Research on the Relationship Between the Achievement Goal Orientation and the Academic Help-seeking

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Abstract

This research employed the questionnaire method to investigate the relationship between achievement goal orientation and academic help-seeking among 477 college students. The results indicate that: (1) Students with mastery approach, mastery avoidance, and performance approach goal orientations are more likely to engage in instrumental help-seeking, while students with performance avoidance goal orientation tend to engage in executive and avoidant help-seeking; (2) There is a significant difference between male and female students in instrumental and avoidant help-seeking; (3) Help-seeking behavior is determined by multiple goal orientations.

Keywords: achievement goal orientation, academic help-seeking, multiple goal orientation

1. Introduction

The internal factors that influence effective learning have always been a subject of interest to educational psychologists both domestically and internationally. Why do students with the same IQ achieve different learning outcomes? The macro concept of non-intelligence factors has been unable to provide a concrete explanation. The theory of achievement goal orientation explores the motivation and cognitive factors that affect learning at a more micro level, and its research deepens our understanding of the internal mechanisms of learning.

Traditionally, achievement goal orientation has been divided into two categories: mastery orientation and performance orientation. Dweck et al. propose that these two orientations create distinct mental frameworks for individuals to understand and respond to achievement situations (Ames, 1992). This difference is particularly evident in individuals' perceptions of ability and effort. Firstly, individuals with a mastery orientation tend to hold an incremental theory of competence, viewing competence as a developable trait that can be improved through effort and experience. In contrast, individuals with a performance orientation tend to hold an entity theory of competence, viewing competence as a fixed, uncontrollable personal trait. Secondly, individuals with a mastery orientation believe that effort can lead to success, and view effort as a means of activating existing abilities, completing tasks, and developing the ability needed to master future tasks. In contrast, individuals with a performance orientation view ability as a fixed trait and do not see effort as a means of developing the ability required for task mastery. Moreover, individuals with a performance orientation may even view high effort as a symbol of low ability, as they believe that high-ability individuals can easily complete tasks without having to work hard.

Subsequent studies on achievement goals have produced contradictory conclusions, leading some researchers to further divide goals. A three-dimensional goal orientation model is proposed, in which performance goals are divided into two categories: approach and avoidance (Elliot, 1994). While both approaches focus on the results of one's own performance, the former focuses on demonstrating one's abilities and receiving positive feedback from others, whereas the latter focuses on avoiding negative evaluation by not revealing one's shortcomings. This new classification, with its emphasis on avoidance orientation, echoes McClelland and Atkinson's description of achievement motivation in the 1950s, and is another example of empirical research and theoretical reasoning in educational psychology. This model has been supported by an increasing number of studies. For instance, it is found that self-oriented achievement goals (i.e., performance goal orientation) can distinguish between approach goals and avoidance goals, and that their effects on academic help-seeking differ (Li Xiaodong & Zhang Bingsong, 2001).

Recently, researchers have proposed a four-point theory of achievement goals, which divides mastery goals into

approach and avoidance orientations based on the three-point theory (Elliot, 2001). The definition of mastery approach orientation is the same as that of mastery orientation in the rule of thirds. The newly added dimension is the mastery avoidance goal orientation, which focuses on self-comparison and fears of declining abilities. For instance, older people may fear that they cannot learn or may give up due to inability to master new skills, while students at a higher level may fear that they cannot maintain their current level of achievement, leading to anxiety. Elliot has previously confirmed the existence of learning-avoidance goals in his studies. An empirical study was conducted on Elliot et al.'s quartage theory, verified the existence of mastery avoidance goals, and concluded that the quartage method of achievement goals is more reasonable than the three-dichotomy method and the dichotomy method (Liang Guosheng, 2002, Li Yuan, 2004).

Research on the relationship between achievement goal orientation and academic help-seeking is growing. Bulter and Neuman found that children are more willing to seek help when pursuing mastery goals, with the explanation for not seeking help being the desire to master the task independently. Under achievement goals, the explanation for not seeking help is to hide incompetence. In China, the psychologist studied second-grade students and found that those with mastery and approach goal orientations tended to choose instrumental help-seeking strategies, while those with performance avoidance goal orientation were more likely to engage in executive help-seeking or avoidant help-seeking when they needed help (Li Xiaodong & Zhang Bingsong, 2001). Additionally, students in mastery goal orientation classrooms tended to seek instrumental help, while those in performance goal orientation classrooms tended to avoid seeking help.

However, existing research in this field has mainly been conducted based on the two-dimensional and three-dimensional achievement goal theories, with the research subjects primarily concentrated on primary and secondary school students. As such, it remains unclear whether the newly proposed four-dimensional achievement goal theory is applicable, and how achievement goals relate to academic help-seeking among college students. Further research is needed to confirm or disprove this theory. Therefore, this study aims to investigate the achievement goals of college students and explore the relationship between achievement goal orientation and academic help-seeking.

2. Method

2.1 Participants

This study selected a sample of 500 college students from Southeast University, Hohai University, and Nanjing Tech University, of which 477 questionnaires were deemed valid. The sample consisted of 138 students from Southeast University, 157 students from Hohai University, and 182 students from Nanjing Tech University. Of the participants, 256 were male and 221 were female. The sample also included 128 freshmen, 111 sophomores, 139 juniors, and 99 seniors.

2.2 Tools

2.2.1 Achievement Goal Orientation Questionnaire for College Students

The "Achievement Goal Scale" self-compiled questionnaire by Liang Guosheng and Xue Xiang was used in this study, consisting of 40 items. After being evaluated by three psychology teachers, five psychology graduate students, and three experienced university teachers, 37 items were retained. The questionnaire utilized a five-point Likert scale, with 1 indicating very inconsistent, 2 indicating relatively inconsistent, 3 indicating unclear (sometimes yes and sometimes no), 4 indicating relatively consistent, and 5 indicating very consistent. Following prediction and statistical analysis, the original questionnaire items were modified and unsatisfactory items were deleted, resulting in a formal questionnaire of 20 items. In June 2023, 477 subjects were tested, and statistical analysis revealed that the four subscales of the formal questionnaire had homogeneity reliabilities of 0.8180, 0.6936, 0.7666, and 0.7431, respectively, meeting measurement requirements. Principal component factor analysis with orthogonal rotation revealed that the 20 items were clustered into four factors: mastery approach goal orientation, mastery avoidance goal orientation, performance approach goal orientation, and performance avoidance goal orientation. The four factors accounted for 47.210% of the total variance, indicating that the revised achievement goal orientation questionnaire had good reliability and validity.

2.2.2 Questionnaire of Academic Help-seeking Behavior of College Students

The study utilized Jin Dongmei's "Questionnaire on Peer Academic Help-Seeking Behavior of College Students" and added a project on instrumental help-seeking from teachers, resulting in a collection of 26 items. After evaluation by three psychology teachers, five psychology graduate students, and three experienced university teachers, 24 items were retained. The questionnaire employed a Likert five-point score, with 1 indicating very inconsistent, 2 indicating

relatively inconsistent, 3 indicating unclear (sometimes yes and sometimes no), 4 indicating relatively consistent, and 5 indicating very consistent. Following prediction and statistical analysis, unsatisfactory items were deleted, and the original items of the forecast questionnaire were modified, resulting in a formal questionnaire of 20 items. In June 2023, 477 subjects underwent formal testing, and statistical analysis revealed that the homogeneity reliability of the four subscales of the formal questionnaire were 0.8415, 0.8158, 0.7201, and 0.8567, respectively, meeting the measurement requirements. Principal component factor analysis and orthogonal rotation were used to group the 24 items into four factors: instrumental help-seeking from teachers, instrumental help-seeking from classmates, executive help-seeking, and avoidant help-seeking. The four factors accounted for 54.765% of the total variance, indicating the revised achievement goal orientation questionnaire's good reliability and validity.

2.3 Procedures

The study was conducted during self-study sessions with graduate students from the Department of Psychology. Prior to the test, the researchers explained the questionnaire's purpose and significance to the participants, emphasizing important considerations for the test. After completion of the test, the researchers removed invalid questionnaires based on specific criteria and analyzed the valid questionnaire data using SPSS 26.0 software.

3. Result

3.1 Correlation Analysis Between Achievement Goal Orientation and Academic Help-seeking Behavior Tendency of College Students

A bivariate correlation analysis was used to analyze the achievement goal and academic help-seeking behavior tendency of the subjects, and the results were shown in Table 1.

Table 1. The correlation between achievement goal orientation and academic help-seeking behavior tendency

Item	Instrumental help-seeking (teacher)	Instrumental help-seeking (classmate)	Executive help-seeking	Avoidant help-seeking
MAP	.025	$.140^{**}$	$-.114^{*}$	$-.219^{***}$
MAV	.052	$.125^{*}$	.003	-.067
PAP	.015	$.107^{*}$	$.129^{**}$	-.038
PAV	-.021	$-.090^{*}$	$.163^{**}$	1.041^{**}

Note. *P<.05, **P<.01, ***P<.001

The correlation analysis results indicate that mastery approach goals are positively correlated with instrumental help-seeking from classmates, but negatively correlated with executive and avoidant help-seeking. Meanwhile, mastering avoidance goals are positively correlated with instrumental help-seeking from classmates. Achievement approach goals are positively correlated with instrumental and executive help-seeking, whereas achievement avoidance goals are positively correlated with executive and avoidant help-seeking. These findings suggest that mastery approach orientation goals are more positively associated with adaptive help-seeking, whereas mastery avoidance orientation goals are also positively associated with adaptive help-seeking. Achievement approach orientation goals are positively associated with both positive and negative help-seeking, whereas achievement avoidance goals are only positively associated with negative executive and avoidance help-seeking.

3.2 Gender Difference Analysis of Academic Help-seeking Behavior Tendency of College Students

Multivariate analysis of variance was used to investigate whether there were gender differences in each variable, and the results were shown in Table 2.

Table 2. Gender difference analysis of academic help-seeking behavior tendency of college students

item	male		female		Test of significance
	M	SD	M	SD	t
instrumental help-seeking (classmate)	22.765	6.106	24.199	5.358	2.568[*]
avoidant help-seeking	17.628	6.472	15.064	5.944	4.269[*]

Note. *P<.05

The results indicate significant gender differences in instrumental and avoidance help-seeking from classmates. Specifically, female students are more likely to utilize instrumental help-seeking strategies from classmates, while male students are more likely to engage in avoidance help-seeking behaviors. However, there is no gender difference in instrumental help-seeking from teachers or executive help-seeking.

3.3 Regression Analysis Results of Achievement Goal Orientation on Academic Help-seeking Behavior Tendency of College Students

The study employed multiple regression analysis using the stepwise entry method, with four types of achievement goal orientation as independent variables and four academic help-seeking factors as dependent variables. While a regression equation could not be established for instrumental help-seeking from teachers, equations were established for the other three dependent variables, as shown in Tables 3-5.

Table 3. Results of regression analysis of achievement goal orientation and instrumental help-seeking from classmates

	Normalized regression coefficient β	t	Sig
MAP	0.574	10.365	0.001
MAV	0.402	8.776	0.005
PAP	0.388	6.105	0.005
PAV	-0.196	-2.746	0.05
R	0.783		
R^2	0.613		
Adjusted R^2	0.610		

The multiple regression analysis indicates that all four independent variables, namely mastery approach goal, mastery avoidance goal, performance approach goal, and performance avoidance goal, were entered into the regression equation. The complex correlation coefficient (R) was 0.783, indicating a strong relationship between the variables. The decision coefficient (R2) was 0.613, indicating that the independent variables explain 61.3% of the variation in the dependent variable. The adjusted decision coefficient was 0.610. The variance analysis significance test of the regression equation yielded a statistic F of 7.979 and a probability value (p) of less than 0.005, demonstrating that the regression equation established by the independent and dependent variables is significant.

The standardized regression equation is as follows:

Instrumental help-seeking from students = 0.574 * MAP + 0.402 * MAV + 0.388 * PAP - 0.196 * PAV

Table 4. Regression analysis results of achievement goal orientation on executive help-seeking

	Normalized regression coefficient β	t	Sig
MAP	-0.683	-15.184	0.001
PAP	0.451	8.339	0.001
PAV	0.227	3.157	0.001
R	0.803		
R^2	0.645		
Adjusted R^2	0.640		

Table 4 displays the results of the multiple regression analysis, which indicates that three independent variables, namely mastery approach goal, performance approach goal, and performance avoidance goal, were entered into the regression equation. The multiple correlation coefficient (R) of the regression equation was 0.803, indicating a strong relationship between the variables. The determination coefficient (R2) was 0.645, indicating that the independent variables explain 64.5% of the variation in the dependent variable. The adjusted determination coefficient was 0.640. The variance analysis significance test of the regression equation yielded a statistic F of 7.460 and a probability value (p) of less than 0.001, demonstrating that the regression equation established by the independent and dependent variables is significant.

The standardized regression equation for executive help is as follows:

$$\text{Executive help} = -0.683 * \text{MAP} + 0.451 * \text{PAP} + 0.227 * \text{PAV}$$

Table 5. Regression analysis results of achievement goal orientation on avoidant help-seeking

	Normalized regression coefficient β	t	Sig
MAP	-0.418	-11.297	0.001
PAV	0.194	4.326	0.001
R	0.863		
R^2	0.745		
Adjusted R^2	0.742		

Table 5 displays the results of the multiple regression analysis, which indicates that two independent variables, namely mastery approach goal and performance avoidance goal, were entered into the regression equation. The multiple correlation coefficient (R) of the regression equation was 0.863, indicating a strong relationship between the variables. The determination coefficient (R2) was 0.745, indicating that the independent variables explain 74.5% of the variation in the dependent variable. The adjusted determination coefficient was 0.742. The variance analysis significance test of the regression equation yielded a statistic F of 20.038 and a probability value (p) of less than 0.001, demonstrating that the regression equation established by the independent and dependent variables is significant.

The standardized regression equation for avoidant help-seeking is:

$$\text{Avoidant help-seeking} = -0.418 * \text{MAP} + 0.194 * \text{PAV}$$

4. Discussion

4.1 Correlation Between Achievement Goal Orientation and Academic Help-seeking Behavior Tendency of College Students

Previous research on the relationship between achievement goal orientation and academic help-seeking among junior and sophomore students has found that those with mastery approach and performance approach goals are more likely to engage in instrumental help-seeking, while those with avoidance goal orientation tend to engage in executive

help-seeking or avoidant help-seeking (Song Haifang, 2013). This study analyzed the correlation between achievement goal orientation and academic help-seeking behavior among college students and found that those with mastery approach goals, mastery avoidance goals, and performance approach goals were more likely to engage in instrumental help-seeking, while those with performance avoidance goals tended to engage in executive help-seeking or avoidance help-seeking. However, the study also found that those with performance approach goals were more likely to engage in executive help-seeking, and that mastery approach goals, mastery avoidance goals, and performance approach goals were not significantly related to instrumental help-seeking from teachers.

Therefore, existing research on the relationship between achievement goal orientation and academic help-seeking behavior leads us to believe that fostering mastery approach goals and mastery avoidance goals in education, emphasizing the intrinsic value and task significance of learning, is beneficial to college students' development. While achievement approach goals are also associated with positive academic help-seeking behavior, they can have negative effects, so fostering achievement approach goals should be done in moderation. Performance avoidance goal orientation is associated with negative help-seeking behavior, so it is important to minimize the development of this goal orientation.

4.2 Gender Differences in Achievement Goal Orientation and Academic Help-seeking Behavior Tendency

This study found no significant gender difference in achievement goal orientation between male and female students. studied second-grade middle school students and concluded that girls are more likely to use academic help-seeking as a learning strategy than boys, and are more inclined to use instrumental help-seeking (Yang X H et al., 2023). This study is consistent with previous research, which found that female students are more likely to use instrumental help-seeking from classmates than male students, while male students are more likely to engage in avoidant help-seeking behaviors than female students.

4.3 Influence of Achievement Goal Orientation on Academic Help-seeking Behavior Tendency of College Students

In recent years, some scholars have proposed the concept of multiple goals, suggesting that the positive effects of mastery goals do not negate the negative effects of achievement goals. These goals are independent and not mutually exclusive, meaning that learners can have multiple types of goals at different levels. The research found that having multiple goals leads to more active learning strategies (Feng Sasa & Zhang Xujun, 2014). This study aims to further investigate this theoretical hypothesis, providing a unique perspective on previous research.

This study employed multiple regression analysis to investigate the impact of achievement goals on academic help-seeking behavior. The results revealed that: (1) The four factors of achievement goals significantly affect instrumental help-seeking behavior. The order of entry into the equation is mastery of approach goal, mastery of avoidance goal, achievement approach goal, and achievement avoidance goal. This indicates that the four types of goals collectively determine students' academic help-seeking behavior, with mastery approach goal playing the most significant role in determining students' choice of instrumental help-classmate behavior. The coefficient of achievement avoidance goal is negative, indicating that achievement avoidance goal hinders students' instrumental help-classmate behavior. (2) Mastery approach goal, achievement approach goal, and achievement avoidance goal jointly affect executive help-seeking behavior. Mastery approach goal negatively affects the formation of executive help-seeking behavior and plays the most important role. Achievement approach goal and achievement avoidance goal jointly promote executive help-seeking behavior. (3) Mastery approach goal and achievement avoidance goal jointly affect help-avoidance behavior. The higher the mastery goal, the lower the tendency for help-avoidance behavior. The higher the achievement avoidance goal, the higher the tendency for help-avoidance behavior.

4.4 Limitations and Outlook

Although the study has important theoretical and practical significance, there are also some limitations. Firstly, the current study mainly focuses on the Relationship between the achievement goal orientation and the academic help-seeking, however based on previous studies, academic emotions and self-efficacy can also be essential positive psychological variables that help to influence the academic help-seeking. Hence, whether these influential factors have impacts on the relationship between achievement goal orientation and academic help-seeking would be worth studying in future research.

Secondly, since this study conducts a cross-sectional survey rather than an experiment, it is hard to come to a cause-and-effect conclusion. In future research, a longitudinal survey may help to construct more comprehensive models that can better explain the influential factors of academic help-seeking.

Lastly, this study examines the relationship between the achievement goal orientation and the academic help-seeking among Chinese university students, however the generalizability of the findings in other regions remains to be

explored. Therefore, on account of these possible factors, the applicability of this model in The United States and European countries still requires further verification.

5. Conclusion

A correlation exists between achievement goal orientation and academic help-seeking behavior among college students. Students who master approach goals, avoidance goals, and achievement approach goals are more likely to engage in instrumental help-seeking behavior. Additionally, students who achieve goal approach goals are more likely to engage in executive help-seeking behavior. Conversely, students who achieve goal avoidance goals are more likely to engage in executive help-seeking or avoidance help-seeking behavior.

In the universities, female students tend to adopt the instrumental help-classmate strategy more frequently than male students, while male students tend to avoid help-seeking behavior more frequently than female students.

This academic paper examines the influence of achievement goal orientation on the academic help-seeking behavior tendency of college students. The mastery of approach goals, avoidance goals, achievement approach goals, and achievement avoidance goals determine the tendency towards instrumental help-seeking behavior. Additionally, mastery of approach goals, achievement approach goals, and achievement avoidance goals determine the tendency towards executive help-seeking behavior. Finally, the mastery of approach goals and achievement avoidance goals determine the tendency towards avoidant help-seeking behavior.

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Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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