DEVELOPING STRATEGIC GUIDELINE TO ENHANCE STUDENT LITERACY AT YUNNAN UNIVERSITY, KUNMING, CHINA*

Gong Teng[1], Nipaporn Khamcharoen[2]
Faculty of Education, Dhonburi Rajabhat University[1,2]
Email : nipaporn.k@dru.ac.th

ABSTRACT

The problem in this study is that students have low reading and writing abilities. Therefore, this study will find ways to improve students' reading and writing abilities. This article aimed 1) to investigate the current situation of college students' literacy, 2) to investigate the training needs to enhance students' literacy, and 3) to develop strategic guideline for enhancing students' literacy. The sample for this study will be divided into two groups: 1) 375 students and 2) 200 teachers. The sampling method was stratified random sampling. The questionnaire was used to collect the data. The data collected were analyzed and then presented in terms of frequency, mean, and standard deviation.

The research yielded the following results: 1) The current situation of college students' literacy was at a middle level, 2) The training needs to enhance students' literacy were at a middle level, and 3) the strategic guidelines for enhancing students' quality of Yunnan University consisted of five parts: 1. Strengthening cross-departmental collaboration and guidance; 2. Utilize digital tools and e-learning platforms; 3. Expand academic resources and encourage participation; 4. Integrate critical thinking and cultural background into the curriculum; and 5. Integrate literacy with career paths and practical applications.

Keywords : Student literacy; Strategic guideline; Yunnan University

1. Background and Problem Statement

In the era of globalization and rapid development of information technology, college students' reading and writing ability has become an important standard to measure their comprehensive quality and future career competitiveness. However, with the popularization of higher education, many colleges and universities still face serious challenges in improving students' literacy. In recent years, people from all walks

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of life have expressed concern about the decline of college students' literacy, which is not only reflected in the decline of academic writing quality, but also reflected in the insufficiency of students' daily language expression and reading comprehension.

In China, the implementation of the university enrollment expansion policy has provided more students with the opportunity to receive higher education, but the quality of education is uneven, especially in the cultivation of literacy. Chen and Yu (2019) pointed out that due to the lack of systematic writing training before entering college, many college students feel at a loss when faced with complex academic writing tasks. In addition, with the popularization of the Internet and social media, students' reading and writing habits have changed significantly. The popularity of fragmented reading and Internet language has to some extent weakened their ability to read deeply and write rigorously (Zhao, 2021). This change not only affects students' academic ability, but also has a profound impact on the broader sociocultural level.

Faced with these challenges, domestic colleges and universities gradually realized the urgency of improving students' literacy, and began to explore a variety of methods and strategies. Some universities have set up special writing centers to provide personalized tutoring and writing workshops aimed at improving students' writing skills and language abilities (Liu & You, 2020). In addition, some universities introduce interdisciplinary and cross-cultural writing courses through curriculum reform, in order to improve students' academic writing ability through diversified teaching methods. However, the effectiveness of these measures in practical applications and their widespread promotion among students with diverse backgrounds still require further research and evaluation (Wang & Zhang, 2021).

From an international perspective, foreign research has made remarkable progress in improving students' literacy, providing an important reference for China's education reform. Boquet (2002) examined the role of writing centers in improving students' writing ability and found that students' writing ability was significantly improved through personalized feedback and support. In addition, Smith (2016) studied the application of technology tools in writing teaching and found that online writing platforms combined with self-regulated learning strategies significantly improved students' writing quality. Jones (2018) showed that cooperative learning strategies also showed significant effects in improving students' writing ability. These international experiences show that the combination of modern technology and teaching strategies can effectively address the challenges of students' literacy development. However, how to effectively localize these successful international experiences and promote their implementation in China's educational environment

remains an important issue that needs further discussion (Li, 2020).Recent studies have further emphasized the role of digital literacy and multimodal writing in enhancing student engagement and writing outcomes (Hafner, 2022; Jiang & Chen, 2023).

In recent years, scholars at home and abroad have discussed the problem of college students' literacy from different angles. Liu & You (2020) pointed out that the establishment of a writing center and the provision of professional writing guidance can help students receive personalized guidance in the writing process, thereby improving their writing skills and language skills. Wang & Zhang (2021) explored the application effect of diversified teaching methods in improving college students' writing ability through empirical research, and emphasized the importance of interdisciplinary and cross-cultural writing courses. These studies show that through personalized tutoring and diverse instruction, students' writing skills can be significantly improved.

Internationally, Smith’s research (2016) showed that students' writing quality is significantly improved through online writing platforms combined with self-regulated learning strategies. The study further pointed out that the interactive and instant feedback features of online platforms can help students find and correct mistakes in writing in a timely manner, thus improving learning efficiency. Similarly, Jones (2018) emphasized the role of cooperative learning strategies and found that students can learn from each other and make progress together in a cooperative environment, thus improving the overall writing level. These international studies provide important theoretical reference and practical experience for improving the literacy of college students in our country.

However, although many achievements have been made in the research on improving college students' literacy at home and abroad, there are still some challenges in practice. First of all, students' individual differences and background differences play an important role in literacy training. How to design effective teaching strategies for students with different backgrounds is still an urgent problem to be solved. Secondly, although the extensive application of modern technology in teaching brings new opportunities, how to find a balance between technological means and traditional teaching methods also poses challenges (Li, 2020).Moreover, the post-pandemic shift toward hybrid and online learning has accelerated the need for digital literacy integration, which remains underexplored in the Chinese context (Huang & Li, 2023).

Based on this, this study aims to comprehensively analyze the current situation of college students' literacy, explore the effectiveness of various strategies and tools in practical application, and provide a set of systematic and operable strategy guidance

for colleges and universities to comprehensively improve college students' literacy. Specifically, this study will be carried out from the following aspects: First, the current situation of college students' literacy at home and abroad is analyzed, and the application effect of existing teaching methods and technical tools is discussed; Secondly, the feasibility of improving students' literacy in different backgrounds is evaluated by combining practical cases. Finally, the paper puts forward some suggestions suitable for Chinese colleges and universities to provide theoretical support and practical guidance for education reform. Through this study, we hope to provide theoretical support for the reform and development of China's higher education, and provide a useful reference for the global education community to explore the improvement of students' literacy. This will not only contribute to students' academic development, but will also play a solid foundation for their future careers.

2. Research Objectives

2.1 To investigate the current situation of college students' literacy.

2.2 To investigate the training needs to enhance students’ literacy

2.3 To develop strategic guideline for enhancing students’ literacy.

3. Expected Results

3.1 Improve student academic performance: By improving literacy, students will be able to better understand academic material and write high-quality essays and reports, thereby improving their grades in various academic courses and overall academic performance.

3.2 Enhance students' employment competitiveness: Excellent literacy is an essential skill required for many professions. By improving these abilities, graduates will be more competitive in the job market and able to express their abilities and values more effectively.

3.3 Enhance the quality and reputation of education: For Yunnan University, effective literacy promotion strategic guideline can enhance the quality of education and the overall reputation of the school, attract more excellent students and teachers, and enhance the academic influence at home and abroad.

4. Research Methods

4.1 Research Design

This study adopts a mixed-methods approach, combining quantitative surveys and qualitative expert consultations. The mixed-methods design allows for a

more holistic understanding of the current situation and training needs of college students' literacy. Quantitative data offer the opinion of teachers and students' perceptions, while qualitative insights provide insight into developing strategic guideline for enhancing students' literacy.

4.2 Population and Sample

The population comprised 6,000 students and 400 teachers at Yunnan University. The sample divided into two groups, 1) 375 students 2) 200 teachers (Yamane, 1973). The sampling method was stratified random sampling.

4.3 Instruments

In this research project, questionnaire survey was used to collect the data. The questionnaire is divided into three parts: 1) general information, 2) the current situation of college students' literacy, and 3) the training needs to enhance students' literacy. Three experts assessed the validity of the questionnaire using the index of item objective congruence (IOC) scale. The IOC range for each question in the questionnaire was between 0.67 and 1.00. The reliability of questionnaires was more than 0.80

4.4 Data Collection

The researchers collected the data and information personally from the sample group via email.

4.5 Data Analysis

4.5.1 To investigate current situation and needs, the data and information collected were analyzed using frequency, percentage, average, standard deviation (S.D.).

4.5.2 The criteria and definitions within the mean score range are as follows: Quantitative research methods are used to analyze the ideas and opinions of 3 experts obtained during the focus group discussion.

5. Research Results

5.1 The current situation of college students' literacy.

Table 1 Teacher Literacy Challenges

Questions	n		Level of opinion
	$\bar{x}$	S.D.	
Q1 Students face difficulties in understanding complex academic texts.	3.80	0.85	High
Q2 Students struggle to produce well-structured academic writing.	3.95	0.82	High

Questions	n		Level of opinion
	$\bar{x}$	S.D.	
Q3 Limited resources for developing students' literacy skills.	3.40	0.88	Middle
Q4 There is insufficient collaboration between departments to support literacy.	2.30	0.78	Low
Q5 Students are not adequately motivated to engage in reading and writing activities.	4.05	0.80	High
Q6 Lack of effective training programs to enhance teachers' ability to foster literacy.	3.70	0.86	High
Q7 Integration of technology in literacy practices is inadequate.	3.10	0.82	Middle
Q8 Balancing teaching responsibilities with supporting students' literacy development.	2.95	0.83	Middle
Q9 Difficulties in encouraging critical thinking through reading and writing tasks.	4.25	0.79	High
Q10 The current curriculum does not adequately address literacy development needs.	3.45	0.88	Middle
Q11 There is insufficient recognition of teachers' efforts in promoting literacy.	2.60	0.81	Low
Q12 The workload prevents focused attention on literacy-related activities.	3.00	0.84	Middle
Q13 Students face challenges in accessing academic resources for literacy development.	4.15	0.82	High
Q14 There is limited training on critical thinking frameworks for teachers.	3.55	0.85	High
Q15 Assessment systems inadequately measure literacy improvements.	3.20	0.83	Middle
Q16 Teachers find it difficult to tailor literacy activities to diverse student needs.	2.45	0.80	Low
Q17 Students lack exposure to practical literacy applications in their coursework.	3.30	0.86	Middle

Questions	n		Level of opinion
	$\bar{x}$	S.D.	
Q18 Collaboration opportunities among faculty to address literacy challenges are scarce.	2.10	0.70	Lowest
Q19 There are insufficient platforms to share best practices in literacy development.	3.05	0.82	Middle
Q20 Teachers face challenges in integrating cultural context into literacy activities.	4.60	0.78	Highest
Total	**3.35**	**0.82**	**Middle**

According to table 1, the total average was in the middle level (3.35). The five most significant literacy challenges are listed in descending order, with teachers facing various challenges in their roles: Teachers face challenges in integrating cultural context into literacy activities ($\bar{x}$ = 4.60, S.D. = 0.78). This suggests major difficulties in creating culturally relevant instructional materials. Difficulties in encouraging critical thinking through reading/writing tasks ($\bar{x}$ = 4.25, S.D. = 0.79), underscoring the urgent need for pedagogical methods that promote deeper analysis. Students face challenges in accessing academic resources ($\bar{x}$ = 4.15, S.D. = 0.82), highlighting the importance of resource expansion to support literacy skill development. Students are not adequately motivated to engage in reading/writing ($\bar{x}$ = 4.05, S.D. = 0.80), showing that motivational factors remain a critical barrier to literacy improvement. Students struggle to produce well-structured academic writing ($\bar{x}$ = 3.95, S.D. = 0.82), indicating a gap in teaching strategies that focus on organization and clarity.

Table 2 Student Literacy Challenges

Questions	n		Level of Opinion
	$\bar{x}$	S.D.	
Q1 I face difficulties in understanding complex academic texts.	3.65	0.84	High
Q2 I struggle to write coherent academic essays.	4.00	0.85	High

Questions	n		Level of Opinion
	$\bar{X}$	S.D.	
Q3Limited access to academic resources hinders my literacy development.	3.55	0.86	High
Q4I lack motivation to engage in reading and writing activities.	2.45	0.80	Low
Q5I have insufficient opportunities to practice academic writing.	4.50	0.78	High
Q6Feedback on my writing assignments is limited.	3.20	0.82	Middle
Q7I find it challenging to critically analyze academic texts.	3.40	0.83	Middle
Q8My curriculum does not emphasize the importance of literacy development.	2.95	0.82	Middle
Q9I struggle to apply what I read to real-world scenarios.	2.60	0.81	Middle
Q10 Digital tools for literacy improvement are not accessible to me.	3.00	0.80	Middle
Q11 Collaboration with peers on literacy projects is limited.	1.50	0.70	Lowest
Q12 I find it difficult to develop critical thinking skills through reading.	3.15	0.82	Middle
Q13 Teachers provide limited support for improving literacy.	3.75	0.85	High
Q14 The assessment system does not reflect my literacy improvement.	3.10	0.81	Middle
Q15 Extracurricular activities for literacy enhancement are scarce.	3.65	0.84	High
Q16 I struggle to write research-based academic papers.	3.20	0.80	Middle
Q17 Balancing other coursework with literacy development is challenging.	3.90	0.82	High
Q18 My literacy development is hindered by insufficient practice materials.	2.55	0.83	Middle
Q19 I find it difficult to identify credible sources for academic writing.	3.50	0.82	Middle

Questions	n		Level of Opinion
	$\bar{x}$	S.D.	
Q20 I lack exposure to various academic writing formats.	3.70	0.86	High
Total	**3.27**	**0.82**	**Middle**

According to table 2, the total average was in the middle level (3.27).The five most significant literacy challenges are listed in descending order, highlighting students' experiences: I have insufficient opportunities to practice academic writing (mean = 4.50, S.D. = 0.78), indicating a strong desire for more structured writing assignments. I struggle to write coherent academic essays (mean = 4.00, S.D. = 0.85), reflecting fundamental difficulties in composition and argumentation. Balancing other coursework with literacy development is challenging (mean = 3.90, S.D. = 0.82), emphasizing time-management pressures. Teachers provide limited support for improving literacy (mean = 3.75, S.D. = 0.85), suggesting a perceived gap in teacher feedback or one-on-one guidance. Limited access to academic resources hinders my literacy development (mean = 3.55, S.D. = 0.86), underscoring the external resource constraints many students face.

5.2 The training needs for enhancing literacy

Table 3 Teacher training needs

Questions	n		Level of needs
	$\bar{x}$	S.D.	
Q1 Training on integrating literacy skills into teaching practices.	3.60	0.82	High
Q2 Workshops on fostering collaboration for literacy development.	2.80	0.78	Middle
Q3 Programs to enhance critical thinking in literacy instruction.	4.20	0.80	High
Q4 Training on using technology to track literacy progress.	4.55	0.77	Highest
Q5 Workshops on building a literacy-friendly classroom environment.	3.20	0.85	Middle
Q6 Guidance on aligning literacy strategies with institutional goals.	3.50	0.83	Middle

Questions	n		Level of needs
	$\bar{x}$	S.D.	
Q7 Training on supporting diverse literacy needs in classrooms.	3.90	0.84	High
Q8 Programs for mentoring students on literacy projects.	1.40	0.68	Lowest
Q9 Training on integrating literacy into assessments.	3.70	0.85	High
Q10 Workshops on improving literacy for students in multicultural contexts.	4.00	0.81	High
Q11 Training on fostering creativity through literacy.	3.65	0.86	High
Q12 Guidance on developing leadership skills to promote literacy.	2.40	0.75	Low
Q13 Programs to address the challenges of literacy in online learning.	3.10	0.82	Middle
Q14 Workshops on engaging parents in literacy initiatives.	3.00	0.80	Middle
Q15 Training on using research to enhance literacy strategies.	3.80	0.83	High
Q16 Programs on fostering teamwork through literacy-related projects.	4.05	0.82	High
Q17 Guidance on creating sustainable literacy initiatives.	3.25	0.84	Middle
Q18 Training on emotional intelligence for literacy instruction.	3.45	0.82	Middle
Q19 Workshops on using data to inform literacy practices.	3.90	0.81	High
Q20 Programs on ethical practices in literacy education.	3.95	0.80	High
Total	**3.47**	**0.81**	**Middle**

According to table 3, the total average was in the middle level (3.47). The five most significant training needs are listed in descending order, reflecting teachers' priorities: Training on using technology to track literacy progress ($\bar{x}$ = 4.55, S.D. = 0.77), emphasizing the critical role of digital platforms in monitoring student development.

Programs to enhance critical thinking in literacy instruction ($\bar{x}$ = 4.20, S.D. = 0.80), aligning with the challenge of limited critical thinking. Programs on fostering teamwork through literacy-related projects ($\bar{x}$ = 4.05, S.D. = 0.82), suggesting a desire for collaborative learning strategies. Workshops on improving literacy for students in multicultural contexts ($\bar{x}$ = 4.00, S.D. = 0.81), linking directly to the cultural integration challenge found in Section 2. Programs on ethical practices in literacy education ($\bar{x}$ = 3.95, S.D. = 0.80), highlighting the importance of integrity and responsible teaching.

Table 4 Student training needs

Questions	n		Level of needs
	$\bar{x}$	S.D.	
Q1 Workshops on academic reading strategies.	3.10	0.81	Middle
Q2 Training on improving academic writing skills.	4.00	0.84	High
Q3 Guidance on using digital tools for literacy improvement.	4.60	0.78	Highest
Q4 Programs to enhance peer collaboration on literacy projects.	2.45	0.80	Low
Q5 Opportunities to participate in research-based writing tasks.	3.40	0.82	Middle
Q6 Training on analyzing and synthesizing complex texts.	3.65	0.83	High
Q7 Support for developing creative writing skills.	3.55	0.85	High
Q8 Workshops on aligning literacy development with career goals.	3.00	0.80	Middle
Q9 Guidance on integrating literacy practices into daily study routines.	3.10	0.82	Middle
Q10 Access to online self-learning literacy resources.	3.50	0.84	Middle
Q11 Training on research-based writing for academic success.	3.90	0.82	High

Questions	n		Level of needs
	$\bar{x}$	S.D.	
Q12 Guidance on fostering critical thinking through literacy tasks.	3.75	0.85	High
Q13 Workshops on enhancing creativity in academic writing.	3.20	0.81	Middle
Q14 Opportunities for feedback-driven writing improvement.	4.05	0.80	High
Q15 Training on evaluating credible sources for academic use.	3.35	0.83	Middle
Q16 Programs to integrate literacy improvement into extracurricular activities.	2.15	0.78	Low
Q17 Workshops on adapting writing for diverse audiences.	3.00	0.80	Middle
Q18 Access to advanced literacy training for career preparation.	4.00	0.83	High
Q19 Guidance on managing time effectively for literacy development.	3.25	0.80	Middle
Q20 Programs to encourage a literacy-rich environment on campus.	3.85	0.86	High
Total	**3.36**	**0.82**	**Middle**

According to table 4, the total average was in the middle level (3.36).The five most significant strategies and training needs are listed in descending order, reflecting students' priorities: Guidance on using digital tools for literacy improvement ($\bar{x}$ = 4.60, S.D.= 0.78), demonstrating a strong push for e-learning and technological solutions. Opportunities for feedback-driven writing improvement ($\bar{x}$ = 4.05, S.D. = 0.80), emphasizing the value of iterative revision processes. Access to advanced literacy training for career preparation ($\bar{x}$ = 4.00, S.D. = 0.83), showing a long-term perspective that ties literacy to future job success. Training on improving academic writing skills ($\bar{x}$ = 4.00, S.D. = 0.84), reinforcing the fundamental demand for structured essay instruction. Support for developing creative writing skills ($\bar{x}$ = 3.55, S.D. = 0.85), reflecting a broader interest in imaginative and expressive forms of writing beyond strictly academic tasks.

5.3 Strategic guideline for enhancing students' literacy

The strategic guideline for enhancing students' literacy at Yunnan University has been developed based on the research findings, it consisted of 5 units.

1) Strengthen Cross-Department Collaboration and Mentoring
2) Leverage Digital Tools & E-Learning Platforms
3) Expand Academic Resources and Incentivize Participation
4) Embed Critical Thinking & Cultural Context in Curriculum
5) Align Literacy with Career Pathways and Real-World Applications

6. Research Discussions

Numerous theoretical frameworks highlight how motivation and self-regulation are central to academic success. Vygotsky (1978) corroborated that many Yunnan University students similar to national patterns struggle with intrinsic motivation for reading/writing, possibly due to a perceived disconnect between classroom tasks and future aspirations. When teachers express challenges in capturing student engagement ($\bar{x}$ = 4.05, S.D. = 0.80), it reflects an institutional mismatch between the extrinsic demands of the curriculum and students' intrinsic drives. Strengthening autonomy in writing choices, as well as embedding real-life or career-related tasks, might alleviate these motivational shortcomings.

One of the sharpest signals is the mutual call for digital tools. Teachers want to track performance automatically, while students wish to access advanced e-learning resources. In line with Smith's (2016) findings, such synergy can reduce the time educators spend on mechanical corrections and free them up for deeper conceptual coaching. The teacher's strong emphasis on technology training ($\bar{x}$ = 4.55, S.D. = 0.77) also implies that new professional development modules covering everything from LMS usage to specialized writing analytics software are a necessary precursor for successful technology adoption.

Teachers giving high priority ($\bar{x}$ = 4.20, S.D. = 0.80) to critical thinking in literacy suggests a broader shift: moving away from standardized test-oriented instruction (Zhao, 2021) and instead promoting essay composition that demands multi-perspective analysis and logical argumentation. If effectively implemented, collaborative approaches can bring in synergy from different academic specializations. Students who see practical value in co-writing projects or peer-editing sessions across disciplines (e.g., combining humanities and STEM perspectives) may also gain deeper exposure to diverse forms of scholarly discourse. Furthermore, recent studies by Huang and Li (2023) emphasize

the importance of integrating digital literacy frameworks into teacher training programs to better align with students' technological needs and learning habits.

7. New Knowledge Gained

The research takes "knowledge research" as the core concept and systematically constructs the theoretical and practical framework for improving the reading and writing abilities of college students, integrating core literatures such as social and cultural theories, writing process theories, and self-regulated learning theories to lay the academic foundation for the research on literacy skills. Through empirical research on the current situation, obstacles, and demands of reading and writing abilities were identified. Transform theory into practical strategies and construct a localized improvement plan featuring "cross-departmental collaboration + hierarchical mentorship system + digital platform support". It is shown in Figure 1.

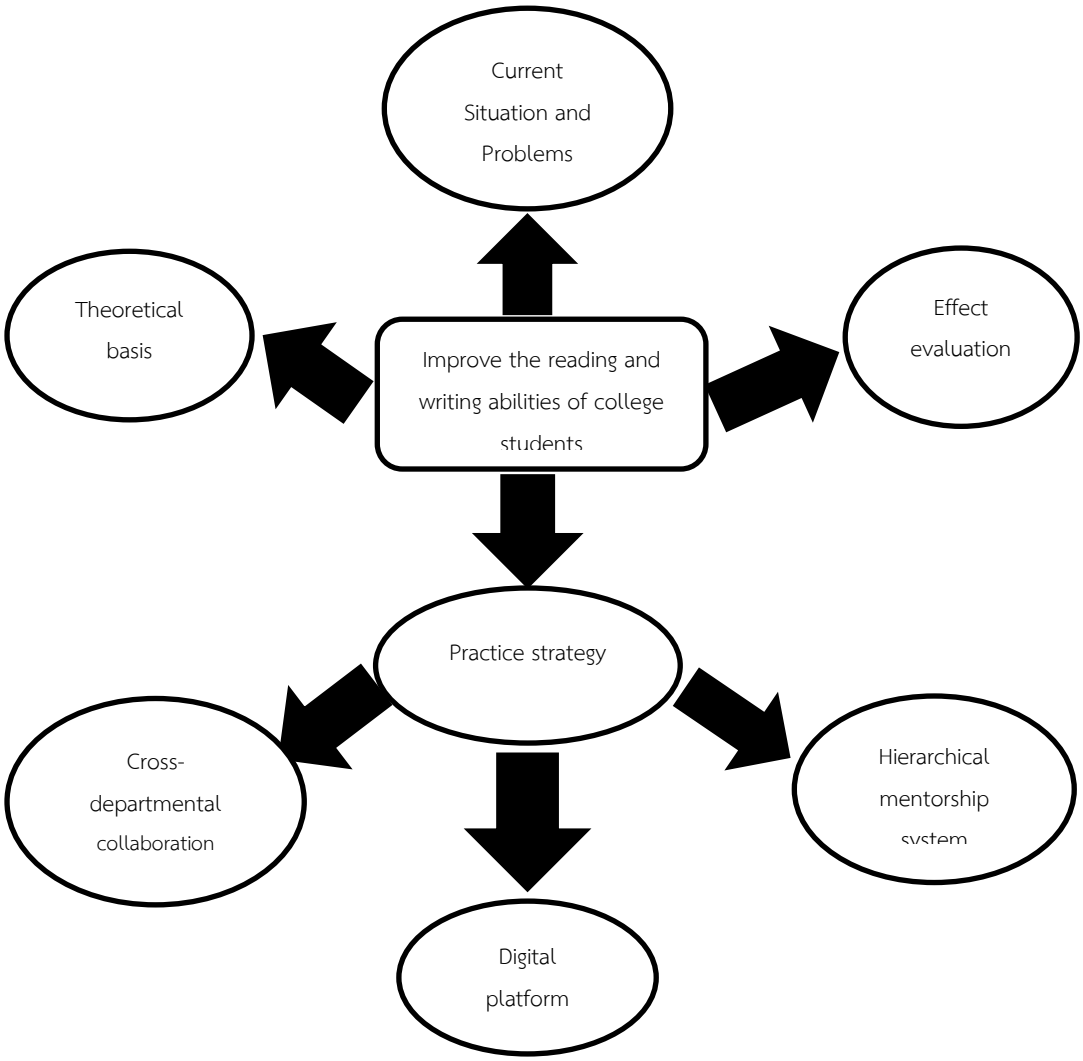


Figure 1 Knowledge gained from research

8. Research Recommendation

8.1 Policy Recommendation

8.1.1 Yunnan University should invest in implementing advanced digital literacy tools, such as writing analytics software, real-time feedback mechanisms, and interactive e-learning platforms.

8.1.2 Yunnan University should establish peer mentorship and writing support centers, a peer mentorship program should be developed where senior students provide guidance and feedback to junior students on academic writing.

8.2 Implementation Suggestions

8.2.1 Develop comprehensive faculty training programs; regular and structured faculty development programs should be established to train educators on integrating literacy instruction across different disciplines.

8.2.2 Yunnan University should invest in implementing advanced digital literacy tools, such as writing analytics software, real-time feedback mechanisms, and interactive e-learning platforms.

8.3.3 A dedicated writing support center should be established within the university, offering one-on-one consultations, workshops, and access to online writing resources.

8.3 Suggestions for Further Studies

8.3.1 Investigate the long-term impact of digital literacy integration, future research should explore how digital tools influence student literacy development over multiple academic years.

8.3.2 Examine the effectiveness of cross-disciplinary collaboration, further studies should evaluate how collaborative literacy projects between different academic disciplines impact student learning outcomes.

8.3.3 Assess the role of motivation in literacy development, there is a need for future research on how student motivation influences literacy engagement and achievement. Future studies should investigate the factors that encourage students to actively participate in reading and writing activities, as well as strategies for improving motivation through curriculum design and instructional approaches.

8.3.4 Evaluate institutional support for literacy enhancement, future research should analyze the effectiveness of institutional policies and resources allocated for literacy development.

9. References

Boquet. (2002). **Noise from the Writing Center.** Logan, UT : Utah State University Press.

Chen, X., & Yu, L. (2019). Academic writing challenges faced by Chinese students in higher education. **Journal of Language and Literacy Education.** 15(1). 123–137.

Hafner, C. A. (2022). Digital literacy in English for academic purposes: Innovation and inclusion. **English Language Teaching Journal.** 76(2). 234–243.

Huang, R., & Li, Y. (2023). Integrating digital literacy into teacher education: A post-pandemic perspective. **Journal of Educational Technology & Society.** 26(1). 89–102.

Jiang, L., & Chen, J. (2023). Multimodal composing in academic writing: A case study of Chinese EFL students. **System.** 114. 103–115.

Jones, K. (2018). Cooperative learning strategies and student writing improvement: An empirical study. **Educational Research Review.** 62(2). 157–172.

Li, Y. (2020). Technology-enhanced learning and literacy development in Chinese higher education. **International Journal of Educational Technology.** 11(1). 45–59.

Liu, X., & You, X. (2020). The role of writing centers in improving student writing in Chinese universities. **Journal of Writing Research.** 12(2). 243–267.

Smith, A. (2016). Using online writing development of Higher Psychological Processes. Cambridge, MA: Harvard University Press. g platforms to enhance self-regulated learning in higher education. **Computers & Education.** 94(2). 153–167.

Vygotsky, L. S. (1978). **Mind in Society: The Development of Higher Psychological Processes**. Cambridge, MA : Harvard University Press.

Wang, L., & Zhang, M. (2021). Curriculum reform and literacy development in Chinese universities: A cross-cultural perspective. **Journal of Higher Education.** 38(3). 212–230.

Yamane, T. (1973). **Statistics: An Introductory Analysis**. London : John Weather Hill, Inc.

Zhao, Q. (2021). Impact of internet culture on student reading and writing habits in China. **Contemporary Chinese Education.** 38(3). 212–230.