

The impact of college students' achievement motivation on subjective well-being: Self-efficacy as a mediating variable

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ABSTRACT

Purpose: The purpose of this study is to analyze the factors affecting college students' subjective well-being and the relationship between research achievement motivation, self-efficacy and emotional well-being among college students.

Design/Methodology/Approach: 1,082 students were selected from 10 universities in Guangxi Province using a convenience sampling method. Questionnaires were administered based on achievement motivation, self-efficacy and subjective well-being scales. The data were analyzed using SPSS 24.0 and AMOS 22.0.

Findings: College students' achievement motivation has a significant positive effect on emotional well-being. Self-efficacy acts as a mediator in the relationship between achievement motivation and subjective well-being.

Conclusion: Achievement motivation can stimulate positive actions and efforts in college students enabling them to face challenges and difficulties more confidently. Approving activities and increased confidence enhance students' self-efficacy improving their subjective well-being.

Research Limitations The interpretation of study results and inferences is constrained in sampling because of the time and expertise of the researchers.

Practical Implications: It is possible to effectively improve college students' subjective well-being by focusing on the development of achievement motivation, self-efficacy and social support.

Contribution to the Literature: This study further clarifies the influence of achievement motivation on subjective well-being and the mechanism of self-efficacy which is a supplement to the current research in this field at the same time. It also helps to enrich and perfect the research on achievement motivation, self-efficacy and subjective well-being of college students.

Keywords: Achievement motivation, College students, Impact, Mediation, Self-efficacy, Subjective well-being.

1. INTRODUCTION

The education and development of college students are intrinsically linked to the future growth of a nation. College students are often hailed as the driving forces behind societal advancement and as the vanguard of new societal ideas (Tobon & Luna-Nemecio, 2021). Expectations and goals for college students have increased along with economic growth. Crowley, Kapitula, and Munk (2022) highlighted the mounting pressures on college students regarding employment leading to a decline in their happiness index. A lot of industries and businesses have closed as a result of the epidemic's recent substantial effects on the global economy and labour market making it extremely difficult for recent college graduates to find employment. Increasing the subjective well-being of college students has become critical in considering these situations (Zheng, Wu, Zhao, & Chen, 2022). Surveys indicate that the current happiness level of Chinese college students is barely above average signifying that their life satisfaction requires further enhancement (Xu & Choi, 2023).

Achievement motivation is a driving force that propels and sustains student learning behaviors. It permeates various facets of an individual's academic life including strategic learning (Liru & Jiali, 2018), academic achievements (Dinger, Dickhäuser, Spinath, & Steinmayr, 2013), procrastination (Seyed, Salmani, Nezhad, & Noruzi, 2017) and subjective well-being (Lin, Hua, & Li, 2022). College students' motivation for achievement and their personal well-being are closely related to each other (Tian, Zhang, Zhou, & Wu, 2021). High achievers typically establish difficult goals and are determined to see these goals through to completion with perseverance and concentration. When they overcome challenges and complete their goals, they feel satisfied which improves their subjective well-being.

Self-efficacy plays an instrumental role in this relationship as a crucial intermediary between achievement motivation and subjective well-being. Individuals with solid self-efficacy are inclined to set ambitious objectives and are confident in realizing these targets through effort and skill application. When people achieve their goals, they feel more accomplished and satisfied which improves their wellbeing (Azizli, Atkinson, Baughman, & Giammarco, 2015). Relatively high self-efficacy improved resilience, subjective well-being (Schonfeld, Brailovskaia, Zhang, & Margraf, 2019) and healthy psychology among college students (Lifang, 2017). Therefore, educational institutions and society should emphasize boosting college students' self-efficacy which will be conducive to elevating their subjective well-being.

Numerous Chinese researchers have investigated the relationship between subjective well-being and accomplishment motivation but the results have varied due to differences in sample groups, literature sources and assessment techniques. Hence, it is imperative to employ empirical research methods to investigate the influence of achievement motivation on college students' subjective well-being. Additionally, it is crucial to ascertain if achievement motivation impacts emotional well-being through the lens of self-efficacy. This research is essential offering theoretical grounding for educational administrators.

This paper examines the deficiencies of existing research on college students' subjective well-being and makes recommendations for future research based on the literature analysis. In this study, the students of 10 undergraduate colleges in Guangxi Province were investigated to detect some basic information on demographic variables (gender, grade and subject). The second is to study the relationship among achievement motivation, self-efficacy and subjective well-being. The third is to examine the mediating effect of college students' self-efficacy on achievement motivation and subjective well-being.

The following three major concerns are further examined in the context of the aforementioned study purposes: H_1 : *Explore the influence of college students' achievement motivation on subjective well-being.*

H_2 : *To explore the mediating effect of college students' self-efficacy on achievement motivation and subjective well-being.*

2. LITERATURE REVIEW

2.1. Study the Relationship between Achievement Motivation and Subjective Well-Being

Achievement motivation is the drive in an individual to pursue tasks they deem necessary and valuable aiming to perfect them. It is a motivation characterized by setting high standards and striving for activity success (McClelland, 1953). This study uses Atkinson and Feather's (1966) achievement motivation theory which emphasises individual differences more than previous studies as the basis for this investigation. This theory stresses the importance of internal cognitive processes in shaping achievement motivation. Those with higher achievement motivation tend to set challenging goals and demonstrate stronger motivation and effort to achieve these goals. They are generally more confident, motivated and focused and they can better cope with difficulties and setbacks. Achieving success gives them a sense of accomplishment and satisfaction, thus enhancing their subjective well-being (Steinmayr, Crede, McElvany, & Wirthwein, 2016). However, excessively high or low achievement motivation can negatively impact emotional well-being. Excessive achievement motivation might lead to a relentless pursuit of higher accomplishments and perfection making it hard for individuals to feel satisfied and happy. On the other hand, insufficient achievement motivation can result in a lack of objectives and determination leading one to feel aimless and disoriented (Gao & Bai, 2021).

Subjective well-being is an emotional attitude and feeling reflecting the individual's affirmation that their current life status matches their ideal life status. This is a holistic evaluation of their established self-set target accuracy and emotional experiences (Diener, 1984). The goal theory of subjective well-being posits that fulfilling individual

needs or achieving set goals can lead to personal well-being (Brunstein, Schultheiss, & Grässman, 1988). The intensity of achievement motivation affects the satisfaction successful methods need and the possibility of self-realization. On the other hand, it relates to the level of one's own happiness. Individuals with highly skilled achievement motivation are inclined to set challenging goals and strive diligently and attentively to realize these goals. When they successfully achieve these goals, they experience a sense of accomplishment and satisfaction which boosts their subjective well-being.

Based on the above, this study proposes hypothesis 1.

H1: College students' achievement motivation significantly impacts subjective well-being.

2.2. Mediating Role of Self-Efficacy

A person's evaluation of their ability to carry out a certain behaviour based on personal and contextual conditions is known as self-efficacy. This idea was developed by Bandura (1977) and Bandura (1986) for theoretical learning in society. Research by Steinmayr, Heyder, Naumburg, Michels, and Wirthwein (2018) suggests that highly educated students with general self-efficacy choose tasks based on their actual abilities facing challenges with confidence and overcoming difficulties. Another aspect of self-efficacy is that they often lose confidence when faced with challenges, feeling incapable of completing tasks resulting in negative emotions detrimental to subjective well-being. Multiple studies have identified self-efficacy as a mediating variable (Chang, Yuan, & Chen, 2018; Wang et al., 2021). Self-efficacy mediates and enhances motivation for academic achievement (Wu, Li, Zheng, & Guo, 2020). Furthermore, research on the impact of self-efficacy on students' subsequent subjective well-being has found that an individual's self-efficacy significantly influences emotional well-being.

Given the above, this leads to hypothesis 2 for this study.

H2: College students' self-efficacy mediates the impact of achievement motivation on subjective well-being.

3. RESEARCH METHODS

3.1. Research Framework

We have developed a research framework for this study based on a thorough review of the literature (as illustrated in Figure 1).

Hypothesis H₁: Proposes to explore the influence of achievement motivation on subjective well-being among Chinese college students.

Hypothesis H₂: Aims to investigate the role of the mediation effect on self-efficacy in the relationship between achievement motivation and subjective well-being among Chinese college students.

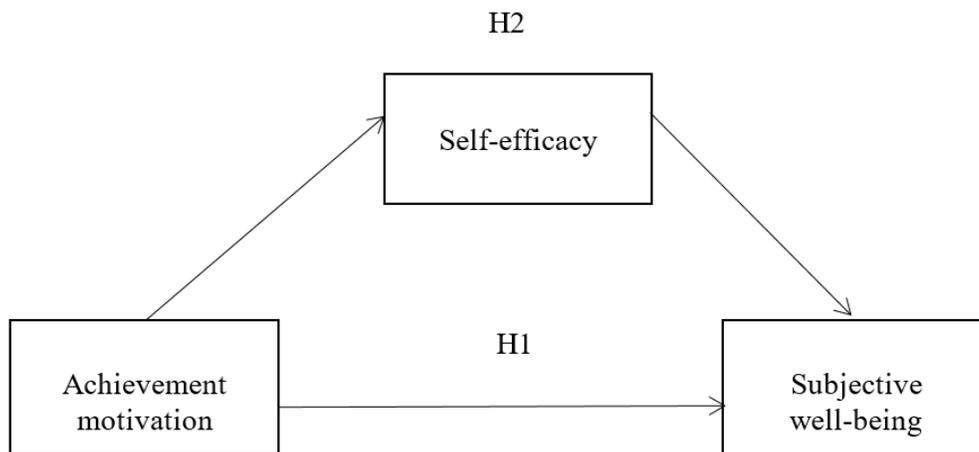


Figure 1. Framework of the research hypothesis.

3.2. Research Participants

The participants in this study consist of students from 10 undergraduate institutions in Guangxi Province. One thousand two hundred online questionnaires were distributed to the students with 1,082 validity questionnaires for a response ratio of 90%. Participants were selected using convenience sampling. The sample comprised 575

500

school boys (53.1%) and 507 school girls (46.9%). In terms of academic disciplines, 520 were from the humanities (48.1%) while 562 were from the sciences (51.9%). In terms of enrollment grade, there are 302 first-year students accounting for 27.9% of the sample size; 288 sophomores, accounting for 26.6% of the sample size; 232 juniors accounting for 21.4% of the sample size and 260 seniors, accounting for 24% of the sample size. According to the aforementioned data, there are approximately comparable numbers of male and female students in this sampling with a slightly higher percentage of first-year students and a more evenly distributed group of sophomores, juniors and seniors. The number of students in science majors is higher than that in humanities majors.

3.3. Research Instruments

Achievement motivation scale: This study employed the scale revised by [Ye and Hagtvvet \(1992\)](#). Pursuit of success and fear of failure are the two main characteristics of the project.

Self-efficacy scale: The General Self-Efficacy Scale (GSES) by [Schwarzer, Mueller, and Greenglass \(1999\)](#) was used. This unidimensional scale contains ten items.

The subjective well-being scale (SWB) which consists of 5 items is measured by the total life satisfaction scale compiled by [Diener, Emmons, Larsen, and Griffin \(1985\)](#).

All 3 scales above were scored with 5 points ranging from 1 point “completely disagree” to 5 points “completely agree”. The higher the score, the stronger it was.

All three scales underwent Confirmatory Factor Analysis (CFA) using AMOS 24.0. This included tests for normality, estimated violations, model fit, convergent validity and discriminant validity.

normality test: the mardia coefficients for subjective well-being, self-efficacy and achievement motivation were 86.175, significantly lower than [bollen's \(1989\)](#) threshold of 575.

Estimated violations test: All standardized regression coefficients for the three scales were between the appropriate ranges and there were no significant standard errors (SE) in the measurement error variances.

Validity test: Most model fit indices met the established criteria ([Hair, Anderson, Tatham, & Black, 1998](#)). Factor loadings for all items on the three scales ranged between 0.523 and 0.893 meeting the requirements of having standardized factor loadings above 0.5 ([Hair et al., 1998](#)). The credibility of these results (CR) for all the constructs was more significant than 0.600 indicating good reliability. The convergence validity between them (AVE) ranged between 0.449 and 0.646 surpassing the benchmark of 0.4 ([Bagozzi & Yi, 1988](#)) indicating satisfactory convergent validity as shown in [Table 1](#).

Table 1. Measurement model fit indicator checklist for scale.

Model	X ² /DF	GFI	AGFI	NFI	CFI	RMR	RMSEA	PNFI	PGFI
Standard	< 5.000	> 0.850	> 0.800	> 0.900	> 0.900	< 0.080	< 0.080	> 0.500	> 0.500
Achievement motivation	4.726	0.972	0.945	0.965	0.972	0.030	0.073	0.643	0.486
Self-efficacy	2.777	0.989	0.967	0.988	0.992	0.015	0.060	0.494	0.330
Subjective well-being	1.982	0.997	0.986	0.995	0.998	0.018	0.037	0.632	0.507

Note: X²/DF: Degrees of freedom, GFI: Goodness of fit index, AGFI: Adjusted goodness-of-fit index, NFI: Normed fit index, CFI: Comparative fit index, RMR: Root mean square residual, RMSEA: Root mean square error of approximation, PNFI: Parsimony normed fit index, PGFI: Parsimony goodness of fit index.

Discriminant validity test: The correlation coefficients of the various dimensions of the three scales range from 0.045 to 0.672 show significant correlations. The average number of variations extracted (AVE) between each facet is greater than the square of the correlation coefficient between this facet and other facets indicating that differential validity varies across different dimensions ([Fornell & Larcker, 1981](#)).

3.4. Common Method Bias

During the survey process of this study, strict procedural controls were implemented; the final result of this questionnaire emphasizes that confidentiality was solely used for academic research and that the data would remain confidential and be filled out anonymously. In post-hoc statistical testing, Harman's uses single-factor validation during the analysis data process. All measurement items of the variables were placed in an exploratory

factor analysis. Seven main extract components were tested and used before factor rotation. The first factor explained 26.041% of the variance which was less than the 40% threshold standard (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Therefore, this study is free of severe standard method bias.

4. RESULTS AND ANALYSIS

4.1. Current Situation Analysis

The following scores were determined by examining the mean and standard deviation: Achievement motivation M=3.216, SD=0.427, self-efficacy M=3.274, SD=0.686, social support M=3.747, SD=0.686, subjective well-being M=3.229, SD=0.786. This suggests that the college students in this sample are considerably above average in terms of social support and subjective well-being but they are at intermediate levels of self-efficacy and success drive.

4.2. Direct Effect and Mediation Effect Tests

The data from the three scales follow a normal distribution and do not exhibit violation estimation given the normality test and violation estimation test results for the scales. The fit of the maximum likelihood test for the structural equations method using AMOS 24.0 (Schumacker & Lomax, 2004; Wu et al., 2020).

4.3. Main Effect Test

The main effect test was established between professional identification and academic achievement. The main impact ranged between 0.512 and 0.864 within the 0.50-0.95 range and the variance of errors also reached a significant level without large standard errors indicating that the sample data fits well with the model (Schumacker & Lomax, 2004). The overall model fit indices were $\chi^2/DF=3.980$, Root Mean Square Residual (RMSR)=0.601, Root Mean Square Error of Approximation (RMSEA)=0.096, Goodness of Fit Index (GFI)=0.868, Adjusted Goodness-of-Fit Index (AGFI)=0.818, Comparative Fit Index (CFI)=0.928, Normed Fit Index (NFI)=0.971, Parsimony normed fit index (PNFI)=.691, PGFI Parsimony Goodness of Fit Index (PGFI)=0.632 (Bollen, 1989). This indicates that the overall model fits well (Wu, 2010). Achievement motivation explained 58% of the variance in subjective well-being ($\gamma=0.72$, $p<0.001$). Therefore, hypothesis 1 was supported. The achievement of positive motivation impacts emotional well-being as shown in Figure 2.

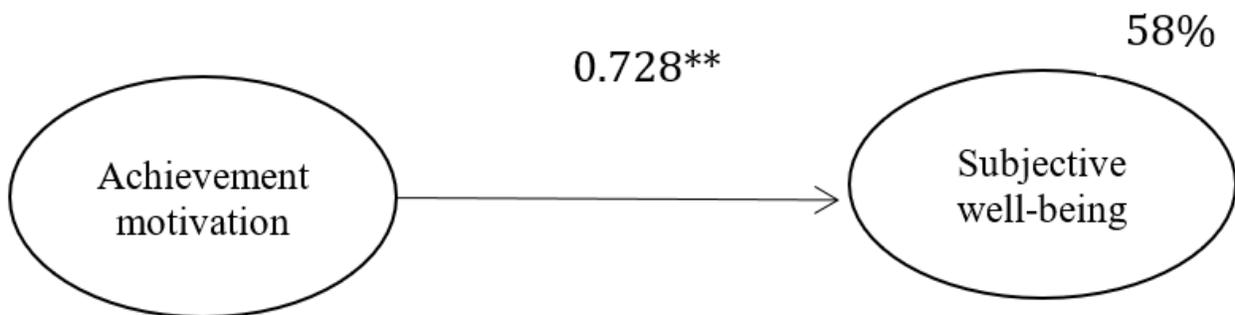


Figure 2. Structural model diagram of achievement motivation and subjective well-being.

Note: ** $p<0.01$.

4.4. Mediation Effect Test

The standardized regression coefficients for the structural equation between achievement motivation, self-efficacy and subjective well-being range from .521 to .865. The model's fit with the mediator is $\chi^2/DF=2.573$, RMR=.627, RMSEA=.071, GFI=.833, AGFI=.825, CFI=.913, NFI=.965, PNFI=.7221 and PGFI=.611 (Bollen, 1989). Therefore, the fit of the structural equation model is good. In addition, achievement motivation explained 41% of the variance in self-efficacy ($\gamma=.31$, $p<.001$) and both achievement motivation ($\gamma=.58$, $p<.001$) and self-efficacy ($\gamma=.51$, $p<.001$) together accounted for 63% of the variance in subjective well-being as shown in Figure 3.

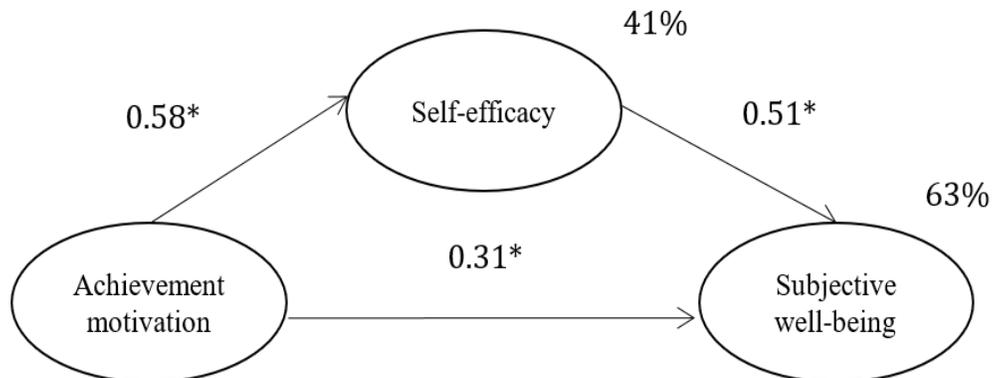


Figure 3. Structural model diagram of achievement motivation, self-efficacy and subjective well-being.
 Note: * $p < 0.05$.

4.5. Mediating Role of Achievement Motivation

Figure 2 shows that there is a substantial predictive relationship between accomplishment motivation and subjective well-being. Furthermore, we investigated the mediation effect with 2000 re-samples and a 95% confidence interval using AMOS 24.0 and the bootstrapping technique suggested by MacKinnon (2008). The mediation effect was tested with a 95% confidence interval and 2000 re-samples. The result is seen in Table 2. Table 2 shows that the confidence interval estimated for the overall, indirect and some indirect effects of individual achievement motivation on subjective well-being does not include 0. Their parameters indicate that they are statistically significant. The overall impact of achievement motivation on emotional well-being is 0.723, the direct result is 0.351 and the indirect effect is 0.380. The immediate effect of achievement motivation on subjective well-being decreases to 0.351 and is significant within a 95% confidence interval. The structural equation model indicates that the overall, direct and indirect effects of achievement motivation on subjective well-being suggest that self-efficacy partially mediates the influence of emotional well-being. Therefore, hypothesis two is confirmed.

Table 2. Self-efficacy mediated effectiveness test scale.

Total, direct and indirect effects	Path coefficient	Bias-corrected		Percentile	
		Lower	Upper	Lower	Upper
Total effect (MI→AA)	0.723***	0.632	0.802	0.611	0.814
Direct effect (MI→AA)	0.351***	0.175	0.491	0.203	0.508
Indirect effect (MI→AA)	0.380***	0.291	0.501	0.257	0.471

Note: *** $p < 0.001$.

(MI→AA): Identification by boot-pulling method.

5. CONCLUSION AND SUGGESTIONS

5.1. Discussion

5.1.1. The Subjective Well-Being of College Students' Achievement Opportunities Has a Significant Positive Impact

The study shows that achievement motivation significantly affects subjective well-being with Li, Lan, and Ju (2015) and Yang's (2021) findings. Higher achievement motivation in college students implies excellent drive and goals. This can prompt individuals to continuously pursue new challenges and achievements. When they strive to accomplish their goals, they frequently feel gratified which raises their subjective well-being (Chen, 2015; Harpaz, Vaizman, & Yaffe, 2023). Achievement motivation also aids individuals in establishing a positive self-identity and self-evaluation. This positive self-evaluation can enhance subjective well-being (Bergold, Wirthwein, & Steinmayr, 2020; Chen & Zhang, 2022). Achievement motivation can also lead to social recognition and appreciation, positively impacting individual subjective well-being (Bucker, Nuraydin, Simonsmeier, Schneider, & Luhmann, 2018). Therefore, this research resonates with McClelland's (1985) achievement motivation theory.

5.1.2. Mediating Effect

The study indicates that the higher the college students' motivation, the higher their self-efficacy. This is related to the findings of [Li, Pu, and Phakdeephrot \(2022\)](#) and [Hong, Zhang, Ye, and Ye \(2021\)](#). The level of self-efficacy directly affects subjective well-being. Students with higher self-efficacy are more motivated to pursue their goals and can succeed. This confidence and positive self-evaluation enhance their emotional well-being ([Cespedes et al., 2021](#); [Wang, Li, Zhang, & Luo, 2022](#)). Students with higher self-efficacy are better equipped to handle difficulties and setbacks and are more likely to experience positive emotions and mental states enhancing their subjective well-being. The findings of this research show that self-efficacy in college students includes some adjustments to achieve motivation and emotional well-being.

The findings of this study reveal that college students' self-efficacy serves as a partial specific mediating relationship between achievement motivation and subjective well-being. It is clear from the mediation analysis that people with high proficiency self-efficacy set challenging but realistic objectives and continue to believe in their ability to achieve them. Such goal-setting and expectation management practices contribute to heightened achievement motivation, increasing satisfaction and happiness. This aligns with the findings of [Eherton, Steele-Johnson, Salvano, and Kovacs \(2022\)](#) which suggest that college students with elevated self-efficacy are more inclined to actively seek support, foster positive interpersonal relationships and derive emotional contentment and backing from these relationships. This social support mechanism significantly contributes to the enhancement of subjective well-being reinforcing the conclusions drawn by [Yu and Luo \(2018\)](#) regarding the impact of self-efficacy on emotional well-being. Moreover, self-efficacy mediates achievement motivation and subjective well-being in two primary ways. Initially, when college students work hard to achieve their objectives, their self-efficacy is strengthened which in turn helps to improve their psychological well-being. Second, individuals with heightened self-efficacy are more inclined to attribute their successes to their capabilities and exerted efforts, thus fostering a positive evaluation of their achievements and deriving satisfaction and happiness from them. These findings correspond with the results of [Tamannaeifar and Motaghedifard \(2014\)](#) further reinforcing the robustness of the study's outcomes. In this context, the results of this investigation also resonate with [Bandura \(1977\)](#) and [Bandura's \(1986\)](#) social learning theories.

5.2. Conclusion

According to the results of a confirmatory factor analysis and reliability analysis performed on the questionnaire, the questionnaire on the impact of achievement motivation on subjective happiness among college students which consists of the achievement motivation scale, self-efficacy scale and subjective happiness scale has good reliability and validity. The final results of this study validated the achievement motivation theory ([McClelland, 2005](#)) and the following conclusion has been drawn: The achievement motivation of college students has a significant positive impact on their subjective well-being. Self-efficacy is a mediating factor in the relationship between emotional well-being and success motivation.

The conclusions of this study can provide a reference for education and teaching managers in general colleges and universities. Educational managers in colleges and universities can organize teacher skill activities to cultivate students' self-efficacy or learning interests give students specific complex and challenging tasks and encourage them to transcend their comfort zones and constantly try new fields. This will motivate them and increase their sense of achievement.

5.3. Research Recommendations

How to improve college students' achievement, motivation and self-efficacy can be implemented in the following aspects:

1. Establish clear goals and expectations. Help college students set clear, challenging goals and clarify the outcomes they expect to achieve. These goals should be consistent with their values and interests, stimulating their enthusiasm and motivation.
2. Provide positive feedback and recognition. Give college students timely and specific feedback and recognize their efforts and achievements. Enhance their self-confidence and self-efficacy through praise and recognition.

3. Cultivate the abilities of self-reflection and self-evaluation. Encourage college students to reflect on and evaluate their performance helping them recognize their strengths and areas for improvement. Such self-evaluation helps build a positive self-identity and self-efficacy (Robinson, 2021).
4. Provide appropriate support and resources. Provide college students with appropriate support and resources to help them overcome difficulties and setbacks. This may include providing learning coaching, mentoring and participation in leadership activities to increase their experience of success and self-efficacy.
5. Create a supportive learning environment. Create a supportive and stimulating environment that encourages collaborative learning, mutual support and active participation. This environment is conducive to college students learning from each other, sharing experiences and improving their achievement, motivation and self-efficacy (Xi, Wang, & Jia, 2017).

Future research could expand the scope to other provinces in China such as Guangdong, Hunan, and Guizhou and increase the sample size to gather more comprehensive data. Additionally, they are conducting a more thorough investigation of the situation. Students coming from various undergraduate institutions will have significant research implications.

FUNDING

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INSTITUTIONAL REVIEW BOARD STATEMENT

The Ethical Committee of the International College, Krirk University, Thailand has granted approval for this study on 12 July 2023 (Ref. No. 2023-0712).

TRANSPARENCY

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

COMPETING INTERESTS

The authors declare that they have no competing interests.

AUTHORS' CONTRIBUTIONS

Both authors contributed equally to the conception and design of the study. Both authors have read and agreed to the published version of the manuscript.

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