

The Affect Mechanism of Entrepreneurial Mentoring Style on Higher Vocational Students' Entrepreneurial Quality in China-Myanmar Border Areas

Ke Zhang¹

Received: 02 March 2026; **Revised:** 27 April 2026; **Accepted:** 09 May 2026

Abstract

This study aimed to examine the relationship between entrepreneurial mentoring style and entrepreneurial quality among higher vocational students in the China–Myanmar border region, with particular attention to the mediating role of AI self-efficacy and the moderating role of a sustainable institutional environment. This quantitative study collected 2,089 valid responses from higher vocational students in 12 institutions using purposive sampling and an electronic questionnaire. The research instruments measured entrepreneurial mentoring style, entrepreneurial quality, AI self-efficacy, and sustainable institutional environment. Data were analyzed using descriptive statistics, reliability and validity testing, correlation analysis, mediation analysis, moderation analysis, and moderated mediation analysis.

The findings revealed that: (1) entrepreneurial mentoring style was significantly and positively associated with entrepreneurial quality among higher vocational students ($r=0.372$, $p < .001$); (2) AI self-efficacy significantly mediated the relationship between entrepreneurial mentoring style and entrepreneurial quality (Sobel $Z=2.103$, $p < .001$); (3) a sustainable institutional environment significantly and positively moderated the relationship between entrepreneurial mentoring style and AI self-efficacy ($\beta=0.126$, $p < .001$); and (4) the indirect effect of entrepreneurial mentoring style on entrepreneurial quality through AI self-efficacy increased as the level of the sustainable institutional environment rose, with indirect effects of 0.1215, 0.1512, and 0.1649 at low, medium, and high levels, respectively ($p < .001$).

¹ Chinese International College, Dhurakij Pundit University, Thailand
Corresponding Author, E-mail: zhangkedpu@gmail.com

Keywords: Entrepreneurial Mentoring Style; AI Self-Efficacy; Entrepreneurial Quality

Introduction

Entrepreneurial quality has become an increasingly important component of economic and social development, particularly as China has entered a stage of high-quality development and entrepreneurship has become a significant mechanism for innovation, employment creation, and regional economic growth (Adityo & Akbar, 2026; Zhou, 2025). Within this context, entrepreneurial mentors play an important role in supporting prospective entrepreneurs by providing professional knowledge, practical experience, motivation, strategic guidance, and access to relevant resources (Li & Zhang, 2026). Previous studies indicate that effective entrepreneurial mentoring can contribute to opportunity identification, innovation, capability development, financing, technical problem solving, and supply-chain integration, thereby improving entrepreneurial performance and quality (Shusen & Gan, 2025; Xu & Cao, 2025). This issue is particularly significant for higher vocational students in the China–Myanmar border region, where entrepreneurship is shaped by distinctive conditions, including cross-border resource mobility, cultural diversity, institutional fragility, and uneven access to entrepreneurial resources. Although mentoring has been associated with entrepreneurial outcomes in previous studies (Issa, 2024), the extent to which different entrepreneurial mentoring styles contribute to the entrepreneurial quality of higher vocational students in this distinctive border context remains insufficiently understood.

The development of entrepreneurial quality is also likely to depend on the interaction between individual capabilities and the institutional environment. AI self-efficacy refers to an individual's belief in his or her ability to use artificial intelligence effectively in different situations and has become increasingly relevant to entrepreneurial decision-making, innovation, and long-term development in the digital era (García et al., 2024). Prior research suggests that self-efficacy may function as an important psychological mechanism linking mentoring support with entrepreneurial intentions and practices (Issa, 2024; Pradana & Susanti, 2025). At the same time, a sustainable institutional environment including policy support, resource availability, market opportunities, and supportive entrepreneurial ecosystems may strengthen or constrain the effectiveness of entrepreneurial

mentoring (Zhou, 2025; Xu & Cao, 2025; Park, Baek, & Lee, 2025). Nevertheless, existing research has largely examined entrepreneurial mentoring styles, AI self-efficacy, and institutional environments separately, while the mechanism through which entrepreneurial mentoring influences entrepreneurial quality through AI self-efficacy under different institutional conditions remains underexplored, especially among higher vocational students in the China–Myanmar border region. Drawing on self-determination theory, which emphasizes the interaction between motivational, cognitive, and environmental factors in competence development (Ryan & Deci, 2000), this study therefore integrates entrepreneurial mentoring style, AI self-efficacy, sustainable institutional environment, and entrepreneurial quality into a unified analytical framework.

Accordingly, this study seeks to explain not only whether entrepreneurial mentoring style is associated with the entrepreneurial quality of higher vocational students, but also how and under what institutional conditions this relationship operates. The study addresses four research questions: (1) Is entrepreneurial mentoring style significantly related to the entrepreneurial quality of higher vocational students in the China–Myanmar border region? (2) Does AI self-efficacy mediate the relationship between entrepreneurial mentoring style and entrepreneurial quality? (3) Does a sustainable institutional environment moderate the relationship between entrepreneurial mentoring style and AI self-efficacy? and (4) Does a sustainable institutional environment moderate the indirect effect of entrepreneurial mentoring style on entrepreneurial quality through AI self-efficacy? Addressing these questions is expected to clarify the multi-level mechanism linking mentoring practices, individual technological confidence, and institutional support, while providing a contextualized explanation of how entrepreneurial quality can be strengthened among higher vocational students in resource-constrained border areas. The findings may also contribute to the development of entrepreneurship education, mentor-support systems, and sustainable institutional frameworks appropriate to the China–Myanmar border context.

Research Objectives

1. To examine the relationship between entrepreneurial mentoring style and entrepreneurial quality among higher vocational students in the China–Myanmar border region.

2. To examine the mediating effect of AI self-efficacy on the relationship between entrepreneurial mentoring style and entrepreneurial quality.

3. To examine the moderating effect of a sustainable institutional environment on the relationship between entrepreneurial mentoring style and AI self-efficacy.

4. To examine whether a sustainable institutional environment moderates the indirect effect of entrepreneurial mentoring style on entrepreneurial quality through AI self-efficacy.

Research Methodology

1. Research Design

This quantitative study employs self-determination theory to investigate the relationship between entrepreneurial mentoring styles and entrepreneurial quality in the China-Myanmar border region, examining the mediating role of AI self-efficacy and the facilitating effect of sustainable institutional environments. It aims to clarify the effects and mediating/moderating roles of entrepreneurial mentoring style, AI self-efficacy, and sustainable institutional environment on entrepreneurial quality, thereby proposing corresponding improvement strategies and measures to provide insights for advancing future economic development in the China-Myanmar border region. Furthermore, this study will collect data from higher vocational students in January 2026 using purposive sampling and electronic questionnaires (covering entrepreneurial mentoring style, AI self-efficacy, sustainable institutional environment, and entrepreneurial quality scales). Hypotheses will be tested through correlation, mediation and moderation analyses. Furthermore, before sample collection, consent has been obtained from both respondents and their respective vocational institutions to proceed with the research.

The research framework was constructed according to the research objectives and hypotheses (Figure 1).

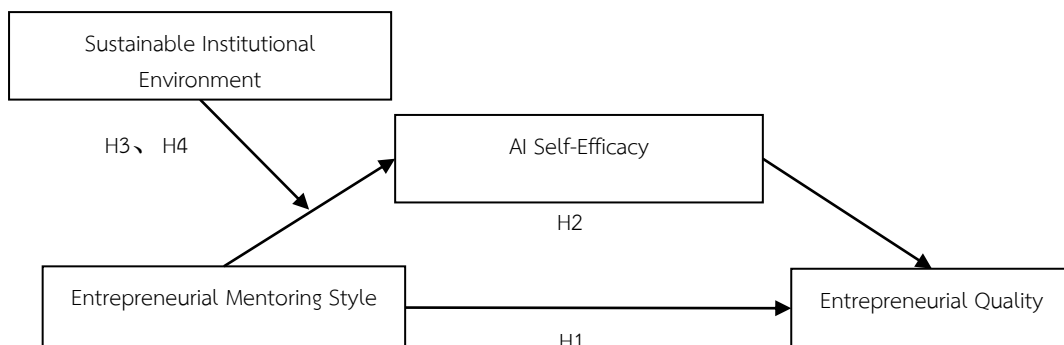


Figure 1 New Knowledge

2. Population and Sample

The sample for this study comprised higher vocational students in the China-Myanmar border region, with 2,089 valid questionnaires collected (a response rate of 87.04%). Furthermore, the sample was gathered through purposive sampling and electronic questionnaires, with all respondents being higher vocational students currently enrolled at their institutions.

3. Data Analysis Methods

This study will utilize higher vocational students in the China-Myanmar border region as its sample, employing entrepreneurial mentoring style, AI self-efficacy, sustainable institutional environment, and entrepreneurial quality scales (virtual questionnaires) to collect data. The survey was conducted in January 2026, yielding 2,089 valid responses. Concurrently, purposeful sampling was employed to select students from 12 institutions within the China-Myanmar border region. Furthermore, this study will utilize descriptive analysis, reliability and validity testing, correlation analysis, and mediation and moderation analyses to describe and test the hypotheses.

4. Research Instrument

Entrepreneurial mentoring style scale: Designed by Xu and Cao (2025), comprising 3 factors: Motivation-enhancing ($\alpha=0.954$), opportunity-enhancing ($\alpha=0.953$), and capability-enhancing mentoring style ($\alpha=0.957$), with 15 items. Entrepreneurial quality scale: Designed by Xu and Li (2025), single-factor, comprising 5 items ($\alpha=0.924$). Sustainable institutional environment scale: Designed by Zhou (2025) single-factor, comprising 6 items ($\alpha=0.95$). AI self-efficacy scale: Designed by García et al. (2024), single-factor, comprising 6 items ($\alpha=0.88$).

Results

1. Distribution of Population Characteristics

As shown in Table 1, the effective sample size comprised 2089 respondents, predominantly female at 60.17%. Furthermore, Year 2 pupils accounted for the largest proportion (61.61%, 1287). Concurrently, students with rural household registrations accounted for the highest proportion (72.91%, 1,523). An analysis of demographic distribution reveals that female students make up the largest proportion of the sample, with 2-year students constituting the largest group of participants in entrepreneurial activities; furthermore, the proportion of students with rural household registration participating in entrepreneurial activities is higher than that of students with municipal household registration.

Background variables	Category	N	%
Gender	Male	832	39.83
	Female	1257	60.17
Grade	1	18	0.86
	2	1287	61.61
	3	784	37.53
Household registration category	Municipal household registration	566	27.09
	Rural household registration	1523	72.91

Table 1 Distribution of population characteristics

2. Model Fit

The purpose of model fit analysis is to assess the degree of correspondence between the sample data and the model. As shown in Table 2, the model had an SRMR=0.031. An analysis of model fit revealed that this indicates that the sample and the model are in agreement.

	O	M	95%	99%
Models of saturation	0.031	0.034	0.036	0.039
Estimated model	0.031	0.034	0.036	0.039

Table 2 Root mean square error

3. Correlation Analysis

The purpose of correlation analysis is to examine the relationship between variables. The mean values for entrepreneurial mentoring style, entrepreneurial quality, AI self-efficacy, and sustainable institutional environment were 3.67, 3.89, 3.73 and 3.65, respectively, indicating a high level of acceptance of the variables among the sample. Correlation analysis indicates that entrepreneurial mentoring style exhibits a significant positive correlation with higher vocational students' entrepreneurial quality ($r=0.372^{***}$, $p < 0.001$), thereby supporting H1 (Note: the value in the diagonal is the AVE open root value).

This study aims to explore the relationship between entrepreneurial mentoring styles and higher vocational students' entrepreneurial quality. Through correlation analysis, it demonstrates that there is a significant association between entrepreneurial mentoring styles and higher vocational students' entrepreneurial quality.

Variable	M	SD	1	2	3	4
1. Entrepreneurial mentoring style	3.67	0.92	0.761			
2. AI self-efficacy	3.89	0.94	0.228**	0.748		
3. Sustainable institutional environment	3.73	0.89	0.156*	0.179**	0.754	
4. Entrepreneurial quality	3.65	0.91	0.372**	0.234**	0.253**	0.768
α			0.88	0.87	0.92	0.89
CR			0.72	0.81	0.81	0.88
AVE			0.58	0.56	0.57	0.59

Table 3 Correlation analysis

4. Mediating and Moderating Effect Analysis

The purpose of mediation analysis is to examine the mediating effect of the mediating variable; the purpose of moderation analysis is to examine the moderating effect of the moderator variable. As shown in Table 4, AI self-efficacy had a mediating effect (2.103^{***} , $p < 0.001$) on the path from entrepreneurial mentoring style to entrepreneurial quality, supporting H2. This study aims to explore the mediating effect of higher vocational students' AI self-efficacy on the relationship between entrepreneurial mentoring style and entrepreneurial quality. Through mediational analysis, it seeks to confirm that higher vocational students' AI

self-efficacy mediates the relationship between entrepreneurial mentoring style and entrepreneurial quality.

Moreover, a sustainable institutional environment has a significant positive moderating effect on the pathway from entrepreneurial mentoring style to AI self-efficacy ($\beta=0.126^{***}$, $p < 0.001$), supporting H3. This study aims to explore the moderating effect of a sustainable institutional environment on the relationship between entrepreneurial mentoring style and AI self-efficacy among higher vocational students. Through moderation analysis, it seeks to confirm that a sustainable institutional environment acts as a moderator in the relationship between entrepreneurial mentoring style and AI self-efficacy among higher vocational students.

Effect	Path	Coefficients
Mediating	Entrepreneurial mentoring style $\rightarrow$ AI self-efficacy $\rightarrow$ entrepreneurial quality	2.103*** (Sobel Z)
Moderating	Entrepreneurial mentoring style $\times$ sustainable institutional environment $\rightarrow$ AI self-efficacy	0.126***

Table 4 Mediating and moderating effect analysis

5. Moderated Mediation Effect Analysis

Moderated mediation analysis aims to examine the effect of moderation on the mediating (path) effect. As shown in Table 5, the indirect effect of entrepreneurial mentoring style through AI self-efficacy on entrepreneurial quality is significant (0.1215^{***} , 0.1512^{***} , 0.1649^{***} , $p < 0.001$) at different levels of sustainable institutional environment, confidence interval does not include 0, and H4 holds.

This study aims to explore the mediating effect of a sustainable institutional environment on the relationship between entrepreneurial mentoring style and AI self-efficacy among higher vocational students. Through mediational analysis, it seeks to demonstrate that a sustainable institutional environment can further facilitate the relationship between entrepreneurial mentoring style and entrepreneurial quality via higher vocational students' AI self-efficacy.

Effect	Sobel test		95% IC
	Indirect effect	SE	
Sustainable institutional environment (low)	0.1215	0.0406	0.1226, 0.3213
Sustainable institutional environment (medium)	0.1512	0.0453	0.1602, 0.3436
Sustainable institutional environment (high)	0.1649	0.0525	0.1752, 0.4103

Table 5 Moderating mediating effect analysis

Discussion

The findings indicate that in the China-Myanmar border region, there exists a significant positive correlation between entrepreneurial mentoring style and the entrepreneurial quality. These results align with the conclusions of Xu and Li (2025), who similarly observed a positive relationship between entrepreneurial mentoring style and entrepreneurial quality. This indicates that during the entrepreneurial process, mentors adapt their guidance styles based on their experience, capabilities, and resources to achieve optimal mentoring outcomes for different entrepreneurs. Moreover, the effects of entrepreneurial mentoring styles vary across entrepreneurs, with this specialised and practical guidance significantly enhancing the success rate and quality of entrepreneurial projects. Consequently, mentors exert a positive influence on enterprises through establishing mentoring relationships and providing industry-specific information, particularly in areas such as new product sales and patent applications.

The findings reveal that in the China-Myanmar border region, AI self-efficacy mediates the relationship between entrepreneurial mentoring style and the entrepreneurial quality of higher vocational students. This outcome aligns with Issa's (2024) conclusion (self-efficacy mediates the relationship between mentoring and entrepreneurial intention). This indicates that entrepreneurial mentors, through proactive interaction, feedback provision, and encouragement, assist entrepreneurs in deeply understanding and internalizing organizational missions and values, while motivating their implementation in entrepreneurial practice. This process of internalization and application may enhance entrepreneurs' AI self-efficacy, fostering recognition of the mission's significance for both personal and

organizational success, thereby strengthening commitment to entrepreneurial objectives. Concurrently, entrepreneurial mentoring style enhances entrepreneurs' AI self-efficacy by fostering self-exploration, strengthening self-efficacy, and enhancing a sense of belonging. Entrepreneurs with high AI self-efficacy typically exhibit greater work enthusiasm and creativity, pursue their entrepreneurial goals with greater conviction, and are more inclined to align personal objectives with organizational missions. Consequently, they demonstrate stronger execution capabilities and innovative capacity throughout the entrepreneurial journey.

Findings indicate that within the China-Myanmar border region, sustainable institutional environment mediates the relationship between entrepreneurial mentoring style and AI self-efficacy. These results align with Xu and Cao (2025)'s conclusion that entrepreneurial ecosystems moderate the relationship between mentoring style and entrepreneurial quality. This indicates that within sustainable institutional environments, positive policy frameworks and culturally supportive innovation climates more readily stimulate entrepreneurs' intrinsic motivation. Self-determination theory posits that positive external support reinforces individuals' internal drive. Specifically, mentoring styles emphasizing market opportunity identification, capture, and exploitation enhance entrepreneurs' resource orchestration capabilities. Within a sustainable institutional environment characterized by high information transparency and abundant market opportunities, this approach effectively amplifies entrepreneurs' efficiency in identifying and exploiting opportunities, thereby driving high-quality entrepreneurial behaviour. Consequently, favourable policies within a sustainable institutional environment can moderate the effects of entrepreneurial mentoring style, enabling it to enhance entrepreneurial quality more effectively when supported by robust, diversified resources.

Set against the backdrop of the China-Myanmar border region, this study moves beyond the static analysis of entrepreneurial support factors found in traditional research, revealing the contingency effects of AI self-efficacy and a sustainable institutional environment on entrepreneurial mentoring styles and the entrepreneurial quality. Furthermore, it establishes a multi-level adaptation theory that links micro-level mentoring practices with macro-level entrepreneurial systems, thereby deepening the application of AI self-efficacy and fostering a sustainable institutional environment in entrepreneurial practice. This provides a contextualized

explanatory framework for higher vocational students to enhance the quality of their entrepreneurial endeavours, which holds significant research value.

New Knowledge

This study, incorporating motivational information processing theory, found that entrepreneurial mentoring style in the China-Myanmar border region positively correlates with the entrepreneurial quality of higher vocational students. AI self-efficacy mediates this relationship, whilst sustainable institutional environments moderate the direct effect of entrepreneurial mentoring style on entrepreneurial quality among higher vocational students.

Furthermore, sustainable institutional environments exert an indirect influence on entrepreneurial mentoring style through AI self-efficacy. Consequently, entrepreneurial institutions and higher vocational colleges in the China-Myanmar border region should prioritise cultivating teachers' specialised entrepreneurial knowledge and practical experience, while fostering students' development of AI capability beliefs. Establishing diversified, sustainable resources will thereby effectively enhance the development of entrepreneurial quality.

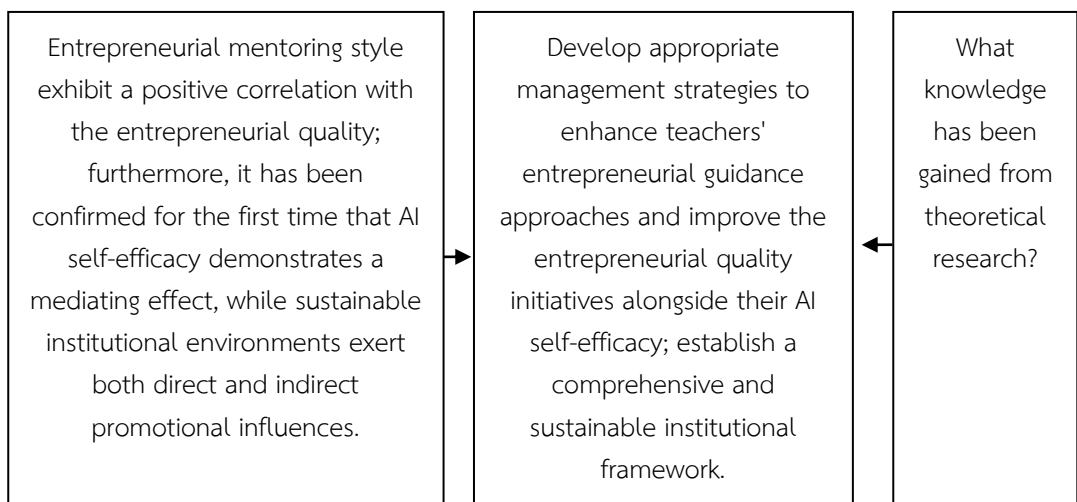


Figure 2 New Knowledge

Conclusion and Suggestion

The findings can be concluded in accordance with the four research objectives. First, entrepreneurial mentoring style was significantly and positively

related to entrepreneurial quality among higher vocational students in the China–Myanmar border region, indicating that appropriate mentoring can contribute to the development of entrepreneurial capabilities and quality. Second, AI self-efficacy significantly mediated the relationship between entrepreneurial mentoring style and entrepreneurial quality, demonstrating that mentoring can enhance entrepreneurial quality partly by strengthening students' confidence in using AI. Third, a sustainable institutional environment significantly moderated the relationship between entrepreneurial mentoring style and AI self-efficacy, suggesting that supportive policies, resources, and institutional conditions can strengthen the effectiveness of entrepreneurial mentoring. Fourth, the indirect effect of entrepreneurial mentoring style on entrepreneurial quality through AI self-efficacy increased as the level of the sustainable institutional environment became more favorable. Overall, the findings demonstrate that entrepreneurial quality is shaped by the combined effects of mentoring support, AI self-efficacy, and a supportive institutional environment.

1. Practical Recommendations

1.1 Higher vocational institutions should strengthen entrepreneurial mentor development by enhancing mentors' practical entrepreneurial experience, guidance skills, and ability to integrate AI tools into entrepreneurship education.

1.2 Institutions should promote students' AI self-efficacy through practical AI training, mentoring activities, and opportunities to apply AI in market analysis, business planning, and entrepreneurial decision-making.

1.3 Educational institutions and relevant agencies should develop a supportive and sustainable institutional environment through appropriate policies, access to entrepreneurial resources, mentor-matching systems, and collaborative networks.

2. Suggestions for Future Research

2.1 Future studies should employ longitudinal research designs to examine changes in entrepreneurial quality, AI self-efficacy, and mentoring effects over time.

2.2 Future research should investigate different types or profiles of entrepreneurial mentoring styles to determine whether specific mentoring approaches produce different entrepreneurial outcomes.

2.3 Additional contextual variables, such as cross-border social capital, cultural differences, institutional distance, and access to entrepreneurial resources, should be incorporated into future models.

References

- Adityo, M. & Akbar, A. (2026). Rise of technology in the 21st century: China study case. *Proirofonic*, 1(1), 579-587.
- Al-Issa, H. E. (2024). Entrepreneurial intentions among university students: The role of mentoring, self-efficacy and motivation. *Journal of Applied Research in Higher Education*, 16(5), 1848-1863.
- Li, L. & Zhang, K. (2026). The influence of internet embedding and higher vocational students' sustainable entrepreneurial intentions in Qinghai Province, China: Role of practical learning and AI literacy. *Creative Business and Sustainability Journal*, 48(1), 1-19.
- Li, L., Bunnag, C. & Zhang, K. (2025a). Multi-agent interaction in digital entrepreneurial ecosystem and digital re-entrepreneurial intention in Zhejiang Province, China: The roles of opportunity belief and episodic future thinking. *MUT Journal of Business Administration*, 22(1), 222-238.
- Li, L., Bunnag, C. & Zhang, K. (2025b). The influence mechanism of environmental attention on opportunity beliefs in new ventures in Yunnan Province, China: "One belt one road" perspective. *MUT Journal of Business Administration*, 22(2), 65-85.
- Morales-García, W. C., Sairitupa-Sanchez, L. Z., Morales-García, S. B. & Morales-García, M. (2024). Adaptation and psychometric properties of a brief version of the general self-efficacy scale for use with artificial intelligence (GSE-6AI) among university students. *Frontiers in Education*, 9, 1-9.
- Park, H., Baek, M. & Lee, C. (2025). The impact of institutional environment and innovativeness on early-stage entrepreneurial activities: The moderating effects of reciprocity. *Sustainability*, 17(2), 1-22.
- Pradana, D. A. & Susanti, H. D. (2025). Leveraging online platforms for coach-peer conferences among university student entrepreneurs: Building entrepreneurial self-efficacy. *Higher Education, Skills and Work-Based Learning*, 15(2), 384-402.

- Ryan, R. M. & Deci, E. L. (2001). On well-being and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52(1), 141-166.
- Shusen, W. & Gan, X. (2025). China's low-altitude economy: Theoretical foundations, development status, and policy directions. *China Economist*, 20(6), 68-100.
- Xu, Z, D. & Cao, A, N. (2025). The impact of entrepreneurial mentorship style on entrepreneurial quality: An empirical test based on new ventures. *Chinese Journal of Science and Technology Management Research*, 10, 164-173.
- Xu, Z, D. & Li, H, B. (2025). The influencing mechanism of entrepreneurial mentors' mentoring styles on the sustainable entrepreneurial behavior of startup entrepreneurs: The mediation of entrepreneurial involvement and the moderating role of the entrepreneurial ecosystem. *Chinese Journal of Science & Technology Progress and Policy*, 8, 138-149.
- Zhou, S, Y. (2025). Sustainable institutional environment and higher vocational students' digital entrepreneurial intention in Border Area of Yunnan Province: Impact of social mindfulness and AI literacy. *Educational Science Literature*, 2(14), 46-50.