



Investigate the problems and needs to enhance language literacy ability in the new media environment of middle school students at Wuhan Experimental Junior High School, China

Ruan Qingzi¹ Nipaporn Khamcharoen^{2*}

^{1,2} Dhonburi Rajabhat University, Thailand

* Corresponding author's e-mail: 1308757602@qq.com¹, nipaporn.k@dru.ac.th^{2*}

ARTICLE INFO

Article history:

Received: April 25, 2025

Revised: June 25, 2025

Accepted: June 26, 2025

Keyword:

new media environment, middle school students, language literacy, problems and needs

ABSTRACT

In the context of the prevalence of new media, it is crucial to explore the cultivation of middle school students' language literacy ability. This study takes Wuhan Experimental Junior High School as the research object. This article aimed 1) to investigate the existing problems and needs in the cultivation of language literacy ability among middle school students in the new media environment of Wuhan Experimental Junior High School, and 2) to develop the strategic guideline to enhance language literacy ability in the new media environment of Middle School students. The respondents were 316 students and 20 teachers. The research instrument employed in this study was a questionnaire. The information and data collected were analyzed through the content analysis method and then presented in terms of frequency, mean, and standard deviation. The results show that: 1) the problems and needs in the cultivation of language literacy ability of students were at a high level and the problems and needs in the cultivation of language literacy ability of teachers were at a middle level; 2) the strategic guideline to enhance language literacy ability in the new media environment of Middle School students consisted of 8 chapters. All 10 chapters were evaluated by 3 experts, and the IOC values ranged from 0.67 to 1.00.

Introduction

With the emergence and wide application of smart phones, iPads and laptops, WeChat, Weibo, Tiktok, Kwai and other We Media platforms have also emerged, and new media has become the most iconic term in the 21st century. In the new era of rapid development of information technology, various new media have widely penetrated into various fields such as economy, politics, society, culture, and daily life. The application of new media not only changes students' learning and life but also affects their ideological understanding and value orientation (Kim & Gurvitch, 2020). New media represented by WeChat, Weibo, Tiktok and Kwai have unique advantages such as efficiency, simplicity, convenience and strong interaction. Once online, they are deeply loved by student groups, and become an important way for them to know the world, understand the national conditions, grow their talents and cultivate their character (Lei & Li, 2020)

In September 2020, the Chinese Academy of Social Sciences released the Youth Blue Book "Internet Application Report for Chinese Minors 2020", which showed that the internet penetration rate for minors had reached 99.2%; The age at which minors first access the internet is continuously decreasing, with 78% of people aged 10 and below starting to access the internet. The digital indigenous characteristics of teenagers are becoming increasingly evident (Liu et al., 2021). Therefore, while quality education is increasingly valued, the middle school student group is also facing increasing network risks, and quality education for middle school students has become an urgent research issue. From an individual perspective, middle school students are in the adolescence of growth and development, growing from ignorant young children to adults. The internet, as a window for them to explore the world and the unknown, has a great impact on their physical and mental development. The level of quality education formed during this stage directly affects their future participation in the information society. In the new media environment, high school students not only need to master traditional language skills such as reading, writing, and speaking, but also need to adapt to the language requirements in the new media environment. They need to learn to effectively express and communicate, understand and analyze various media information, as well as distinguish the authenticity of information and its dissemination methods. At the same time, middle school students also need to cultivate media literacy and learn to use new media resources for learning, creation, and socializing.

The teaching of new media technology conforms to the quality education concept of "education should be oriented towards modernization, the world, and the future" (Stosic, 2015). The 21st century is the era of information technology, and computer and internet technologies are influencing and changing every aspect of today's society at an unprecedented speed (Johnson, 2016). The competition between countries in the future is mainly about talent, and the competition for talent ultimately depends on the competition in education. Whether the latest science and technology can be transformed into advanced productivity depends on the continuous talent transmission and supply of education (Chun et al., 2016). Therefore, timely introduction of advanced new media technology to assist teaching, enabling students to be exposed to multimedia technology from the beginning, understand and love multimedia technology, and thereby stimulate their interest in information technology, laying a solid foundation for the future strategy of "revitalizing the country through science and education", should also become an important content of today's education.

In summary, the rise of new media presents both opportunities and challenges for the cultivation of middle - school students' language literacy. Research on enhancing their language literacy in the new - media environment is of great theoretical and practical significance. Theoretically, it helps to integrate relevant theoretical frameworks to provide a more comprehensive and systematic solution for language - literacy improvement. Practically, it offers valuable guidance for educational practice and policy - making, promoting the all - around development of middle - school students' language literacy and contributing to the cultivation of high - quality talents for social development.

Objectives

1. To investigate the existing problems and needs in the cultivation of language literacy ability among middle school students in the new media environment of Wuhan Experimental Junior High School.
2. To develop strategic guidelines to enhance language literacy ability in the new media environment of Middle School students.

Literature Review

The development of new media is a history of continuous progress in human society's production and communication processes, as well as a process of continuously advanced and improved information

dissemination and communication methods. Currently, there is no clear - cut definition in the academic community regarding the connotation of new media. The concept and connotation of new media can be explained or extended from different perspectives or environments. According to Liao (2008), President of Communication University of China, new media refers to all new means or forms of communication that utilize digital technology, network technology, and mobile communication technology to provide integrated information and entertainment services such as video, audio, voice data services, connected games, and remote education through channels such as the Internet, broadband local area networks, wireless communication networks, and satellites, with television, computers, and mobile phones as the main output terminals. Liu et al. (2021) from Beijing University of Posts and Telecommunications have a broader definition of new media. They believe that new media refers to using high - tech means such as computer technology, telecommunications technology, and digital broadcasting technology, and through communication channels such as the Internet, wireless communication networks, digital broadcasting and television networks, and satellites, and via computers, mobile phones, vehicles, buildings, squares, airplanes, rockets, spacecraft, and Mp3, Mp4 and other all - weather and all - around multi - style receiving terminals, to achieve personalized, refined, and interconnected communication methods for point - to - point, point - to - many, multi - point, and "many - to - many" communication. New media in teaching should rely on modern networked digital information technology to transmit learning resources to students through media such as television, computers, and mobile phones, achieving long - distance interaction, real - time communication, and massive information in teaching.

People mainly explore the connotation of language literacy ability from three different dimensions. From the perspective of curriculum establishment, some studies hold that the composition of Chinese language literacy ability comes from learning. Chao (2007) pointed out it includes the cultivation of "listening", "speaking", "reading", "writing", literary cultivation, and personal cultivation in writing. When determining the objectives of the Chinese language curriculum, Liu (2021) proposed to articulate language literacy ability based on the "three - dimension" framework in the "Chinese Language Curriculum Standards". Considering the nature of the Chinese language curriculum, the study defines Chinese education as strengthening students' language literacy ability, with a framework covering basic knowledge, logical thinking, etc. The substitution of "language literacy ability" for "language ability" is based on a consensus on "language". From the individual dimension, the meaning of language literacy ability is often studied from humanities and Chinese education perspectives, aiming to explore individual shaping in Chinese education, though the view that "language life goes beyond language activities" is disagreed. In terms of human training, scholars classify language literacy abilities, but the author deems these classifications unreliable as learning and humanities training are interrelated and basic training is their foundation. From a psychological perspective, Ni (2013) and Lei (2004) divided Chinese language literacy ability and proficiency into different levels respectively. Wang & Tong (2004) drew on Gagne's research to summarize its structural framework. In 2016 "New Curriculum Standards for High School Chinese", core competencies were defined, and Zhang & Yang (2016) emphasized aspects in secondary Chinese teaching, which the author summarized into three dimensions according to relevant standards and high - school students' learning characteristics.

Conceptual Framework

The purpose of this study is to investigate the existing problems and needs in cultivating the language - literacy ability of middle - school students in the new - media environment of Wuhan Experimental Junior High School, as well as to explore the problems and needs for enhancing their language literacy ability in this environment.

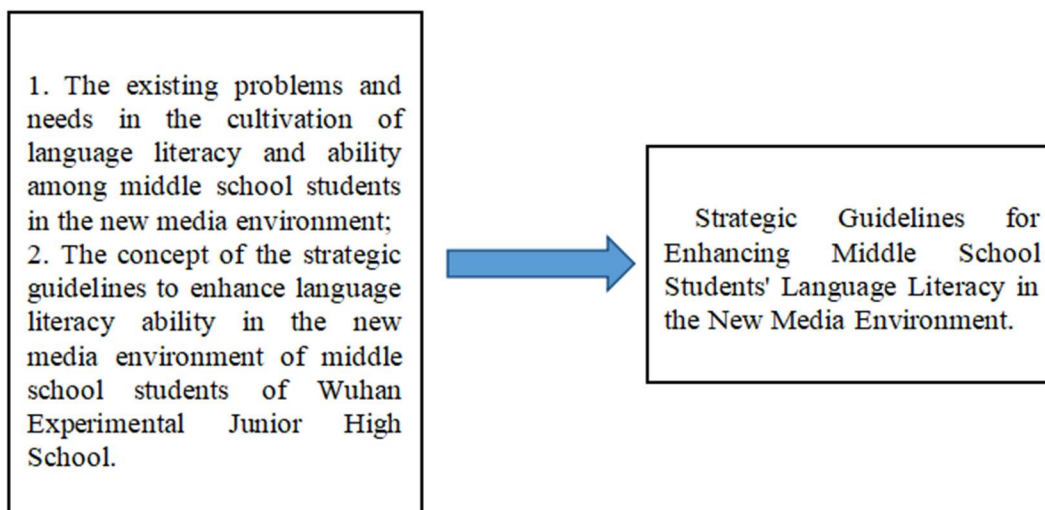


Figure 1. Conceptual Framework

Methods

The research methods in this study cover multiple aspects. The research object is Wuhan Experimental Junior High School. In terms of sampling, the sample is determined by stratified random sampling from the population. Data collection employs questionnaires and online interviews. The former is divided into student and teacher versions and has been evaluated by experts, while the latter is assisted by professional experts. The data is collected by the researcher. During data - analysis, common statistics and the Likert scale are used to assess problems and needs.

1. Population and sample

This study is centered on Wuhan Experimental Junior High School as the research subject. The population is categorized into two groups: 1,500 middle - school students who were involved in the learning of Chinese literacy skills and 20 teachers who instructed middle - school students in Chinese literacy. The sample group, which comprises 316 students and 20 teachers teaching Chinese language courses, is chosen through the application of the stratified random sampling method (Yamame, 1973).

2. Research instrument

In this research project, data collection was carried out through a questionnaire - survey method. The questionnaire was divided into a student set and a teacher set, each containing three parts: general information, problems in the cultivation of middle - school students' language literacy ability, and needs in the cultivation of middle - school students' language literacy ability (Cronbach, 1995). Three experts conducted an IOC (consistency score index) evaluation on the questionnaire, with each question in the same volume being evaluated within the range of 0.67 to 1.00, and the reliability of the questionnaire was evaluated using Cronbach's alpha for the problem - set. Additionally, a set of online interview questions was designed to construct strategic guidelines for enhancing middle - school students' language literacy in the context of building a new media environment, and five experts (five university teachers in the professional field) will express their opinions in the interviews to contribute to the construction of such strategic guidelines.

3. Data collection

In this research project, the researcher herself collected data and information from the sample group. The sample group was informed of the purpose of data collection and made an appointment. The researchers submitted

a permit letter in advance to the school director, requesting permission to collect data and information from the sample group of Wuhan Experimental Junior High School.

4. Data analysis

In this data - analysis section, the collected data and information are analyzed and interpreted, and then presented by means of frequency, percentage, average, and standard deviation (S.D.). The five - point Likert Rating Scale is adopted to evaluate the existing problems and needs in the cultivation of language literacy ability of middle - school students in the new media environment of Wuhan Experimental Junior High School.

Results

1. The existing problems and needs in the cultivation of language literacy ability.

Table 1. The problems of Middle School Students' Language Literacy of students.

Questions	\bar{x}	S.D.	Level of Problems
1. I can express my ideas clearly and fluently in daily communication.	3.34	1.23	Middle
2. When writing, I can organize my language according to the requirements of different writing styles.	3.68	1.18	High
3. When speaking in class, I can quickly organize my language and accurately convey my viewpoints.	3.53	1.22	High
4. When reading literary works, I can understand and absorb the good words and sentences and use them in my own expressions.	3.51	1.26	High
5. I can skillfully use a variety of rhetorical devices to make my expressions more vivid.	3.81	1.13	High
6. When reading an article, I can quickly grasp the key information and sort out the context of the article.	3.54	1.18	High
7. Facing a topic, I can think from different angles and put forward novel viewpoints.	3.77	1.24	High
8. When learning Chinese knowledge, I am good at summarizing and constructing a knowledge system.	3.64	1.19	High
9. I can analyze the text and understand the deep meaning hidden behind the words by the author.	3.50	1.19	Middle
10. In the writing process, I will first conceive the framework and then fill in the content to make the article organized.	3.97	1.16	High
11. When encountering complex Chinese problems, I can think calmly and try to use various methods to solve them.	3.47	1.19	Middle
12. My Mandarin pronunciation is standard and can be easily understood by others.	3.13	1.21	Middle
13. I can quickly and accurately recognize new characters and words and understand their meanings.	3.37	1.22	Middle
14. Reading classical Chinese is not very difficult for me. I can understand the usages of common notional and functional words.	3.52	1.23	High
15. I can write relatively fast and complete the composition task within the specified time.	3.62	1.19	High

Questions	\bar{x}	S.D.	Level of Problems
16. I am good at reciting and can express the emotions of the works through changes in intonation and rhythm.	3.59	1.22	High
17. I like reading various literary works and enjoy the reading process.	3.39	1.34	Middle
18. In Chinese classes, I always actively participate in interactions and show high enthusiasm.	3.55	1.21	High
19. When writing, I can incorporate my true feelings into the text and move the readers.	3.56	1.25	High
20. I think Chinese learning is very important for my growth and future development.	3.60	1.22	High
Total	3.55	1.21	High

From table 1, the average score of middle school students' language literacy status was 3.55, with a standard deviation of 1.21, which was at a high level. This indicates that middle school students have a certain foundation in language literacy, but there is still room for improvement. The statement "In the writing process, I will first conceive the framework and then fill in the content to make the article organized." ($\bar{x} = 3.97$), which indicates that most students have major problems in conceiving the writing framework and filling in the content. It is difficult for them to conceive the framework first and then fill in the content in an organized manner in actual writing. The statement "I can skillfully use a variety of rhetorical devices to make my expressions more vivid." ($\bar{x} = 3.81$), indicating that students have obvious deficiencies in skillfully using rhetorical devices to make their expressions vivid. They may encounter difficulties or misuse them in practical applications. Overall, there is an unbalanced development in different aspects of middle school students' language literacy, and targeted teaching improvements and learning enhancements are needed. The statement "Facing a topic, I can think from different angles and put forward novel viewpoints." ($\bar{x} = 3.77$), reflecting that students have problems in thinking about topics from multiple perspectives and putting forward novel viewpoints. Their thinking is not flexible enough, and it is difficult for them to come up with novel ideas.

The statement "I can quickly and accurately recognize new Chinese characters and words and understand their meanings" ($\bar{x} = 3.37$), showing that students have few problems in recognizing and understanding new Chinese characters and words and possess good basic recognition and understanding abilities. The statement "I can clearly and fluently express my ideas in daily communication" ($\bar{x} = 3.34$), suggesting that students are in good condition in terms of the clarity and fluency of their expressions in daily communication and can express themselves relatively smoothly. In terms of specific ability performances, the statement "My Mandarin pronunciation is standard and can be easily understood by others" ($\bar{x} = 3.13$), indicating that students perform well in Mandarin pronunciation. Most students have standard Mandarin pronunciation and can be understood smoothly by others.

Table 2. Needs of Middle School Students' Language Literacy of students.

Questions	\bar{x}	S.D.	Level of needs
1. I need more practice opportunities to improve the clarity of expression in daily communication.	3.16	1.34	Middle
2. I hope to obtain writing skills guidance to better adapt to the requirements of different literary styles.	3.52	1.11	High
3. I look forward to improve my ability to organize language when speaking in class.	4.04	1.04	High

Questions	\bar{X}	S.D.	Level of needs
4. I want to learn how to select useful expressions from literary works and apply them to my own creations.	3.70	1.22	High
5. I'm eager to learn more rhetorical devices to make my expressions more vivid.	3.78	1.04	High
6. I hope to be able to grasp the key information of articles more quickly.	3.61	1.18	High
7. I need to train myself to think about problems from multiple perspectives and form unique insights.	3.54	1.15	High
8. I want to better master the methods of summarizing Chinese language knowledge.	3.59	1.22	High
9. I hope to deeply understand the author's intentions behind the text.	3.53	1.22	High
10. I want to learn how to effectively construct the framework of an article to ensure logical rigor.	3.91	1.07	High
11. I hope to improve the accuracy of my Mandarin pronunciation.	3.05	1.39	Middle
12. I need to strengthen the speed and comprehension ability of recognizing Chinese characters.	2.94	1.21	Middle
13. I want to improve my comprehension ability in classical Chinese reading.	3.59	1.19	High
14. I expect to speed up my writing without affecting the quality.	3.63	1.22	High
15. I want to improve my recitation skills and enhance my expressive ability.	3.57	1.18	High
16. I'm interested in reading various types of literary works.	3.58	1.20	High
17. I'm willing to participate in Chinese class interactions more actively.	3.67	1.22	High
18. I will feel delighted because of excellent articles and savor them repeatedly.	3.65	1.15	High
19. I want to learn to integrate personal feelings into my writing.	3.46	1.19	Middle
20. Even when encountering setbacks, I still want to maintain a positive attitude and continue to study Chinese hard.	3.56	1.17	High
Total	3.56	1.20	High

According to Table 2., the overall mean was 3.56, with a standard deviation of 1.20, indicating a high level situation. This means that middle school students have relatively common and medium degree demands in terms of improving their language literacy. Among the specific demands, the top three items with the highest scores were as follows: "I look forward to improving my ability to organize language when speaking in class" ($\bar{X} = 4.04$), which was at a high level. This shows that students attach great importance to the improvement of their language organizing ability in public occasions like the classroom. "I want to learn how to effectively construct the framework of an article to ensure logical rigor." ($\bar{X} = 3.91$), also at a high level, indicating that students are aware of the importance of the logical rigor of the article structure and are eager to improve in terms of framework construction in writing. "I'm eager to learn more rhetorical devices to make my expressions more vivid" ($\bar{X} = 3.78$), at a high level, reflecting students' strong demand for enhancing the vividness of language expressions.

On the other hand, "I need more practice opportunities to improve the clarity of expression in daily communication" ($\bar{X} = 3.16$), at a middle level. This indicates that although students are aware of the importance of the clarity of daily communication, their urgency of demand is slightly lower compared with

some other demands for ability improvement. The dimension of "I hope to improve the accuracy of my Mandarin pronunciation" ($\bar{x} = 3.05$), at a middle level. Perhaps due to factors such as the daily language environment, students' demand for improving Mandarin pronunciation is not particularly prominent. The item "I need to strengthen the speed and comprehension ability of recognizing Chinese characters" ($\bar{x} = 2.94$), at a middle level, reflecting that students have certain demands for improvement in basic Chinese character learning.

Table 3. Problems of Cultivating Middle Students' Language Literacy in the New Media Environment of teachers.

Questions	\bar{x}	S.D.	Level of problems
1. In classroom teaching, I will use multimedia resources to create situations and guide students to enter the learning state.	3.20	1.06	Middle
2. I encourage students to use new media platforms to preview texts and look for information independently.	3.15	1.09	Middle
3. During the teaching process, I organize students to carry out group cooperative learning and guide them to use new media tools to communicate and discuss.	3.35	1.04	Middle
4. I will use new media technologies to increase the interactivity of classroom teaching and understand students' learning situations in a timely manner.	3.55	1.36	High
5. I will introduce excellent literary works in teaching to broaden students' reading horizons.	3.40	1.39	Middle
6. I focus on cultivating students' critical thinking about new media information, guiding them to distinguish the advantages and disadvantages of network language	3.45	1.28	Middle
7. Combining current affairs hotspots, I design Chinese exercise questions with a sense of the times to help students consolidate knowledge.	3.25	1.02	Middle
8. I will understand students' extracurricular learning situations through their learning records on new media platforms, and incorporate them into the evaluation system.	3.65	1.31	High
9. I use the method of online questionnaires to collect students' opinions on Chinese teaching and adjust teaching strategies and evaluation methods accordingly.	3.85	1.35	High
Total	3.43	1.21	Middle

As can be seen from Table 3., the overall mean was 3.43 and the standard deviation was 1.21, with the overall situation at a middle level. The statement "I use the method of online questionnaires to collect students' opinions on Chinese teaching and adjust teaching strategies and evaluation methods accordingly" ($\bar{x} = 3.85$). This reflects that there are major problems in collecting students' opinions through online questionnaires and adjusting teaching. It is difficult to effectively use this method to improve teaching in actual operation. The statement "I will understand students' extracurricular learning situations through their learning records on new media platforms and incorporate them into the evaluation system" ($\bar{x} = 3.65$), indicating that there are obvious deficiencies in understanding students' extracurricular learning situations through learning records on new media platforms and incorporating them into the evaluation system. There are difficulties in data utilization and the integration of the evaluation system. The statement "I will use new media technologies to increase the interactivity of classroom teaching and understand students' learning

situations in a timely manner" ($\bar{x} = 3.55$), indicating that there are problems in using new media technologies to enhance classroom interactivity and timely grasp students' learning situations. There is room for improvement in terms of technology application and the timeliness of information acquisition.

Among them, the statement "Combining current affairs hotspots, I design Chinese exercise questions with a sense of the times to help students consolidate knowledge" ($\bar{x} = 3.25$), reflecting that teachers have relatively few problems in designing Chinese exercise questions in combination with current affairs hotspots and can integrate elements of the times into the teaching consolidation process relatively well. From this, it can be seen that teachers have certain advantages in cultivating middle school students' language literacy, but there are also some deficiencies. The statement "In classroom teaching, I will use multimedia resources to create situations and guide students to enter the learning state" ($\bar{x} = 3.20$), showing that teachers perform well in using multimedia resources to assist teaching and create a learning atmosphere. They can make good use of these resources to help students get into the learning state. The statement "I encourage students to use new media platforms to preview texts and look for information independently" ($\bar{x} = 3.15$). This indicates that teachers do a relatively good job in encouraging students to use new media platforms for independent preview and information search and able to guide students to carry out such learning activities.

Table 4. Needs of cultivating Middle School Students' Language Literacy in the new media environment of teachers.

Questions	\bar{x}	S.D.	Level of Needs
1. I think schools should provide more diversified new media teaching resources to meet the needs of language literacy cultivation.	3.10	1.25	Middle
2. I hope schools can strengthen the renewal and maintenance of new media teaching equipment to improve teaching effectiveness.	2.80	1.06	Middle
3. I think teachers need to receive regular training on new media teaching skills to improve their teaching abilities.	3.45	1.23	Middle
4. I think using situation simulation for language practice is very effective in improving students' language literacy.	3.75	1.16	High
5. I tend to combine new media platforms to carry out independent learning and cooperative learning activities.	3.40	1.14	Middle
6. I think project-based learning can effectively promote students' comprehensive language application abilities.	3.35	1.04	Middle
7. I think critical thinking training should become an important part of cultivating middle school students' language literacy.	4.05	1.19	High
8. I think reading and appreciating classic literary works is crucial for cultivating middle school students' language literacy.	3.80	1.01	High
9. I think the teaching contents of practical writing styles and oral expression should be increased to meet students' practical needs.	3.60	1.43	High
10. I think the standardization and application of new media language should become a new direction for cultivating middle school students' language literacy.	3.05	1.19	Middle
11. When evaluating students' language literacy, I tend to adopt a comprehensive evaluation method, including classroom performance, homework grades, and learning records on new media platforms.	3.55	1.36	High
Total	3.46	1.18	Middle

From table 4, the overall mean was at a middle level (3.46). This indicates that there was a medium - degree demand in cultivating middle school students' language literacy in the new media environment. Among the specific demands, the statement "I think critical thinking training should become an important part of cultivating middle school students' language literacy" ($\bar{x} = 4.05$), which was at a relatively high level. This shows that teachers attach great importance to improving students' language literacy through critical thinking training and are aware of the importance and urgency of this for the development of students' language literacy. The statement "I think reading and appreciating classic literary works is crucial for cultivating middle school students' language literacy" ($\bar{x} = 3.80$), also at a relatively high level. It indicates that teachers are aware of the key role of classic literary works in cultivating middle school students' language literacy and hope to increase investment and attention in this regard. The statement "I think using situation simulation for language practice is very effective in improving students' language literacy." ($\bar{x} = 3.75$), at a high level, indicating that although teachers' pay attention to the impact of new media language - related aspects on the cultivation of students' language literacy, the obviousness of this demand is relatively weak compared with some other items. Based on these data, it can be seen that in the process of cultivating middle school students' language literacy in the new media environment, teachers have different degrees of demand in different aspects.

The statement "I think schools should provide more diversified new media teaching resources to meet the needs of language literacy cultivation." ($\bar{x} = 3.10$), also at a relatively middle level, reflecting the recognition and demand for the teaching method of situation simulation in enhancing students' language abilities. The statement "I think the standardization and application of new media language should become a new direction for cultivating middle school students' language literacy" ($\bar{x} = 3.05$), at a middle level, reflecting the demand for diversified teaching resources, but the prominence of this demand is relatively less strong. Among the three items with the lowest scores, the statement "I hope schools can strengthen the renewal and maintenance of new media teaching equipment to improve teaching effectiveness." ($\bar{x} = 2.80$), at a middle level. This shows that although teachers are aware of the importance of renewing and maintaining new media teaching equipment, the urgency of this demand is slightly lower compared with other aspects.

2. Strategic Guideline to Enhance Language Literacy Ability in the New Media Environment of Middle School Students

Strategic Guideline to Enhance Language Literacy Ability in the New Media Environment of Middle School Students consisted of 8 chapters.

Chapter 1 Daily Expression and Communication

Chapter 2 Writing Ability Cultivation

Chapter 3 Literature Reading and Absorption

Chapter 4 Thinking Expansion and Innovation

Chapter 5 Improvement of Classroom Speaking Ability

Chapter 6 Guidance on Writing Framework Construction

Chapter 7 Learning of Rhetorical Devices

Chapter 8 Comprehensive Ability Enhancement

Discussion

The findings of this study on the language literacy of middle - school students in the new media environment align closely with previous research. Middle - school students demonstrate a certain language foundation yet exhibit unbalanced development. They struggle notably in advanced areas such as constructing writing frameworks, skillfully using rhetorical devices, and thinking from multiple perspectives, while performing relatively well in basic language skills like new character recognition, clarity

of daily communication, and Mandarin pronunciation. In terms of needs, students' demands for enhancing language literacy are of a medium - degree and cover a wide range, with high expectations for improving language - organizing ability in classroom speaking (= 4.04), mastering article framework construction, and learning more rhetorical devices, and also showing needs in basic areas such as daily communication practice, Mandarin pronunciation accuracy, and Chinese character learning speed. The strategic guidelines proposed to enhance language literacy in the new media environment share commonalities with those advocated by other scholars, such as using regular writing workshops to improve writing skills and group discussions to enhance oral communication skills. However, similar to other studies, the implementation of these strategies faces challenges. The IOC scores in our study reflect issues such as insufficient in-depth guidance (e.g., in daily expression and communication with an IOC score of 0.67) and difficulty in meeting students' needs with the current activity frequencies. These challenges suggest that while the strategies are in the right direction, continuous refinement and adaptation are necessary to effectively improve middle school students' language literacy in the new media environment.

Body of knowledge

This study contributes to originality and enriches the body of knowledge in two main aspects. Methodologically, it innovates by integrating questionnaires and online interviews, both rigorously evaluated by experts. This approach ensures comprehensive and accurate data collection. The use of the Likert scale for data analysis offers a more refined way to measure the problems and needs in language literacy cultivation, enabling in - depth exploration of the situation. In terms of the knowledge system, the research integrates theories of media education, language acquisition, and information literacy. This integration provides a comprehensive understanding of enhancing middle - school students' language literacy in the new media environment. The findings can guide educators, policymakers, and researchers, promoting the development of educational theories and practices, and thus enriching the knowledge related to language education in the digital age.

Suggestions

In terms of implementation, it is recommended to strengthen teachers' in-depth guidance in daily teaching activities to provide students with more effective assistance in language practice, regularly update and maintain new - media teaching equipment to ensure the smooth progress of professional teaching activities, and enrich teaching resources, especially diversified teaching materials, closely integrated with the new- media environment to meet students' personalized learning needs. For future research, it is suggested to conduct in-depth research on how to use new - media technology to further enhance students' critical thinking ability to meet the development needs of the complex information era, study the differential responses of students with different learning styles to language literacy improvement strategies in the new-media environment for precise teaching, and establish a more complete and scientific evaluation system for middle - school students' language literacy in the new- media environment to more accurately assess students' development.

References

- Chun, D., Kern, R., & Smith, B. (2016). Technology in language use, language teaching, and language learning. *Modern Language Journal*, 100(S1), 64–80.
- Cronbach, L. (1995). Construct validity in psychological tests. *Psychological Bulletin*, 52(4), 281-302.
- Johnson, N. (2016). A Virtual B-School through Information Technology: Framework and Case Study. *Journal of Computer Information Systems*, 38(3), 58-63.

- Kim, G., & Gurvitch, R. (2020). Online education research adopting the community of inquiry framework: A systematic review. *Quest*, 72(4), 395-409.
- Lei, L. (2004). Redefining "Chinese literacy". *Proceedings of the 2004 Annual Meeting of Jiangxi Language Society*, 8.
- Lei, L., & Li, Z. (2020). Analysis of Influencing Factors and Barrier Factors of Online Teaching Quality in Colleges and Universities under the Epidemic Situation: A Case Study of a Higher Education Institution. *Higher Education Forum*, (12), 53-56.
- Liao, X. (2008). What is new media. National New Media Art Department Chairman (Dean) Forum. *Chinese Society of Engineering Graphics*, 41.
- Liu, L., Chen, X., Li, X., Zeng, Y., & Zhang, C. (2021). Online teaching practice under the epidemic situation of novel coronavirus pneumonia. *Asian Agricultural Research*, 12(08), 78-82.
- Liu, Y. (2021). Research on ways to improve Minors' online news literacy. *Journal of Journalism and Research*, 12(13), 8-9.
- Ni, W. (2013). My Opinion on the nature of Chinese Curriculum. Curriculum, Textbooks. *Teaching Methods*, 33(01), 24-28.
- Stosic, L. (2015). The importance of educational technology in teaching. *International Journal of Cognitive Research in Science Engineer*, 3(1), 111-114.
- Wang, Y., & Tong, M., (2004). A Study on the Basic Characteristics of Online English Teaching. *Journal of Erbin College*, (2), 116-118.
- Yamane, T. (1973). *Problem to accompany statistics: an introductory analysis (3rd. ed)*. New York: Harper & Row, 725.
- Zhang, Y., & Yang D. (2016). Chinese Teaching in primary schools based on Core literacy. *Educational Exploration*, (10), 4.