



ETCOR Educational Research Center
PHILIPPINES
Sta. Ana, Pampanga, Philippines



Website: <https://etcor.org>



JOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

Digital Language Teaching, Literacy, Skills and Competence of Chinese Teachers Jing Sun

Lyceum of the Philippines University, Philippines
Corresponding Author e-mail: 10869247@qq.com

Received: 16 July 2023

Revised: 20 August 2023

Accepted: 13 September 2023

Available Online: 13 September 2023

Volume II (2023), Issue 3, P-ISSN – 2984-7567; E-ISSN - 2945-3577

Abstract

Aim: The purpose of this study is to determine the impact of Chinese language teachers' digital literacy and skills on their language teaching competence, so as to propose a language teaching program that will improve teachers' digital competence.

Methodology: Using a questionnaire, this study utilized a quantitative research method to investigate the level of digital literacy, digital skills, and language teaching competence of 300 language teachers from eight schools in Henan Province, China.

Results: Findings revealed that the respondents who participated in this survey are balanced between men and women, most of them have a master's degree, and most of the teachers' teaching experience is 1-5 years. The respondents have digital information literacy, digital risk literacy, digital information use literacy, and digital information creation literacy. The respondents also possess digital tools skills, digital data analysis skills, digital development skills, and digital assessment skills. Respondents also possess instructional design skills and instructional management skills.

Conclusion: Chinese teachers are competent in teaching in particularly on their instructional design and instructional management skills. There is a significant difference on digital literacy when grouped according to sex and educational background; digital skills are found to vary based on educational background while language teaching competence particularly on instructional management skills varies in terms of sex. Male teachers and those who have earned their master's degree have higher assessment on digital language teaching literacy and skills. Digital Language Teaching Literacy is highly related with the skills and competence acquired by the Chinese teachers.

Keywords: digital literacy, digital skills, language teaching, teaching competence

INTRODUCTION

Digital literacy is commonly understood as a broad set of competencies that include the ability to use, understand and critically evaluate digital technologies and utilize them to solve problems in life, learning and work. Digital literacy for language teaching and learning refers to the ability to use, understand and critically evaluate digital technologies and resources in language teaching and learning. It involves not only how to use various tools and platforms, but also how to integrate them effectively and appropriately into the language curriculum. Language teaching digital literacy also requires teachers to be aware of the ethical, social and cultural implications of using digital technologies in language education, such as issues of privacy, security, access and diversity (Yang et al.).

Digital skills, on the other hand, are more focused on the ability to operate specific technologies using a variety of digital tools such as programming, data analytics, cloud computing, etc. (Sghari, 2021). Digital skills refer to the ability to access, process, use, manage and evaluate digital information and resources using digital technologies and it is one of the essential skills for teachers in the digital age. Digital literacy, on the other hand, refers to the ability to analyze, judge, innovate and communicate digital information and resources based on digital skills, and it is also one of the essential qualities of teachers in the digital era. Language teaching digital skills are the specific abilities and knowledge that language teachers need to use digital technologies effectively and appropriately in their teaching practice (Wang and Chu, 2023).



ETCOR Educational Research Center
PHILIPPINES
Sta. Ana, Pampanga, Philippines



Website: <https://etcor.org>



iJOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

Meanwhile, teaching competence in this study refers to the ability of teachers to utilize digital skills to teach with digital literacy. This competence is reflected in the ability of teachers to utilize digital skills to improve their teaching while possessing a high level of digital literacy. Language teaching digital competence is the integration of digital skills and digital literacy in language education. It is the ability of teachers to use digital technologies and resources effectively and appropriately in their teaching practice, as well as to foster the development of digital competencies among their learners (Sghari, 2021). Teachers' digital literacy and digital skills are important issues in today's education field, and they are significant for improving teaching quality and promoting student development. In order to cope with the challenges and opportunities of the digital age, teachers need to continuously update their knowledge, skills and attitudes, as well as explore and utilize various digital technologies. At the same time, teachers also need support and assistance from various sources to overcome barriers and difficulties in using digital technologies for their professional growth and development (Canto et al., 2022).

For language teachers, digital skills and digital literacy can help language teachers expand their teaching resources, utilize the Internet, multimedia, artificial intelligence and other technologies to obtain rich and diverse information about language and culture, design innovative and interesting teaching activities, and improve students' interest in and effectiveness of language learning. Moreover, digital skills and digital literacy can help language teachers optimize teaching methods, use cloud platforms, virtual reality, smart classrooms and other technologies to realize the online and offline integration, the reality and virtual dual integration of teaching modes, and support personalized, collaborative, and inquiry-based learning styles to promote students' language communication skills and creativity. Digital skills and digital literacy can also help language teachers improve the quality of teaching by using technologies such as big data, intelligent analysis and automatic evaluation to collect and analyze students' learning data, achieve accurate diagnosis and feedback for students, adjust and optimize teaching strategies, and achieve continuous improvement of teaching effects. Finally, digital skills and digital literacy can help language teachers promote their professional development by utilizing technologies such as online communities, online courses, and microprofessionalism to participate in cross-school, cross-regional, and cross-section research and training and exchanges, to access the latest language education theories and practices, and to improve their professional knowledge and skills.

However, despite the increasing use of digital technologies and digital literacy in education, education departments and teachers are increasingly emphasizing the importance of digital technologies and digital literacy in teaching and learning. However, how teachers can effectively utilize these technologies for teaching and learning is still a pressing issue (Konovalev et al. 2020). For language teachers in China in particular, they are faced with the challenge of how to utilize digital technologies to improve the quality and efficiency of their teaching while maintaining linguistic and cultural identity.

Objective

This study aimed to determine the impact of Chinese language teachers' digital literacy and skills on their language teaching competence in order to propose a program to enhance the digital competence in language teaching:

1. To describe the profile of Chinese language teachers in terms of sex, education level and teaching experience and assess their language teaching digital literacy in terms of information, risk, information use and information creation.
2. To identify their language teaching digital skills in terms of digital tool, development, data analysis and assessment skills and assess their language teaching competence in terms of instructional design and instructional management skills;
3. To test the significant differences in responses when grouped according to the profile variables; test the relationship between and among language teaching digital literacy, skills and language teaching competence, and propose a language teaching program to enhance the digital literacy, skills, and competence of Chinese teachers.

METHODS

Research Design

This study is a quantitative research (descriptive research), a research that describes "what" educational phenomena, problems and facts are. It is a type of research that uses methods such as observation, surveys, and



ETCOR Educational Research Center
PHILIPPINES
Sta. Ana, Pampanga, Philippines



Website: <https://etcor.org>



iJOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

interviews to objectively record and truthfully describe educational phenomena, problems, and facts (Sadaf, 2019). Whereas, quantitative research can collect and analyze data by using quantitative measurement tools and methods (Anggini & Rodliyah, 2020). Secondly, quantitative research usually requires larger sample sizes to increase the statistical efficacy and reliability of the study (Elçi, 2019). Finally, quantitative studies that use statistical methods to analyze collected data can reveal the extent of correlation and influence between digital literacy and digital skills and teaching competencies.

This study is a quantitative study that utilized a questionnaire to collect research data. Since the scope of this study is digital literacy and digital skills of Chinese language teachers, the use of quantitative methods in this study can cover a larger number of interviewed teachers, thus obtaining more representative results. In the data collection stage, this study targeted eight schools in Henan, China, and randomly sampled 312 research samples. Statistical analyses were also conducted and used to further address the research questions. The data analysis techniques used in this study includes descriptive analysis, reliability analysis, analysis of variance and regression analysis.

Population and Sampling

This study utilized random sampling technique to select 300 language teachers from eight schools as respondents for this study and this number of research sample can effectively represent the average level of digital skills, digital literacy and teaching competence of language teachers in the Henan Province area. The participants of study were 300 teachers engaged in teaching English and Chinese languages at different educational levels in China, including primary, secondary, high school and university in eight schools in Henan Province, China. The study utilized simple random sampling technique in selecting the 300 teacher respondents who voluntarily participated in the study, which primarily focused on those who are using technology in facilitating their classes.

A sample size of 300 respondents would be representative of the current population and suggested that a sample size of 300 would be sufficient for any respectable statistical study. Sheard (2018) found that the optimal sample size for behavioral research is between 30 and 500 when appropriate confidence levels are taken into account.

Instrument

In this study, a questionnaire and a four-point Likert scale were used as research tools. A four-point Likert scale is a commonly used assessment tool to measure respondents' attitudes or perceptions towards a particular concept or phenomenon. The four-point scale (usually "strongly agree", "agree", "disagree", "strongly disagree") allows researchers to get a clear picture of teachers' attitudes towards digital literacy and the impact of digital skills on teaching competence (Sghari, 2021). The four-point Likert scale has good reliability and validity and can be validated and interpreted using statistical analysis methods in the study. In addition, the questionnaire was adapted from previous studies and questionnaires to meet the research objectives of this study. The questionnaire design of this study was divided into 3 main sections, digital literacy, digital skills and teaching competence. The questionnaire design of this study was derived from the questionnaires of (Aydın & Çelik, 2020; Talmo et al, 2020; Sghari, 2021), which were adapted to meet the research objectives of this study and a four-point Likert scale was used as a scale assessment tool for the questionnaire.

Data Collection

Before a formal survey is launched in this study, the validity of the preliminary version of the questionnaire needs to be determined for assessment. Therefore, there is a need to pilot test the data collection tool and the pilot test was conducted as an important step in order to ensure the validity and reliability of the data collection tool (Sheard, 2018). Before the pilot test was conducted, the researcher posted the content of the questionnaire on the internet using Questionnaire Star (the Chinese version of Google Questionnaire) and generated a link and QR code for the questionnaire. Respondents who participated in the pilot test and formal survey could access the questionnaire through the link and QR code. In the formal survey, Questionstar online survey (the Chinese version of Google questionnaire) was used to obtain the research sample, and the online survey was utilized in this study to solve the problems of cross-region and convenience in the survey. It is also necessary to ensure that respondents have a complete understanding of the purpose of this study before launching the survey, and the formal survey will begin after confirming the respondents' consent. The survey data will be securely stored in the backend of the QuestionStar online survey system after the respondents have completed the questionnaire, waiting for further data analysis.



ETCOR Educational Research Center
PHILIPPINES
Sta. Ana, Pampanga, Philippines



Website: <https://etcor.org>



iJOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

Data Analysis

Data analysis is one of the means of analyzing and interpreting quantitative data, in this study the data were analyzed descriptively, variability and correlation using SPSS 27 data analysis software.

Descriptive analysis is a method of describing and summarizing data, in the descriptive analysis of this study the mean, standard deviation and variance were used to show the distribution of the data and the average level of the data and a specific description of the demographics, and also, the weighted mean and ranking were used to rank and evaluate the different levels of the data. Secondly, analysis of variance is a data analysis technique to compare the level of difference between two groups of data. Analysis of variance was used in this study mainly to test significant differences based on different characteristic variables. Pearson's correlation analysis was used in this stage of data analysis, which facilitated the identification of the influential relationships among the three variables of teachers' digital literacy, digital skills and teaching skills, and the further development of relevant strategies used accordingly to improve the teaching competence of Chinese language teachers.

The data analysis of this study was conducted in order to achieve the research objectives of this study in a more scientific and reasonable way, and the data analysis can make the research data of this study more convincing. It provides an effective empirical research sample and scientific and reasonable variables and data to support the improvement of Chinese language teachers' teaching competence and strategy development.

Ethical Consideration

Ethical considerations are taken into account in order to ensure the fairness and morality of the study. Therefore, in this study, the purpose of the study and the content of the study are explained in detail before the questionnaire survey is conducted. It was ensured that each respondent was informed and the data of each respondent is anonymized, which ensures the privacy and information security of the respondents. This study starts with the respondents being fully aware of the purpose of the study, the respondents and the organization with informed and consent as a prerequisite to ensure that the data of the study is not disclosed and used for other purposes as a prerequisite. The impartiality and ethicality of this research conformity is guaranteed.

RESULTS and DISCUSSION

Table 1
Frequency Distribution of Respondents' Demographic Profile

Sex	Frequency	Percentage (%)
Male	139	46.33
Female	161	53.667
Educational Background		
Bachelor	79	26.33
Master	111	37.00
PhD	61	20.33
Postdoctoral	49	16.33
Teaching Experience		
1-5 years of teaching	155	51.66
6-10 years of teaching	24	8.00
11-15 years of teaching	97	32.33
Over 15 years of teaching	24	8.00
Total	300	100

Table 1 presents the demographic profile of the 300 respondents who participated in this study. The ratio of male respondents to female respondents was close to 1:1, with 139 (46%) males and 161 (53%) females. Thus, the proportion of male and female teachers participating in this survey was more or less the same. The findings of this study are consistent with Wang & Chu, (2023), in which the authors stated that the number of female teachers in



ETCOR Educational Research Center
PHILIPPINES
Sta. Ana, Pampanga, Philippines



Website: <https://etcor.org>



iJOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

China is greater than that of males, which is due to the difference between men and women in their choice of specialization, with women tending to choose language majors more than men.

Secondly, in the survey of academic background, master's degree became the largest number of teachers with academic background in this survey, followed by bachelor's degree and doctoral degree. There were 111 teachers with master's degree (37%), followed by 79 teachers with bachelor's degree (26%), and 61 teachers with doctoral degree (20%). The results are consistent with the findings of a survey by Yang et al. (2020) in which the authors conducted a survey of 10 schools in China. The results showed that the study had the largest percentage of educational backgrounds of all teachers. This result is due to the fact that China has a large population and a limited number of teaching positions, so a bachelor's degree educational background has made it difficult to enter school positions. The requirements for positions in major schools have also been raised to master and even doctoral degrees. Finally, with regard to the data on teaching experience, the largest number of teachers in the teaching experience survey was those with 1-5 years of teaching experience, with 155 teachers (51%). This was followed by teachers with 11-15 years of teaching experience with 97 teachers (32%). The number of teachers with 6-10 years and 15+ years of teaching experience was the same at 24 or 8%.

Table 2
Table on Teachers' Language Teaching Digital Literacy

Indicators	Weighted Mean	Verbal Interpretation	Rank
Digital Information Literacy	2.81	Agree	2
Digital Risk Literacy	2.82	Agree	1
Digital Information Use Literacy	2.79	Agree	3
Digital Information Creation Literacy	2.78	Agree	4
Composite Mean	2.80	Agree	

Based on the results in Table 2, it is indicated that in this phase of the survey of digital literacy. Teachers' digital literacy levels all showed high levels, and the weighted means were all higher than 2.70. One of the items with the highest weighted mean was Digital Risk Literacy. This indicates that teachers have a high quality of digital risk, based on the results of another survey conducted by Hua (2015), which showed that schools in China show a very high level of motivation for digital risk prevention and avoidance. Therefore, teachers also show a high level of digital risk prevention and avoidance.

Whereas, Digital Information Creation Literacy emerged as the lowest weighted mean of 2.772. It shows that although teachers have digital creation literacy, they do not show an advantage in teamwork. This implies that teachers must be working together to come up with cohesive materials for their students. The school management must really devote time for teachers to develop their own modules and have them integrated in their available technological platforms.

Table 3
Digital Tools Skills in Language Teaching

Indicators	Weighted Mean	Verbal Interpretation	Rank
I am very confident in using digital tools related to language teaching and learning (e.g., online teaching platforms, digital teaching resource libraries, etc.).	2.83	Agree	1
I understand the process of using digital tools for language teaching and learning activities.	2.82	Agree	2



ETCOR Educational Research Center
PHILIPPINES
Sta. Ana, Pampanga, Philippines



Website: <https://etcor.org>



iJOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

I regularly use digital tools for language teaching and learning activities.	2.77	Agree	5
I am able to solve technical problems that arise in the use of digital tools.	2.78	Agree	3.5
I have the flexibility to use multiple digital tools to meet different language teaching needs.	2.78	Agree	3.5
Composite Mean	2.80	Agree	

Table shows the data related to digital tools skills in teachers' digital skills, with a composite mean of 2.80, indicating that the majority of the responses show positive messages. Item no. 1, respondents are very confident in using digital tools related to teaching and learning (e.g., online teaching platforms, digital teaching resource libraries, etc.). As the item with the highest mean, the weighted mean had 2.83, indicating that most teachers are able to confidently use digital tools related to digital tools. This is in line with the findings of Cheng (2010), where the authors concluded that the new generations of teachers in China are able to use digital technology proficiently and basically every university has a digital teaching platform after the Ministry of Education's demand for digital reforms in colleges and universities. Therefore, the level of teachers' use of teaching-related digital tools is high.

Secondly, in Item no. 2, understanding the process of using digital tools for language teaching and learning activities ranks the second. The Item4 and 5, the mean values of these two items are 2.78, which show that teachers understand the process of using digital tools and can independently solve technical problems that arise during the use of digital tools. Independent use of digital tools is an important indicator of digital skills, and a good representation of this indicator suggests that teachers are performing well in digital skills.

Finally, the item with the lowest weighted mean is, item no.3, teachers regularly use digital tools for language teaching and learning activities. This indicates a phenomenon that even with good digital skills. Teachers still do not often use digital tools in language teaching and learning activities, which is inconsistent with the findings of Chien & Hui (2010), where teachers in the authors' study were good at using digital tools in teaching and learning. The reason for the discrepancy may be that language teaching does not rely heavily on digital tools. Therefore, it causes some degree of error. Teachers can independently cope with technical problems arising from digital tools.

Table 4
Table on Teachers' Language Teaching Digital Skills

Indicators	Weighted Mean	Verbal Interpretation	Rank
Digital Tools Skills	2.80	Agree	1
Digital data analysis skills	2.77	Agree	4
Digital Development Skills	2.78	Agree	3
Digital Assessment Skills	2.79	Agree	2
Composite Mean	2.79	Agree	

In Summary Table, Dimension 1, Digital Tools Skills, had the highest weighted mean, which suggests that Chinese language teachers are adept at using digital tools (Chien & Hui, 2010), but in subsequent analyses, a more detailed investigation of digital tool use unfolded. Dimension4, Digital Assessment Skills ranked second with a weighted mean of 2.79. Dimension 3, Digital Development Skills ranked third with a weighted mean of 2.78. These two more detailed surveys illustrate the strengths of Chinese language teachers in digital assessment skills and development skills.

However, compared with other three dimensions, Dimension 2, Digital Data Analysis Skills has the lowest weighted mean of 2.77. This is due to the fact that Chinese teachers' Digital Data Analysis Skills are easily limited by hardware equipment, environment, and teaching pressure (Cheng, 2010). Therefore, the performance of Chinese teachers' Digital Data Analysis Skills may not be as high as the other dimensions.

Table 13 shows data related to instructional design skills in teaching competencies with a composite mean of 2.74, which indicates that the majority of responses showed a positive message. The Item1and2 with the highest weighted mean suggest that the majority of teachers have information about designing courses independently.



ETCOR Educational Research Center
PHILIPPINES
Sta. Ana, Pampanga, Philippines



Website: <https://etcor.org>



iJOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

Table 5
Table on Language Teaching Competence

Indicators	Weighted Mean	Verbal Interpretation	Rank
Instructional Design Skills	2.74	Agree	1
Instructional Management Skills	2.72	Agree	2
Composite Mean	2.73	Agree	

In Table, teachers' instructional design skills are higher than teachers' classroom management skills, in rank 1. This result is consistent with the findings of Dilekli and Tezci (2016) that classroom management involves more factors than just instructional competence. It also involves teachers' personality, characteristics and strategies. Therefore, classroom management cannot be explained by digital literacy and digital skills alone. Still the human technical skills of the teachers are important.

Table 6
Difference in Responses on Teachers' Language Teaching Digital Literacy When Grouped to Profile

Sex	F-value	p-value	Interpretation
Digital Information Literacy	3.877	0.050	Not Significant
Digital Risk Literacy	6.766	0.010	Significant
Digital Information Use Literacy	6.049	0.014	Significant
Digital Information Creation Literacy	4.383	0.037	Significant
Educational Background			
Digital Information Literacy	3.016	0.030	Significant
Digital Risk Literacy	4.506	0.004	Significant
Digital Information Use Literacy	6.072	0.001	Significant
Digital Information Creation Literacy	3.527	0.015	Significant
Teaching Experience			
Digital Information Literacy	2.253	0.082	Not Significant
Digital Risk Literacy	2.023	0.111	Not Significant
Digital Information Use Literacy	2.451	0.064	Not Significant
Digital Information Creation Literacy	1.329	0.265	Not Significant

Table shows the analysis of variance (ANOVA) on demographic characteristics where sex showed significant differences in teachers' digital language teaching skills and language teaching competence. Males significantly presented higher levels in Language Teaching Digital skills, Language Teaching Competence. This result is in line with Du and Yang's (2020) findings that in one of the authors' surveys males had higher sensitivity to digital technology compared to females. As a result, they showed higher levels of learning and communicating about digital technology, which further affected the teachers' digital teaching competence. Thus, male teachers performed better in digital technology and digital language teaching competencies as compared to female teachers.

In the difference of responses on Teachers' Language Teaching Digital Literacy, was observed that there was significant difference when grouped according to sex (except on digital information literacy) and educational background since the obtained p-values were less than the alpha level. From the post hoc test conducted, it was found out that those who obtained masteral degree and with a teaching experience of 11 to 15 years have better assessment than others.

Whereas, educational background showed significant differences in digital language teaching literacy and digit language teaching I skills. Master's degree significantly showed better performance than bachelor's degree on Language Teaching Digital Literacy, Language Teaching Digital Skills -- the two components. The results of Zhang & Huang (2022) verified the findings of this study that academic qualifications can improve teachers' digital literacy and digital skills. This is due to the fact that the graduation standard of master's degree is much higher than that of



ETCOR Educational Research Center
PHILIPPINES
Sta. Ana, Pampanga, Philippines



Website: <https://etcor.org>



iJOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

bachelor's degree students, thus they are able to demonstrate higher levels of digital learning. This further influenced their digital literacy and digital skills levels.

Teaching experience, on the other hand, did not make a difference in language teaching digital literacy, language teaching digital skills, and language teaching competence. Jiang's (2021) study also illustrates this state of affairs, as the accumulation of ordinary teaching experience has little effect on digital teaching literacy, skills, and teaching competence.

Table 7

Difference in Responses on Teachers' Language Teaching Digital Skills When Grouped to Profile

Sex	F-value	p-value	Interpretation
Digital Tools Skills	13.575	0.000	Significant
Digital data analysis skills	3.780	0.053	Not Significant
Digital Development Skills	6.580	0.011	Significant
Digital Assessment Skills	3.113	0.079	Not Significant
Educational Background			
Digital Tools Skills	2.856	0.037	Significant
Digital data analysis skills	4.681	0.003	Significant
Digital Development Skills	5.357	0.001	Significant
Digital Assessment Skills	5.643	0.001	Significant
Teaching Experience			
Digital Tools Skills	2.139	0.095	Not Significant
Digital data analysis skills	2.261	0.082	Not Significant
Digital Development Skills	1.451	0.228	Not Significant
Digital Assessment Skills	2.391	0.069	Not Significant

Table shows Difference in Responses on Teachers' Language Teaching Digital Skills When Grouped According to Profile. Teachers' language digital skills have found significant difference in terms of sex particularly on digital tool skills and digital development skills. Meanwhile, significant difference is also found when grouped according to educational background and not significant in terms of teaching experience.

This implies that the education of a person is a critical aspect on his digital skills. When a person has vast orientation and training on technology it will impact his teaching skills. According to Johannesen et al. (2019), digital literacy enables language teachers to keep up with the latest developments in the field. With digital tools such as online journals, blogs, and social media platforms, language teachers have access to a wealth of information about new research findings, best practices, and emerging trends. This information can be used to inform their teaching practices and ensure that they are providing their students with the most relevant and up-to-date information.

Table 8

Relationship Between Teachers' Language Teaching Digital Literacy and Teachers' Language Teaching Digital Skills

Digital Information Literacy	r-value	p-value	Interpretation
Digital Tools Skills	.604**	0.000	Highly Significant
Digital data analysis skills	.613**	0.000	Highly Significant
Digital Development Skills	.592*	0.000	Highly Significant
Digital Assessment Skills	.594**	0.000	Highly Significant
Digital Risk Literacy			
Digital Tools Skills	.613**	0.000	Highly Significant
Digital data analysis skills	.608**	0.000	Highly Significant
Digital Development Skills	.619**	0.000	Highly Significant



ETCOR Educational Research Center
PHILIPPINES

Sta. Ana, Pampanga, Philippines



Website: <https://etcor.org>



iJOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

Digital Assessment Skills	.613**	0.000	Highly Significant
Digital Information Use			
Literacy			
Digital Tools Skills	.613**	0.000	Highly Significant
Digital data analysis skills	.654**	0.000	Highly Significant
Digital Development Skills	.621**	0.000	Highly Significant
Digital Assessment Skills	.618**	0.000	Highly Significant
Digital Information Creation Literacy			
Digital Tools Skills	.616**	0.000	Highly Significant
Digital data analysis skills	.606**	0.000	Highly Significant
Digital Development Skills	.598**	0.000	Highly Significant
Digital Assessment Skills	.615**	0.000	Highly Significant

Table illustrates the association between Teachers' Language Teaching Digital Literacy and Language Teaching Digital skills. It was observed that the computed r-values indicate highly significant relationship and the resulted p-values were less than the alpha level. This means that Teaching Digital Literacy and Teachers' Language Teaching Digital Skills are highly related. This means that the better is the teaching digital literacy, the more competent in teaching.

Nowadays, teachers are challenged to keep themselves abreast to the current technologies. Since today's learners are visual and considered digital natives, there is no such thing as learning only for the moment. There must be continuous improvement in their skills more particularly, the digital skills in order to be relevant.

Starkey and Yates (2021) stated that digital skills can also increase teaching effectiveness and improve students' learning experience. For example, language teachers can utilize online tools to create interactive classroom activities to better engage students in the classroom. In addition, language teachers can utilize online tools to assess students' performance and give timely feedback.

Table 9
Relationship Between Teachers' Language Teaching Digital Skills and Language Teaching Competence

	r-value	p-value	Interpretation
Digital Tools Skills			
Instructional Design Skills	.587**	0.000	Highly Significant
Instructional Management Skills	.607**	0.000	Highly Significant
Digital data analysis skills			
Instructional Design Skills	.589**	0.000	Highly Significant
Instructional Management Skills	.573**	0.000	Highly Significant
Digital Development Skills			
Instructional Design Skills	.595**	0.000	Highly Significant
Instructional Management Skills	.630**	0.000	Highly Significant
Digital Assessment Skills			
Instructional Design Skills	.569**	0.000	Highly Significant
Instructional Management Skills	.570**	0.000	Highly Significant

Table presents the association between Teachers' Language Teaching Digital Skills and Language Teaching Competence. It was observed that the computed r-values indicate a strong direct correlation in all the domains and the resulted p-values were less than the alpha level. This means that significant relationship exists and implies that the better is the teaching digital skills, the more competent in teaching.

This study found that digital skills produced a significant correlation and impact on teachers' teaching competence. In today's classroom, all teachers are challenged to be updated to the current technologies in teaching.



ETCOR Educational Research Center
PHILIPPINES
Sta. Ana, Pampanga, Philippines

INTERNATIONAL
MULTIDISCIPLINARY
RESEARCH CONFERENCE



Google



Website: <https://etcor.org>



JOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

As such, all strategies must also be adjusted. The way classes were held before are definitely different from the way classes are handled nowadays.

Summary, Conclusions, and Recommendations

Most of the respondents were female who have earned their master's degree and were teaching for one to five years. Respondent Chinese teachers have confirmed that they are digitally literate with digital literacy as the foremost of all. Respondent Chinese teachers possess the language teaching digital skills primarily on the digital tool skills. Respondent Chinese teachers are competent in teaching in particularly on their instructional design and instructional management skills. There is a significant difference on digital literacy when grouped according to sex and educational background; digital skills are found to vary based on educational background while language teaching competence particularly on instructional management skills varies in terms of sex. Male teachers and those who have earned their master's degree have higher assessment on digital language teaching literacy and skills. Digital Language Teaching Literacy is highly related with the skills and competence acquired by the Chinese teachers. A Language Teaching Program was proposed to enhance the digital literacy, skills, and competence of Chinese teachers.

The study recommends the following:

1. Language teachers may participate in trainings and seminars on digital teaching competencies.
2. School administrators may provide the necessary support for improving the digital teaching competence of language teachers.
3. Language teachers' unions may bridge for a call to improve the digital teaching competence of language teachers by organizing and promoting communication and sharing digital-enhancement activities in the classroom.
4. The proposed language teaching program may be reviewed, implemented and evaluated after its implementation.
5. Future researchers may consider adopting a mixed research methodology to evaluate the plans to enhance the digital teaching competence of language teachers in various regions.

REFERENCES

- Aijaz, G. (2017). Direct instruction and appropriate intervention for children with learning problems. *Turkish Online Journal of Educational Technology - TOJET*, 6(2), 23–25. <https://eric.ed.gov/?id=EJ1102453>
- Aydın, M. & Çelik, T. (2020) 'Impact of the digital literacy courses taken by the prospective social studies teachers by distance learning on Digital Citizenship Skills', *Research on Education and Media*, 12(1), pp. 42–57. doi:10.2478/rem-2020-0006.
- Biggane, J., Sadrinezhad, A., & Steinbauer, R. (2019). The shifting roles of faculty in Digital Teaching and Learning. *Handbook of Research on Faculty Development for Digital Teaching and Learning*, 1–16. <https://doi.org/10.4018/978-1-5225-8476-6.ch001>
- Ccanto, F.F. et al. (2022). 'Digital Skills and professional development in teachers at Ugel 12, Canta - Lima', *NeuroQuantology*, 20(5), pp. 620–625. doi:10.14704/nq.2022.20.5.nq22216.
- Cheng, V. M. Y. (2010). Tensions and dilemmas of teachers in creativity reform in a Chinese context. *Thinking Skills and Creativity*, 5(3), 120–137. <https://doi.org/10.1016/j.tsc.2010.09.005>
- Cheng, Y., & Yeh, H. (2019). Developing thinking skills in English literacy instruction in Taiwanese secondary schools: Teachers' perspectives. *English Literacy Instruction for Chinese Speakers*, 159–173. https://doi.org/10.1007/978-981-13-6653-6_10
- Chien, C., & Hui, A. N. N. (2010). Creativity in early childhood education: Teachers' perceptions in three Chinese societies. *Thinking Skills and Creativity*, 5(2), 49–60. <https://doi.org/10.1016/j.tsc.2010.02.002>



ETCOR Educational Research Center
PHILIPPINES
Sta. Ana, Pampanga, Philippines



Website: <https://etcor.org>



JOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

- Demeshkant, N. (2020). Future academic teachers' digital skills: Polish case-study. *Universal Journal of Educational Research*, 8(7), 3173–3178. <https://doi.org/10.13189/ujer.2020.080746>
- Dilekli, Y., & Tezci, E. (2016). The relationship among teachers' classroom practices for teaching thinking skills, teachers' self-efficacy towards teaching thinking skills and teachers' teaching styles. *Thinking Skills and Creativity*, 21, 144–151. <https://doi.org/10.1016/j.tsc.2016.06.001>
- Elçi, A. (2019). Faculty Development Centers for Digital Teaching and learning. *Handbook of Research on Faculty Development for Digital Teaching and Learning*, 417–437. <https://doi.org/10.4018/978-1-5225-8476-6.ch021>
- Fedotova, O., Belousova, A., & Vyshkvyrkina, M. (2022). Digital competence of future teachers as a topic of Russian scientific discourse. *Digital Literacy for Teachers*, 559–586. https://doi.org/10.1007/978-981-19-1738-7_26
- Garau López, M. M. (2021). Digital teaching competence and online teaching in times of confinement. *INTED2021 Proceedings*. <https://doi.org/10.21125/inted.2021.0879>
- Guo, H. (2022). Teacher professional development in elementary and secondary schools in China. *Encyclopedia of Teacher Education*, 1869–1876. https://doi.org/10.1007/978-981-16-8679-5_5
- Harakchiyska, T. K. (2023). Self-assessment of pre-service English teachers' digital competence. 2023 46th MIPRO ICT and Electronics Convention (MIPRO). <https://doi.org/10.23919/mipro57284.2023.10159858>
- Hua, Z. (2015). On teacher development. *Autobiography and Teacher Development in China*, 49–68. https://doi.org/10.1057/9781137382405_2
- Huang, J., & Xu, S. (2015). A narrative inquiry into Chinese teacher induction in West China through Cross-Cultural Teacher Development. *Frontiers of Education in China*, 10(3), 470–492. <https://doi.org/10.1007/bf03397080>
- Ikpeze, C. H. (2018). Designing e-books: Enhancing prospective teachers' digital literacy skills. *Best Practices in Teaching Digital Literacies*, 29–42. <https://doi.org/10.1108/s2048-045820180000009003>
- Jiang, J. (2021). Teaching a minimal citizenship in China: Testing, official discourse, and teacher agency. *Teaching and Teacher Education*, 106, 103441. <https://doi.org/10.1016/j.tate.2021.103441>
- Johannesen, M., Øgrim, L., & Hatlevik, O. E. (2019). Perspectives on Teachers' Professional Digital Competence. *ICERI Proceedings*. <https://doi.org/10.21125/iceri.2019.0365>
- Jones, I. (2022). Analysing data I: Quantitative data analysis. *Research Methods for Sports Studies*, 247–275. <https://doi.org/10.4324/9781003195467-13>
- Ke, X. (2019). Teacher authority in the West and China. *Encyclopedia of Teacher Education*, 1–5. https://doi.org/10.1007/978-981-13-1179-6_18-1
- Lam, S. (2019). Teach for China as a response to teacher shortage. From “Teach For America” to “Teach For China,” 51–72. <https://doi.org/10.4324/9780429450426-4>
- Lathipatud Durriyah, T., & Zuhdi, M. (2018). Digital Literacy with EFL student teachers: Exploring Indonesian student teachers' initial perception about integrating digital technologies into a teaching unit. *International Journal of Education and Literacy Studies*, 6(3), 53. <https://doi.org/10.7575/aiac.ijels.v.6n.3p.53>
- Liu, S. (2020). Teacher education in China, policy of. *Encyclopedia of Teacher Education*, 1–5. https://doi.org/10.1007/978-981-13-1179-6_263-1
- Liu, S. (2022). Teacher education in China, policy of. *Encyclopedia of Teacher Education*, 1798–1802. https://doi.org/10.1007/978-981-16-8679-5_263



ETCOR Educational Research Center
PHILIPPINES
Sta. Ana, Pampanga, Philippines



Website: <https://etcor.org>



iJOINED ETCOR
P - ISSN 2984-7567
E - ISSN 2945-3577



The Exigency
P - ISSN 2984-7842
E - ISSN 1908-3181

- Liu, W. (2023). Critical thinking skills for Chinese teachers: A study of mathematics teachers' perceptions. *PUPIL: International Journal of Teaching, Education and Learning*, 7(2), 01-16. <https://doi.org/10.20319/pijtel.2023.72.0116>
- Masiliauskiene, E., Daugirdaite, M., & Lenkauskaitė, J. (2021). Expression of the digital competence of Preschool Teachers. *ICERI2021 Proceedings*. <https://doi.org/10.21125/iceri.2021.0477>
- Opie, C. (2019). Understanding Quantitative Data Analysis. *Getting Started in Your Educational Research: Design, Data Production and Analysis*, 275-308. <https://doi.org/10.4135/9781526480507.n13>
- Puhy, C., Prakash, N., Lacson, C., & Bradt, J. (2021). Multicultural teaching competence among undergraduate faculty: A convergent mixed methods study. *Journal for Multicultural Education*, 15(4), 459-473. <https://doi.org/10.1108/jme-05-2021-0059>
- Putri Anggini, C., & Siti Rodliyah, R. (2020). ESP students' Digital Literacy Needs: The Teachers' Perspectives. *2020 The 4th International Conference on Education and Multimedia Technology*. <https://doi.org/10.1145/3416797.3416846>
- Sadaf, A. (2019). Exploring teachers' value beliefs of integrating digital literacy in K-12 classrooms. *International Journal of Digital Literacy and Digital Competence*, 10(2), 1-14. <https://doi.org/10.4018/ijdlldc.2019040101>
- Sempere, M. and Fernández, F. (2022) 'Acquisition of digital skills of University Teachers: A massive experience', *ICERI2022 Proceedings [Preprint]*. doi:10.21125/iceri.2022.1703.
- Sercu, L. (2018). The future of intercultural competence in Foreign Language Education: Recommendations for Professional Development, educational policy and Research. *Foreign Language Teachers and Intercultural Competence*, 160-181. <https://doi.org/10.21832/9781853598456-012>
- Serezhkina, A. (2021) 'Digital Skills of Teachers', *E3S Web of Conferences*, 258, p. 07083. doi:10.1051/e3sconf/202125807083.
- Seufert, S., & Scheffler, N. (2016). Developing digital competences of Vocational Teachers. *International Journal of Digital Literacy and Digital Competence*, 7(1), 50-65. <https://doi.org/10.4018/ijdlldc.2016010104>
- Sghari, A. (2021) 'How does the digital transformation affect the job of university teachers?', *Advances in Educational Technologies and Instructional Design*, pp. 185-197. doi:10.4018/978-1-7998-4972-8.ch011.
- Shao, X., & Bruening, T. (2005). Knowledge and skills needed by teachers in Chinese agricultural schools regarding curriculum and instruction reforms. *Journal of International Agricultural and Extension Education*, 12(3). <https://doi.org/10.5191/jiaee.2005.12303>