

The Relationship Between Students' Self-Efficacy and Self-Management Ability at Henan Zhengzhou S College in China

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Abstract: This study used college students from Henan Zhengzhou S College as the research subjects. This research aimed to explore the current characteristics and the mutual relationship between college students' self-efficacy and self-management ability, and analyze the differential performances of the two variables under different background variables. This study adopted the questionnaire survey method and selected 378 college students as the research samples, covering different genders, grades, residences and major categories. This study conducted descriptive statistical analysis on the levels of college students' self-efficacy and self-management ability, and adopted the independent sample t-test and one-way analysis of variance to examine group differences under different background variables. This study explored the relationship between self-efficacy and self-management ability through correlation analysis. The research results indicated that the overall levels of self-efficacy and self-management ability of college students in Henan Zhengzhou S College were both at a relatively high level. In terms of difference analysis, college students with different genders, grades, residences and majors presented significant differences in self-efficacy and self-management ability. The results of correlation analysis showed that there was a significant positive correlation between self-efficacy and self-management ability; the higher the level of college students' self-efficacy was, the stronger their self-management ability became. The research conclusions provided an empirical basis for colleges and universities to strengthen the cultivation of students' self-efficacy and self-management ability in the practice of student development and management.

Keywords: Self-Efficacy, Self-Management Ability, College Students.

1. Introduction

Self-efficacy and self-management ability have long been core themes in international higher education research. Rooted in Bandura's social cognitive theory, self-efficacy is widely recognized as a critical predictor of students' learning persistence, problem-solving and resilience, and is strongly linked to effective self-management competencies including goal setting, time management and emotional regulation (Li et al., 2022). Countries worldwide increasingly prioritize cultivating these 21st-century skills, as together they shape students' academic success, mental health and long-term professional competitiveness.

Against the deepening reform of China's higher education system, self-efficacy and self-

management ability have become key priorities for high-quality talent cultivation, aligned with national policy goals that emphasize developing students' independent learning, self-regulation and practical capabilities. The shift to blended and digital learning in Chinese universities has further highlighted the importance of self-management for learning outcomes, and existing research confirms that college students with higher self-efficacy tend to use learning strategies more effectively and maintain stronger self-management. However, targeted empirical research based on the specific context of regional Chinese universities remains insufficient (Zan, 2025).

As a national central city and the educational hub of Henan, a populous central

with different background variables.

H2-1: There are significant differences in self-management ability among college students of different genders.

H2-2: There are significant differences in self-management ability among college students from different places of residence.

H2-3: There are significant differences in self-management ability among college students from different grades.

H2-4: There are significant differences in self-management ability among college students from different majors.

H3: There is a correlation between self-efficacy and self-management ability of college students.

Literature Review

Self-Regulated Learning Theory

Self-Regulated Learning Theory, systematically proposed by Zimmerman (1989), is a core educational psychology framework that emphasizes learners' active control over their own cognition, motivation and behaviors through cyclic processes of goal setting, strategy application, self-monitoring and reflection. The theory has evolved from an individual-centered cognitive model into a multi-dimensional, dynamic and technology-integrated framework, with contemporary extensions covering its three-stage cyclic structure, social and environmental interactions, technology-enhanced dynamic regulation, cross-cultural differences, and integration with theories such as self-determination and emotion regulation (Zimmerman, 2000). This theory provides a fundamental foundation for understanding the relationship between college students' self-efficacy and self-management ability: successful self-regulation accumulates mastery experiences to boost self-efficacy, while the cyclic process of self-regulation also cultivates long-term self-management habits. In turn, higher self-efficacy promotes more active adoption of learning strategies and further optimizes self-management performance, forming a mutually reinforcing relationship between the two constructs (Efklides, 2023).

Self-Efficacy

First proposed by Bandura (1977) based on Social Learning Theory, self-efficacy refers to individuals' subjective belief in their ability to organize and complete specific tasks to achieve goals, comprising three core dimensions: magnitude, strength, and generality. As a dynamic psychological construct shaped by social context rather than a static trait, it influences individuals' goal setting, motivation, emotional response and behavioral performance: people with high self-efficacy tend to pursue higher goals and maintain greater resilience when facing challenges. In academic and organizational research, self-efficacy has been verified as a key predictor of learning performance, work engagement, innovative behavior and psychological well-being, and contemporary research has extended its connotation to interdisciplinary, multi-contextual and technology-integrated directions, revealing its cross-cultural differences and dynamic changing mechanisms in digital learning environments (Bandura & Schunk, 2021).

For measuring college students' self-efficacy in higher education contexts, academia generally adopts a four-dimensional framework including academic self-efficacy, external influences, help-seeking and relatedness. Among them, academic self-efficacy is the core dimension, which refers to students' belief in completing academic tasks and is proven to significantly predict learning engagement, strategy adoption and academic outcomes; external influences emphasize the shaping effect of social environment, cultural context and technological feedback on self-efficacy; help-seeking self-efficacy reflects students' confidence in actively seeking external resources to overcome difficulties; relatedness captures individuals' belief in establishing emotional connection and sense of belonging in academic social interaction (Schunk & DiBenedetto, 2020).

Self-Management Ability

Originated from organizational behavior theory and introduced into educational research, college students' self-management ability refers to individuals' comprehensive competence to regulate cognition, emotion and behavior through goal setting, self-monitoring and emotional

adjustment to achieve sustainable development in study and life, generally recognized as a core meta-competence affecting autonomous learning, mental health and social adaptation (Teng, 2022).

Most studies divide it into three core dimensions: goal management, emotional regulation and behavioral regulation; as a dynamic trait that can be cultivated through educational intervention rather than a static personality, it is confirmed to be significantly positively correlated with academic performance, psychological resilience and subjective well-being, and can effectively alleviate academic procrastination, burnout and anxiety (Liu & Panadero, 2023). Current measurement research of self-management ability focuses on scale development and cross-cultural adaptation, gradually shifting from static trait evaluation to dynamic process monitoring combined with learning analytics. Research on Chinese college students has formed a systematic framework, revealing that self-management ability is the interactive product of internal psychological resources such as self-efficacy and external environmental support such as family education and teacher feedback, and Chinese colleges have begun to incorporate self-management cultivation into talent training systems, though existing research still has deficiencies such as the lack of unified localized measurement tools and long-term intervention verification (Chen et al., 2023).

Research on the Relationship Between College Students' Self-Efficacy and Self-Management Ability

Self-efficacy, defined as individuals' belief in their ability to complete specific tasks, is recognized as the core internal driving factor of college students' self-management ability, and the two variables share a significant positive correlation and interactive relationship (Jana, 2025). Extant empirical research has confirmed that self-efficacy can directly and indirectly positively predict self-management ability: college students with higher self-efficacy are more likely to adopt active self-regulation strategies such as clear goal setting, rational time allocation and appropriate emotional adjustment, maintain higher behavioral persistence and orderly planning

even in high-pressure environments, and thus show higher self-management levels; meanwhile, positive self-management practice and successful goal achievement can reversely enhance students' self-efficacy judgment, forming a mutually reinforcing positive development cycle through the interaction of learning motivation, persistence and emotional regulation (Pérez-González, 2022).

Relevant Research on Chinese College Students' Self-Efficacy and Self-Management Ability

In the Chinese higher education context, self-efficacy, as an important psychological resource that affects learning motivation and further shapes the development of college students' self-management ability, has been verified to form a dynamic positive interactive relationship with self-management, in which high self-efficacy promotes better self-management performance, and accumulated successful self-management experiences reversely enhance self-efficacy (Shi et al., 2022). Consistent with general research conclusions, studies in the Chinese context also confirm that self-efficacy can directly or indirectly promote self-management ability, while highlighting the unique regulating effect of Chinese cultural and educational system: institutional support including tutorial systems and academic counseling, as well as family social capital will amplify the promoting effect of self-efficacy on self-management, and the intensity of this influence also varies across different academic scenarios regulated by variables such as metacognitive monitoring (Zhang, 2024).

Influences of Demographic Background Variables on Self-Efficacy and Self-Management Ability

Existing studies have found that Chinese college students' self-efficacy and self-management ability show significant differences across demographic variables. In terms of gender, male students generally have higher academic self-efficacy, while female students perform better in self-management dimensions such as emotional regulation, plan formulation, and self-monitoring. These differences may be related to socialized gender roles and learning strategy preferences. In terms of grade, both variables usually increase as students adapt to university life and gain successful experiences. However, some junior and

senior students may show lower self-efficacy and unstable self-management due to academic burnout and employment pressure (Chang et al., 2023; Zhang, 2024).

In addition, students from high-income families or families with highly educated parents usually have higher self-efficacy and more mature self-management ability because they have more learning resources, clearer academic expectations, and better early skill training. In contrast, students from low-income families or families with lower parental education may face more challenges, although some still develop strong self-management through resilience and motivation. These demographic differences provide a basis for colleges and universities to offer targeted learning support and psychological intervention for diverse student groups (Pérez-González et al., 2022).

2. Materials and Methods

This study selected full-time undergraduate students from Henan Zhengzhou S College as the research population, which totals 34,126 students as of September 2024. Adopting convenience sampling based on the sample size calculation formula of Krejcie & Morgan (1970), 400 anonymous online questionnaires were distributed via the Wenjuan Xing platform between January and February 2026, meeting the requirement of a minimum 380 valid samples for a 95% confidence level and $\pm 5\%$ margin of error.

A total of 400 questionnaires were distributed online to students at Henan Zhengzhou S College through the Wenjuan Xing platform. With the assistance of counselors, the questionnaire was shared through student group chat channels to ensure broad participation. Regular reminders were sent to improve the response rate, and the completion progress was monitored in real time through the platform system. All collected data were uniformly organized and kept strictly confidential, with access limited to the research team for analysis. The survey aimed to examine students' perceptions of their self-efficacy and self-management ability.

A structured questionnaire was compiled by integrating the College Students' Self-Efficacy Scale (Griffiths et al., 2021) and the College

Students' Self-Management Ability Scale (Peter, 2009), using a 5-point Likert scoring system. The self-efficacy scale includes four dimensions: Academic Self-Efficacy, External Reach, Help Seeking, and Relatedness, with good internal consistency (Cronbach's $\alpha = 0.82-0.91$) and construct validity (KMO = 0.926, $p < .001$, 4 factors explaining 52.8% of total variance). The self-management ability scale includes three dimensions: self-monitoring, self-evaluating, and self-reinforcing, with acceptable reliability (Cronbach's $\alpha = 0.74-0.78$ for dimensions) and good validity (KMO = 0.869, $p < .001$, 3 factors explaining 49.31% of total variance).

For data analysis, this study adopted a mixed descriptive and inferential statistical approach. Descriptive statistics (frequency, percentage, mean, standard deviation) were used to summarize participants' demographic characteristics and the overall and dimensional levels of college students' self-efficacy and self-management ability. Independent-samples t-tests and one-way ANOVA were applied to examine significant differences in self-efficacy and self-management ability across demographic background variables, including gender, grade, residence, and parental education level. Finally, Pearson correlation analysis was conducted to test the relationship between college students' self-efficacy and self-management ability. All raw data were processed with strict confidentiality and were accessible only to the research team.

3. Results

This study recruited full-time undergraduate students from Henan Zhengzhou S College, and finally obtained 378 valid questionnaires. The overall sample distribution is balanced and representative: the gender ratio is basically balanced, with 49.73% male (188) and 50.30% female (190); participants cover all grades, with 24.90% freshmen (94), 25.90% sophomores (98), 20.60% juniors (78) and 28.60% seniors (108); the proportion of urban (54.50%, 206) and rural (45.50%, 172) residential background is relatively close; and all major disciplines of the college are covered, with a relatively balanced distribution of science and engineering (21.70%,

82), literature, history and law (21.70%, 82), economics and management (19.00%, 72), education (18.30%, 69), and art and design (19.30%, 73). The reasonable and balanced demographic distribution lays a reliable foundation for subsequent statistical analysis and result interpretation.

Table 1: Basic Information of Participants

Variable	Group	n	Percentage%
Gender	Male	188	49.73
	Female	190	50.30
Residence	Urban	206	54.50
	Rural	172	45.50
Grade	Freshman	94	24.90
	Sophomore	98	25.90
	Junior	78	20.60
	Senior	108	28.60
Major	Science and Engineering	82	21.70
	Economics and Management	72	19.00
	Literature, History and Law	82	21.70
	Education	69	18.30
	Art and Design	73	19.30
Total		378	100.00

1) Descriptive statistical analysis of 378 samples from Henan Zhengzhou S College showed that both self-efficacy and self-management ability of college students were at high overall levels, with balanced and coordinated structural development: for the four dimensions of self-efficacy (academic efficacy, external influence, help seeking, relatedness), the overall mean was 3.94 (SD=0.444), and the mean difference between dimensions was small, all scoring between 3.94-3.95; for the three dimensions of self-management ability (self-monitoring, self-evaluating, self-reinforcing), the overall mean was 4.24 (SD=0.536), the mean of each dimension was close (between 4.23-4.24), with a highly balanced structure.

2) There were extremely significant differences in overall self-efficacy and all four dimensions (all $p < .001$), with male students scoring significantly higher than female students on all indicators; Extremely significant differences were found in overall self-efficacy and all sub-dimensions (all $p < .001$), and urban students had significantly higher self-efficacy than rural students in all aspects; Significant differences existed in overall self-efficacy and all dimensions (all $p < .001$), showing a stable trend of juniors >

seniors > freshmen > sophomores, with juniors having the highest level and sophomores the lowest; Significant differences were observed in overall self-efficacy and all dimensions (all $p < .001$), with the overall level ranking as art and design > education > economics and management > literature, history and law > science and engineering, which was mainly attributed to different learning characteristics of different majors.

3) Extremely significant gender differences were observed in overall self-management ability and all three of its dimensions ($p < .001$), with male students scoring significantly higher than female students; there were also extremely significant differences in all dimensions between students of different residence origins ($p < .001$), and the overall self-management ability of urban-origin students was markedly higher than that of rural-origin students; for grade groups, significant differences existed in overall self-management ability and all sub-dimensions ($p < .001$), which generally showed an increasing trend with the improvement of grades, and the overall level followed the order of juniors > seniors > sophomores > freshmen, with juniors having the strongest ability and freshmen the weakest; for different major categories, significant differences were found in overall self-management ability and all dimensions ($p < .001$), and the overall level was ranked as art and design > education > economics and management > literature, history and law > science and engineering, which was caused by the differences in training objectives and learning modes of different majors.

Table 2 Correlation Between College Students' Self-Efficacy and Self-Management Ability

	AS	ER	HS	RE	SE0	SM	SE	SR	SM0
AS	1								
ER	.886**	1							
HS	.861**	.835**	1						
RE	.834**	.802**	.809**	1					
SE0	.971**	.943**	.929**	.896**	1				
SM	.550**	.561**	.571**	.533**	.588**	1			
SE	.558**	.553**	.566**	.548**	.590**	.839**	1		
SR	.574**	.565**	.584**	.559**	.606**	.844**	.834**	1	
SM0	.592**	.592**	.607**	.577**	.629**	.953**	.941**	.940**	1

** . Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed). Note: AS: Academic Self-Efficacy,

ER: External Influence, HS: Help Seeking, RE: Relatedness, SE0: Self-Efficacy, SM: Self-Monitoring, SE: Self-Evaluating, SR: Self-Reinforcing, SM0: Self-Management Ability

4) This study used Pearson correlation analysis to test Hypothesis H3, which posited a correlation between college students' self-efficacy and self-management ability. The results indicated that all dimensions of self-efficacy were significantly positively correlated with each other ($r = 0.834-0.971$, $p < 0.01$), confirming good internal consistency of the self-efficacy scale. All dimensions of self-efficacy were significantly positively correlated with all dimensions of self-management ability ($p < 0.01$), with correlation coefficients at a moderately high level. The overall correlation coefficient between general self-efficacy and general self-management ability was 0.629 ($p < 0.01$), confirming a stable and significant positive correlation, that is, college students with higher self-efficacy have stronger self-management ability. This result supports Hypothesis H3 and provides reliable empirical evidence for colleges and universities to carry out targeted educational interventions and student management.

Table.3: Results of Research Hypothesis Verification

	Research Hypothesis	Results
H1	There are significant differences in self-efficacy among college students with different background variables.	Supported
H1-1	There are significant differences in self-efficacy among college students of different genders.	Supported
H1-2	There are significant differences in self-efficacy among college students from different places of residence.	Supported
H1-3	There are significant differences in self-efficacy among college students from different grades.	Supported
H1-4	There are significant differences in self-efficacy among college students from different majors.	Supported
H2	There are significant differences in self-management ability among college students with different background variables.	Supported
H2-1	There are significant differences in self-management ability among college students of different genders.	Supported
H2-2	There are significant differences in self-management ability among college students from different places of residence.	Supported
H2-3	There are significant differences in self-management ability among college students from different grades.	Supported
H2-4	There are significant differences in self-management ability among college students from different majors.	Supported
H3	There is a correlation between self-efficacy and self-management ability of college students.	Supported

4. Discussion

A survey conducted on college students at Henan Zhengzhou S College examined the current situation, demographic differences and correlation of self-efficacy and self-management ability. Results indicated that the overall levels of both variables were relatively high: all four dimensions of self-efficacy (academic self-efficacy, external influence, help seeking, relatedness) and all three core dimensions of self-management ability (self-monitoring, self-evaluating, self-reinforcing) achieved favorable scores, which is consistent with previous research findings and reflects contemporary college students' generally positive self-perception of competence and strong awareness of self-regulation.

Both self-efficacy and self-management ability showed consistent significant demographic differences: male students, higher-grade students, urban students, and students majoring in art, design and education scored significantly higher than female, lower-grade, rural, and science and engineering students respectively. Further analysis confirmed a stable and significant positive correlation between the two variables: students with higher self-efficacy tended to have stronger self-management capacity, which verified the theoretical viewpoint that positive self-efficacy serves as a critical psychological foundation for effective self-management. These findings confirm the applicability of relevant theories in local higher education contexts and provide a reliable empirical basis for targeted student cultivation strategies to promote college students' all-round development.

5. Conclusion

This research analyzed the relationship between college students' self-efficacy and self-management ability at Henan Zhengzhou S College through frequency analysis, difference comparison and correlation analysis. The descriptive results show that the overall level of self-efficacy is high (overall $M = 4.07$, $SD = 0.42$), with all four dimensions (academic self-efficacy, external influence, help seeking, relatedness) scoring above 4.07; the overall level of self-management ability is also high (overall $M = 4.24$,

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