



## A Study of Relationship between Academic Self-efficacy and Professional Commitment with Teacher Support on Students' Academic Achievements in Higher Vocational Colleges

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**Abstract:-** *In recent years, a large number of empirical studies based on the theory of self-determination have found teachers' support can significantly and positively predict students' academic achievements (Chen & Guo, 2016). The purpose of this study is to explore the impact of teacher support, academic self-efficacy, and professional commitment on the academic achievement of higher vocational students based on the theory of self-determination. Methods: 840 vocational college students were tested by questionnaire. Because students' academic achievements are related to the quality of higher education, however, not all students' academic achievements are invested in learning activities independently, and a big factor in learning gains is students' social support. After consulting previous research and existing literature, this research chooses teacher support as an independent variable, the academic achievement of vocational students as a dependent variable, the academic self-efficacy of students as the mediation variable, and professional commitment as a moderator variable in students' social support. The results show that: 1. There was a significant positive correlation among teacher support, academic self-efficacy, professional commitment, and academic achievement; 2. Academic self-efficacy plays a part of the intermediary role in the influence of teacher support on academic achievement; 3. Professional commitment plays a moderating role in the influence of teacher support on academic achievement. Finally, based on the conclusions of the study, this study puts forward specific suggestions for future research.*

**Keywords:** Academic Achievements; Academic Efficacy; Professional Commitment; Teacher Support

### Introduction

With the construction of new socialist countryside and the continuous improvement of the requirements for highly skilled personnel in an innovative country, higher vocational education is facing both excellent opportunities for development and severe challenges. Many surveys show that higher vocational college students' satisfaction with themselves is not high, and employers' evaluation of graduates' knowledge, ability, attitude, and other aspects is not high. The quality of higher vocational students' education is a topic worth studying. (Tam, 2002) The fundamental problem of education quality lies in how to ensure students' learning gains and personal growth, and improving college students' academic achievement level is considered an effective measure to ensure the quality of higher education in today's era. As an important part of China's education, higher vocational education teachers often encounter that some students cannot achieve ideal academic results due to insufficient self-efficacy, lack of energy, and other factors, which seriously restricts the quality of talent training in higher vocational colleges and hinders the attractiveness of higher vocational education (Yu, 2019). In the current process of education management in higher vocational colleges, students have low participation in learning and poor enthusiasm for learning, which makes it difficult for students to obtain direct emotional experience from learning, affecting students' enthusiasm and initiative in academic achievements (Ma, 2018).

Many scholars have studied teacher support, Ryan and Patrick (2001) defined teacher support as the degree of trust that students place in teachers and establish interpersonal relationships with themselves. Ou (2005) believed that the teacher support perceived by students was the care and care that students could feel from teachers at school. Li & Shi (2021) think that students' perceived teacher support is: teachers' help and guidance to students' attitudes and behaviors in learning and life, which can be easily realized by students. Most previous studies found that there was a significant positive correlation between teacher support and students' academic achievements (Chen & Guo, 2016), but some studies did not find a significant correlation between them (Schuitema, Peetsma, & van der Veen,

[57]



2016), which made the relationship between the two uncertain. It is worth further analyzing how much teacher support affects students' academic achievement, what factors affect the relationship between teacher support and academic achievement, and how teacher support affects academic achievement, the above issues are regional issues that need to be studied.

### Research Objectives:

1. To use a survey way to find the relationship between teachers' support and academic achievement of higher vocational students;
2. To investigate the mediating role of Academic self-efficacy;
3. Study the moderating effect of professional commitment.

### Literature Review

Although academic achievement is crucial, not all students are engaged in learning activities independently. Social support from different sources, such as parents, teachers, and peers, is beneficial to students' healthy development and academic achievements, but their relative importance is different.

#### 2.1 Teacher support and academic achievements

According to the Self Determination Theory (SDT), teacher support will affect students' practice, especially the practice of supporting students' self-consciousness, providing ability support, or communication and participation. These practices help to meet the students' basic psychological needs for autonomy, ability, and relevance and thus support their motivation for autonomy (i.e. self-orientation). In contrast, the lack of demand support will weaken students' needs, leading to the lack of controlled motivation (namely, lack of motivation). (Ahn, Chiu, & Patrick, 2021) Compared with students whose motivation is controlled or whose needs are not satisfied, students whose automatic machines and psychological needs are satisfied tend to learn more. In the school environment, teachers are organizers and implementers of teaching activities, and they have a more direct and authoritative influence on students' learning motivation and task input. Hu, Yu, & Liu (2011) The social support status of college students will affect their self-concept happiness by influencing their core self-evaluation rhythm and content. (Wentzel, Russell, & Baker, 2016) pointed out that teachers are the closest influencing factor of students' classroom motivation and learning behavior. The influence of teachers on students' effort and academic value is stronger than that of their peers. Secondly, teacher support plays a more critical role in academic performance (Alfaro, Umana-Taylor, & Bamaca, 2006). (DeGarmo & Martinez, 2006) Studies have shown that teachers have a more direct impact on academic performance than peers. In addition, (Plunkett, Henry, Houlberg, Sands, & Abarca-Mortensen, 2008) found that compared with parental and peer support, teacher support has the largest impact on academic performance. In view of the uniqueness and importance of the impact of teacher support, this study will take teacher support as a starting point to explore its impact on academic achievement. To sum up, this study proposes the following assumptions:

**H1. Teacher support has a positive impact on student's academic achievements in higher vocational colleges.**

#### 2.2 Mediation of academic self-efficacy

To reveal the internal mechanism of teachers' support in the process of influencing students' academic achievements in higher vocational colleges is crucial to improving the quality of higher vocational education. Does teacher support play a role in the process of influencing students' academic achievements in higher vocational colleges? The answer to this question can better reveal the internal mechanism of teachers' support affecting students' academic achievements in higher vocational colleges. Combined with the theory of self-efficacy and related research results, the author believes that the academic self-efficacy of vocational college students may play a mediating role in the relationship between teacher support and the academic achievements of vocational college students. (Bandura & Cliffs, 1987) believe that academic self-efficacy is the level of confidence or belief in an individual's ability, specifically, the learners' cognition of whether their ability can achieve academic goals.

[58]



(Zimmerman, Bandura, & Martinezpons, 1992) research believes that self-efficacy has a direct impact on academic achievement. In addition, relevant empirical studies have also supported the above views. For example, Yi, Guo, & Yu (2017) who believe that their academic self-efficacy level is high show a higher academic goal setting. They pay more attention to academic performance, spend more time on learning, and have higher academic performance. Ji & Zhao (2008) concluded that academic self-efficacy has a greater impact on student's academic performance than teacher support. Secondly, this study believes that the academic self-efficacy of vocational college students will also be affected by teacher support. In the current research, some scholars have found that teacher support can predict the learning self-efficacy of vocational college students, and this prediction is positive. It points out that teacher support can enhance students' sense of efficacy, autonomy, and belonging. research (Ryan & Patrick, 2001) shows that perceived teacher support can promote social self-efficacy and self-regulated learning behavior of interaction between students and teachers.

In previous studies, academic self-efficacy has been considered as a mediator of other motivation variables or social environment variables affecting academic performance. In (Ahmed, Minnaert, van der Werf, & Kuyper, 2010) research, ability belief is considered a mediator in the relationship between parental support, peer support, teacher support, and academic performance, and the research results also found that ability belief has a significant mediating effect in the above relationship. Jiang, Liu, Zhen, Hong & Jin (2019) researchers found that students' mathematical self-efficacy plays a mediating role in the relationship between students' perceived teacher support and students' mathematical performance. To sum up, this study proposes the following assumptions:

**H2: Teacher support will affect the academic achievements of vocational students through academic self-efficacy.**

### 2.3 The moderating role of professional commitment

Xu Changyong believes that college students' professional learning is for future employment. Professional learning is highly professional and targeted, which is closely related to college students' future careers. Therefore, how college students view their majors and what attitude they have toward them have an important impact on their learning behavior (Xu, 2013). The research of Lian, Yang & Wu (2005) shows that the higher the professional commitment of college students, the more willing they are to make efforts in learning, and thus the individual will be more active in learning. There is a significant negative correlation between professional commitment and learning burnout. (Schaufeli, 2002) research shows that learning engagement and learning burnout are two opposite aspects of learning attitudes, so it can be inferred that there is a positive correlation between professional commitment and learning engagement. Lin & Lian (2006) made an empirical study on the relationship between professional commitment, career self-efficacy, and mental health of vocational college students. The research results show that there is a significant positive correlation between professional commitment and career self-efficacy of vocational college students, professional commitment is an effective predictor of career self-efficacy, and there is a significant negative correlation between professional commitment and the mental health of vocational college students. Song & Xu (2022) conducted a survey on 583 preschool education students in Jing zhou Vocational Colleges. Through empirical research, they found that the higher the professional commitment of preschool education students in vocational colleges, the more students will be willing to spend more time on learning, learn the professional knowledge of preschool education. The higher the degree of learning investment, the intermediary role of professional commitment in social support and learning investment. In view of the important role of professional commitment, whether there is a moderating role of professional commitment in the model of the impact of teacher support on academic achievement is a problem worth studying. To sum up, this study proposes the following assumptions:

**H3: Professional commitment regulates the predictive effect of teacher support on the academic achievements of vocational students.**

## Research Design & Methodology

This chapter includes 1. Research model 2. Research methods and samples 3. Research tools, are discussed as follows.

### Research Model

From the perspective of academic self-efficacy and professional commitment, this study explores the impact of teacher support on students' academic achievements in higher vocational colleges. The specific research model is shown in Figure 1.

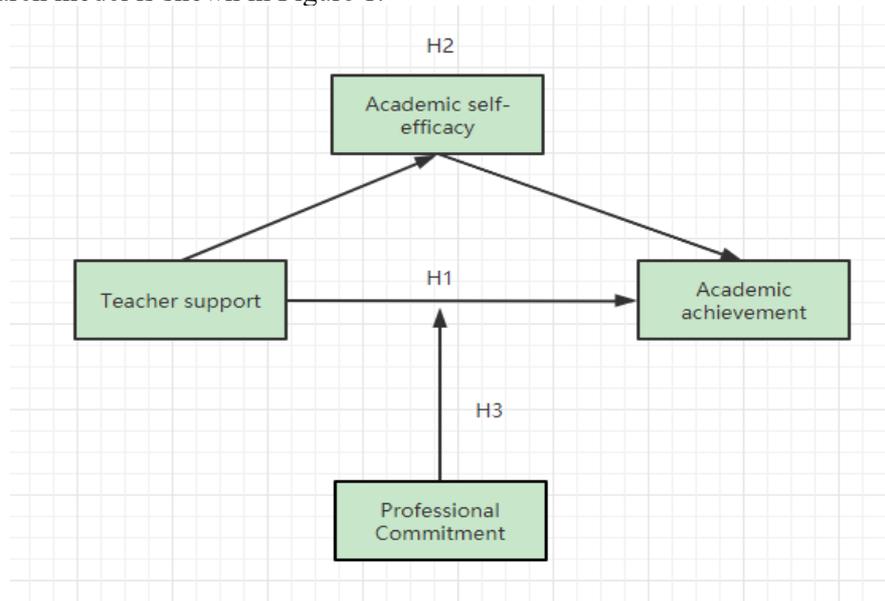


Figure 1 Research Model

### 3.1 Methodology & Sampling

The data of this study comes from the author's questionnaire survey on students' learning in a vocational college in Chongqing in October 2022. The survey adopted a convenient sampling method. A total of 851 questionnaires were distributed, 840 were recovered, and 811 valid questionnaires were obtained after 29 invalid questionnaires were removed (including those with missing values and those with the same answer for multiple consecutive questions). The effective utilization rate of the questionnaire was 95.3%. Among them, there are 600 female students and 211 male students.

### 3.2 Research Tools

This study involves four variables: teacher support, academic self-efficacy, professional commitment, and academic achievement. The relevant data are measured by the perceived teacher support scale, academic self-efficacy scale, professional commitment scale, and academic achievement scale of vocational college students.

#### 3.2.1 Teacher support scale perceived by students in Higher Vocational Colleges

Based on the comprehensive consideration of research content and purpose, this paper adopts the Learning Climate Questionnaire (LCQ) used by (Sakiz, 2007) for research. The scale has a total of 10 items, including "independent support", "emotional support" and "ability support". Among them, teachers' independent support is measured by 4 questions, emotional support by 3 questions, and ability support by 3 questions. Using the 5-level Likert scale (1 = very inconsistent, 5 = very consistent), A high score indicates stronger support from teachers, while a low score indicates weaker support from teachers. As shown in Table 1, which is in line with the standards recommended by scholars, as shown in Table 1, which meet the standards recommended by scholars. All standardized factor loads greater than 0.5, (Fornell & Larcker, 1981) indicate that the scale has good reliability and validity.



### 3.2.2 Academic self-efficacy scale of Higher Vocational College

Students' Academic self-efficacy in this study measures students' perception of the ability to successfully complete learning tasks and achieve academic achievements, which is a general level of efficacy measurement. According to the comprehensive consideration of the research content and purpose, based on the scale designed by MSLQ, PALS and (Greene, Miller, Crowson, Duke, & Akey, 2004), this study designed four topics and adopted the 5-level Likert scale (1 = very inconsistent, 5 = very consistent). A high score expresses that academic self-efficacy is stronger, while a low score expresses that academic self-efficacy is weaker. As shown in Table 1, which meets the standards recommended by scholars.

### 3.2.3 Professional Commitment Scale of Higher Vocational College Students

According to the comprehensive consideration of the research content and purpose, this paper adopts the college students' professional commitment scale compiled by Lian, Yang & Wu (2005). The scale has 15 items in total, including four dimensions "emotional commitment", "economic commitment", "normative commitment" and "continuous commitment". Among them, there are 4 items of emotional commitment, 3 items of economic commitment, 4 items of normative commitment, and 4 items of continuous commitment. The 5-level Likert scale is used for measurement (1=very inconsistent, 5=very consistent). The higher the score, the higher the professional commitment, and the lower the score, the lower the professional commitment. In this study, the author analyzed Cronbach's Alpha and AVE of the Academic Achievement Scale respectively. As shown in Table 1, Cronbach's Alpha and AVE of the Student Academic Self-efficacy Scale are 0.91 and 0.62 respectively, which are in line with the standards recommended by scholars, indicating that the scale has good reliability and validity.

### 3.2.4 Academic achievement scale of Higher Vocational College Students

The academic achievement scale of students in Higher Vocational Colleges adopts the academic achievement scale revised by Li & Yang (2016). The scale has 14 items in total, including four dimensions of "learning cognitive ability", "communication ability", "self-management ability" and "interpersonal promotion". Among them, learning cognitive ability includes 4 topics, communication ability includes 3 topics, self-management ability includes 3 topics, and interpersonal promotion includes 4 topics. The 5-level Likert scale is used for measurement (1=very inconsistent, 5=very consistent). A high score indicates that students get more academic achievements, while a low score indicates that students get fewer academic achievements. In this study, the author analyzed the academic achievement scale. As shown in Table 1, which are in line with the standards recommended by scholars.

**Table 1** reliability and convergence validity

	Cronbach's Alpha	CR	AVE
Teacher support	0.96	0.97	0.73
Academic self-efficacy	0.89	0.87	0.64
Professional Commitment	0.90	0.95	0.65
Academic achievement	0.91	0.96	0.67

## Results & Discussion

In this study, the samples were tested according to the aforementioned research methods and tools. The collected data and discussions are discussed as follows:

### 4.1 Analysis Tools and Research Methods

In this study, SPSS25.0 and AMOS22.0 are used as the core data analysis software. The data analysis includes the following three steps: First, CFA is used to explore the reliability and validity of the four variables perceived by vocational college students, namely, teacher support, academic self-efficacy, professional commitment, and academic achievement. Secondly, the Pearson correlation was used to explore the pairwise relationship among the four variables of teacher support, learning self-efficacy, professional commitment, and academic achievement. This study uses (Hayes & Preacher, 2013) SPSS macro program process to verify the mediation hypothesis. SPSS macro programs can

[61]



verify a variety of mediated adjustment models based on the deviation-corrected percentile Bootstrap method. Many scholars have used this program to check whether the first half or the second half of the mediation effect is regulated (Chardon, Janicke, Carmody, & Dumont-Driscoll, 2016). In this study, the investigation of the relationship among teacher support, academic self-efficacy, professional commitment, and academic achievement is not only limited to the investigation of the relationship between the two, but also the analysis and exploration of the possible mediating role of academic self-efficacy and the possible moderating role of professional commitment.

## 4.2 Analysis of Research Results

### 4.2.1 Common method deviation test

Pre-prevention and post-inspection are adopted. Anonymous measurement and balancing the order of questionnaires were used to reduce errors. Harman's one-way test shows that the interpretation rate of the total variance of all items by the obtained one factor is 19.45%, less than 40%, and there is no serious common method deviation in the sample.

### 4.2.2 Difference analysis of control variables

The results showed that gender was different in teacher support ( $t=1.120$   $p<0.05$ ) (boys>girls), academic self-efficacy ( $t=1.668$   $p<0.001$ ) (boys>girls), professional commitment ( $t=-0.886$   $p<0.001$ ) (boys<girls), and academic achievement ( $t=0.039$   $p<0.05$ ) (boys<girls). There were differences in teacher support ( $t=-1.378$   $p<0.05$ ) (rural areas<urban areas) and academic self-efficacy ( $t=-1.294$   $p<0.05$ ) (rural areas<urban areas). There is no difference in others.

ANOVA was used to analyze the grade differences, and it was found that there were differences in teacher support among grades ( $F=10.531$   $p<0.001$ ). Further LSD method was used to make an ex-post comparison, and it was found that freshman>sophomore>junior. Grades have different effects on academic self-efficacy ( $F=7.290$   $p<0.01$ ). Further comparison with the LSD method shows that freshman>sophomore, freshman>junior, and there is no significant difference between freshman and sophomore. There was a difference in professional commitment among grades ( $F=11.414$   $p<0.001$ ). It was further found by the LSD method that freshman>junior>sophomore. There was a difference in academic achievement among grades ( $F=11.414$   $p<0.01$ ). Further post comparison with the LSD method showed that freshman>sophomore, sophomore<junior.

### 4.2.3 Correlation test between variables

Through the simple descriptive statistics and Pearson correlation analysis of the variables of teacher support, academic self-efficacy, professional commitment, and academic achievement, it is found that teacher support is significantly positively correlated with the academic self-efficacy of vocational college students ( $r=0.49$ ,  $p<0.01$ ); There was a significant positive correlation between teacher support and professional commitment ( $r=0.33$ ,  $p<0.01$ ); Teacher support is significantly positively correlated with the academic achievements of vocational college students ( $r=0.40$ ,  $p<0.01$ ), and the correlation coefficient of each variable is less than the AVE square root of the corresponding variable, so the differential validity is demonstrated, as shown in Table 2. This result shows that the research hypothesis is supported by preliminary data and is suitable for further verification. Thus, assumption H1 is supported.

**Table 2** Statistics of basic information

Variable	Basic Statistics			Correlation coefficient		
	<i>M</i>	<i>SD</i>	<i>N</i>	Teacher support	Academic efficacy	self-Professional Commitment
Teacher support	3.38	0.58	387	1		
Academic self-efficacy	3.14	0.59	387	0.35**	1	
Professional Commitment	3.29	0.49	387	0.25**	0.39**	1
Academic achievement	3.14	0.60	387	0.30**	0.54**	0.55**

\*  $p<0.05$  ; \*\*  $p<0.01$  ; \*\*\*  $p<0.001$  .



#### 4.2.4 Mediation effect test

Based on the two research hypotheses proposed in the article, using the method of path analysis, this study uses the SPSS macro program developed by Hayes&Preacher (Hayes&Preacher, 2013) to explore the mediating role of academic self-efficacy between teacher support and academic achievement under the condition of controlling gender and grade type. With teacher support as the independent variable X, academic self-efficacy as the intermediary variable M, and academic achievement as the dependent variable Y, use the SPSS 25.0 macro program Process V4.0 to set Bootstrap sampling 5000 times and use the bootstrap method to test the significance of the intermediary effect. The confidence interval is set to 95%. The overall output of the model is shown in Figure 2.

The results show that teacher support has a significant positive impact on academic achievement ( $\beta = 0.28$ , 95% C.I.=(0.24, 0.33), SE=0.02,  $t=12.35$ ,  $p<0.001$ ). Teacher support has a significant positive impact on academic self-efficacy ( $\beta = 0.44$ , 95% C.I.=(0.39, 0.50), SE=0.03,  $t=16.14$ ,  $p<0.001$ ), academic self-efficacy also has a significant positive impact on academic achievement ( $\beta = 0.39$ , 95% C.I.=(0.34, 0.44), SE=0.03,  $t=15.23$ ,  $p<0.001$ ). At the same time, teacher support still has a significant impact on academic self-efficacy ( $\beta = 0.11$ , 95% C.I.=(0.06, 0.15), SE=0.02,  $t=4.66$ ,  $p<0.001$ ). The significance of the mediation effect was tested by the bootstrap method, and the results showed that the mediation effect was 95% The confidence interval is zero, so the mediation effect is significant (Hayes & Preacher, 2013). Therefore, academic self-efficacy plays a part in the intermediary effect between teacher support and academic achievement, and the intermediary effect accounts for 60.71% of the total effect. Thus, H2 is assumed to be supported.

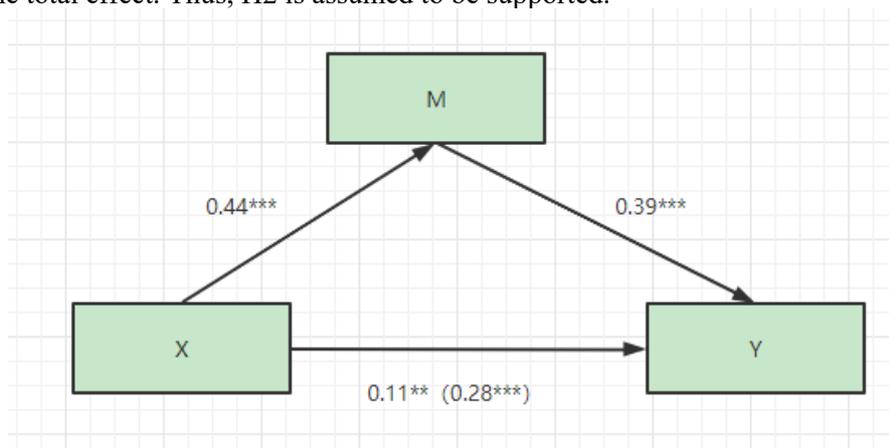


Figure 2 output results of overall path analysis

#### 4.2.5 Moderate effect test

Using Model 5 in SPSS macro program PROCESS to test the moderating effect of professional commitment in the influence of teacher support on academic achievement, under the condition of controlling the variables of gender, grade, and student origin, and considering the mediating effect of academic self-efficacy, the results (see Table 3) show that the interaction of teacher support and professional commitment has a significant predictive effect on academic achievement ( $\beta = 0.07$ ,  $p<0.05$ ). This shows that professional commitment positively regulates the impact of teacher support on academic achievement. Thus, H2 is assumed to be supported.

Table 3 Schematic diagram of moderating effect of professional commitment

Regression Equation		Regression coefficient	Significance	95%CI	
Result variable	Predictive Variables	$\beta$	$t$	LLCI	ULCI
Academic achievement	Gender	0.03	0.87	-0.03	0.08
	Grade	0.04	2.61	0.01	0.07

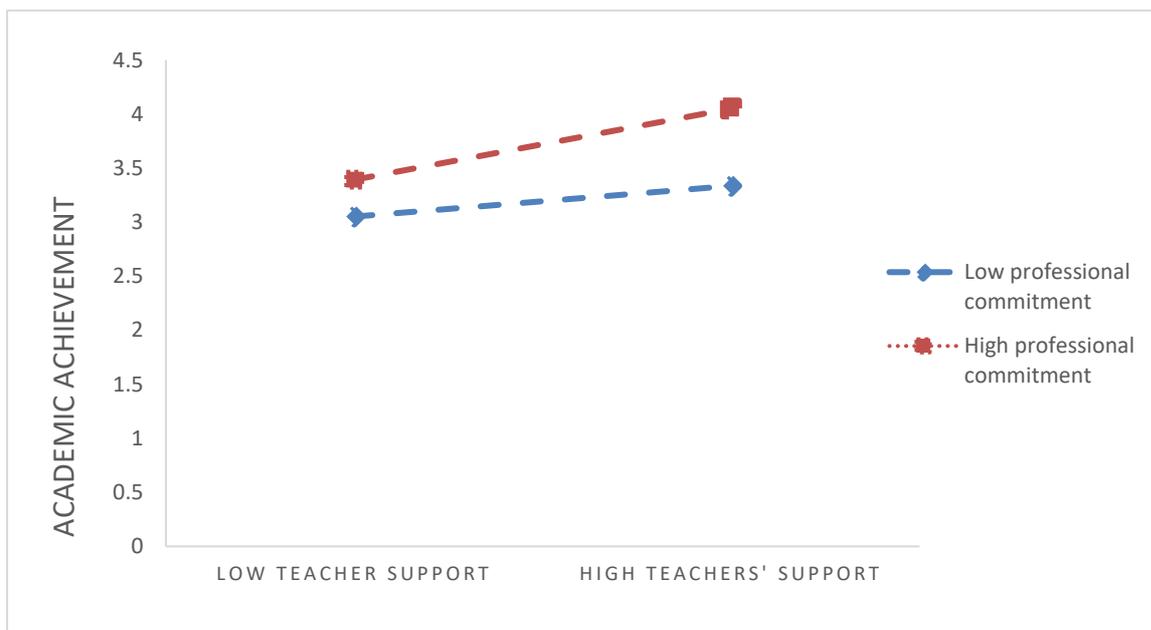
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	Regression Equation	Regression coefficient	Significance	95%CI	
	Place of origin	0.04	1.37	-0.02	0.09
	Teacher support	0.06	2.92***	0.02	0.11
	professional commitment	0.36	12.52***	0.30	0.41
	Teacher support × professional commitment	0.07	2.18*	0.01	0.14
<i>R</i>	0.59				
<i>R</i> <sup>2</sup>	0.35				
<i>F</i>	34.47				

\*  $p < .05$  ; \*\*  $p < .01$  ; \*\*\*  $p < .001$  .

In order to further the moderating effect of professional commitment, a simple slope test was used to examine the moderating effect of professional commitment between teacher support and academic achievement. The results showed that for students with a low level of professional commitment, teachers' support to positively predict students' academic achievements were less effective; For students with high professional commitment, teacher support can positively predict students' academic achievements (As shown in Figure 3).



**Figure 3.** Schematic diagram of the regulatory effect of professional commitment

## Conclusions and Recommendations

After the data analysis and discussion in Chapter 4, the conclusions and recommendations of this study are summarized as follows:

### 5.1 Conclusions

The results of this study show that teacher support has a direct effect on student's academic achievements in higher vocational colleges.

First, the correlation analysis of teacher support, academic self-efficacy, professional commitment, and academic achievement. The perceived teacher support, academic self-efficacy, professional commitment and academic achievement of students in higher vocational colleges have a significant positive correlation with each other. This shows that the more teacher support, the stronger



the academic self-efficacy of students in higher vocational colleges. Accordingly, they will make more efforts in learning to ensure better learning performance.

Second, the differences between different variables. The results of this study show that gender has significant differences in teacher support ( $t=1.120$   $p<0.05$ , boys>girls), professional commitment ( $t=-0.886$   $p<0.001$ , boys<girls), and academic achievement ( $t=0.039$   $p<0.05$ , boys<girls). There were significant differences in teacher support ( $t=-1.378$   $p<0.05$ , rural areas<urban areas) and academic self-efficacy ( $t=-1.294$   $p<0.05$ , rural areas<urban areas). There are significant differences in teacher support, academic self-efficacy, professional commitment, and academic achievement among different grades. The specific results are shown in Table 4.

**Table 4** Variance analysis

Variable	Variance Analysis		
	F	P	LSD comparison
Teacher support	10.531***	$p<0.001$	Freshman>sophomore>junior
Academic self-efficacy	7.290**	$p<0.01$	Freshman>sophomore, freshman>junior
Professional Commitment	11.414***	$p<0.001$	Freshman>junior>sophomore
Academic achievement	11.414**	$p<0.01$	Freshman>sophomore, sophomore>junior

\*  $p<0.05$  ; \*\*  $p<0.01$  ; \*\*\*  $p<0.001$  .

Third, the mediating role of academic self-efficacy between teacher support and students' academic achievement. When academic self-efficacy is not included in the analysis model, teacher support has a very significant predictive effect on student's academic achievements, with a predictive effect of 0.28. However, when students' academic self-efficacy is included in the analysis model, although teacher support can still directly predict students' academic achievements, the predictable effect has decreased from 0.28 to 0.11, and its effect has passed the Bootstrap test, which shows that academic self-efficacy acts as a partial intermediary between teacher support and students' academic achievements in higher vocational colleges. That is to say, when teachers give more guidance and help to students, it can effectively improve students' academic self-efficacy, and then promote students to invest more time and energy in learning.

Fourth, the moderating role of professional commitment between teacher support and students' academic achievements. This study found that professional commitment positively regulated the role of "teacher support academic achievement". Specifically, compared with vocational students with low professional commitment, teachers' support of vocational students with high professional commitment has a greater predictive effect on their academic achievements. This study shows that when discussing the role of teacher support on academic achievement, we should not neglect the moderating role of professional commitment of vocational students. Good professional commitment is a protective factor for students' academic achievements in higher vocational colleges. It also warns teachers and parents to actively pay attention to students' living and learning conditions, strengthen communication with students, and give students more professional guidance to improve their academic achievements.

## 5.2 Recommendations

The above research conclusions show that the support of teachers in higher vocational colleges on students' learning is an important way for students to form higher academic self-efficacy and improve their academic achievements, which provides an effective starting point for improving the academic level of students in higher vocational colleges, promoting the improvement of the quality of education and training in higher vocational colleges, and enhancing the attractiveness and influence of higher vocational colleges. To this end, efforts can be made in the following aspects.

First, teachers should care for students in multiple ways to enhance their self-confidence. As the most direct and close group of students, teachers should pay attention to students' learning while completing teaching tasks. Teachers should often go deep into students, and take the initiative to understand, integrate and guide students. Teachers' positive support and encouragement will make students confident in learning well and willing to make more efforts to achieve good academic results.

[65]



In this process, counselors should pay more attention to the professional commitment and academic achievements of vocational college boys, care more about rural students, give more care and care, and help rural students improve their academic self-efficacy.

Second, teachers should strengthen their professional guidance to students and enhance their professional commitment. Teachers should establish a good style of teacher ethics, govern teaching by virtue, have lofty ambitions and be willing to contribute, and influence students imperceptibly with good words and deeds. Teachers should guide students to truly understand the purpose and significance of learning, and be willing to make efforts to transform the love of vocational students for their majors into the final learning harvest.

Third, help and guide senior vocational students to enhance their sense of self-efficacy and academic achievements. Junior students in higher vocational colleges lack the care and encouragement from teachers when they participate in internship outside the school, which reduces their academic self-efficacy and affects their academic achievements. The junior students are encouraged to be optimistic about life, maintain a positive attitude, and not be easily hindered by difficulties and setbacks in the process of enterprise practice. They are encouraged to practice and exchange technology in multiple majors, so as to make continuous progress in the pursuit of professional learning level and technological innovation and improve their academic achievements.

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