

## **A STUDY ON THE IMPACT OF LANGUAGE TEACHERS' INFORMATION LITERACY ON THE QUALITY OF LANGUAGE TEACHING IN PRIMARY SCHOOLS IN YUNNAN, CHINA**

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### **Abstract**

The objectives of the study were 1): to study the level of language teachers' information literacy; 2): to study the level of teaching quality; 3): to study the impact of language teachers' information literacy on teaching quality. The study was conducted on all elementary school language teachers in Kunming, Yunnan, the research instrument was a questionnaire. The questionnaires were distributed by convenience sampling, both online and offline, 385 questionnaires were distributed and 385 were validly answered, with a validity rate of 100%. The results of the study showed that language teachers' information literacy had a significant positive impact on teaching quality. Specifically, the four dimensions of language teachers' information literacy—information ethics, information thinking, language information technology use and research information competence, all had a positive impact on teaching quality.

**Keywords:** Information literacy of language teachers, Quality of teaching, Information ethics, Information thinking, Language information

### **Introduction**

In the context of global informatization, education informatization has become a crucial driver of educational reform and development, particularly in Yunnan Province, China. Home to many ethnic groups, Yunnan faces unique challenges in elementary language education, which not only promotes language skills but also preserves and advances diverse ethnic cultures. According to the 2023/2024 Statistical Bulletin on Education in Yunnan, the province has 11,621 compulsory education schools, with over 5.7 million students enrolled. Despite this, the number of elementary schools decreased by 436, or 4.21%, from the previous year, while the number of teaching points slightly declined. However, enrollment has increased significantly, with a rise of 109,300 elementary students, or 18.45%, compared to the previous year.

This increase in enrollment leads to larger class sizes, which challenges teachers in providing individualized instruction. This situation is especially difficult in subjects such as language, where personalized teaching is crucial. The large class sizes highlight the need for improved information literacy among elementary school language teachers in Yunnan. Information literacy—teachers' ability to effectively use information technology in teaching—is essential to enhancing teaching quality, fostering student engagement, and managing the challenges of large classrooms.

The main aim of this study is to explore how the information literacy of language teachers in Yunnan affects teaching quality and to propose effective solutions. By examining the relationship between teachers' information literacy and indicators such as students' academic performance, learning interest, attitudes, and intercultural communication skills, this research seeks to improve educational outcomes in Yunnan. It will also provide practical insights for integrating information technology into language education, helping teachers better manage large classrooms and foster a more interactive, effective learning environment.

Moreover, the study aims to develop strategies to improve information literacy among language teachers in Kunming and Yunnan Province, ultimately supporting the broader goal of modernizing education and improving teaching quality in multi-ethnic areas. This research will contribute to the balanced development of elementary school language education and offer valuable guidance for enhancing education informatization, benefiting not just Yunnan but potentially other regions facing similar challenges.

### Research Objectives

1. To study the level of language teachers' information literacy.
2. To study the level of teaching quality.
3. To study the impact of language teachers' information literacy on teaching quality.

### Conceptual framework

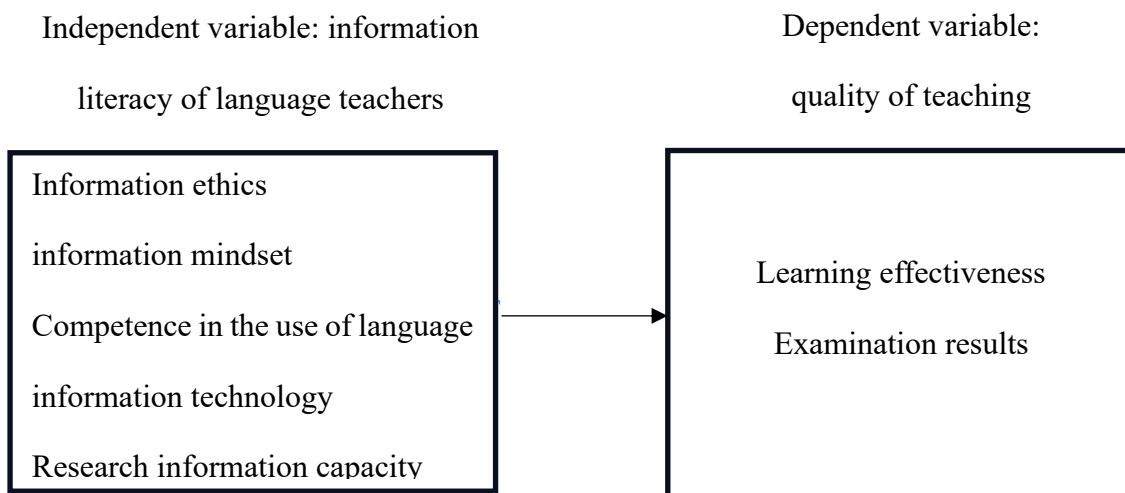


Figure 1: Conceptual framework

### Hypotheses

- H<sub>1</sub>: There is a significant positive effect of information literacy of language teachers on teaching quality.
- H<sub>2</sub>: Information ethics has a significant positive effect on teaching quality.
- H<sub>3</sub>: There is a significant positive effect of information thinking on teaching quality.
- H<sub>4</sub>: Language information technology application ability has a significant positive effect on the quality of teaching and learning.
- H<sub>5</sub>: Research information competence has a significant positive effect on teaching quality.

## **Literature Review**

### **1. Information literacy for language teachers. (Zhu, 2001)**

Information ethics and morals: refers to the ethical norms and principles that teachers should follow when acquiring, using and managing information in the teaching and education process. (Teng Qiuming, 2007)

Information thinking: Information thinking for primary school Chinese teachers refers to a way of thinking that teachers demonstrate in the process of obtaining, processing and using information. It covers teachers' abilities to analyze, evaluate and apply information. Information thinking is considered to be a brand new scientific way of thinking that is different from traditional physical thinking and energy thinking. (Xiang Shuqiong & Jiang Zhengming, 2017)

Language information technology application ability: refers to the need for teachers to have a solid foundation in information technology application to enhance language information technology application ability. (Zuoxiulan, 2020)

Scientific research information ability: the ability of elementary school Chinese language teachers to improve teaching effectiveness and teaching quality in their teaching practice by combining information technology with scientific research methods. (Zhang Min, Li Zhiqiang, 2020).

### **2. Teaching quality (2002)**

Teaching quality: It refers to the extent to which teachers promote students' achievement of expected educational outcomes, including whether learning activities are reasonable and appropriate and whether they take into account students' characteristics (knowledge acceptance, learning methods, etc.). In particular, it refers to teachers' handling of students and content, and the organization and handling of learning tasks and activities. (Liu Zhijun, 2002)

Test scores, or students' "academic performance," generally refer to the performance and measurement of the knowledge, skills, or abilities that students have acquired through learning within a certain learning period. Feng Tingting (2020) studied how to effectively improve the academic performance of students at risk of failing.

## **Research Methodology**

### **1. Population and Sample**

Population: all primary school Chinese language teachers in Kunming City, Yunnan Province

Sample: Due to the large number of people in the research population of this paper and the inability to count an accurate number, the Cochran formula (Cochran, 1977) was used to calculate the sample size, and the final appropriate sample size for this study was determined to be 385.

### **2. Data Collection**

The data collection tool for this paper is a survey questionnaire. The main tool used in this study is a questionnaire divided into three parts. The first part is about the basic characteristics of the personnel, including gender, age, and computer proficiency. The second part is a test on the information literacy of primary school Chinese teachers, and the third part is a test on teaching quality.

A total of 385 valid questionnaires were returned, with an effective recovery rate of 100%, which meets the requirements for statistical significance. Simple random sampling was used.

### 3. Data Analysis

Descriptive statistics (e.g., mean, standard deviation, percentages and frequencies) were used for the data. The analysis focused on the frequency, percentage and standard deviation of age, and the frequency and percentage of gender.

### Research Result

Among the respondents in this study, the highest proportion, 51.2%, was male. The highest proportion, 67.5%, was aged 31-40. The highest proportion, 87.0%, had a bachelor's degree. The highest proportion, 95.6%, had a Level 1 Computer Proficiency Certificate. The highest proportion, 94.8%, had a Level 2A Mandarin Proficiency Certificate.

Table 1: Goodness of Fit ( $R^2$ ) of X and Z

R	$R^2$	Adjusted $R^2$	Standard Error of Estimate	$R^2$ Change	F	p-value	Durbin - Watson
0.980	0.959	0.959	0.151294	0.959	2246.715	0.000	2.052

As can be seen from the above table, the value of the model  $R^2$  is 0.959, which means that dimensions X1, X2, X3 and X4 affect 95.9% of the variation in the variable Z. The D-W value is 2.052, which is close to 2, indicating that there is no obvious autocorrelation between the residuals, and there is no correlation between the sample data, and that the model is reasonable.

Table 2: Results of the linear regression analysis of X and Z

	Unstandardized Coefficient		Standardized Coefficient	t	p-value	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(X)	0.246	0.039		6.392	0.000		
X1	0.238	0.008	0.334	28.975	0.000	0.803	1.246
X2	0.254	0.009	0.356	28.401	0.000	0.678	1.476
X3	0.254	0.008	0.375	31.172	0.000	0.737	1.356
X4	0.228	0.007	0.337	30.974	0.000	0.904	1.106

From the above table, it can be seen that the p-values of the t-tests for dimensions X1, X2, X3 and X4 are all less than 0.001, indicating statistical significant. This shows that these four dimensions have a significant impact on variable Z. Additionally, a multicollinearity test was performed on the model. The VIF values in the model are all less than 5, indicating that there is no problem of multicollinearity.

The impact on the dependent variable is compared using the unstandardized coefficient. The larger the absolute value of the unstandardized coefficient, the greater the impact on the variable. As can be seen from the table above, the unstandardized coefficients of dimensions X1, X2, X3 and X4 are 0.238, 0.254, 0.254 and 0.228 respectively. Therefore, dimensions X2 and X3 have the greatest impact on variable Z, followed by dimension X1, and the least impact is from dimension X4.

## **Discussion**

The analysis shows that in primary school Chinese language teaching in Yunnan Province, the information literacy of Chinese language teachers is a key factor that determines the quality of teaching. Teachers highly agree that the information literacy of Chinese language teachers affects the quality of teaching. These factors greatly improve the quality of teaching, which is consistent with the findings of previous scholars, as this study found.

The analysis of elementary school language teaching in Yunnan Province reveals several key factors affecting teaching quality. First, language teachers' information literacy is crucial, with teachers agreeing that it significantly enhances teaching effectiveness, a finding supported by prior research. Similarly, information ethics plays a pivotal role, with teachers emphasizing its importance in improving teaching quality. Studies highlight the need for ethical awareness in the age of smart technology and the ethical risks it brings.

Additionally, teachers' information thinking is vital, as it shapes how they guide students to use technology strategically for learning, as supported by various studies. Information technology skills also influence teaching quality, with research showing that improving teachers' technological abilities enhances teaching flexibility and student engagement.

Analysis shows that in primary school Chinese language teaching in Yunnan Province, the ability of Chinese language teachers to use information technology is a key factor that determines the quality of teaching, and teachers highly agree on the importance of Chinese language teachers' ability to use information technology on teaching quality. These factors greatly improve the quality of teaching. By continuously improving the ability to use modern information technology, it is indeed possible to enhance the diversity and flexibility of teaching methods, so that students can absorb and utilize classroom knowledge. Clarifying the teacher's teaching philosophy is the key to improving information teaching ability.

Analysis shows that in primary school Chinese language teaching in Yunnan Province, the scientific research information capability of Chinese language teachers is a key factor that determines the quality of teaching, and teachers highly agree on the importance of the scientific research information capability of Chinese language teachers on the quality of teaching. These factors greatly improve the quality of teaching.

Finally, the ability to conduct research is another important factor. Teachers' research skills are linked to improved teaching quality, as research informs better teaching practices and problem-solving in educational settings. Overall, these factors—information literacy, ethics, thinking, technology use, and research ability—are interrelated and crucial for enhancing the quality of elementary language education in Yunnan Province.

## **Research Suggestions**

In today's "Internet Plus" era, the rapid development of information technology has had a profound impact on all walks of life, especially the field of education. Primary school Chinese teachers not only impart knowledge in the process of teaching, but also play an important role

in information literacy education. Therefore, in primary school Chinese teaching, optimizing teachers' information ethics and strengthening the promotion of information ethics are important measures to improve the quality of education. Regularly conducting information ethics training is an important way to improve teachers' information ethics literacy. Innovative teaching methods are an important means to promote information ethics. The rapid development of information technology has brought new opportunities for education. Teachers can flexibly use innovative teaching methods such as flipped classrooms and online learning to encourage students to actively participate and think independently, and emphasize the importance of information ethics in the process. Teachers should guide students to follow information ethics norms to obtain information, and ensure that they understand and master reasonable and legal ways to use information. Schools can establish an information ethics and morality exchange platform to encourage teachers to share ethical and moral issues encountered in teaching practice, and their solutions. Regular teacher study meetings should be held to share successful cases of integrating information technology with ethics and morals, so as to enhance teachers' application ability in practical work and create a good atmosphere for collective learning. Cooperation between schools and families is also crucial to the promotion of information ethics and morals. Schools should take advantage of home-school cooperation to educate parents about information ethics and guide them to pay attention to the ethical issues of students' information use together with teachers. In an era of rapid development of information technology, only multi-party cooperation can ensure the effectiveness and fairness of education, thereby creating a better learning environment for students.

In today's world of rapid IT development, the concept of information thinking is gradually permeating the field of education, and is of particular significance in primary school Chinese language teaching. Information thinking not only helps teachers to use IT more effectively in teaching, but also promotes students' deeper understanding and application ability in learning. With the rapid development of information technology, the field of education is also facing opportunities for change. In particular, the effective use of information technology in primary school language teaching can not only broaden students' knowledge, but also enhance their interest and participation in learning, and improve the quality of teaching. Training activities that combine information technology and education are organized regularly, and experts are invited to give lectures and workshops to help teachers understand the latest information technology and teaching tools. In today's educational environment, the improvement of scientific research information capabilities has become an important part of teachers' professional development. In primary school Chinese teaching, enhancing teachers' research and information literacy can promote educational innovation and improve teaching quality. It is particularly important to carry out systematic training in research skills. Regular training specifically for primary school Chinese teachers in research skills, including research methods, literature searches, data analysis, etc.) is organized. The effective integration of research results into classroom teaching is promoted. Through the implementation of the above strategies, the promotion of research and information literacy among primary school Chinese teachers can be effectively strengthened, thereby improving teaching quality and effectiveness.

To sum up, we can see that there are several key strategies that need to be implemented to improve the quality of primary language education. First, it is crucial to optimize teachers' information literacy. Schools should regularly conduct information literacy training, formulate clear codes of conduct, and establish a monitoring system. Teachers should also incorporate moral education into classroom teaching to raise students' awareness. Second, it is crucial to

promote information thinking. This can be achieved through targeted training, incorporating information thinking into the curriculum, and promoting reflection and collaboration among teachers. Third, the capacity of teachers to use information technology should be prioritized through systematic training, resource support and feedback mechanisms. Encouraging home-school collaboration is also important to enhance the use of technology in learning. Finally, enhancing teachers' research and information capabilities is essential for educational innovation. Schools should provide training in research methods, encourage teachers to participate in research projects and create platforms to share research results. These strategies, coupled with support from schools, families and society, will improve the quality of teaching and ensure that students develop the skills they need in the digital age.

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