

Influence of Self-Efficacy and Goal Orientation on Academic Achievements among Chinese Junior Middle School Students

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Abstract

The aim of this study was to explore factors influencing academic performance. It surveyed 400 junior high school respondents through questionnaire forms and analyzed the results using methods like Spearman rank correlation and Mann-Whitney U. The study found significant positive correlations between self-efficacy in learning ability, approach goals, and mastery goals with academic performance. Significant differences in academic performance were observed based on gender, holding class leadership positions, and family income. Female students outperformed male respondents, while those who held class leadership positions and individuals from higher family income levels achieved better academic results. Surprisingly, lower-grade respondents exhibited a stronger approach goal orientation compared to higher-grade respondents.

Keywords: Academic Achievement, Family Factors, Goal Orientation, Personal Factors, Self-Efficacy

Introduction

Given the disparities in China's education system, such as structural shortages of rural teachers, uneven talent outflow, the dilemma of education and training, and weak teaching abilities Li et al (2020), the significant disparities in academic achievement among middle school students between urban and rural areas Xu & Wu (2022), as well as within urban areas Hu et al (2020), underscore the importance of studying the factors influencing academic performance.

Academic achievement" refers to the extent to which students, teachers, or schools have achieved their academic goals (Barbosa et al., 2020). Academic performance is a key determinant of future educational and career success (Rivkin & Kain, 2005). There are many factors influencing academic performance. Some factors can enhance learning outcomes, such as self-directed learning interventions Theobald (2021), metacognitive awareness Abdelrahman (2020), digital tools Hillmayr et al (2020), effective teaching methods Adams et al (2021), more attention to achievement goal orientation (Li et al., 2021; Teng et al., 2022). Other factors have a negative impact on academic performance, such as fatigue Madigan & Curran (2021), absenteeism Liu et al (2021), and multitasking in the classroom (Alghamdi et

al., 2020). Some factors can both facilitate and hinder academic performance (Flashman, 2012). Despite the overlap in these studies Anderman (2020), they have enabled researchers to understand that students' academic performance is the result of multiple factors working together.

Achievement goals are preferences and tendencies that stabilize through interactions between individuals (Gegenfurtner & Hagenauer, 2013). Since its introduction in the early 1980s, achievement goal theory has rapidly become one of the most popular frameworks in motivation research (Urduan & Kaplan, 2020). Achievement goal theory comprises individual motivational characteristics (achievement goals) and situational characteristics (goal structures). The theory posits that the goal structures prevalent in learning environments, such as classrooms, influence the achievement goals adopted by students (Bardach et al., 2020). Achievement goal theory has been a focal point of numerous studies in the field of education, with goals hypothesized to impact student performance (Was, 2006).

However, most researchers have only focused on the types of goal orientation, and there is limited research on the relationship between goal orientation and students' academic performance. VandeWalle defines goal orientation as comprising mastery orientation, performance orientation, and avoidance orientation (VandeWalle, 1997). Tuominen et al. (2020) pointed out that there are four types of goal orientation: mastery, performance-approach, performance-avoidance, and apathetic. Students with a mastery orientation exhibit the most adaptive patterns in academic achievement, and these goal orientations can transition from performance-approach to apathetic, and from apathetic to performance-avoidance, with most individuals shifting from more favorable to less favorable orientations. Sommet and Elliot (2017) argued that goal orientation consists of mastery goals, performance-approach goals, and performance-avoidance goals. This study adopts the second classification of goal orientation. However, they believe that the assertion that "goal orientation has a significant impact on students' academic performance" remains to be confirmed.

Self-efficacy is individuals' specific judgments and beliefs about their own abilities (Walker, 2003). It is the belief in one's ability to achieve specific levels of performance, and this belief determines how individuals perceive, think, motivate themselves, and behave (Bandura & Wessels, 1994). Research on the relationship between self-efficacy and academic performance also faces considerable controversy. Some studies argue that self-efficacy has a significant impact on academic performance (Cai et al., 2021; Hayat et al., 2020), with students possessing higher self-efficacy achieving better academic results (Komarraju & Nadler, 2013; Hayat et al., 2020). However, other studies suggest that the influence of self-efficacy on academic performance is not clear (Wu et al., 2020). In this study, researchers believe that self-efficacy will have a significant impact on students' academic performance, with students exhibiting higher self-efficacy achieving better academic results, while those with lower self-efficacy may experience poorer academic performance.

According to Alhadabi and Karpinski (2020), there is a positive correlation between mastery and performance-approach goals and academic achievement, while there is a negative correlation between performance-avoidance goals and academic achievement. There is also a positive correlation between academic achievement and self-efficacy. Self-efficacy may play a supportive and protective role by enhancing the positive effects of mastery and performance-approach goals and reducing the negative impact of performance-avoidance goals on academic achievement. Although this study confirms the relationship between self-

efficacy, goal orientation, and academic achievement, due to the limited research available, further consideration of the relationship among these factors is needed.

Furthermore, many studies indicate that students' gender, grade level, family background, and other factors may influence their levels of self-efficacy and goal orientation. For instance, academic performance varies by gender Herrera et al (2020), with females demonstrating higher self-efficacy in self-regulated learning, mastery achievement goals, and engagement, while males exhibit higher work avoidance goals (Putarek & Pavlin-Bernardić, 2020).

Therefore, this study aims to: (1) Determine the correlation between self-efficacy, goal orientation, and academic performance among junior high school students, (2) Determine the impact of goal orientation on academic achievement among junior high school students through self-efficacy performance, and (3) Identify differences in self-efficacy and goal orientation among junior high school students based on factors such as gender, grade level, holding leadership positions in class, family income, and parental education levels. This study assumes that students' self-efficacy, goal orientation, and academic achievement are all correlated. It hypothesizes that the higher students' self-efficacy, the better their academic performance. It also posits that stronger approach and mastery goal orientations, coupled with weaker avoidance goal orientations, are associated with better academic achievement. Figure 1 illustrates the conceptual framework of the research:

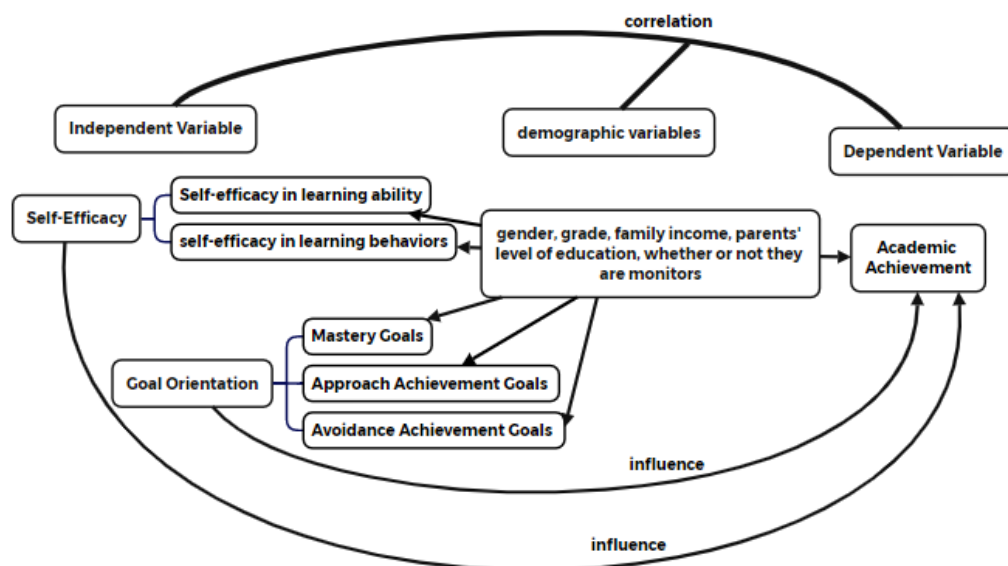


Figure 1: Conceptual Framework

Methodology

Research Design and Participants

This research employed a quantitative research method. According to the Chongqing Municipal Bureau of Statistics & Chongqing Survey Team of National Bureau of Statistics (2023), the total number of junior high school students in Chongqing in 2022 amounted to 1.0875 million. The researchers used all junior high school students in Chongqing as the target population for the survey and determined a sample size of 400 using the Yamane formula ($n = N / (1 + N \cdot e^2)$). The researchers directly utilized experts' "Self-Efficacy Scale" and "Achievement Goal Scale" as survey questionnaires. Employing simple random sampling ensured that every member of the population had an equal chance of being selected as a respondent (Thomas, 2020), which provided greater generalizability to the entire population (Rahman et al., 2022). Researchers distributed online questionnaires through simple random

sampling to 420 respondents from five public middle schools in Tongnan District, Yongchuan District, and Bishan District. Participants were given 7 days to complete the questionnaire, and 400 valid questionnaires were collected. Those participants who met the criteria did not undergo the second-stage testing. Descriptive and inferential statistics were used to analyze the questionnaire data using SPSS version 22.0. Descriptive statistics of respondents' demographic variables are presented in Table 1.

Table 1

Socio-demographic characteristics of the respondents(N=400)

No.	Variables	Category	Frequency (f)	Percent (%)
1	Gender	Male	148	37.0
		Female	252	63.0
2	Grade	Grade 7	255	63.7
		Grade 8	86	21.5
		Grade 9	59	14.8
3	Whether or not They are Class Monitors	Yes	174	43.5
		No	226	56.5
4	Fathers' Level of Education	Junior High School and Below	149	37.3
		High School	108	27.0
		Associate Degree, Bachelor's Degree	133	33.3
		Graduate Degree and Above	10	2.5
		Mothers' Level of Education	Junior High School and Below	153
5	Family Income	High School	117	29.3
		Associate Degree, Bachelor's Degree	123	30.8
		Graduate Degree and Above	7	1.8
		Below 2000 RMB	12	3.0
		2000-3000 RMB	28	7.0
		3000-5000 RMB	110	27.5
		5000-8000 RMB	104	26.0
		Above 8000 RMB	146	36.5

Measurement and Data Collection Tools

Validity concerns the content measured by an instrument and the accuracy of its measurement, while reliability focuses on the truthfulness of the obtained data and the extent to which any measurement tool controls random error (Ahmed & Ishtiaq, 2021). The internal consistency and reliability of a tool can be measured using Cronbach's Alpha coefficient, which ranges from 0 to 1. Values closer to 1 indicate higher internal consistency, indicating higher reliability of the measurement tool. When the Cronbach's Alpha coefficient is below 0.7, it suggests low internal consistency; between 0.7 and 0.8, it indicates acceptable internal consistency; between 0.8 and 0.9, it suggests good internal consistency; and above 0.9, it indicates excellent internal consistency (Cronbach, 1951). In this study, the measurement results of questionnaire reliability using Cronbach's Alpha coefficient are presented in Table 2. The Cronbach's alpha coefficients for Self-Efficacy, Goal Orientation, and

the Total questionnaire are 0.923, 0.895, and 0.917, respectively. These high coefficients indicate strong internal consistency reliability for all variables, suggesting that the items within each variable and the questionnaire as a whole reliably measure the intended constructs.

Table 2

Reliability Test Results of the Academic Achievements Influencing Factors Questionnaire (N=400)

No.	Variables	Items	Cronbach's alpha Coefficient
1	Self-Efficacy	22	0.923
2	Goal Orientation	18	0.895
3	Total	40	0.917

The range of KMO values is from 0 to 1. KMO values between 0.8 and 1.0 indicate adequate sampling. Values between 0.7 and 0.79 are considered moderate, while values between 0.6 and 0.69 are regarded as fair. KMO values less than 0.6 suggest insufficient sampling and remedial action should be taken (Shrestha, 2021). The validity testing results of the questionnaire on factors influencing academic performance are shown in Table 3. The KMO value of the questionnaire regarding academic performance factors is 0.930 ($p=0.000<0.05$), with a KMO value of 0.903 for the "Achievement Goal Orientation Questionnaire" and 0.945 for the "Student Self-Efficacy Questionnaire". In summary, the dimensions within the questionnaire are interrelated, indicating a good internal structure, and can be applied to the actual investigation in this study.

Table 3

Assessing the Adequacy of Sample Size (N=400)

1	Self-Efficacy	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.945
		Bartlett's Test of Sphericity	Approx. Chi-Square
			df
			5485.334
			231.000
			Sig.
			.000
2	Goal Orientation	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.903
		Bartlett's Test of Sphericity	Approx. Chi-Square
			df
			4105.720
			153.000
			Sig.
			.000
3	Total	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.930
		Bartlett's Test of Sphericity	Approx. Chi-Square
			df
			10261.679
			780.000
			Sig.
			.000

Data Analytical Tools

The researchers analyzed the collected questionnaire data using descriptive and inferential statistics through SPSS version 22.0. Descriptive statistics were used to gather data on demographic variables such as grade level, gender, and family background of junior high school students from Yongchuan District and Tongnan District in Chongqing City. Frequency analysis, a type of inferential statistics, was utilized to calculate the sample size for each category and analyze the number and proportion of students with different genders, grade levels, and family backgrounds. Measures of central tendency such as median and mode were

employed to assess the data's concentration tendency, while standard deviation was used to measure data dispersion. Normality tests were conducted to assess whether the independent variables, self-efficacy and goal orientation, followed a normal distribution. Spearman's rank correlation coefficient was used to analyze the relationship (if any), nature (positive or negative), and strength of correlation between self-efficacy, goal orientation, and academic performance. Furthermore, Mann-Whitney U and Kruskal-Wallis H tests were conducted to examine differences in self-efficacy, goal orientation, and academic performance based on variables such as gender, leadership roles in class, family income, grade level, and parents' education level.

Findings

Table 4

The Relationship Between Self-Efficacy, Goal Orientation and Academic Achievements N=400)

Items	Variables	Correlation Coefficient	P-Value	Results	
1	Self-Efficacy vs Academic Achievement	Self-Efficacy in Learning Ability vs Academic Achievement	.234**	<.001	Significant, Positive, Low
		Self-Efficacy in Learning Behaviors vs Academic Achievement	.058	.247	No significant, Positive, Low
3	Goal Orientation vs Academic Achievement	Approach Achievement Goals vs Academic Achievement	0.96	.055	No significant, Positive, Very high
		Avoidance Achievement Goals vs Academic Achievement	-.054	.277	No significant, Negative, Negligible
		Mastery Goals vs Academic Achievement	.101*	.043	Significant, Positive, Negligible
3	Self-Efficacy vs Goal Orientation	Self-Efficacy in Learning Ability vs Approach Achievement Goals	.365**	<.001	Significant, Positive, Low
		Self-Efficacy in Learning Ability vs Avoidance Achievement Goals	-.188**	<.001	Significant, Negative, Low
		Self-Efficacy in Learning Ability vs Mastery Goals	.363**	<.001	Significant, Positive, Low
		Self-Efficacy in Learning Behaviors vs Approach Achievement Goals	.314**	<.001	Significant, Positive, Low
		Self-Efficacy in Learning Behaviors vs Avoidance Achievement Goals	.218**	<.001	Significant, Positive, Low
		Self-Efficacy in Learning Behaviors vs Mastery Goals	.185**	<.001	Significant, Positive, Low

*.Correlation is significant at the 0.05 level (2-tailed).

** .Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows the relationship between self-efficacy, goal orientation, and academic performance. The results indicate that: (1) Regarding the relationship between self-efficacy, goal orientation, and academic performance, learning ability self-efficacy has a significant positive correlation with academic performance, whereas learning behavior self-efficacy does not have a significant relationship with academic performance. Mastery goals are significantly positively correlated with academic performance, while approach achievement goals and avoidance goals do not have a significant relationship with academic performance. (2) Regarding the relationship between self-efficacy and goal orientation, both learning ability self-efficacy and learning behavior self-efficacy have a significant positive correlation with approach goals and mastery goals, but have a significant negative correlation with avoidance goals.

Table 5

Differences of Self-Efficacy, Goal Orientation, Academic Achievement based on Gender (N=400)

Variables	Kruskal-Wallis H	Asymp. Sig.	Results
Self-Efficacy in Learning Ability	1.947	.163	No significant difference
Self-Efficacy in Learning Behaviors	.149	.699	No significant difference
Approach Achievement Goals	.013	.910	No significant difference
Avoidance Achievement Goals	1.607	.205	No significant difference
Mastery Goals	.957	.328	No significant difference
Academic Achievement	19.588	<.001	Significant difference

a. Kruskal Wallis Test

b. Grouping Variable:Gender

Table 5 shows the differences in self-efficacy, goal orientation, and academic performance based on gender. The results of the Kruskal-Wallis test indicate that there are no significant gender differences in self-efficacy and goal orientation. However, there is a significant gender difference in academic performance.

Table 6

Differences of Self-Efficacy, Goal Orientation, Academic Achievement, based on Grade (N=400)

Variables	Kruskal-Wallis H	Asymp. Sig.	Results
Self-Efficacy in Learning Ability	7.972	.019	Significant difference
Self-Efficacy in Learning Behaviors	2.902	.234	No significant difference
Approach Achievement Goals	13.639	.001	Significant difference
Avoidance Achievement Goals	.461	.794	No significant difference
Mastery Goals	9.549	.008	Significant difference
Academic Achievement	6.692	.035	Significant difference

- a. Kruskal Wallis Test
- b. Grouping Variable:Grade

Table 6 analyzes the differences in self-efficacy, goal orientation, and academic performance based on grade level. The results of the Kruskal-Wallis test show significant differences based on grade level in learning ability self-efficacy, approach goals, mastery goals, and academic performance. However, no significant differences were observed in learning behavior self-efficacy and avoidance goal orientation. This indicates that students of different grade levels vary in their confidence in their learning abilities, their concern with self-presentation, and their focus on mastering knowledge, which leads to differences in their academic performance across grades.

Table 7

Differences of Self-Efficacy, Goal Orientation, Academic Achievement based on Whether Holding a Class Cadre Position (N=400)

Variables	Kruskal-Wallis H	Asymp. Sig.	Results
Self-Efficacy in Learning Ability	14.931	<.001	Significant difference
Self-Efficacy in Learning Behaviors	.204	.651	No significant difference
Approach Achievement Goals	.643	.422	No significant difference
Avoidance Achievement Goals	5.160	.023	Significant difference
Mastery Goals	1.879	.170	No significant difference
Academic Achievement	31.084	<.001	Significant difference

- a. Kruskal Wallis Test
- b. Grouping Variable:Whether Holding a Class Cadre Position

Table 7 examines the differences in self-efficacy, goal orientation, and academic performance based on whether or not the respondents hold class leadership positions. The results of the Kruskal-Wallis test show significant differences for those holding class leadership positions in learning ability self-efficacy, avoidance goal orientation, and academic performance. However, there are no significant differences in learning behavior self-efficacy, approach goals, and mastery goals based on whether or not respondents hold class leadership positions. These findings suggest that holding class leadership positions affects students' confidence in their learning abilities and increases their concern about their performance in the classroom, leading to differences in academic performance.

Table 8

Differences of Self-Efficacy, Goal Orientation, Academic Achievement based on Family Income (N=400)

Variables	Kruskal-Wallis H	Asymp. Sig.	Results
Self-Efficacy in Learning Ability	10.475	.033	Significant difference
Self-Efficacy in Learning Behaviors	4.484	.344	No significant difference
Approach Achievement Goals	11.048	.026	Significant difference
Avoidance Achievement Goals	2.728	.604	No significant difference
Mastery Goals	10.582	.032	Significant difference
Academic Achievement	9.573	.048	Significant difference

a. Kruskal Wallis Test

b. Grouping Variable: Family Income

Table 8 explores the differences in self-efficacy, goal orientation, and academic performance based on family income. The results of the Kruskal-Wallis test show significant differences in learning ability self-efficacy, approach goals, mastery goals, and academic performance based on monthly family income. However, there are no significant differences in learning behavior self-efficacy and avoidance goals based on monthly family income. The results indicate that family income affects students' confidence in their learning abilities, their concern with self-presentation, and their focus on mastering knowledge, which in turn influences their academic performance.

Table 9

Differences of Self-Efficacy, Goal Orientation, Academic Achievement based on Parents' Education Level (N=400)

Variables	Catagry	Kruskal-Wallis H	Asymp. Sig.	Results
Self-Efficacy in Learning Ability	Fathers' Education Level	13.578	.004	Significant difference
	Mathers' Education Level	7.023	.071	No significant difference
Self-Efficacy in Learning Behaviors	Fathers' Education Level	.111	.990	No significant difference
	Mathers' Education Level	3.143	.370	No significant difference
Approach Achievement Goals	Fathers' Education Level	4.073	.254	No significant difference
	Mathers' Education Level	3.865	.276	No significant difference
Avoidance Achievement Goals	Fathers' Education Level	4.762	.190	No significant difference
	Mathers' Education Level	2.532	.470	No significant difference

Mastery Goals	Fathers' Education Level	3.078	.380	No significant difference
	Mathers' Education Level	.405	.939	No significant difference
Academic Achievement	Fathers' Education Level	12.399	.006	Significant difference
	Mathers' Education Level	11.022	.012	Significant difference

a. Kruskal Wallis Test

b. Grouping Variable:Parents' Education Level

Table 9 investigates the differences in self-efficacy, goal orientation, and academic performance based on parents' educational levels. The results of the Kruskal-Wallis test show significant differences in learning ability self-efficacy based on the father's educational level and academic performance based on parents' educational levels. This indicates that the father's educational level affects students' confidence in their learning abilities, and the parents' educational levels have an important influence on students' academic performance.

Table 10

Differences in Academic Performance Based on Gender, Grade Level, Class Leadership Position, Family Monthly Income, and Parents' Educational Levels (N=400)

Variables		N	Mean Rank
Gender	Male	147	170.49
	Female	253	217.93
Grade	Grade 7	254	209.47
	Grade 8	87	174.37
	Grade 9	59	200.41
Whether Holding a Class Cadre Position	Yes	173	233.79
	No	227	175.13
Family Income	Below 2000 RMB	12	187.42
	2000-3000 RMB	29	162.00
	3000-5000 RMB	110	184.56
	5000-8000 RMB	104	208.28
	Above 8000 RMB	145	215.79
Fathers' Level of Education	Junior High School and Below	150	188.49
	High School	108	186.15
	Associate Degree, Bachelor's Degree	132	221.66
	Graduate Degree and Above	10	256.30
Mothers' Level of Education	Junior High School and Below	154	181.09
	High School	117	205.30
	Associate Degree, Bachelor's Degree	122	216.61
	Graduate Degree and Above	7	266.50

Table 10 explores the differences in academic performance based on gender, grade level, class leadership positions, family monthly income, and parents' educational levels. The study results show that female students have better academic performance than male students. Students in lower and higher grades perform better than those in middle grades. Students

holding class leadership positions have better academic performance than those who do not. To some extent, students from families with higher monthly income and higher parental educational levels achieve better academic performance.

Table 11

Differences in Learning Ability Self-Efficacy Based on Grade Level, Class Leadership Position, Family Income, and Father's Educational Level (N=400)

Variables		N	Mean Rank
Grade	Grade 7	254	212.72
	Grade 8	87	182.98
	Grade 9	59	173.73
Whether Holding a Class Cadre Position	Yes	173	219.35
	No	227	186.13
Family Income	Below 2000 RMB	12	155.63
	2000-3000 RMB	29	183.55
	3000-5000 RMB	110	189.57
	5000-8000 RMB	104	192.56
	Above 8000 RMB	145	221.59
Fathers' Level of Education	Junior High School and Below	150	179.27
	High School	108	196.80
	Associate Degree, Bachelor's Degree	132	223.50
	Graduate Degree and Above	10	255.40

The findings of Table 11 reveal that higher-grade students have stronger learning ability self-efficacy than lower-grade students. Participants who hold class leadership positions, have higher family income, and whose fathers have higher educational levels also exhibit higher learning ability self-efficacy.

Table 12

Differences in Approach Goals and Mastery Goals Based on Grade Level and Family Income (N=400)

Variables			N	Mean Rank
Approach Goals	Grade	Grade 7	254	216.46
		Grade 8	87	178.66
		Grade 9	59	163.97
	Family income	Below 2000 RMB	12	151.83
		2000-3000 RMB	29	195.41
		3000-5000 RMB	110	185.02
		5000-8000 RMB	104	191.48
		Above 8000 RMB	145	223.76
Mastery Goals	Grade	Grade 7	254	213.49
		Grade 8	87	168.98
		Grade 9	59	191.08
	Family Income	Below 2000 RMB	12	169.08
		2000-3000 RMB	29	181.71
		3000-5000 RMB	110	199.42
		5000-8000 RMB	104	179.32
		Above 8000 RMB	145	222.87

Table 12 explores the differences in approach goals and mastery goals among students based on different grade levels and family incomes. The findings indicate that family income has a certain impact on approach goals and mastery goals, though this impact shows some fluctuations. Higher-grade students have a stronger approach goal orientation than lower-grade students, and both higher-grade and lower-grade participants have a stronger mastery goal orientation compared to those in the middle grades.

Discussion

This study aimed to explore factors influencing academic performance, primarily focusing on the impact of self-efficacy and goal orientation on academic performance. Data analysis revealed a significant positive correlation between learning ability self-efficacy and academic performance (Table 4). The stronger the learning ability self-efficacy, the better the students' academic performance. The hypothesis that self-efficacy is positively correlated with academic performance was partially supported by the data. Therefore, the relationship between self-efficacy and academic performance is nuanced and may depend on specific aspects of self-efficacy. Approach goals and mastery goal orientation were positively correlated with academic performance; the stronger the approach goals and mastery goals, the better the students' academic performance, which aligns with the hypothesis. The hypothesis that avoidance goal orientation is negatively correlated with academic performance was supported by the data, but this relationship was not significant. The relationship between avoidance goals and academic performance is more complex and may

be influenced by other variables, requiring further research for a comprehensive understanding.

The results also showed that avoidance goals differed significantly based on whether students held class leadership positions (Table 7). Goal orientation and self-efficacy showed no significant differences based on gender, but academic performance differed significantly based on gender (Table 5), grade level, class leadership positions, family monthly income, and parents' educational levels. Female students outperformed male students, lower and upper middle school students performed better than those in middle grades, students holding class leadership positions performed better than those who did not, and students whose mothers had higher educational levels achieved better academic performance (Table 10). To some extent, students from higher family income levels were more likely to achieve higher academic performance. Learning ability self-efficacy showed significant differences based on grade level (Table 6), class leadership positions (Table 7), family income (Table 8), and father's educational level. The higher the class leadership positions, family monthly income, and father's educational level, the stronger the learning ability self-efficacy (Table 11). Approach goals and mastery goals showed significant differences based on grade level and family income (Table 9). Lower-grade students had stronger approach goals than higher-grade students, and lower-grade and higher-grade students had stronger mastery goals than middle-grade students (Table 12). These associations are statistically significant.

Conclusion

This study is of great value to both theory and practice in the field of education. The specific contributions are as follows: (1) This study helps to explore the relationship and differences between students' self-efficacy, goal orientation and academic achievement based on gender, grade, whether they are class leaders, family income and parents' education level, filling the research gap on the relationship between goal orientation and academic achievement. (2) This study helps to enrich the theoretical literature on the relationship between self-efficacy, goal orientation and academic performance, especially the theoretical literature on improving the relationship between goal orientation and academic performance, and provides theoretical support for educational practice. (3) This study helps to bridge the gap between theory and practice. (4) By identifying and studying specific measures to eliminate negative factors that affect academic performance and actively adjusting students' self-efficacy and goal orientation, this study can help teachers' teaching and students' learning present a spiral upward virtuous cycle, thereby improving students' learning effects and optimizing academic performance. The researchers conducted data analysis on factors affecting academic performance from multiple perspectives, which helps to fully understand teachers' teaching, students' learning and the output of school education practice from the students' perspective, and helps to promote educational practice. (5) The researchers collected a large amount of quantitative research data, providing empirical support for the impact of self-efficacy and goal orientation on students' academic performance, making the research results universal and generalizable. (6) It provides an important reference for teaching reform and education development in Chongqing and even China, which is conducive to the sustainable development of education.

In this study, it was found that: (1) students' academic performance showed significant differences based on gender, grade level, class leadership positions, family income, and parents' educational levels; (2) learning ability self-efficacy showed significant differences based on grade level, class leadership positions, family income, and father's educational level;

(3) approach goals and mastery goals showed significant differences based on grade level and family income; (4) there was a positive correlation between learning ability self-efficacy, approach goals, and academic performance; (5) students who held class leadership positions had stronger self-efficacy and better academic performance than those who did not. Students from higher family income levels had stronger self-efficacy and better academic performance. Lower-grade and higher-grade students had stronger mastery goals and better academic performance than middle-grade students. Higher parental educational levels had more positive impacts on students' academic performance.

The researchers believe that in order to improve the academic performance of junior high school students, efforts should be made to cultivate and enhance students' self-efficacy, especially learning ability self-efficacy. Students should be encouraged to develop a positive learning attitude and confidence. Helping them set achievable learning goals and focusing on approach and mastery goals is important, particularly for second-year junior high students. Attention should be paid to individual differences among students, providing targeted education based on different genders and family backgrounds. Students with lower academic performance should be given opportunities to hold class leadership positions to improve their self-efficacy and learning motivation, while teachers should carefully allocate tasks to avoid overburdening them. Additionally, parents can provide more academic support and resources to fully realize their children's learning potential. Parents should also lead by example, demonstrating the importance of learning.

The limitations of this study are that it was restricted to junior high schools in Chongqing and did not include other provinces. The academic performance data collected was limited to the Chinese language subject, lacking sufficient evidence to support similar conclusions in other subjects. Due to time and resource constraints, the study only considered the effects of self-efficacy and goal orientation on academic performance. Future research could focus on schools in more provinces across China, examining whether the conclusions apply to other subjects beyond Chinese. It could also explore more factors that influence academic performance and discuss broader aspects of curriculum evaluation.

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