

# **Influence of Student English Learning Motivation on English Learning Efficiency among College Students in Yunnan, China: Mediating Effect of English Learning Strategies**

Yan Rong

City Graduate School, City University Malaysia  
Email: 272406311@qq.com

Hui-Suan Wei

City Graduate School, City University of Malaysia  
Email: wei.hui@city.edu.my

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## **Abstract**

This research explores the intricate and interactive relationship among English learning motivation, English learning strategies, and English learning efficiency among college students in Yunnan, China. The study aims to provide a new theoretical perspective for Second Language Acquisition (SLA) research while offering empirical insights that inform educational policies and practices in China and beyond. This study analyzes English learning efficiency based on Second Language Acquisition (SLA) theory, with a particular focus on the critical role of socio-educational factors in language acquisition. Motivation is regarded as a key determinant of learning efficiency. This research employs Self-Determination Theory (SDT) to examine how different types of motivation (intrinsic and extrinsic) interact and contribute to students' English learning process. Furthermore, learning strategies play a significant mediating role between English learning motivation and learning outcomes. The study adopts the Strategy Inventory for Language Learning (SILL) to systematically analyze the impact of learning strategies in the context of language acquisition. A random stratified sampling technique is employed to select a representative sample of college students in Yunnan, ensuring broad applicability of the findings. Data analysis methods include independent samples t-test and Partial Least Squares Structural Equation Modeling (SEM-PLS) to explore the causal relationships and mediating effects among English learning motivation, learning strategies, and learning efficiency. This study aims to provide a comprehensive analysis of how students' English learning motivation influences their language acquisition efficiency, with a particular emphasis on the mediating role of various learning strategies. Through an in-depth examination of these factors, this research contributes both theoretically and

practically—advancing the field of Second Language Acquisition (SLA) while offering empirical evidence for English teaching practices. The findings serve as a valuable reference for educational policymakers, assisting them in optimizing teaching strategies and improving students' English learning efficiency.

**Keywords:** Student English Learning Motivation, English Learning Strategies, English Learning Efficiency

## Introduction

Learning a foreign language is undeniably both time-consuming and painstaking, requiring significant effort and dedication to achieve success. As a result, it is common for Chinese EFL (English as a Foreign Language) learners to face difficulties or challenges when learning English in China. According to a survey, most non-English major college students in China spend over 70 percent of their study time on English outside of class, in addition to attending four to six hours of English courses each week. Unfortunately, due to the recent expansion of college enrollment, English teachers often manage classrooms with 50 or more students, making it difficult to provide individualized attention. Moreover, some English classes lack access to audio-visual language laboratories. The traditional textbook-based, teacher-dominated, and test-oriented teaching methods are becoming outdated with the rapid increase in international communication in China.

To improve college students' English learning outcomes, it is crucial to fully engage their self-motivation and employ appropriate learning strategies. Self-motivation plays a vital role in language acquisition, as it drives students to put in the necessary time and effort. Encouraging students to set personal goals, stay persistent, and maintain a positive attitude towards learning can significantly enhance their motivation. Additionally, adopting effective learning strategies can make a substantial difference. These strategies might include active listening and speaking practice, engaging with authentic English materials such as books, movies, and online content, and participating in language exchange programs or conversation clubs. By fostering self-motivation and utilizing effective learning strategies, students can overcome challenges and achieve greater success in their English studies.

The history of foreign language teaching is rich with studies on various teaching methods aimed at achieving successful learning outcomes for learners. In the 19th century, methods such as grammar-translation, direct method, audio-lingualism, and interactive method emerged, though these did not yield the anticipated results. Despite their efforts, educators found that these traditional methods did not meet the diverse needs of learners and often failed to engage students effectively.

A significant breakthrough occurred in the late 1960s with the rise of cognitive psychology and generative transformational linguistics, prompting researchers to focus on individual learner differences. Cognitive psychology emphasized understanding the mental processes involved in learning, while generative transformational linguistics provided insights into how language is structured and processed by the human brain. This shift in focus led to more personalized and effective approaches to language teaching.

Since then, foreign language teaching and education research have progressed along two main routes: one route explores the impact of external factors, such as teaching methods,

social environment, and classroom conditions, on learning outcomes; the other route investigates the role of individual learner differences in the process of second/foreign language acquisition. Notably, the latter route represents the mainstream of second/foreign language teaching and learning research. By understanding how individual differences, such as motivation and learning strategies, influence language acquisition, educators can develop more tailored and effective instructional methods.

To date, extensive theoretical and empirical research has been conducted on these individual learner variables, particularly language learning motivation and strategies, identified as the two most influential variables in ESL/EFL learning. Motivation, in particular, has been highlighted as a critical factor in successful language learning. Skehan (1989) suggests that motivation, aside from language aptitude, is the most powerful predictor of learning outcomes. Gardner and Lambert (1972) emphasize that strong learning motivation can compensate for poor language aptitude and learning conditions, or even surpass language aptitude in effectiveness.

In this context, language learning strategies serve as a crucial mediating variable. These strategies are essential tools for active and self-directed learning, critical for developing communicative competence. Effective use of language learning strategies can enhance the positive impact of motivation on learning outcomes. By employing appropriate learning strategies, students can better manage their learning processes, thereby improving their overall language proficiency. Learning strategies provide learners with the tools to approach language learning more effectively, enabling them to overcome challenges and achieve their learning goals.

Existing studies on language learning motivation and strategies generally address their nature and roles in the language learning process. Research has shown that integrative motivation and intrinsic motivation contribute more to successful second/foreign language learning than instrumental motivation and extrinsic motivation, despite some contradictory findings; motivation intensity is more important than motivation types (e.g., Ely, 1986; Ellis, 1994; Larsen-Freeman, 1991). Integrative motivation, which involves a genuine interest in the language and culture, and intrinsic motivation, which is driven by internal rewards and personal satisfaction, have been found to be more effective than motivation driven by external rewards or practical needs.

Strategies used by successful language learners can provide insights for less proficient learners (e.g., Abraham & Vann, 1987; Chamot & Kupper, 1989; Huang & Van Naersson, 1987; Naimen, et al., 1978; Rubin, 1975). Proper use of strategies can enhance language proficiency (e.g., Bailystok, 1981; Dreyer & Oxford, 1996; Politzer & McGroarty, 1985). Strategy training is beneficial for language teaching and learning (e.g., Ellis & Sinclair, 1989; Oxford, 1990; Wenden, 1989, 1991; Wiling, 1987). By studying the strategies employed by successful learners, educators can identify effective practices that can be taught to other students, helping them to improve their language skills and learning outcomes.

Research on Chinese English learners' motivation has predominantly followed Gardner's (Gardner & Lambert, 1972) classic model and its extensions regarding motivation types (Gao, et al., 2004). Hua (1998) and Shi (2002) confirm that most Chinese learners exhibit a

"certificate motivation". Wen's (2001) studies indicate that surface motivation is more prevalent among Chinese learners. Surface motivation is characterized by learning driven by external rewards, such as passing exams or obtaining certificates, rather than a genuine interest in the language itself.

Gao, et al. (2004) propose that Chinese English learners' motivation can be classified into instrumental, cultural, and situational motivations. Instrumental motivation involves practical benefits, such as career advancement, while cultural motivation is driven by a desire to understand and engage with the target language's culture. Situational motivation is influenced by specific circumstances, such as the need to use English in certain contexts or environments.

Huang (1987), Chen (1990), and Wang and Qi (1992) are pioneers in studying language learning strategies in the Chinese context. Subsequently, numerous strategy studies have been conducted among Chinese learners (e.g., Dai & Shu, 1994; Jiang, 1994; Wang, 2000, 2001; Wen, 1993, 1996, 2001; Wu, 1994; Zhuang & Shu, 1994). These studies have provided valuable insights into the unique challenges and strategies of Chinese learners, highlighting the importance of culturally responsive teaching practices.

Wen's two-dimensional classification of language learning strategies is considered a significant advancement in strategy research (Wen, 1993, 2001). Her dynamic research methods addressing the stability and variability of strategies are innovative both domestically and internationally (Wen & Wang, 1996; Wen, 1993, 2001). By examining how learners adapt and modify their strategies over time, Wen's research offers a comprehensive understanding of the complex nature of language learning strategies and their impact on learning outcomes. The history of foreign language teaching underscores the importance of understanding individual learner differences and employing effective teaching methods. Motivation and learning strategies are critical variables that significantly influence language learning success. By focusing on these factors, educators can develop more effective teaching practices that cater to the diverse needs of learners. Future research should continue to explore the dynamic interplay between motivation, learning strategies, and language learning outcomes, particularly in different cultural contexts. This ongoing research will contribute to the development of more effective and inclusive language teaching practices, ultimately enhancing the learning experiences and outcomes for students worldwide.

In Canada, Martin and Bernard's (2021) analysis examined the effects of multilingual environments, such as Quebec, on English learning efficiency. The dominance of French presents unique challenges for prioritizing English, suggesting a need for tailored language programs in multilingual settings. In Australia, White and Thompson (2018) investigated the influence of indigenous languages and cultures on English learning efficiency, finding that integrating local contexts and indigenous perspectives into the English curriculum enhances engagement and understanding among native students, emphasizing the importance of cultural relevance in education.

### **Objectives**

In this research proposal, the research objectives related to the title "Influence of Student English Learning Motivation on English Learning Efficiency among College Students in Yunnan,

China: Thinking on the Mediating Effect of English Learning Strategies" will be outlined. Driven by the identified research gaps, this study seeks to examine and analyze the English learning process among college students in Yunnan, China. The primary focus is to explore the various types and intensities of their English learning motivation, the strategies they employ in their language learning, and how these strategies mediate the relationship between their motivation and English learning efficiency. By investigating these aspects, the study aims to provide a comprehensive understanding of how motivation influences learning outcomes through the use of specific strategies within this unique student group. These objectives will be guided by the survey, and the relationship between English learning motivation, English learning strategies, and English learning efficiency will be clarified. The following are the research objectives of this study.

Specific research objectives include:

RO1: To examine the level of English Learning Efficiency in gender and discipline among College Students in Yunnan, China.

RO2: To assess the influence of students' English learning motivation domains on their learning efficiency among college students in Yunnan, China.

RO3: To evaluate the influence of students' English Learning strategies on English learning efficiency among college students in Yunnan, China.

RO4: To evaluate the influence of students' English learning motivation domains on students' English Learning strategies domains among college students in Yunnan, China.

RO5: To investigate the mediating effect of English learning strategies on the relationship between English learning motivation and English learning efficiency among college students in Yunnan, China.

## **Method**

This study employs a quantitative research design to investigate the relationship between learning motivation, strategies, and English learning efficiency. The research was conducted among college students in Yunnan, China. Stratified random sampling was used to select participants from multiple colleges. The instruments included the English Learning Motivation Questionnaire, which assesses both controlled and autonomous motivation, and the English Learning Strategies Questionnaire, which covers six domains: memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies.

Data were collected through surveys and analyzed using multiple regression and mediation analysis techniques. These methods allowed for the examination of the direct and indirect effects of motivation on learning efficiency, as well as the mediating role of learning strategies. The study also controlled for variables such as gender and academic discipline to ensure the robustness of the findings.

In this section, the strategy and methodology that will be employed in our investigation are outlined. Surveys of college students in Yunnan, China, will serve as our major source of information, complemented by additional data culled from local educational institutions and government agencies. Surveys, being our principal method of data collection, are integral to the design of our study. These questionnaires will be carefully crafted to elicit detailed and reliable responses, thereby guaranteeing the validity of our study's conclusions. For this

purpose, well-validated measures of motivation and pedagogy will be utilized to enhance the trustworthiness of our findings. The research aims require that the survey instrument cover a broad range of topics. Primarily, it will explore the area of students' desire to learn English, with the objective of identifying the factors that either encourage or discourage their enthusiasm for studying the language. Both intrinsic and extrinsic motivations of students for learning English will be extensively explored through well-crafted questions.

Furthermore, the survey will provide students an opportunity to express their opinions about the classroom practices at their schools. The ultimate goal is to gain a more nuanced understanding of the pedagogical approaches that foster successful English language acquisition by identifying the teaching strategies that students find most engaging. This aspect is critically important as it lays the theoretical groundwork for our study and illuminates the link between instructional strategies and student retention. Additionally, the survey will include a section for self-evaluation, where students can reflect on their English learning progress and performance. This ability of students to self-evaluate will be crucial in understanding how their progress links to their motivation and the effectiveness of the instruction they have received.

To supplement the primary data collected through surveys, secondary information from Yunnan's academic institutions and government agencies will be utilized. These secondary sources are invaluable as they provide additional depth to our study by offering background and contextual data on English language instruction in the area. With this background information, we will be better equipped to understand the educational climate in Yunnan and make nuanced inferences from our core survey results. Factors such as institutional policies, curricular frameworks, and instructional standards will be integral components of the secondary data. Additionally, consultations with educational officials in Yunnan will be sought to gain a deeper understanding of the province's overarching goals and methodologies for English language instruction. These insights will form the bedrock of our investigation, enabling a thorough examination of how student motivation and teaching approaches to English are influenced by and interact with the larger educational environment.

This study strategy, encompassing both surveys and secondary data collection, has been meticulously developed to address the research question for college students in Yunnan, China. It is anticipated to yield important insights into the complex web of variables impacting English language learning among this population. The depth and breadth of the study will be enhanced by our use of both primary and secondary sources of information, which together will assist in achieving our research objectives. The complex relationship between student motivation, instructional strategies, and educational effectiveness in Yunnan can be effectively uncovered through this multidimensional approach.

### **Findings**

This research can prove beneficial for both English teachers and students, as it enhances teachers' understanding of students' learning motivation and strategies. Consequently, it will lead to enhanced understanding of motivation and learning strategies, educational policy and curriculum development, practical implications for teaching practices, contribution to academic literature, and implications for student success. The significance of this research study on the influence of student English learning motivation on English learning efficiency

among college students in Yunnan, China, with a focus on the mediating effect of English learning strategies, lies in several key areas.

#### *Enhanced Understanding of Motivation and Learning Strategies*

This study provides an in-depth analysis of how intrinsic and extrinsic motivations influence English learning efficiency. By distinguishing between these two types of motivation, the research offers valuable insights into which factors more strongly drive student success in English language acquisition.

The study highlights the importance of various English learning strategies, including cognitive, metacognitive, and social strategies, as mediators between motivation and learning outcomes. This understanding can help educators and researchers develop more targeted and effective teaching methods.

#### *Educational Policy and Curriculum Development*

The findings of this study can inform policymakers and educational institutions in Yunnan and beyond about the critical role of motivation and learning strategies in language education. This knowledge can be used to design curricula that better cater to the needs and preferences of students, leading to improved learning outcomes.

By identifying effective learning strategies, educational institutions can develop training programs that equip students with the necessary skills to optimize their language learning processes.

#### *Practical Implications for Teaching Practices*

This study can, first and foremost, provide valuable insights for English teachers in Yunnan colleges, helping them better understand the characteristics of student motivation and the strategies employed in English learning. Secondly, the findings on the relationship between English learning motivation and learning strategies can offer practical guidance for improving English learning efficiency, both in second language and foreign language education contexts. The research underscores the need for a supportive and engaging learning environment that fosters motivation. Teachers can use these findings to create classroom activities and learning experiences that are more enjoyable and interesting for students, thereby increasing their motivation.

Understanding the mediating role of learning strategies allows teachers to incorporate specific strategies into their teaching practices. This can help students develop better study habits and improve their overall efficiency in learning English.

#### *Contribution to Academic Literature*

This study contributes to the broader body of academic literature on language learning by providing empirical evidence on the relationships between motivation, learning strategies, and learning efficiency. It offers a comprehensive analysis that can serve as a reference for future research in similar contexts.

The integration of motivational theories and strategic frameworks in this study provides a holistic approach to understanding language learning, which can be valuable for scholars and educators seeking to explore similar issues in different educational settings.

*Implications for Student Success*

By identifying the factors that enhance English learning efficiency, this research can ultimately help students achieve higher proficiency in English. This is particularly important in a globalized world where English proficiency is often a key factor in academic and professional success.

The study's recommendations for matching teaching strategies with students' learning strategies can lead to more personalized and effective educational experiences, contributing to better student outcomes and satisfaction.

Furthermore, teachers can integrate materials and activities that match students' learning styles by understanding their learning motivation and strategies. They can also manipulate learning strategies in various situations to assess and guide students. Conducting this research is highly effective, as Kinsella (1995) believes that teachers, in their efforts to create a democratic learning environment, should go far beyond mere instructional adjustments. She also points out that teachers should seek to collaborate with colleagues to provide practices that help students identify obstacles preventing them from reaching their potential in school or university life, daily life, or society. The reason for conducting this study is that there is very little research on the impact of English learning motivation on learning outcomes, considering the mediating effect of English learning strategies. Consequently, English teachers lack effective advice on students' learning strategies. In Yunnan, as a remote southwestern region of China, the unsatisfactory quality of English learning is related to the effective application of students' learning motivation and the availability of appropriate learning strategies. Therefore, it is crucial to understand and explore each individual's English learning strategies based on their learning motivation. Analyzing personal learning strategies in conjunction with learning motivation can help students become more focused learners and further improve the English learning outcomes of college students in Yunnan. In summary, this research study offers significant insights and practical implications for improving English language education among college students in Yunnan. By focusing on the interplay between motivation and learning strategies, it provides a valuable framework for enhancing teaching practices, educational policies, and ultimately, student success in English learning.

**Discussion**

This study reveals the complexity and multidimensional nature of English learning efficiency, emphasizing the interaction between learning motivation, learning strategies, and English learning efficiency. By integrating theoretical frameworks such as Self-Determination Theory (SDT) and the Strategy Inventory for Language Learning (SILL), this research highlights the importance of adopting a comprehensive, student-centered approach in language education. English learning efficiency is not determined by a single factor but is influenced by intrinsic motivation, learning strategies, and other elements. Recognizing these interactions is crucial for designing educational interventions that cater to the diverse needs and preferences of learners.

One of the key findings of this study is the necessity of enhancing students' intrinsic motivation. Personal interest, self-actualization, and autonomy have a significant impact on English learning outcomes. Therefore, educators and policymakers should prioritize teaching strategies that promote student autonomy, create meaningful learning experiences, and align

English education with students' academic and career development goals. Additionally, this study further validates the mediating role of learning strategies between learning motivation and learning efficiency. Structured learning strategies can improve students' ability to acquire and retain language knowledge. Thus, teachers should explicitly teach learning strategies in English courses and promote strategy-based learning methods to cultivate students' self-regulated learning abilities.

This study also reveals the dynamic changes in learning motivation and learning strategies throughout students' academic journeys. As students progress, their learning strategies and motivation levels continuously adjust, ultimately affecting their language learning outcomes. Therefore, educators should adopt flexible and adaptive teaching methods to meet the evolving needs of students at different stages of learning. By providing continuous guidance and targeted support, educators can help students sustain their motivation and improve long-term learning efficiency. Additionally, external environmental factors, such as teacher quality, school atmosphere, and family support, significantly impact English learning efficiency. Creating a conducive learning environment that fosters collaboration, critical thinking, and active participation is essential for improving English proficiency. Policymakers and educational institutions should invest in teacher training, cultivate an inclusive school culture, and encourage active family involvement in students' English learning processes.

In conclusion, this study makes a significant contribution to the field of Second Language Acquisition (SLA) by elucidating the relationship between learning motivation, learning strategies, and English learning efficiency. The findings indicate that intrinsic motivation and strategic learning are key to optimizing language learning outcomes. Future research could further explore the long-term impact of learning motivation and learning strategies, examine the influence of socio-cultural factors on English acquisition, and investigate the role of technology-enhanced learning in improving language proficiency. By expanding these research areas, future studies can provide deeper insights into language education practices, further support the optimization of educational policies, enhance English learning experiences, and promote language learning development in diverse educational settings.

## References

- Amabile, T. M., Hill, K. G., Hennessey, B. A., & Tighe, E. M. (1994). The Work Preference Inventory: Assessing intrinsic and extrinsic motivational orientations. *Journal of Personality and Social Psychology*, 66(5), 950-967.
- Barry, W., & Wang, C. (2019). The relationship between social support, self-efficacy, and English language learning achievement in Hong Kong. *TESOL Quarterly*, 53(1), 208-220.
- Babad, E. (1990). Calling on students: How a teacher's behaviors can acquire disparate meanings in students' minds. *The Journal of Classroom Interaction*, 25(1), 1-4.
- Caplan, G. (1974). Support systems and community mental health: Lectures on concept development. Behavioral Publications.
- Chen, J. W., Guo, Y. Y., & Hu, X. Y. (2015). Teacher autonomy support and junior high school students' learning engagement: The impact of family social class and students' autonomous motivation. *Psychological Development and Education*, 31(2), 180-187.
- Chi, L. P., & Xin, Z. Q. (2006). Measurement of college students' learning motivation and its relationship with self-efficacy. *Psychological Development and Education*, 2006(2), 64-70.

- Chi, X. L. (2017). A study on the mechanism of teacher support's impact on college students' learning engagement based on self-determination theory (Doctoral dissertation). Tianjin University.
- Chai, X. Y., Gong, S. Y. (2013). Development of a questionnaire on perceived mathematics teacher support for middle school students. *Psychology and Behavioral Research*, 11(4), 511-517.
- Chai, X. Y., Gong, S. Y., Duan, T., Zhong, L., & Jiao, Y. Q. (2011). Motivation contagion between teachers and students: A social cognitive perspective. *Advances in Psychological Science*, 19(8), 166-1173.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.
- Davis, K., Winsler, A., & Middleton, M. (2006). Students' perceptions of rewards for academic performance by parents and teachers: Relations with achievement and motivation in college. *Journal of Genetic Psychology*, 167(2), 211-220.
- Ertesvåg, S. K., & Havik, T. (2021). Student-perceived classroom interaction and mental health problems and proactive aggression. *Scandinavian Journal of Educational Research*, 65(1), 1-20.
- Fang, L. T., Shi, K., & Zhang, F. H. (2008). Reliability and validity study of the Chinese version of the learning engagement scale. *Chinese Journal of Clinical Psychology*, 16(6), 618-620.
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59-109.
- Gao, F. X. (2019). A study on the impact of teacher autonomy support on junior high school students' English learning engagement: The mediating role of basic psychological needs (Doctoral dissertation). Central China Normal University.
- Gardner, R. C., & Lambert, W. E. (1972). Attitudes and motivation in second language learning. Newbury House.
- Geng, F., Yu, S. L., & Zheng, Y. (2021). Exploring the relationship between self-determined motivation and college students' online English learning intentions: The multiple mediating roles of perceived behavioral control, attitudes, and subjective norms. *Foreign Language Teaching and Research*, 53(4), 100-107.
- Guo, B. L., Zhang, L. (2021). The impact of classroom environment on children's victimization and peer acceptance, and academic achievement. *Chinese Journal of Clinical Psychology*, 12(3), 244-245.
- Guo, M. C., & Li, K. K. (2022). Investigation of the current status and strategies to enhance the professional identity of educational technology majors. *Educational Observation*, 11(22), 66-70.
- Han, Y., Gao, X., & Xia, J. (2019). Problematizing recent developments in non-English foreign language education in Chinese universities. *Journal of Multilingual and Multicultural Development*, 40(7), 562-575.
- Jia, X. J., Cai, L., Lin, L. (2020). The relationship between high school students' perceived teacher support and learning engagement: The chain mediating effects of academic self-efficacy and achievement goal orientation. *Psychological Development and Education*, 36(6), 700-707.
- Jiang, Z. H., Zhao, C. L., Li, H. X. (2018). Construction of a model of perceived teacher support behaviors for online learners. *Chinese Journal of Educational Technology*, 38(11), 103-110.

- Jiang, Z. P., & Zhou, Z. K. (2010). The relationship among classroom environment, learning efficacy, and high school students' learning motivation. *Chinese Journal of Clinical Psychology*, 18(6), 789-791.
- Kashy, G., Kaplan, O., & Israel, Y. (2018). Predicting academic achievement by class-level emotions and perceived homeroom teachers' emotional support. *Psychology in the Schools*, 55, 770-782.
- Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health*, 74, 262-273.
- Kuh, G. D. (2001). *The National Survey of Student Engagement: Conceptual framework and overview of psychometric properties*. Indiana University Center for Postsecondary Research.
- Li, C. S. (2022). *The relationship between learning motivation, social support, and academic burnout among college students* (Master's thesis). Jilin University.
- Li, J. H., Wan, Q. Q., Lu, X. J., et al. (2021). Development directions and suggestions for educational informatization towards modernization: Policy reflections triggered by China Education Modernization 2035. *China Distance Education*, No. 555(04), 21-30.
- Li, J. Y. (2002). Chinese students' perceptions and use of second language learning strategies: An empirical study. *Foreign Language Teaching*, 23(1), 45-52.
- Li, K. (2009). Research on English learning motivation regulation strategies of Chinese college students. *Modern Foreign Languages*, 32(3), 345-359.
- Li, X. D., Xue, L. L., & Han, Q. T. (2006). Research on college students' motivation regulation strategies. *Journal of Jiangsu University (Higher Education Research Edition)*, 6(1), 56-62.
- Liu, D. Z., & Huang, X. T. (2002). An overview of research on learning strategies. *Educational Research*, 23(2), 76-83.
- Liu, R. D. (1997). On the essence of learning strategies. *Psychological Science*, 20(2), 120-125.
- Liu, W. (2002). *A study on the use of English learning strategies and their relationship with gender* (Doctoral dissertation). Capital Normal University.
- Liu, X. H., & Guo, J. D. (2021). The relationship between foreign language online teaching teacher support and students' interactive engagement and learning enjoyment. *Journal of PLA Foreign Languages Institute*, 44(5), 34-42.
- Luan, L., Dong, Y., & Liu, J. J. (2022). The impact of teacher support strategies on college students' online learning engagement. *Modern Educational Technology*, 32(3), 119-125.
- Luan, L., Hong, J. C., Cao, M., & Dong, Y. (2020). Exploring the role of online EFL learners' perceived social support in their learning engagement: A structural equation model. *Interactive Learning Environments*. Advance online publication. <https://doi.org/10.1080/10494820.2020.1860105>
- Lu, G., Xie, K., & Liu, S. (2022). What influences student situational engagement in smart classrooms: Perception of the learning environment and students' motivation. *British Journal of Educational Technology*. Advance online publication. <https://doi.org/10.1111/bjet.13176>