studies have focused on how their interplays may influence English majors' language learning. Thus, this study chooses English majors as research objects, employes questionnaires as instruments to analyze the relationship between their self-efficacy and learning engagement. It is found in this study that English major students have moderate level of self-efficacy and learning engagement and the self-efficacy and learning engagement influence each other significantly. A significant relationship between self-efficacy, learning engagement and learning achievements has also been identified in this study. These findings shed light on the teaching and learning of English major students.

Keywords: English Major; Self-Efficacy; Learning Engagement; Learning Achievement.

1. Introduction

Nowadays, how to improve English major students' learning has drawn wide attention at universities. In traditional teaching, teachers decide the content and form of teaching. There seems to be a mismatch between teachers' teaching and students' learning methods. Therefore, the individual differences in learners have attracted the attention of researchers. Many studies found that learning engagement and learning self-efficacy have a great impact on academic performance.

In the last few years, learning engagement has away become the research focus in the field of second language acquisition. Researchers find that the more students invest in their studies, the more confident they are in the study, and the more they can reduce the anxiety, worry, and other adverse effects caused by study stress. Once students take the initiative to learn, they can experience happiness and satisfaction through learning, and they will not easily give up learning later in their study.

The learners' emotion is composed of many factors, among which self-efficacy is an indispensable factor. Self-efficacy refers to the individual's speculation and judgment about their ability to complete a certain behavior. Bandura (1997) believed that self-efficacy is the degree of confidence people feel that they can use their skills to complete a job.

This study chooses English majors as research subjects and aims to reveal the current situation of their self-efficacy and learning engagement in English learning. Moreover, this study also intends to analyzes the relationship between self-efficacy and learning engagement thus to provide theoretical support and reference for improving the self-efficacy and learning engagement of English majors, to promote their academic development.

2. Literature Review

2.1. Relevant Studies on English Learning Engagement

Plenty of studies on learning engagement have been conducted in recent years but no unified conclusion has been drawn by now. In the 1930s, Tyler, an American psychologist, conducted many relevant experiments to study whether the number of time students spent on study impacted academic performance. He proposed the concept of "time on task" and explained the meaning of learning engagement from the perspective of behavior. He came to the conclusion that the time invested in learning is proportional to the gain of learning. Similarly. In 1984, Astin also put forward the theory of "Theory of Involvement" from the perspective of behavior. He believed that learning engagement refers to the quantity and quality of physical and mental energy that students pay in learning, and it has both quantity and quality characteristics. Reeve (2012) was the first one to propose the concept of foreign language learning engagement. He proposed that learning engagement refers to students' participation in learning activities, which is an important predictor of learning achievement and teaching quality. Later, Uzun (2020) pointed out that students with a high level of English learning engagement are enthusiastic, positive, optimistic, curious, and have a very strong desire to learn English, so that they can actively complete some challenging tasks.

The research on learning engagement started relatively late in China. In 2011, Wang compare the survey results of "American college students' learning investment" with that of a group of top tire Chinese university students and found that the evaluation of teaching quality in colleges should shift from "school investment evaluation" to "learning investment evaluation". Later in 2015, another study proposed that improving autonomous learning ability is conducive to improving students' enthusiasm and consciousness, as well as their learning engagement (Jiang and Ma, 2015). Xu Yuanchao (2016) used NESS-China to research college students' learning engagement and found that the five indicators of learning engagement are significantly correlated with learning strategies and academic achievement, and learning engagement has a certain predictive effect on academic achievement.

2.2. Relevant Studies on Self-efficacy

At present, many foreign scholars have defined self-efficacy. Bandura (1986) defined as how confident people are that they can use their skills to do a job. With the development of social cognition theory, Bandura (1997) later redefined the concept of self-efficacy. He believed that self-efficacy is an individual's prediction of whether he can solve a certain problem successfully. Schwarzer (1997) believes that self-efficacy is an individual's belief, which is generated in the context of various challenges and changes. People's feelings are determined by their self-efficacy beliefs, which in turn influence their behavior. Later on, many researchers studied the role of self-efficacy in education in 1980s. Schunk (1991) found that students with a high sense of self-efficacy can take on more difficult tasks in English learning. So self-efficacy is a strong predictor of learning achievement and motivation.

In China, there are also many researchers studying self-efficacy. Zhang (2004) found that self-efficacy can predict students' academic performance. Dai (2020) found that self-efficacy is positively correlated with college students' academic performance. Self-efficacy is a mediating variable that moderates goals and learning performance. In English learning, Zhao (2021) found that self-efficacy in English learning refers to the degree of confidence in English skills acquired by individuals. Generally speaking, the more confident English major students are about their English learning ability, the better they perform in English learning, and the calmer they will be when they faced difficult problems. Therefore, students with high self-efficacy in English learning are more likely to achieve ideal academic performance.

2.3. Relevant Studies on the Relationship between Learning Engagement and Self-Efficacy

Current research on self-efficacy and learning engagement has reached consistent conclusions. That is, self-efficacy can positively predict students' learning engagement level. Mccarthy (1995) found that self-efficacy is closely related to learning engagement. Bandura (1997) also showed that self-efficacy plays a role in human learning, behavior, and motivation. In his study, he further proposed that self-efficacy levels can accurately predict students' performance levels. On this basis, some studies suggest that there are significant associations between self-efficacy and learning engagement and learning performance. And self-efficacy can trigger individuals to adopt positive behaviors, such as learning engagement.

As for research on the relationship between learning engagement and self-efficacy, many domestic studies show that learning engagement is closely related to self-efficacy. Cai (2020) used questionnaire to survey 310 online learners and found that self-efficacy can effectively predict online learning engagement. Tao(2017) found that self-efficacy has a significant impact on the realization of autonomous learners' learning goals. Yuan (2017) took 550 high school students as the subjects and studied the relationship between academic self-efficacy and learning engagement. He found a significant positive relationship between academic self-efficacy and learning engagement among high school students, and academic self-efficacy can predict the results of learning engagement. The above studies show that the more strongly students feel about academic self-efficacy, the more confident and successful they are, and the more willing they are to invest more time and energy in their studies. Therefore, students with higher self-efficacy are more patient and more resilient in learning.

3. Research Method

3.1. Subjects

This study conducts a questionnaire survey among English majors at a Chinese university. The college of foreign language at the university has four grades with six English classes in each grade. Two classes of each grade were randomly selected as the survey object, and 109 questionnaires were collected. However, there are invalid questionnaires. A total of 103 valid questionnaires were collected finally. The effective questionnaire rate of this study is 94%. According to the valid questionnaire, there are 25 freshmen, accounting for 24%, 21 sophomores, accounting for 20%, 27 juniors, accounting for 26%, and 30 seniors, accounting for 29%.

3.2. Instruments

This study uses two questionnaires as survey tools, one is to investigate the current situation of English major students' learning self-efficacy, and the other is to investigate the current situation of English major students' learning self-engagement. The questionnaire used a five-point Likert scale, with 1 indicating very satisfied and 5 indicating very dissatisfied. The lower the score, the more satisfied. Students need to choose one and only one option that reflects their reality. To facilitate distribution, the author combined the two questionnaires into one. According to the SPSS software test, alpha = 0.82, which is more than 7. KMO = 0.79, which is more than 0.68, and P = 0.00, which is less than 0.05, so the reliability and validity of this questionnaire is acceptable. TEM-4 score is adopted as the standard to measure students' academic performance. TEM-4 is an important national examination, which distinguishes English major students from non-English major students. Its validity and reliability have been widely recognized.

Among these two questionnaires, the questionnaire on Self-efficacy of English majors is adapted from the 'Questionnaire on Attribution Analysis of Colleges Students' English Learning Motivation and Self-efficacy belief' by Zhong Yan (2004). To make the revised questionnaire more suitable for the current research purpose, the author changed the questions about college students' English learning into the questions about English majors' English learning. There are 20 questions in the questionnaire, which is divided into two dimensions: one is self-efficacy of learning ability, including questions：4, 5, 6, 7, 8, 9, 10, 11, 12, 13, and the other is self-efficacy of learning behavior, including questions:14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24. This study uses the 'learning engagement scale' developed by Fang Laitan (2008) to measure English major students' learning engagement. There are 16 questions in this scale, which tests the vitality, dedication, and concentration of college students in the learning process. The 'vitality' dimension tests the learning enthusiasm of English majors. The higher the score is, the worse the enthusiasm is, including questions：25, 31, 33, 29, and 35. The dedication dimension measures how much the students give, the higher the score, the less the dedication, including questions: 28, 30, 32, 34, and 37. The concentration dimension tests students' concentration degree in the learning

process. The higher the score is, the lower the concentration degree is, including questions：26, 27, 36, 37, 38, 39, and 40.

3.3. Data Processing

Firstly, in this study, SPSS22.0 is used to test the reliability and validity of the questionnaire. Then single sample T-test methods are used for statistical analysis to discuss the current situation of self-efficacy and learning engagement of English majors. This study uses regression analysis to explore the relationship between self-efficacy and learning engagement and discusses the influence of self-efficacy and learning engagement on the academic performance of English majors.

4. Findings and Discussion

4.1. The Current Situation of Self-Efficacy of English Majors

As can be seen from Table 1, the single sample T-test results show that the total average score of the self-efficacy scale for English majors is slightly lower than the theoretical average (3 points). The average scores of English major students in the dimensions of learning ability and learning behavior are slightly lower than the theoretical average (3 points), and the scores of the two-dimension are almost equal. The questionnaire used a five-point Likert scale, with 1 indicating very satisfied and 5 indicating very dissatisfied. The lower the score, the more satisfied. This indicates that English majors have a moderately high sense of self-efficacy and are more confident in their learning ability and behavior.

This may be because English major course tasks are not particularly difficult, and after the rigorous training and fierce competition in the college entrance examination, they have developed their way of learning, so they are confident in their learning ability and behavior (Yang, 2019). From the two dimensions, the scores of learning ability and learning behavior of English majors' students are relatively low, without significant difference. This shows that the learning ability and behavior of English majors are consistent. They believe that they can learn English well and can obtain good results in practical actions. This also shows that English majors have a clear self-awareness of themselves. This may be because college students in the usual learning tasks, through their continuous efforts, whether, in the examination or assessment, they can achieve good results, which constantly improve the sense of learning self-efficacy.

Table 1. The current situation analysis of Self-efficacy of English majors

	M(SD)	t
Self-efficacy	2.545	-9.917
learning ability	2.545	-7.537
Learning behavior	2.545	-10.40

4.2. The Current Situation of Learning Engagement of English Majors

As can be observed from Table 2, the single sample T-test results show that the total average score of the learning engagement scale is lower than the theoretical average (3 points). This shows that English major students' learning engagement is medium-high. The average score for the vitality dimension, dedication dimension, and focus dimension is significantly lower than the theoretical average (3 points). The questionnaire used a five-point Likert scale, with 1 indicating very agreed and 5 indicating very disagreed. A lower score indicates a more agreed. This shows that the learning engagement level of English majors is generally medium and high. These study results are consistent with the study of Liu Qiong (2018). He also found in his research that college students were at a middle level. This is mainly because, in China's education system, college students should pay more attention to independent learning. This is because, in addition to learning textbook knowledge, English students should not only pass CET 4 and 6 but also TEM 4 and 8， so they are more motivated to learn. Moreover, English learning is a process of constant accumulation. If not studying for a long time will lead to a decline in English performance. Therefore, to improve their English level, English major students will take the initiative to participate in some English competitions, such as college students' English competitions, and various English skills competitions. However, according to the data, the independent learning ability of English major students is not particularly high, which is consistent with Xu Jinfen's research results. Xu Jinfen found that college students are unable to master learning strategies and lack study plans. This shows that the independent learning ability of English major students still needs to be improved.

Table 2. The current situation analysis of learning engagement of English majors

	M(SD)	t
learning engagement	2.1852	-5.708
vitality	2.3413	-7.352
dedication	2.1743	-5.707

4.3. The Relationship between Learning Engagement and Self-efficacy

To further explore the interrelationship between learning engagement and self-efficacy among English major students, a Pearson correlation analysis was performed on the data. As result, there was a significant correlation between learning engagement and self-efficacy. (See Table 3) As can be seen from the table below, the correlation coefficient between learning engagement and self-efficacy is 0.472, indicating that higher self-efficacy means more learning engagement. This is in line with the findings of Zhu Haiteng (2015). This is because individuals with high self-efficacy believe that they have fully available resources, and they see the requirements of learning as challenges to themselves and are willing to invest additional energy and effort in learning tasks. Moreover, college students with high self-efficacy usually set lofty ideal goals for themselves and are strict with themselves, and this perfectionist tendency is conducive to learning investment. (Zhang,2007) Students majoring in English need to master various skills of listening, speaking, reading, and writing. Students with high self-efficacy should show their style in various skills competitions, such as reading competitions, writing competitions, and speech competitions. They will be more confident in the competition and highlight their advantages, to have more interest in learning. Students with high self-efficacy will be willing to spend more time and energy on the professional study. They will not be disturbed by the outside world and can find ways to actively deal with the difficulties and setbacks. They tend to imagine activities related to academic success, adding more successful experiences and thus increasing investment in learning. (Yang, 2019) However, most college students with low self-efficacy in learning cannot view their learning ability correctly, and often choose to learn goals that are difficult to achieve. And

they do not have enough motivation to learn, lack self-confidence in the face of difficulties, and often passive escape, rather than increase their investment in learning. In turn, if more English students invest in their studies, they will achieve higher grades and higher self-efficacy. However, those English students who do not invest much in their studies are impatient study and only three points in the study. When they encounter slightly difficult learning tasks, they tend to be very negative. English learning is a process of no pains, no gains. Without paying the time and energy, it is difficult to achieve the ideal goal. The fewer students invest in learning, the worse their academic performance becomes, and the less confidence they have in English learning.

Table 3. The interrelationship between learning engagement and self-efficacy

	Self-efficacy	learning ability	Learning behavior	learning engagement	vitality	dedication	Concentration
Self-efficacy	1						
learning ability	.912**	1					
Learning behavior	.858**	.572**	1				
learning engagement	.472**	.523**	.289**	1			
vitality	.479**	.530**	.293**	.954**	1		
dedication	.392**	.428**	.248**	.956**	.903**	1	
Concentration	.447**	.507**	.259**	.930**	.801**	.844**	1

4.4. The Influence of Self-Efficacy and Learning Engagement on Academic Performance

4.4.1. The Influence of Self-Efficacy on Academic Performance

To better explore the relationship between self-efficacy and academic performance, the data were first analyzed by Pearson correlation. As result, self-efficacy is significantly associated with academic performance. (See Table 4) As can be seen from the table below, the correlation coefficient of self-efficacy and academic performance is 0.602. This suggests that students with higher self-efficacy will have better academic performance.

Table 4. The interrelationship between self-efficacy and academic performance

	academic performance	self-efficacy	Learning ability	Learning behavior
Academic performance	1			
efficacy	.602**	1		
Learning ability	.702**	.912**	1	
Learning behavior	324**	.858**	.572**	1
**. There was significantly correlation at.01 level (bilateral).				

Next, to explore whether there is a causal relationship between learning self-efficacy and academic performance, regression analysis was performed on the data. Using self-efficacy as the independent variable and academic performance as the dependent variable, the regression of self-efficacy and academic performance was found to be significant. (R^2= 0.662, F =60.733, β=0.979, P<0.05). Krashen mentioned in the emotion filtering hypothesis that if the learner has strong confidence, his emotion filtering degree is low, which will help him to acquire the language smoothly. On the contrary, if the learner has low confidence, there is a barrier to his language acquisition. Self-efficacy is an individual's assessment of one's behavioral abilities and is one of the positive affective factors that influence language acquisition. Bandura (1986) said in the study that self-efficacy affects one's attitude towards difficulties, effort completion, and mood to complete the task. Therefore, in English learning, students with high self-efficacy also have high English academic performance. Students with high self-efficacy have clear learning goals and plans for English learning, In the face of learning difficulties, they perform very calmly and can overcome the difficulties according to their own learning pace. They are brave enough to try and break through themselves so that they can complete their learning tasks with high quality. Students with a low self-efficacy lack confidence in their learning ability and do not believe that they can overcome difficulties. They are afraid of the learning task and dare not dare to try it, have a negative attitude to the learning task, and cannot complete the learning task very well.

4.4.2. Analysis of the Influence of Learning Engagement on Academic Performance

Similarly, to explore the relationship between learning engagement and academic performance, a Pearson correlation analysis was first performed on the data. (See Table 5) As can be seen from the table below, the correlation coefficient of learning engagement and academic performance is 0.452. It shows that the more students who invest in their studies, the better their academic performance.

Table 5. The interrelationship between learning engagement and academic performance

	academic performance	Learning engagement	vitality	dedication	concentration
academic performance	1				
Learning engagement	.452**	1			
vitality	.447**	.954**	1		
dedication	.383**	.956**	.903**	1	
concentration	.454**	.930**	.801**	.844**	1
**. There was significantly correlation at.01 level (bilateral).					

Next, to explore whether there is a causal relationship between learning engagement and academic performance, regression analysis was performed on the data. Taking learning engagement as the independent variable and academic performance as the dependent variable， the regression of learning engagement and academic performance was found to be significant. (R^2=0.504, F= 47.503, β=0.719, P<0.05). The study result is similar to that of Xuewei Chen (2018). If students have a high recognition of the value of English learning, they can master learning methods, make reasonable learning plans, and put them into action in the learning process, then their English performance will be improved. Students with strong learning consciousness, are good at using free time to make a learning plan and study learning methods. These students are more likely to achieve their learning goals. On the contrary, for those students who are weak and not good at using their free time to make study plans and study the learning methods, their grades are often poor. At present, a college education is different from primary and secondary education. University teachers do not strongly control students, and students can freely allocate their study time. Students are in a state of active learning, and the more students invest in learning, the better the grades. Therefore, students' academic performance is significantly associated with students' engagement.

5. Conclusion

This study finds that English major students' self-efficacy is moderately high, and they are more confident in their learning ability and learning behavior. Regarding the current situation of learning engagement of English major students, the learning engagement of English major students is moderately high.

As for the correlation between learning engagement and self-efficacy, a significant correlation between them is identified. Further computation reveals that a significant correlation between self-efficacy, learning engagement and academic performance is identified. Students with high self-efficacy and strong learning engagement are more likely to achieve their learning goals.

This study enriches research related to self-efficacy and learning engagement and will provide a reference for improving the self-efficacy and learning engagement of English major students. Future studies exploring the influence of other factors on academic performance are expected in later research.

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