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RESEARCH ON RELATIONSHIPS AMONG ACHIEVEMENT GOALS, SELF- EFFICACY AND ACADEMIC PERFORMANCE OF STUDENTS IN SHANDONG PROVINCE

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Abstract

This study used questionnaire survey and 873 students from private colleges in Shandong Province of China as the research subjects to investigate the relationship between students' achievement goals, self- efficacy and academic performance. The study found that the achievement goals of students from private colleges in Shandong Province can positively affect self- efficacy and academic performance; self- efficacy has a positive predictive effect on students' academic performance; and self- efficacy plays the role as mediator in the influence of achievement goals on academic performance.

Key Words: Achievement Goals, Self- Efficacy, Academic Performance, Private College Students

Introduction

In students' learning, achievement goals are the goals or reasons for students to complete their study tasks. They can be used to explain students' study and academic performance (Ames, 1992) . It is the most important framework for explaining students' motivation, personal learning and experience (Diseth, 2015) . Self- efficacy is also one of the factors that influence students' academic performance. Numerous studies have shown that academic self- efficacy has a predictive

effect on academic performance and has a direct impact on students' final academic result and performance (Feldman, 2015) .

It is a common phenomenon that students in private colleges in China are tired of study, lacking enthusiasm for learning, lacking learning methods, and lacking self- management ability after entering the university. As a group of college students with certain cognitive ability but special characteristics, will their achievement goals and self- efficacy affect their academic performance? If the two are combined to analyze the impact on the academic performance, how is it affected? This study conducts an in- depth empirical study on the relationship between the three, with a view to exploring the motivations and behavioral characteristics of the study of private university students, revealing their specific influence mechanisms and internal laws, as well as providing reference for targeted management and teaching in private colleges and teachers.

Literature Review

Achievement goals

The achievement motivation is studied from the perspective of social cognition, indicating the reasons why individuals participate in achievement activities in order to obtain valuable results or goals (Ames, 1992) . Elliot and Mcgregor (2001) combine the mastery and performance dimension and the approach and avoiding dimension to propose a 2×2 goal structure of achievement goals. It is also found that the performance- approach goals is the positive predictive factor of the student's academic achievement. The performance- avoidance goals is the negative predictive factor of the student's academic achievement. Mastery- approach goals and Mastery- avoidance goals has no predictive effect on the academic achievement. Ireri (2015) showed that the performance- approach goals of middle school students was significantly positively correlated with academic achievement, and the performance- avoidance goals was significantly negatively correlated with student achievement.

Self- efficacy

Bandura (1986) defines self- efficacy as "the judgment of people's ability to organize and execute the processes of action required to accomplish their stated goals. " Students with higher self- efficacy will strive for more challenging goals. Both Komarraju and Nadler (2013) have shown that learning self- efficacy has a positive impact on learning achievement; Alexander (2018) tested the impact of three conceptual models on a student's academic performance over a semester, in which self- efficacy is positively related to student achievement shown in each model.

The relationship between achievement goals and self- efficacy

Middleton and Midgley (1997) believe that the mastery of goals and performance- approach goals is positively related to self- efficacy. Jagacinski (2010) found that there was a significant positive correlation between mastery of goals and achievement approaching goals with academic self- efficacy, while performance- avoidance goals were significantly negatively correlated with academic self- efficacy. Chen Xiaoxin, Liang Jianling (2019) found that mastery of goals and performance- avoidance goals indirectly affect self- directed learning through partial medium of self- efficacy.

Research Method

Research hypothesis

According to the review on relevant literatures, this study proposes the following hypothesis. The research architecture is shown in Figure 1.

H1：The achievement goals of students in private colleges in Shandong Province has a significant positive impact on academic performance.

H2：The self- efficacy of students in private colleges in Shandong Province has a significant positive impact on academic performance.

H3：The self- efficacy of students in private colleges in Shandong Province plays the role of a mediator in the relationship between achievement goals and academic performance.
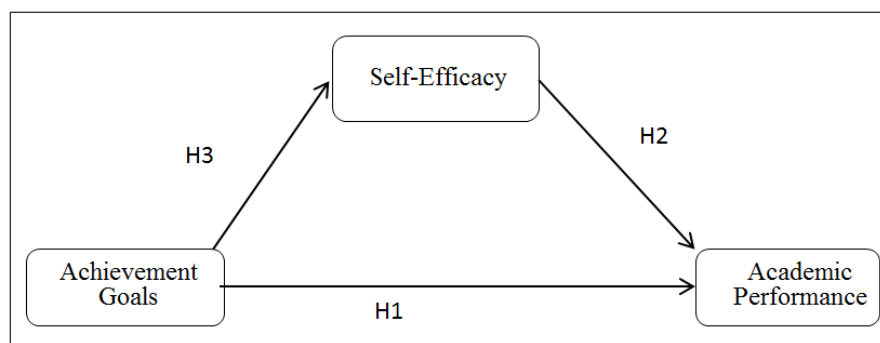

Figure 1 Research architecture diagram

Research Tools

This study adopted the Chinese questionnaire based on the achieve

ment target scale compiled by Elliot and McGregor (2001) , translated by Xiao (2016) , with a total of 12 ques-

282

tions, using 7 points for scoring. The Cronbach's α coefficients of the achievement goals scale of this study were 0. 846, 0. 785, 0. 774, and 0. 809, respectively, with good reliability.

The Academic Self- Efficacy Energy Table was adapted from the academic self- efficacy questionnaire compiled by Liang (2000) using 5- point scoring. The total Cronbach's α coefficient of the academic self- efficacy energy meter is 0. 804, and the Cronbach's α coefficients of the two dimensions are 0. 786 and 0. 629, respectively, and the reliability is good.

The academic performance of this study mainly refers to the grades of the students in the academic year. In order to explain the meaning of the scores better and more scientifically, this study uses weighted T- scores for conversion and measurement.

Sampling

In this study, a total of 1, 000 questionnaires were distributed to private university students in Shandong Province, and 951 were collected, accounting for 95. 1% of the total questionnaires issued. After invalid questionnaires with incomplete answers were excluded, the number of valid questionnaires is 873, and the effective sample ratio is 91. 8%.

Research Findings

Regression analysis of achievement goals, self- efficacy and academic

performance of students in private colleges in Shandong Province

(1) The student achievement goals is a predictive power test for academic achievement. According to Table 1, the performance- approach goals has a significant relationship with the student's academic performance, β=. 078, p<. 05, which indicates that the higher the score of students' performance- approach reaches, the better the student's academic performance will be; The mastery- approach goals has significant predictive power for student's academic performance, β=. 094, p<. 05, indicating that the higher the student's mastery- approach goals score is, the better their academic performance will be; the performance- avoidance goals has a significant negative impact on the student's academic performance, β=- . 108, p<. 01, indicating that the higher the student's performance- avoidance goals score is, the lower the academic performance will be; the mastery- avoidance goals has no significant effect on the student's academic performance. The achievement goals as a whole has a significant explanatory power for academic achievement, β=. 035, p<. 05. H1 is correct.

(2) Academic self- efficacy checks the student's academic performance. As shown in Table 2. The overall academic self- efficacy of students has a significant impact on academic performance, β=. 146, p<. 001, has a positive predictive effect on

Table 1. Summary of analysis on achievement goals and academic performance regression forecast

	Academic Performance		
	B	SE *B*	β
Performance- approach goals	. 282[*]	0. 136	. 078[*]
Performance- avoidance goals	-. 304[**]	0. 099	-. 108[**]
Mastery- avoidance goals	0. 138	0. 128	0. 04
Mastery- approach goals	. 368[*]	0. 156	. 094[*]
Achievement goals	. 379[*]	0. 18	. 035[*]
R^2	0. 035		
Adj R^2	0. 031		
F	4. 454[*]		
df	(4, 868)		

Note：N=872　[*]$p<.05$　[**]$p<.01$

Table 2. Summary of academic self- efficacy prediction of academic performance

	Academic Performance		
	B	SE *B*	β
Study Ability	. 780[**]	. 235	. 129[**]
Study Behaviour	. 242	. 250	. 038
Self- efficacy	1. 043[***]	. 240	. 146[***]
R^2	. 023		
Adj R^2	. 021		
F	18. 918[***]		
df	(2, 870)		

Note：N=872　[**]$p<.01$　[***]$p<.001$

students' academic performance, indicating that the higher the students' academic self- efficacy, the better their academic performance will be. Among them, the learning ability facet and the student's academic performance have significant influence, $β=.129$, $p<.01$, indicating that the higher the student's learning ability score reach, the better their academic performance will be. H2 is verified. (3) Achievement goals are predictive of students' academic self- efficacy. The results are shown in Table 3. The overall achievement goals has a significant predictive power on student academic self- efficacy ($β=0.245$, $p<.001$). Among them, the students' perform-

ance- approach goals (β=0. 240, p<. 001) significantly predicts students' academic self- efficacy, and the Mastery- approach goals (β=0. 274, p<. 001) has a significant impact on students' academic self- efficacy, that is, the higher the score of students' performance- approach goals and mastery- approach goals, the higher the academic self- efficacy they will have; while the performance- avoidance goals and the mastery- avoidance goals have no significant influence on the student's academic self- efficacy.

Table 3. Summary of achievement goals for students' academic self- efficacy

	Academic self- efficacy		
	B	SE B	β
Performance- Approach Goals	. 121***	0. 017	. 240***
Performance- Avoidance Goals	- 0. 023	0. 013	- 0. 059
Mastery- Avoidance Goals	- 0. 029	0. 016	- 0. 06
Mastery- Approach Goals	. 150***	0. 02	. 274***
Achievement Goals	. 182***	0. 024	. 245***
R^2	0. 186		
Adj R^2	0. 182		
F	55. 511***		
df	(4, 868)		

Note：N=872   ***p<. 001

The mediator effect test

Verify according to mediating effect (Baron & Kenny , 1986) , the students' achievement goals has a significant influence on their academic self- efficacy (β=0. 245, p<. 001) , and the students' achievement goals has a significant influence on their academic performance (β=0. 071, p <. 05) , students' academic self- efficacy has a significant influence on their academic performance (β=0. 146, p<. 001).   At the same time, when considering the impact of the achievement goals of students and academic self- efficacy on academic performance, the explanatory power of achievement goals is no longer significant (β=0. 038, p=. 296) , while the effect of self- efficacy on academic performance is still significant (β= 0. 135, p < . 001) . Therefore, the student's academic self- efficacy completely mediates the relationship between students' achievement goals and academic achievement. H3 is verified.

Table 4 Summary table of regression analysis on Achievement goals → Self- efficacy → Academic performance mediator effect

	Self- efficacy M	Academic performance Y		
	Model1	Model2	Model3	Model4
Achievement goals	.245***	0.071*		0.038
Self- efficacy			.146***	.137***
R^2	0.06	0.005	0.021	0.023
Adj R^2	0.059	0.004	0.02	0.02
F	55.511***	4.454*	18.918***	10.063***
df	(1, 871)	(1, 871)	(1, 871)	(2, 870)

Note: The values in the table are standardized regression coefficients β *$p<.05$ ***$p<.001$

Research Conclusion

The achievement goals, self- efficacy of students from private colleges in Shandong Province has significant influence on their academic achievement.

(1) The achievement goals of students in private colleges in Shandong Province directly affects students' academic performance. According to this study, students' achievement goals have a significant predictive power on student achievement. This conclusion is consistent with Zhang (2019) , but Li and Xu (2007) believe that achievement goals have no significant direct impact on academic performance. This difference may be related to different research objects and research methods. Besides, the different components of the achievement goals will cause different or even opposite results. Therefore, the impact of the achievement goals on the student's academic performance still needs further discussion.

(2) The achievement goals of students in private colleges in Shandong Province directly affects students' academic self- efficacy. According to this study, the higher the overall perceived level of achievement goals student can reach, the stronger their academic self- efficacy will be. So it is known that the achievement goals can positively predict students' academic self- efficacy. It is shown that whether students aim at pursuing a good academic performance or aim at their overall improvement and development, they will be encouraged to have better expectations for the realization of their goals, and

therefore their academic self- efficacy will be higher.

(3) The self- efficacy of students in private colleges in Shandong Province directly affects students' academic performance. This study found that students' self- efficacy has a significant impact on academic performance, that is, when students assess themselves to be competent, the confidence in the learning process will be stronger and the academic performance will be better. This is consistent with the conclusions of Cai (2019) that students' academic self- efficacy could positively affect students' academic achievement.

This study found that the achievements of students in private colleges in Shandong Province can not only directly affect students' academic performance, but also influence their academic performance through self- efficacy. This study confirms to some extent the view of Bandura (1997) that self- efficacy is the belief in the ability to organize and implement the desired behavioral processes to achieve specific achievement goals, and is a kind of dynamic factor between motivation and behavior. Therefore, students with a higher degree of perception of oriented achievement have a stronger academic self- efficacy, and are more engaged, conscientious and hard- working in their learning activities, and have better academic performance.

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288

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