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Investigating EFL Teachers' Information Literacy and Its Differences in China

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Abstract

This study aims to explore the current status of information literacy of Chinese EFL teachers in universities as well as its differences. Through a questionnaire on the competency of Chinese EFL teachers in information acquisition, evaluation, utilization, and creation, 334 valid responses were collected. The results indicate that Chinese EFL teachers are highly aware of the acquisition and management of information technology, but not good enough on information collaboration and information interaction. There are significant differences in information literacy by gender, years of work experience, positions, and academic degrees. Ineffective training and guidance as well as a shortage of learning resources, are the main factors. Therefore, needs-oriental training, diverse learning resources, and practical platforms are essential to promote teachers' information literacy.

Keywords

Chinese EFL Teachers, Information Literacy, Differences, Factors

1. Introduction

In recent years, China has placed great emphasis on the development of teachers' information literacy, introducing a series of important policies and documents that require a shift for teachers' and students' information information literacy. The release of the "Teachers Digital Literacy' Education Industry Standards" by the Ministry of Education emphasizes the need to enhance teachers' awareness, capabilities, and responsibilities in optimizing, innovating, and transforming educational activities through digital technology. The development and enhancement of teachers' information literacy is an important measure for deepening the construction of the teaching workforce in China, enabling teachers to actively

adapt to new technological changes. Internationally, the United Nations Educational, Scientific and Cultural Organization (UNESCO) released the "UNESCO Teachers' Information and Communication Technology Competency Framework (3rd Edition)" in 2018, which outlines the competencies required for teachers to effectively use information and communication technology in teaching. In 2017, the European Commission Joint Research Centre (ECJRC) introduced the "European Digital Competence Framework for Educators," aimed at enhancing educators' digital literacy and promoting educational innovation. In the same year, the International Society for Technology in Education (ISTE) published the "ISTE Standards for Educators," defining seven roles for educators and outlining the knowledge, skills, and attitudes that teachers should possess in the digital age. Additionally, Norway and Spain developed the "Teachers' Professional Digital Competence Framework" and the "Teachers' Generic Digital Competence Framework" in 2017, respectively, with the goal of improving the quality of teacher education and encouraging teachers to engage in continuous learning and self-improvement throughout their careers to maintain professionalism.

University teachers bear the dual mission of talent cultivation and research innovation. Their information literacy and abilities are essential to the integration of information technology and teaching research, effectively addressing the challenges posed by changes in students' learning methods, and are a crucial group driving the informatization of education. Currently, research on the information literacy of Chinese EFL Teachers in universities mainly focuses on conceptual connotations, constituent elements, evaluation criteria, and coping strategies. There is relatively little research on the current status and the impact factors, and also less corresponding empirical data to support these studies. Therefore, understanding the current status of information literacy of Chinese EFL Teachers in universities and identifying their needs and challenges in information usage is of great significance for developing effective training programs and enhancing teachers' professional development. This study aims to ensure that the research results objectively reflect the overall state of information literacy of Chinese EFL Teachers in universities.

2. Research Status of Information Literacy of EFL Teachers

2.1. Definition and Framework of Information Literacy

Information literacy (IL) first emerged in the American library and information field, where it was defined as the techniques and skills people use to solve problems with information. It refers to individuals who have been trained to master the use of various information tools and primary information sources and who can apply these skills to solve practical problems (Behrens, 1994: pp. 309-322). In 1989, the American Library Association (ALA) defined information literacy as comprising three levels: cultural literacy, information awareness, and information skills, which refers to the ability to determine when information is needed, understand how to obtain it and know how to evaluate and effectively utilize the required

information. The Association of College and Research Libraries (ACRL) in the United States proposed that information literacy is the ability of individuals to recognize when information is needed and to effectively search for, evaluate, and use the information required. It is translated in China as information quality, information culture, or information knowledge. Before the 1990s, research related to information literacy mainly focused on explaining the concept and its social significance. After the mid-1990s, the research focus shifted from the formation of the concept to its educational application (Zhou, 2007: pp. 67-71). In the information age, information literacy is a fundamental awareness and ability required for global citizens. Technically, it manifests as the ability to discover, utilize, and disseminate information, while on a humanistic level, it reflects the psychological state and coping abilities of individuals when faced with vast amounts of information (Sang & Dong, 2016: pp. 108-112). Xiao (2021: pp. 116-121, 128) systematically reviewed the theoretical origins and connotations of information literacy, concluding that its components include four dimensions: information awareness, information knowledge, information ability, and information ethics. As a core competency and basic quality for individuals in the information age, information literacy is an important indicator for measuring talent quality and comprehensive abilities. The development of information literacy has received widespread attention from the education sectors of various countries around the world.

2.2. Research on Information Literacy of Chinese EFL Teachers

Information literacy is an essential quality for survival and development in the information society and is one of the key qualities that professional teachers should possess. Enhancing teachers' information literacy is a requirement of the information age for educators, serves as an important guarantee for the development of educational informatization, and is a necessary condition for school teaching reform. Wang (2004: pp. 21-24), based on the requirements of educational informatization development, proposed that the cultivation of teachers' information literacy is necessary to adapt to social development, deepen teaching reform, and carry out innovative education. He detailed specific methods for cultivating teachers' information literacy through two approaches: pre-service training and in-service training, including professional development, short-term training, school-based training, and self-directed study. He also emphasized the urgent need to establish standards and evaluation systems for cultivating teachers' information literacy. Wang et al. (2017: pp. 109-114) and others focused on young teachers as their research subjects, explaining that young teachers' information literacy mainly consists of information technology literacy and information humanities literacy. Information technology literacy includes competencies in instructional design, application of teaching methods, implementation of teaching, and selection of teaching media; humanities literacy encompasses teaching observation and teaching reflection. They proposed that teacher training, mentorship systems, lecture competitions, and enhancing research capabilities are effective

cultivation methods. Wu et al. (2020: p. 108) argued that teachers are the primary resource for educational reform and innovation, asserting that information literacy is a fundamental quality necessary for teachers to engage in educational activities. By analyzing domestic and international research and practices on the evaluation of teachers' information literacy, they identified key challenges and difficulties in this area and introduced the phased achievements of their research team in exploring information literacy evaluation.

Through a review of the literature, it is evident that research on teachers' information literacy in China mainly focuses on the essential elements and enhancement pathways of information literacy, often targeting primary and secondary school teachers or general teacher groups, with relatively few studies examining EFL teachers. Notable studies include Zhang & Hu (2009: pp. 73-75), who explored the characteristics of English classroom teaching models, methods, and means, discussing the connotation of EFL teachers' information literacy and the demands of modern education on it. They suggested that awareness of information and a lifelong learning attitude are pathways to enhance EFL teachers' information literacy. Su & Wang (2022: pp. 55-63) examined the application of information technology tools in foreign language teaching, proposing that EFL teachers must improve educational action plans supported by technology, create an integrated information technology environment for foreign language teaching, and enhance their ability to learn and use technology. Wang & Tang (2022: pp. 48-51) identified challenges related to digital support, standards for information literacy, training systems, and the support for foreign language and related disciplines, proposing methods to continuously optimize support mechanisms, improve system standards, enhance training levels, and increase professional support.

2.3. Research on Information Literacy of International EFL Teachers

Exploration of the theory and practice of teacher information literacy abroad has never ceased and has yielded fruitful results. International organizations, represented by UNESCO, focus on economic and social development and are committed to establishing a global framework for teacher information literacy. Countries concentrate on developing teacher information literacy standards and related policies based on their specific national conditions. To improve the effectiveness of information-based teaching and promote the professional development of teachers, research institutions and international organizations in various countries have successively released a series of assessment frameworks or standards for teacher information literacy. The International Society for Technology in Education (ISTE) has published the ISTE Standards for Teachers and the ISTE Standards for Educators. The Association of College and Research Libraries (ACRL) established the Information Literacy Standards for Teacher Education in 2011. In the same year, UNESCO released the ICT Competency Framework for Teachers. Additionally, the Joint Research Centre of the European Commission issued the

European Framework for the Digital Competence of Educators in 2017.

Researchers have pointed out that teachers' attitudes and beliefs about information technology significantly influence their integration of information technology in the classroom, including the extent, methods, and effectiveness of such integration (Zhao & Frank, 2003: pp. 807-840). Creating a practice environment conducive to teachers' integration of information technology helps to impact educational practices. By analyzing teachers' performance in six areas—collecting, organizing, summarizing, analyzing data, integrating data, and transforming data into information—the United States comprehensively assessed science teachers' information literacy (Schifter et al., 2014: pp. 419-432) and designed 58 scale items to evaluate teachers' self-efficacy and information technology application abilities after training (Overbaugh et al., 2015: pp. 240-259). The University of Aveiro in Portugal and other institutions initiated the AGIRE project to develop teacher training programs and enhance the information literacy of both teachers and students, assessing teachers' abilities to deeply integrate information technology with teaching (Pombo et al., 2016: pp. 16-29). Bulgarian scholars Simon and Henriette evaluated teachers' abilities to use information technology for knowledge management and collaborative communication by analyzing behavior data such as the number of resources created by teachers on the ePortfolio platform and the frequency of group discussions (Simon & Henriette, 2018: pp. 99-104).

In summary, research on EFL teachers' information literacy, both domestically and internationally, mainly focuses on the connotation of teacher information literacy, strategies for its enhancement, and evaluation standards, often targeting teachers of primary and secondary school students. There is relatively little empirical research on the specific manifestations of EFL teachers' information literacy and strategies for its improvement. This study aims to conduct an in-depth analysis of the current status of information literacy of EFL teachers in higher education through a questionnaire survey, exploring its application in teaching practice and identifying existing problems, with the goal of providing empirical evidence for related policy formulation and teacher training implementation to promote innovation and development in foreign language teaching.

3. Research Design

3.1. Research Questions

The research will explore the main factors impacting the development of information literacy of Chinese EFL teachers. The study intends to answer the following three questions:

1) What is the overall status of information literacy of Chinese EFL teachers in universities?

2) Are there significant differences among teachers of different genders, years of experience, positions, and academic degrees?

3) What factors influence the enhancement of information literacy of Chinese EFL teachers in universities?

3.2. Research Subjects and Research Methods

Education informatization has become a core issue in educational reform and development, and teachers play a crucial role in this process. Teachers from normal universities are regarded as "teachers' teachers," which is why this study primarily focuses on them as the research subjects. Given that the researcher is engaged in foreign language education, Chinese EFL teachers were specifically chosen as the research subjects for the convenience of the study. In order to examine the information literacy status of Chinese EFL teachers in universities, the survey considered factors such as the teachers' gender, years of work experience, academic degree, and positions, ensuring that the data is representative and reflects the actual state of information literacy. Considering the proportion of full-time Chinese EFL teachers in universities, the number of questions of the survey questionnaire (30 questions), and the statistical indicators of the sample size data, it was determined that a sample size of at least 300 is necessary for statistical significance. So, a total of 334 questionnaires were collected, with basic information presented in Table 1.

Table 1. Basic information of the sample.

Name	Options	Frequency	Percentage (%)	Cumulative Percentage (%)
Gender	Male	98	29.34	29.34
	Female	236	70.66	100
Years of Work Experience	Less than 5 years	94	28.14	28.14
	6 - 10 years	50	14.97	43.11
	11 - 15 years	54	16.17	59.28
	16 - 20 years	76	22.75	82.04
	Over 20 years	60	17.96	100
Degree	Junior College Diploma	26	7.78	7.78
	Bachelor's Degree	86	25.75	33.53
	Master's Degree	144	43.11	76.65
	Doctor's Degree	46	13.77	90.42
	Others	32	9.58	100
Administrative Position	None	136	40.72	40.72
	Class Teacher	42	12.57	53.29
	Preparation Group (Deputy) Leader	28	8.38	61.68
	Research Group (Deputy) Leader	26	7.78	69.46
	Functional Department	26	7.78	77.25
	School Leadership	20	5.99	83.23
	Others	56	16.77	100
Total		334	100	100

The research primarily employs a questionnaire method, combining both quantitative and qualitative analyses to understand the current state of information literacy and training needs of Chinese EFL teachers. The questionnaire mainly includes the following two aspects:

1) Types of Questions: The questionnaire consists of multiple-choice questions, multiple-response questions, Likert Five-Point Scale questions, and open-ended questions. The multiple-choice questions are primarily used to collect personal background information related to the teachers. The scale questions are mainly used to assess teachers' self-perception of their information literacy-related competencies. The open-ended questions are designed to gather teachers' opinions on their training needs and suggestions regarding information literacy.

2) Questionnaire Structure: The questionnaire is structured into two main parts. The first part collects basic information about the respondents, such as the teachers' gender, the educational level of the students they teach, years of work experience, highest degree attained, and administrative positions. The second part focuses on the main themes of the questionnaire, covering self-assessment of information literacy, training needs, and factors influencing the enhancement of information literacy.

3.3. Data Collection and Analysis

Data collection took place in December 2022. The questionnaires were primarily distributed through the WeChat platform and an online survey platform (Wenjuanxing), ensuring that participants could conveniently fill out the questionnaires. Before the distribution, Chinese EFL teachers were introduced to the research's purpose and significance via email and the WeChat platform through acquaintances, aiming to improve participation rates. The data collection lasted for two weeks, during which reminder emails were sent regularly to encourage teacher participation. A total of 334 questionnaires were collected, all of which were valid.

Data analysis employed a combination of qualitative and quantitative methods. Descriptive statistical analysis was performed on the collected questionnaire data using statistical software (SPSS 18.0), including frequency, percentage, mean, and standard deviation. The relationships between different dimensions of Chinese EFL teachers' information literacy were also explored, as well as comparisons of information literacy among teachers from different backgrounds. Responses to open-ended questions were subjected to qualitative analysis using thematic analysis to identify and summarize the main viewpoints and needs of teachers regarding information literacy, extracting common themes to inform the design of subsequent training programs.

4. Research Results

4.1. The Overall Status of Chinese EFL Teachers' Information Literacy

4.1.1. Awareness of Information Literacy Content Knowledge

From the data results in Table 2, the research sample shows a relatively high level of understanding regarding "acquiring and managing information technology teaching resources" and "conducting information technology teaching," with both exceeding 55%. This indicates that Chinese EFL teachers in higher education possess a certain level of information literacy in these two dimensions. However, the

proportion of respondents who did not select options related to information communication and collaboration, information technology innovation and creativity, critical thinking in information technology, and information ethics and moral concepts is relatively high, all exceeding 60%. This suggests that Chinese EFL teachers have not actively engaged with and focused on these dimensions, resulting in a lower level of mastery.

Table 2. Awareness of information literacy content knowledge.

Content	Selected Frequency	Percentage (%)	Unselected Frequency	Percentage (%)	Cumulative Percentage (%)
Understanding the Principles of Using Information Technology Teaching Tools	176	52.69	158	47.31	100
Acquiring and Managing Information Technology Teaching Resources	186	55.69	148	44.31	100
Conducting Information Technology Teaching	186	55.69	148	44.31	100
Using Information Technology for Teaching Evaluation	158	47.31	176	52.69	100
Conducting Research on Information Technology Teaching	158	47.31	176	52.69	100
Engaging in Information Communication and Collaboration	120	35.93	214	64.07	100
Innovating and Creating with Information Technology	118	35.33	216	64.67	100
Cultivating Critical Thinking in Information Technology	130	38.92	204	61.08	100
Establishing Information Ethics and Moral Concepts	110	32.93	224	67.07	100
Pursuing Information Teaching Goals	116	34.73	218	65.27	100
Possessing Big Data Thinking	148	44.31	186	55.60	100
Fostering a Lifelong Learning Attitude	146	43.71	188	56.29	100
Others	16	4.79	318	95.21	100
Total	334	100	334	100	100

Overall, there are significant differences in the sample's grasp of various aspects of information literacy, particularly in the areas of information ethics and critical thinking. There is an urgent need for effective training related to information literacy for teachers to enhance the overall level of information literacy of Chinese EFL teachers.

4.1.2. Current Status of Information Literacy Competence

According to the data in Table 3, the following observations can be made: 1) In terms of willingness to acquire information, the average score of the sample is generally above 3.1, indicating that Chinese EFL teachers are willing to implement information technology in educational practices and actively enhance their information literacy, placing importance on its improvement. 2) Regarding the indicators related to identifying information needs, teachers generally recognize the importance of information technology in education (average score of 3.12). However, the scores for "thinking about the development direction of information technology education" (average score of 2.623) and "teachers' responsibility to

Table 3. Current status of information literacy competence.

Dimension	Content	Sample size	Min	Max	AVG	SD	Median
Willingness to Acquire Information	Willing to implement educational information technology in educational practices	334	1	5	3.18	1.584	4
	Willing to actively enhance information literacy	334	1	5	3.162	1.518	3
	Willing to further understand information literacy	334	1	5	3.108	1.525	3
Identifying Information Needs	Be able to think about the development direction of information technology education	334	1	5	2.623	1.417	2
	Good information literacy is important for teachers	334	1	5	3.096	1.538	3
	Teachers have the responsibility to promote standardized information technology behavior	334	1	5	2.82	1.39	3
	Frequently use information technology in daily teaching or research	334	1	5	2.778	1.429	3
	Be able to recognize the impact of information technology on education	334	1	5	3.12	1.46	3
Applying Information Skills	Be able to actively use information technology to promote self-development	334	1	5	2.802	1.372	3
	Be able to comfortably access the necessary educational information resources	334	1	5	2.491	1.231	2
	Be able to use information technology to communicate with colleagues, students, etc.	334	1	5	2.659	1.265	2
	Be able to help students establish a correct view of information ethics	334	1	5	2.599	1.34	3
	Be able to proficiently use various information technologies for teaching	334	1	5	2.557	1.25	2
	Be able to use information technology for teaching evaluation	334	1	5	2.557	1.311	2
	Be able to meet students' personalized learning needs through information technology	334	1	5	2.515	1.26	2
	Be able to use information technology to solve problems in teaching and management	334	1	5	2.509	1.231	2
	Be able to conduct academic research using information technology	334	1	5	2.485	1.241	2
Creating Information Skills	Be able to creatively apply information technology and resources based on context	334	1	5	2.437	1.254	2
	Be able to design and develop information technology teaching resources	334	1	5	2.156	1.202	2
Evaluating and Managing Information Skills	Be able to critically view and use information technology	334	1	5	2.719	1.312	3
	Be able to notice and address ethical issues when using information technology	334	1	5	2.695	1.383	3
	Have good information resource management skills	334	1	5	2.503	1.231	2
Basic Knowledge of Information Literacy	Understands the usage methods of information technology teaching tools	334	1	5	2.695	1.236	3
	Understands the basic connotation of teachers' information literacy	334	1	5	2.515	1.265	2
	Understands the basic theoretical knowledge of information technology, its connotations, and principles	334	1	5	2.449	1.206	2
	Possesses a certain level of big data thinking	334	1	5	2.551	1.316	2
Usage Difficulties	Faces difficulties in applying information technology in teaching practice	334	1	5	2.659	1.316	3
	Lacks of information knowledge and skills	334	1	5	2.778	1.399	3
	Do not know how to enhance information literacy	334	1	5	2.533	1.265	2

promote standardized information technology behavior" (average score of 2.82) are relatively low, reflecting a lack of awareness among teachers regarding the development of information technology and their related responsibilities. 3) In terms of applying information skills, teachers show weakness in "actively using information technology to promote self-development" (average score of 2.802) and "comfortably accessing the necessary educational information resources" (average score of 2.491), indicating that teachers need to improve their ability to use information technology in actual teaching. 4) In the area of creating information skills, teachers score low on "creatively applying information technology and resources based on context" (average score of 2.437) and "designing and developing information technology teaching resources" (average score of 2.156), suggesting a deficiency in their ability to innovate and develop resources. 5) Regarding evaluating and managing information skills, teachers demonstrate some awareness in "critically viewing and using information technology" (average score of 2.719) and "noticing and addressing ethical issues when using information technology" (average score of 2.695), but the overall level remains low, indicating a need to strengthen critical thinking and ethical awareness related to information technology. 6) In terms of understanding basic knowledge of information literacy, teachers show low mastery in "understanding the usage methods of information technology teaching tools" (average score of 2.695) and "understanding the basic connotation of teachers' information literacy" (average score of 2.515), highlighting a deficiency in relevant theoretical knowledge. 7) Regarding difficulties in usage, teachers generally feel challenged in applying information skills in teaching practice (average score of 2.659) and report insufficient mastery of information knowledge and skills (average score of 2.778), indicating that teachers face certain challenges in the practical application of information literacy.

Overall, teachers exhibit a positive attitude across various dimensions of information literacy, but there are still deficiencies in practical application, innovation capabilities, and mastery of basic knowledge. There is a need for training and practice to enhance their overall information literacy competence.

4.2. Differences in Information Literacy among Teachers of Different Genders, Years of Experience, Positions and Academic Degree

4.2.1. Information Literacy Differences of Chinese EFL Teachers by Genders

From Table 4, it can be observed that there are significant differences between male and female Chinese EFL teachers in terms of their cognition and competence in information literacy across multiple dimensions. Specifically, female Chinese EFL teachers score higher than their male counterparts in areas such as understanding the basic connotation of information literacy (male 2.08 vs. female 2.69), willingness to enhance information literacy (male 2.41 vs. female 3.40), using information technology in daily teaching (male 2.12 vs. female 3.05), and awareness of information ethics (male 2.20 vs. female 2.93).

Table 4. Information literacy differences of Chinese EFL teachers by gender.

Content	Gender (Mean ± Standard Deviation)		F	*p*
	M (n = 98)	F (n = 236)		
Understand the basic connotation of teachers' information literacy	2.08 ± 1.19	2.69 ± 1.26	8.503	0.004**
Willing to further understand information literacy	2.41 ± 1.58	3.40 ± 1.41	15.906	0.000**
Good information literacy is important for teachers	2.33 ± 1.56	3.42 ± 1.42	19.268	0.000**
Frequently use information technology in daily teaching or research	2.12 ± 1.30	3.05 ± 1.40	15.937	0.000**
Willing to actively enhance information literacy	2.43 ± 1.50	3.47 ± 1.42	17.806	0.000**
Do not know how to improve information literacy	2.18 ± 1.30	2.68 ± 1.23	5.429	0.021*
Willing to implement educational information technology in teaching practice	2.39 ± 1.55	3.51 ± 1.48	19.23	0.000**
Understand the usage methods of information technology teaching tools	2.22 ± 1.18	2.89 ± 1.21	10.621	0.001**
Understand the basic theoretical knowledge of digital technology, its connotations, and principles	2.08 ± 1.11	2.60 ± 1.21	6.661	0.011*
Be able to comfortably access the necessary educational information resources	2.12 ± 1.25	2.64 ± 1.19	6.415	0.012*
Have good information resource management skills	2.16 ± 1.30	2.64 ± 1.18	5.418	0.021*
Lack of mastery of information knowledge and skills	2.08 ± 1.22	3.07 ± 1.37	19.083	0.000**
Be able to proficiently use various information technologies for teaching	2.10 ± 1.26	2.75 ± 1.20	9.668	0.002**
Be able to use information technology to communicate with colleagues, students, etc.	2.24 ± 1.32	2.83 ± 1.21	7.723	0.006**
Be able to use information technology to solve problems in teaching and management	2.10 ± 1.29	2.68 ± 1.17	7.887	0.006**
Be able to design and develop information technology teaching resources	1.98 ± 1.28	2.23 ± 1.17	1.492	0.224
Be able to use information technology for teaching evaluation	2.16 ± 1.31	2.72 ± 1.28	6.459	0.012*
Be able to conduct academic research using information technology	2.22 ± 1.16	2.59 ± 1.26	3.094	0.08
Be able to meet students' personalized learning needs through information technology	2.06 ± 1.28	2.70 ± 1.21	9.445	0.002**
Be able to creatively apply information technology and resources based on context	2.10 ± 1.26	2.58 ± 1.23	5.072	0.026*
Faces difficulties in applying information technology in teaching practice	2.12 ± 1.33	2.88 ± 1.25	12.295	0.001**
Be able to notice and address ethical issues when using information technology	2.20 ± 1.40	2.90 ± 1.33	9.155	0.003**
Be able to help students establish a correct view of information ethics	2.10 ± 1.36	2.81 ± 1.28	10.048	0.002**
Teachers have the responsibility to promote standardized information technology behavior	2.29 ± 1.43	3.04 ± 1.32	10.874	0.001**
Be able to recognize the impact of information technology on education	2.49 ± 1.42	3.38 ± 1.40	13.926	0.000**
Be able to actively use information technology to promote self-development	2.24 ± 1.32	3.03 ± 1.33	12.224	0.001**
Possess a certain level of big data thinking	2.24 ± 1.39	2.68 ± 1.27	3.815	0.052
Be able to critically view and use information technology	2.20 ± 1.26	2.93 ± 1.28	11.326	0.001**
Be able to think about the development direction of information technology education	2.14 ± 1.41	2.82 ± 1.38	8.306	0.004**

Note: *$p < 0.05$; **$p < 0.01$; M = Male; F = Female.

Although female Chinese EFL teachers perform better in several aspects, they also face certain challenges, as indicated by their responses to the statement "Enhancing information literacy is difficult for me" (male 2.18 vs. female 2.68). This result suggests that when improving the information literacy of Chinese EFL teachers, it is necessary to design targeted training programs to help them better master and apply information technology.

4.2.2. Information Literacy Differences of Chinese EFL Teachers by Years of Work Experience

From the data in Table 5, it can be observed that there are no significant differences in information literacy of Chinese EFL teachers with varying years of work experience. However, younger teachers who are newly employed demonstrate a more positive attitude and higher awareness in areas such as willingness to acquire information, frequency of using information technology in daily practice, ability to obtain and manage information resources, and understanding of information technology teaching tools compared to teachers from other experience groups. Therefore, tailored curriculum enhancement programs can be developed for teachers at different stages of their careers to promote overall improvement in information literacy.

Table 5. Information literacy differences of Chinese EFL teachers by years of work experience.

Content	Years of Work Experience (Mean ± Standard Deviation)					F	*p*
	≦5 (n = 94)	6 - 10 (n = 50)	11 - 15 (n = 54)	16 - 20 (n = 76)	≥20 (n = 60)		
Understand the basic connotation of teachers' information literacy	2.66 ± 1.27	2.16 ± 1.21	2.37 ± 1.11	2.58 ± 1.31	2.63 ± 1.38	0.82	0.514
Willing to further understand information literacy	3.26 ± 1.45	3.04 ± 1.62	3.04 ± 1.51	3.03 ± 1.60	3.10 ± 1.56	0.161	0.958
Good information literacy is important for teachers	3.28 ± 1.54	3.04 ± 1.51	3.19 ± 1.52	2.89 ± 1.62	3.03 ± 1.52	0.363	0.835
Frequently use information technology in daily teaching or research	3.04 ± 1.47	2.68 ± 1.38	2.70 ± 1.35	2.66 ± 1.40	2.67 ± 1.54	0.557	0.694
Willing to actively enhance information literacy	3.40 ± 1.45	3.04 ± 1.49	3.07 ± 1.52	3.05 ± 1.63	3.10 ± 1.56	0.418	0.795
Do not know how to improve information literacy	2.66 ± 1.20	2.48 ± 1.23	2.44 ± 1.37	2.45 ± 1.37	2.57 ± 1.22	0.207	0.934
Willing to implement educational information technology in teaching practice	3.40 ± 1.54	3.08 ± 1.66	3.19 ± 1.55	3.11 ± 1.66	3.00 ± 1.60	0.373	0.828
Understand the usage methods of information technology teaching tools	3.00 ± 1.23	2.08 ± 1.08	2.67 ± 1.27	2.82 ± 1.23	2.60 ± 1.22	2.489	0.045*
Understand the basic theoretical knowledge of digital technology, its connotations, and principles	2.64 ± 1.29	2.12 ± 1.05	2.30 ± 1.17	2.58 ± 1.20	2.40 ± 1.22	0.986	0.417
Be able to comfortably access the necessary educational information resources	2.81 ± 1.28	2.00 ± 1.12	2.26 ± 1.20	2.53 ± 1.11	2.57 ± 1.33	2.104	0.083
Have good information resource management skills	2.79 ± 1.35	2.16 ± 1.03	2.56 ± 0.93	2.32 ± 1.28	2.53 ± 1.33	1.359	0.251
Lack of mastery of information knowledge and skills	3.04 ± 1.53	2.60 ± 1.38	2.59 ± 1.19	2.66 ± 1.38	2.83 ± 1.42	0.717	0.581
Be able to proficiently use various information technologies for teaching	2.72 ± 1.33	2.24 ± 0.97	2.52 ± 1.05	2.55 ± 1.35	2.60 ± 1.38	0.62	0.649

Continued

Be able to use information technology to communicate with colleagues, students, etc.	2.89 ± 1.27	2.60 ± 1.08	2.41 ± 1.12	2.61 ± 1.41	2.63 ± 1.35	0.7	0.593
Be able to use information technology to solve problems in teaching and management	2.74 ± 1.26	2.36 ± 1.11	2.30 ± 1.10	2.45 ± 1.31	2.53 ± 1.31	0.745	0.562
Be able to design and develop information technology teaching resources	2.43 ± 1.38	1.88 ± 1.09	2.00 ± 1.14	2.05 ± 1.09	2.23 ± 1.17	1.139	0.34
Be able to use information technology for teaching evaluation	2.72 ± 1.33	2.40 ± 1.26	2.26 ± 1.26	2.61 ± 1.35	2.63 ± 1.35	0.66	0.621
Be able to conduct academic research using information technology	2.77 ± 1.27	2.24 ± 1.05	2.22 ± 1.09	2.45 ± 1.27	2.53 ± 1.41	1.173	0.325
Be able to meet students' personalized learning needs through information technology	2.79 ± 1.28	2.28 ± 1.24	2.30 ± 1.07	2.47 ± 1.29	2.53 ± 1.36	0.98	0.42
Be able to creatively apply information technology and resources based on context	2.74 ± 1.26	2.16 ± 1.21	2.07 ± 1.21	2.50 ± 1.22	2.43 ± 1.30	1.626	0.17
Faces difficulties in applying information technology in teaching practice	3.02 ± 1.29	2.36 ± 1.29	2.41 ± 1.31	2.66 ± 1.30	2.57 ± 1.36	1.515	0.2
Be able to notice and address ethical issues when using information technology	2.91 ± 1.32	2.36 ± 1.25	2.41 ± 1.47	2.79 ± 1.28	2.77 ± 1.61	1.021	0.398
Be able to help students establish a correct view of information ethics	2.81 ± 1.38	2.28 ± 1.28	2.48 ± 1.31	2.63 ± 1.30	2.60 ± 1.43	0.694	0.597
Teachers have the responsibility to promote standardized information technology behavior	3.02 ± 1.41	2.64 ± 1.41	2.63 ± 1.36	2.79 ± 1.34	2.87 ± 1.48	0.485	0.747
Be able to recognize the impact of information technology on education	3.40 ± 1.44	3.00 ± 1.41	2.93 ± 1.41	3.03 ± 1.57	3.07 ± 1.46	0.651	0.627
Be able to actively use information technology to promote self-development	3.11 ± 1.39	2.56 ± 1.39	2.70 ± 1.23	2.74 ± 1.41	2.70 ± 1.42	0.868	0.485
Possess a certain level of big data thinking	2.83 ± 1.34	2.44 ± 1.33	2.26 ± 1.02	2.39 ± 1.41	2.67 ± 1.37	1.099	0.359
Be able to critically view and use information technology	2.98 ± 1.28	2.44 ± 1.39	2.59 ± 1.22	2.74 ± 1.33	2.63 ± 1.38	0.836	0.504
Be able to think about the development direction of information technology education	2.94 ± 1.48	2.56 ± 1.50	2.22 ± 1.25	2.66 ± 1.44	2.50 ± 1.33	1.194	0.315

*$p < 0.05$; **$p < 0.01$.

4.2.3. Information Literacy Differences of Chinese EFL Teachers by Positions

From the data in Table 6, it can be seen that there are significant differences in various dimensions of information literacy competence of Chinese EFL teachers in different positions. Among the eight categories of positions, homeroom teachers show a significantly higher willingness to improve information literacy (3.24), frequency of applying information technology (2.95), ability to obtain and manage information resources (2.57), and communication with students using information technology (2.90) compared to other groups. Full-time teachers have the highest awareness of the importance of information literacy (3.47). Teachers in higher positions generally score lower than homeroom teachers and full-time teachers. Training should focus on the characteristics of teachers in different positions to provide targeted training and support measures.

Table 6. Information literacy differences of Chinese EFL teachers by positions.

Content	Position in the School (Mean ± Standard Deviation)							F	p
	A (n = 136)	B (n = 42)	C (n = 28)	D (n = 26)	E (n = 26)	F (n = 20)	G (n = 56)		
Understand the basic connotation of teachers' information literacy	2.65 ± 1.22	2.67 ± 1.35	2.14 ± 1.10	2.77 ± 1.30	1.69 ± 0.75	1.90 ± 1.20	2.75 ± 1.43	2.004	0.068
Willing to further understand information literacy	3.62 ± 1.35	3.24 ± 1.58	2.50 ± 1.40	3.00 ± 1.68	1.69 ± 1.18	2.00 ± 1.15	3.18 ± 1.54	5.084	0.000**
Good information literacy is important for teachers	3.47 ± 1.35	3.52 ± 1.47	2.43 ± 1.40	3.15 ± 1.68	1.85 ± 1.46	1.60 ± 1.26	3.29 ± 1.54	5.134	0.000**
Frequently use information technology in daily teaching or research	3.12 ± 1.24	2.95 ± 1.63	2.29 ± 1.49	2.69 ± 1.60	1.77 ± 1.17	1.80 ± 1.23	2.93 ± 1.46	3.111	0.007**
Willing to actively enhance information literacy	3.60 ± 1.34	3.48 ± 1.63	2.64 ± 1.65	2.92 ± 1.75	2.08 ± 1.19	1.80 ± 1.23	3.21 ± 1.40	4.357	0.000**
Do not know how to improve information literacy	2.79 ± 1.20	2.71 ± 1.38	2.57 ± 1.50	1.85 ± 0.90	1.62 ± 0.77	1.80 ± 0.63	2.75 ± 1.38	3.284	0.004**
Willing to implement educational information technology in teaching practice	3.72 ± 1.35	3.62 ± 1.63	2.64 ± 1.55	2.85 ± 1.82	1.77 ± 1.48	1.50 ± 0.71	3.21 ± 1.45	6.688	0.000**
Understand the usage methods of information technology teaching tools	2.85 ± 1.16	2.81 ± 1.25	2.50 ± 1.29	2.69 ± 1.55	1.85 ± 0.69	2.00 ± 0.82	2.96 ± 1.37	2.128	0.053
Understand the basic theoretical knowledge of digital technology, its connotations, and principles	2.56 ± 1.18	2.57 ± 1.40	1.93 ± 1.07	2.69 ± 1.11	1.77 ± 0.73	1.80 ± 0.92	2.79 ± 1.32	2.291	0.038*
Be able to comfortably access the necessary educational information resources	2.66 ± 1.20	2.57 ± 1.43	2.21 ± 1.05	2.54 ± 1.20	1.54 ± 0.78	1.90 ± 0.88	2.79 ± 1.32	2.419	0.029*
Have good information resource management skills	2.62 ± 1.28	2.76 ± 1.22	2.29 ± 1.14	2.38 ± 1.19	1.62 ± 0.77	2.00 ± 0.82	2.79 ± 1.32	2.073	0.059
Lack of mastery of information knowledge and skills	3.21 ± 1.31	3.14 ± 1.65	2.21 ± 1.31	2.38 ± 0.87	1.38 ± 0.65	1.60 ± 0.97	3.00 ± 1.33	6.317	0.000**
Be able to proficiently use various information technologies for teaching	2.78 ± 1.10	2.90 ± 1.22	1.93 ± 1.21	2.77 ± 1.48	1.54 ± 0.78	1.60 ± 0.97	2.79 ± 1.37	4.319	0.000**
Be able to use information technology to communicate with colleagues, students, etc.	2.85 ± 1.16	2.90 ± 1.34	2.29 ± 1.20	2.92 ± 1.50	1.85 ± 0.69	1.60 ± 0.97	2.82 ± 1.39	3.046	0.008**
Be able to use information technology to solve problems in teaching and management	2.66 ± 1.17	2.86 ± 1.20	2.14 ± 1.17	2.54 ± 1.39	1.77 ± 0.73	1.30 ± 0.48	2.82 ± 1.39	3.674	0.002**
Be able to design and develop information technology teaching resources	2.18 ± 1.22	2.38 ± 1.47	1.86 ± 1.17	2.38 ± 0.77	1.46 ± 0.66	1.30 ± 0.48	2.61 ± 1.26	2.734	0.015*
Be able to use information technology for teaching evaluation	2.72 ± 1.20	2.90 ± 1.45	1.86 ± 1.10	2.85 ± 1.57	1.54 ± 0.78	1.80 ± 0.92	2.86 ± 1.41	3.614	0.002**
Be able to conduct academic research using information technology	2.54 ± 1.19	2.71 ± 1.38	2.14 ± 1.10	2.62 ± 1.33	1.85 ± 0.69	1.80 ± 0.92	2.82 ± 1.44	1.824	0.098

Continued

Be able to meet students' personalized learning needs through information technology	2.68 ± 1.152.71 ± 1.311.86 ± 1.232.62 ± 1.501.85 ± 0.901.60 ± 0.972.89 ± 1.34	3.039	0.008**
Be able to creatively apply information technology and resources based on context	2.54 ± 1.262.67 ± 1.322.07 ± 1.072.46 ± 1.451.69 ± 0.951.80 ± 0.632.75 ± 1.32	1.948	0.076
Faces difficulties in applying information technology in teaching practice	3.21 ± 1.142.90 ± 1.582.14 ± 1.292.00 ± 1.081.69 ± 0.751.40 ± 0.702.61 ± 1.29	6.892	0.000**
Be able to notice and address ethical issues when using information technology	2.93 ± 1.263.10 ± 1.582.21 ± 1.372.54 ± 1.611.77 ± 1.171.90 ± 0.572.86 ± 1.46	2.657	0.017*
Be able to help students establish a correct view of information ethics	2.82 ± 1.272.86 ± 1.562.21 ± 1.122.85 ± 1.411.54 ± 0.971.60 ± 0.972.79 ± 1.34	3.35	0.004**
Teachers have the responsibility to promote standardized information technology behavior	3.21 ± 1.253.00 ± 1.522.43 ± 1.092.92 ± 1.611.69 ± 0.951.70 ± 0.952.82 ± 1.52	4.038	0.001**
Be able to recognize the impact of information technology on education	3.54 ± 1.253.43 ± 1.692.64 ± 1.343.08 ± 1.751.77 ± 1.171.80 ± 0.923.21 ± 1.34	5.323	0.000**
Be able to actively use information technology to promote self-development	3.06 ± 1.183.29 ± 1.652.21 ± 1.252.77 ± 1.791.92 ± 1.121.80 ± 0.632.89 ± 1.40	3.316	0.004**
Possess a certain level of big data thinking	2.65 ± 1.303.10 ± 1.412.14 ± 1.102.62 ± 1.501.46 ± 0.661.80 ± 0.922.86 ± 1.30	3.452	0.003**
Be able to critically view and use information technology	3.01 ± 1.193.14 ± 1.422.00 ± 1.182.92 ± 1.751.77 ± 0.731.80 ± 0.632.71 ± 1.33	4.049	0.001**
Be able to think about the development direction of information technology education	2.87 ± 1.353.19 ± 1.602.07 ± 1.143.08 ± 1.441.38 ± 0.771.50 ± 0.712.64 ± 1.45	4.744	0.000**

Note: *$p < 0.05$; **$p < 0.01$; A = No Administrative Position; B = Homeroom Teacher; C = Lesson Preparation (Deputy) Leader; D = Teaching Research (Deputy) Leader; E = Functional Department; F = School Leadership; G = Other.

4.2.4. Information Literacy Differences of Chinese EFL Teachers by Academic Degree

According to Table 7, there are significant differences in the information literacy abilities of Chinese EFL teachers across different educational levels. Associate degree teachers have significantly lower average scores in understanding the basic concepts of information literacy, willingness to further study information literacy, and the application of information technology in daily teaching compared to those with bachelor's, master's, and doctoral degrees. For example, the average score for associate degree teachers in understanding the basic concepts of information literacy is 1.46, while the averages for master's and doctoral teachers are 2.76 and 2.83, respectively, indicating a deeper understanding of information literacy among higher-educated teachers. Furthermore, master's and doctoral teachers also show a higher willingness to enhance their information literacy and to practice educational informatization in their teaching, with average scores of 3.63 and 2.87, significantly higher than the 1.31 of associate degree teachers. These data

suggest that teachers with higher education levels demonstrate more positive attitudes toward the recognition, application, and willingness to improve their information literacy, reflecting their better adaptation to the demands of modern education regarding information literacy.

Table 7. Information literacy differences of Chinese EFL teachers by academic degree.

Content	Academic Degree (Mean ± Standard Deviation)					F	*p*
	Junior College Diploma (n = 26)	Bachelor's Degree (n = 86)	Master's Degree (n = 144)	Doctor's Degree (n = 46)	Others (n = 32)		
Understand the basic connotation of teachers' information literacy	1.46 ± 0.52	2.67 ± 1.38	2.76 ± 1.17	2.83 ± 1.34	1.38 ± 0.50	7.819	0.000**
Willing to further understand information literacy	1.38 ± 0.51	3.47 ± 1.47	3.61 ± 1.41	2.87 ± 1.49	1.63 ± 0.50	13.932	0.000**
Good information literacy is important for teachers	1.54 ± 0.52	3.30 ± 1.54	3.60 ± 1.40	3.13 ± 1.58	1.50 ± 0.52	12.443	0.000**
Frequently use information technology in daily teaching or research	1.46 ± 0.52	2.93 ± 1.55	3.15 ± 1.30	2.96 ± 1.52	1.50 ± 0.52	8.805	0.000**
Willing to actively enhance information literacy	1.31 ± 0.48	3.51 ± 1.55	3.63 ± 1.34	3.13 ± 1.49	1.69 ± 0.48	14.368	0.000**
Do not know how to improve information literacy	1.38 ± 0.51	2.72 ± 1.35	2.93 ± 1.21	2.26 ± 1.18	1.56 ± 0.51	8.667	0.000**
Willing to implement educational information technology in teaching practice	1.54 ± 0.52	3.63 ± 1.54	3.69 ± 1.39	2.87 ± 1.63	1.44 ± 0.51	15.167	0.000**
Understand the usage methods of information technology teaching tools	1.62 ± 0.51	2.88 ± 1.29	2.97 ± 1.22	2.78 ± 1.20	1.69 ± 0.48	7.285	0.000**
Understand the basic theoretical knowledge of digital technology, its connotations, and principles	1.69 ± 0.48	2.65 ± 1.33	2.64 ± 1.23	2.52 ± 1.16	1.56 ± 0.51	4.575	0.002**
Be able to comfortably access the necessary educational information resources	1.46 ± 0.52	2.74 ± 1.38	2.68 ± 1.14	2.74 ± 1.25	1.44 ± 0.51	7.266	0.000**
Have good information resource management skills	1.69 ± 0.48	2.84 ± 1.34	2.60 ± 1.10	2.74 ± 1.54	1.50 ± 0.52	5.764	0.000**
Lack of mastery of information knowledge and skills	1.46 ± 0.52	3.07 ± 1.53	3.17 ± 1.28	2.70 ± 1.29	1.44 ± 0.51	10.323	0.000**
Be able to proficiently use various information technologies for teaching	1.23 ± 0.44	2.81 ± 1.37	2.81 ± 1.11	2.70 ± 1.40	1.63 ± 0.50	8.392	0.000**
Be able to use information technology to communicate with colleagues, students, etc.	1.62 ± 0.51	2.84 ± 1.43	2.90 ± 1.09	3.00 ± 1.38	1.44 ± 0.51	8.564	0.000**
Be able to use information technology to solve problems in teaching and management	1.62 ± 0.51	2.77 ± 1.36	2.68 ± 1.12	2.65 ± 1.47	1.56 ± 0.51	5.516	0.000**
Be able to design and develop information technology teaching resources	1.69 ± 0.48	2.26 ± 1.35	2.25 ± 1.18	2.48 ± 1.38	1.38 ± 0.50	2.895	0.024*
Be able to use information technology for teaching evaluation	1.54 ± 0.52	2.74 ± 1.42	2.79 ± 1.28	2.83 ± 1.30	1.44 ± 0.51	6.737	0.000**
Be able to conduct academic research using information technology	1.54 ± 0.52	2.56 ± 1.47	2.67 ± 1.11	2.91 ± 1.35	1.63 ± 0.50	5.444	0.000**
Be able to meet students' personalized learning needs through information technology	1.46 ± 0.52	2.72 ± 1.44	2.69 ± 1.16	2.83 ± 1.34	1.56 ± 0.51	6.261	0.000**
Be able to creatively apply information technology and resources based on context	1.54 ± 0.52	2.63 ± 1.40	2.68 ± 1.15	2.52 ± 1.44	1.44 ± 0.51	5.755	0.000**
Faces difficulties in applying information technology in teaching practice	1.54 ± 0.52	2.88 ± 1.55	3.04 ± 1.12	2.61 ± 1.23	1.31 ± 0.48	10.256	0.000**

Continued

Be able to notice and address ethical issues when using information technology	1.54 ± 0.52	3.02 ± 1.64	2.88 ± 1.21	2.87 ± 1.55	1.69 ± 0.48	6.057	0.000**
Be able to help students establish a correct view of information ethics	1.38 ± 0.51	2.93 ± 1.50	2.86 ± 1.18	2.78 ± 1.35	1.25 ± 0.45	9.936	0.000**
Teachers have the responsibility to promote standardized information technology behavior	1.62 ± 0.51	3.02 ± 1.50	3.14 ± 1.24	3.13 ± 1.46	1.38 ± 0.50	10.02	0.000**
Be able to recognize the impact of information technology on education	1.62 ± 0.51	3.56 ± 1.52	3.50 ± 1.24	3.09 ± 1.50	1.50 ± 0.52	13.848	0.000**
Be able to actively use information technology to promote self-development	1.46 ± 0.52	3.07 ± 1.53	3.15 ± 1.23	2.96 ± 1.19	1.38 ± 0.50	11.356	0.000**
Possess a certain level of big data thinking	1.54 ± 0.52	2.79 ± 1.44	2.72 ± 1.26	2.87 ± 1.39	1.50 ± 0.52	6.157	0.000**
Be able to critically view and use information technology	1.31 ± 0.48	2.93 ± 1.40	3.06 ± 1.20	2.91 ± 1.24	1.50 ± 0.52	10.902	0.000**
Be able to think about the development direction of information technology education	1.46 ± 0.52	2.84 ± 1.49	2.92 ± 1.34	2.91 ± 1.47	1.25 ± 0.45	8.502	0.000**

*$p < 0.05$ **$p < 0.01$.

4.3. Main Factors Influencing the Enhancement of Information Literacy of Chinese EFL Teachers

According to the survey results in Table 8, the main factors affecting the improvement of information literacy among Chinese EFL teachers can be summarized as follows: 38.32% of teachers believe that insufficient training is the primary factor hindering the enhancement of information literacy, while 46.11% feel that there is inadequate professional guidance. Additionally, 42.51% of teachers cite a lack of learning resources, and 32.93% mention the absence of typical case studies for reference and learning. Furthermore, 36.53% of teachers report a lack of practical platforms, and another 36.53% indicate that heavy teaching pressure affects their time and energy for improving information literacy.

Table 8. Main factors affecting the improvement of information literacy of Chinese EFL teachers.

Name	Frequency	Percentage (%)
Insufficient training	128	38.32
Inadequate professional guidance	154	46.11
Lack of learning resources	142	42.51
Absence of typical case studies	110	32.93
Lack of practical opportunities	122	36.53
Heavy teaching pressure	122	36.53
Insufficient atmosphere	88	26.35
Lack of personal motivation	88	26.35
Absence of hardware facilities	110	32.93
Others	26	7.78
Total	334	100

Moreover, 26.35% of teachers believe that the atmosphere is not strong enough and that there is a lack of personal motivation, while 32.93% highlight the absence of necessary hardware as another contributing factor. Additionally, 7.78% of teachers mentioned other factors, which, although a smaller proportion, reflect the complexity of improving information literacy, possibly involving individual differences or specific environmental factors.

Overall, the main factors impacting the improvement of information literacy of Chinese EFL teachers are concentrated in areas such as training, guidance, and resources, all of which collectively constrain their improvement in information literacy. Therefore, effective training, more guidance, and learning resources are ways to promote the enhancement of teachers' information literacy.

Additionally, based on the feedback from the open-ended questions in the survey, although teachers have many opportunities to participate in relevant training, there are few activities, such as specialized learning sessions and thematic salons, that can meet the actual needs for improving teachers' information literacy. The evaluation methods for teachers' information literacy are not multidimensional, and there is a lack of a standardized evaluation system. Furthermore, teaching equipment needs further improvement and enhancement.

5. Conclusion

5.1. Summary

This study conducted an in-depth investigation into the current state of information literacy of Chinese EFL teachers in higher education, revealing significant differences across multiple dimensions of information literacy. Overall, Chinese EFL teachers demonstrate a high level of awareness regarding the acquisition and management of information technology teaching resources and the implementation of informatization teaching. However, their mastery of aspects such as information communication and collaboration, critical thinking, and information ethics is relatively low, indicating that the overall level of information literacy urgently needs improvement.

The research also indicates that there are significant differences in teachers' information literacy based on gender, educational background, years of work experience, and job status. Female teachers generally outperform male teachers in terms of information literacy awareness and skills, while teachers with higher educational qualifications exhibit more positive performance across various dimensions of information literacy. Additionally, younger teachers show greater enthusiasm for the frequency and awareness of applying information technology.

The main factors influencing the improvement of information literacy among Chinese EFL teachers include insufficient training, lack of professional guidance, scarcity of learning resources, and inadequate practical opportunities. Therefore, it is recommended that higher education institutions strengthen information literacy training for Chinese EFL teachers, provide diverse learning resources and practical platforms, and establish teacher-learning communities to promote the

comprehensive enhancement of teachers' information literacy, thereby improving teaching quality and student learning outcomes.

5.2. Suggestions

According to the research results and the primary factors hindering the enhancement of their information literacy, based on teachers' expectations, the following effective strategies can be implemented to enhance teachers' information literacy collaboratively from both the perspective of teachers and universities.

First, teachers can enhance their information literacy from the following aspects:

1) Teachers are expected to strengthen their understanding of the value of information literacy. Fully recognize that information literacy can serve as a horizontal key competency that enhances teachers' professional development capabilities. Actively participating in relevant training is essential to enhance teachers' confidence in using information technology for teaching research and practice.

2) Teachers are expected to actively engage in research and innovative practices in digital teaching. Adopt a blended teaching approach that combines online and offline methods within the school, utilizing digital tools to gather and analyze students' learning data for a more precise evaluation of their progress and achievements, which will help refine teaching strategies and enhance the quality of education. Additionally, engage in various digital teaching research conferences outside of classroom teaching to expand subject knowledge, acquire new insights, and apply this learning in practical explorations within their own courses.

Second, universities can help teachers enhance their information literacy from the following aspects:

1) Enrich Training Course Content: Set specific learning objectives based on teachers' actual needs and design diverse information literacy enhancement courses to meet different requirements. Combine theoretical explanations with practical operations to help teachers effectively utilize information technology and resources in teaching design and classroom management, thereby promoting student learning and development. This approach not only improves educational quality and meets modern educational demands but also fosters teachers' professional growth.

2) Provide Demonstration Cases: Conduct case studies based on the subjects taught by teachers. By analyzing successful teaching cases, helps teachers understand the application of information literacy in actual teaching. Encourage teachers to share their teaching experiences to promote mutual learning. Design simulated scenarios that allow teachers to practice information skills in real operations, enhancing their practical abilities.

3) Establish a Teacher Information Literacy Learning Community: Select teachers who need to enhance their information literacy or are interested in improving it, and collaboratively set learning goals and expectations. Create a convenient communication platform, regularly organize thematic learning meetings or practical workshops, or invite experts for lectures and training to help teachers address

issues encountered in the application of information technology, providing necessary training and guidance. Encourage teachers to share, communicate, and collaborate.

4) Build a Resource Repository: Utilize online learning platforms to create a shared resource repository that offers flexible learning resources and courses, facilitating self-directed learning for teachers. Encourage teachers to share their teaching cases, demonstrating how to apply information literacy in the classroom to promote mutual learning.

5) Establish an Incentive Mechanism: Set reasonable assessment standards and incentive measures, such as evaluating teachers' participation levels and diversifying assessments of their application of information technology tools in teaching, including self-assessments and peer evaluations. Encourage teachers to regularly evaluate and provide feedback, and develop improvement plans.

By implementing these strategies, the information literacy of Chinese EFL teachers can be effectively enhanced, leading to improved teaching quality and better student learning outcomes.

5.3. Limitations and Prospects of the Research

The research faces several limitations, including a small sample size that restricts the generalizability of the findings to a broader population, the geographic scope is confined to a relatively specific area, which may not accurately represent diverse cultural or regional contexts, and methodologically, the study mainly relies on questionnaire data. Despite these limitations, there are promising prospects for future research, such as expanding the sample size and geographic scope to enhance the generalizability of findings and allow for a more diverse representation of perspectives, employing mixed methods could yield deeper insights into the research topic. These efforts can lead to more robust conclusions and inform policy decisions, ultimately contributing to improved practices in information literacy of Chinese EFL teachers in universities.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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