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The Effectiveness of Lecture and Demonstration Methods in Improving the Communication Skills of Students in the Mandarin Language Program at Prima Indonesia University

Jocelyn Sutana[1]*, Wenny[2], Mei Lisa[3], Paulia[4]
PUI Bahasa, Sastra dan Literasi, Universitas Prima Indonesia, Indonesia[1,2,3]
Sekolah Tinggi Bahasa Asing Persahabatan Internasional Asia (STBA-PIA), Indonesia[4]
Email: wenny@unprimdn.ac.id*, meilisa@unprimdn.ac.id, paulia@stbapia.ac.id

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Abstract

Mandarin communication skills are important for students in the Mandarin Language Study Program at Prima Indonesia University; however, there are obstacles related to pronunciation, sentence structure, and self-confidence, so effective teaching methods are needed. This study aims to assess the influence of lecture and demonstration approaches on the communication abilities of students in the Mandarin Language Study Program at Prima Indonesia University. This study employed a quantitative method using 36 students as respondents. Data collection was conducted by distributing surveys via Google Forms. Coefficients of determination, F-tests, t-tests, validity and reliability tests, and classical assumption tests were used to analyze the data. The findings demonstrated that students' communication abilities were not significantly affected by the lecture method. On the other hand, the demonstration method was shown to significantly and positively improve students' communication abilities. Therefore, it can be concluded that, in helping students in the Mandarin Language Study Program at Prima Indonesia University improve their communication abilities, the demonstration method is more effective than the lecture method.

INTRODUCTION

The ability to communicate in Chinese is a very important skill for students of the Chinese Language Study Program at Universitas Prima Indonesia (Alindra & Siregar, 2024; Hidayadi et al., 2025; Nurhaliza et al., 2024; Phanata, 2024). With the increasing trade and diplomatic relations between Indonesia and China, graduates who have strong communication skills in Chinese possess a competitive advantage in the workforce (Aisyah, 2024; Amin et al., 2024; Hidayadi et al., 2025). According to Krashen (1982), in the theory of Second Language Acquisition, the ability to speak in a foreign language develops through meaningful interaction and repeated practice. This shows that learning methods that emphasize active communication are very important in Chinese language teaching (Azizi et al., 2022; Law, 2024; Shang et al., 2024; Wang et al., 2022; Zhang, 2025). However, in the language-learning process, there are still obstacles to developing students' speaking skills (AHMAD, 2024; Ghafar & Raheem, 2023; Rahimi & Fathi, 2024; Saputra et al., 2023). Some students have difficulty with pronunciation, grammar, and confidence when speaking in Chinese (Fang, 2022; Jiang & Phusawisot, 2023). According to Brown (2007), factors that affect the success of language learning include motivation, learning methods, and opportunities to practice speaking. In addition, research by Zhang and Wu (2019) found that many college students who study Chinese as a foreign language face obstacles in intonation and tone patterns, which are crucial aspects of Chinese

phonology. In language learning, the teaching strategies used by lecturers play an important role in determining the effectiveness of instruction. Two commonly used methods in Chinese teaching are the lecture method and the demonstration method. Each of these methods has advantages and disadvantages in improving students' speaking skills. The lecture method helps students understand language theory more systematically. According to Arends (2012), the lecture method is effective in conveying information in a short time and providing a clear structure for the learning material. However, its weakness is the lack of interaction between instructors and students, which can lead to low student involvement in speaking practice. On the other hand, the demonstration method allows students to see firsthand examples of Chinese use in real-life situations. According to Harmer (2007), demonstration-based methods, or hands-on practice, help students more easily remember vocabulary and sentence structure because of richer visual and auditory experiences. However, there have not been many studies that specifically compare the effectiveness of these two methods in improving students' communication skills in the Chinese Language Study Program at Universitas Prima Indonesia. According to Liu et al. (2021), demonstration techniques are superior to lecture methods in terms of improving the ability to speak in foreign languages. Meanwhile, Sun (2020) shows that, in order to develop solid theoretical knowledge before students engage in active communication practice, lecture techniques are still required in the early stages of language acquisition. Based on these challenges, this study aims to test the effectiveness of lecture and demonstration techniques in improving the communication skills of students in the Chinese Language Study Program at Universitas Prima Indonesia. It is hoped that the findings of this study will provide instructors with a new perspective on how to choose the most effective teaching strategies to improve their students' speaking skills.

The urgency of this research is underscored by several critical factors. First, Mandarin has become increasingly important in Indonesia's economic landscape, with Chinese investment and trade relations growing substantially over the past decade (Li, 2019). Second, graduates with Mandarin proficiency command higher salaries and have better employment prospects in multinational corporations, banking, tourism, and trade sectors. Third, students in the Diploma in Chinese for Business and Professional Communication program at Universitas Prima Indonesia specifically require practical communication skills for workplace settings, making pedagogical effectiveness a matter of graduate employability. Fourth, without empirical evidence on method effectiveness, instructors may continue using less effective approaches, potentially compromising student learning outcomes. Fifth, the growing number of students enrolled in Mandarin programs across Indonesian universities—with Universitas Prima Indonesia experiencing enrollment increases of approximately 15–20% annually—necessitates evidence-based pedagogical decision-making.

The novelty of this research lies in several key aspects. First, this study is among the first to specifically compare lecture and demonstration methods for Mandarin language instruction in an Indonesian university context. Second, the research focuses on business and professional communication—a specialized program with distinct communicative needs compared to general Mandarin study. Third, the study employs a quantitative design with rigorous statistical testing (validity, reliability, classical assumption tests, F-test, t-test, coefficient of determination) to ensure methodological robustness. Fourth, the research provides institution-specific evidence for Universitas Prima Indonesia, enabling targeted pedagogical

recommendations. Fifth, the study contributes to the limited body of research on Mandarin language pedagogy in Southeast Asian contexts, complementing existing studies from China, Europe, and North America.

Based on the existing context, the formulation of the problem in this study is as follows: First, how effective are the lecture and demonstration methods in improving the communication skills of students in the Chinese Language Study Program at Universitas Prima Indonesia? Second, between the lecture method and the demonstration method, which is more effective in improving students' speaking skills? The purpose of this study is to analyze the effectiveness of the two methods in improving students' communication skills and to compare their effectiveness to determine the more effective method for improving students' speaking skills.

METHOD

This research employed a quantitative methodology. Participants in this study were D4 students at *Universitas Prima Indonesia*, Medan, enrolled in the Business and Professional Communication program. Data were collected using questionnaires distributed through Google Forms, which enabled efficient and consistent data collection from the targeted respondents.

The research population consisted of all students enrolled in the Diploma in Chinese for Business and Professional Communication program at *Universitas Prima Indonesia*, Medan. The sample was selected using purposive sampling, targeting respondents who met specific criteria aligned with the research objectives. The criteria included: (1) students who actively participated in the Diploma 4 Chinese program for Business and Professional Communication, and (2) students who had experienced learning through both lecture and demonstration methods.

Data were analyzed using descriptive statistics to summarize and interpret the collected information. Instrument validity and reliability were tested to ensure that the data collection tool measured consistently and accurately. Classical assumption tests were also conducted, including normality, multicollinearity, and heteroscedasticity tests, to ensure that the regression model met the required assumptions.

Furthermore, the coefficient of determination was used to measure the extent to which independent variables influenced the dependent variable. Hypothesis testing was conducted using the t-test to examine partial effects and the F-test to examine simultaneous effects of the independent variables on the dependent variable. A significance level of 0.05 was used as the basis for decision-making in all statistical tests.

RESULTS AND DISCUSSIONS

Description of Research Results

The Diploma in Chinese for Business & Professional Communication Program at Universitas Prima Indonesia, is the subject of this research. A total of 36 people were surveyed using the Google Forms questionnaire. Descriptive statistical analysis was carried out on the data, and the results were as follows:

Tabel 1. Descriptive Statistics

Variable	N	Minimum	Maximum	Red	Std. Deviation
Lecture Method	36	14	22	17.03	1.699

Variable	N	Minimum	Maximum	Red	Std. Deviation
Demonstration Method	36	15	25	19.97	2.455
Capabilities Communicate	36	15	25	19.14	2.543

Based on table 3.1 above, it can be explained as follows:

1. With 36 observations, the range for the lecture method variable (X1) was 14–22, with an average of 17.03 and a standard deviation of 1.699.
2. The 36-item demonstration approach variable (X2) had a value range from 15 to 25, an average of 19.97, and a standard deviation of 2.455.
3. There were 36 observations for the communication skill variable (Y), with a range of 15–25, an average of 19.14, and a standard deviation of 2.543.

Quantitative Data Analysis

Validity Test

Validity testing assesses the accuracy and precision of research instruments in measuring the variables in question. Karimuddin (2021:83) defines validity as the level of accuracy of a measuring instrument. Validity testing was performed on 36 participants at a significance level of 5% using SPSS. A statement is considered valid if the calculated r-value exceeds the r-value tabled at a significance level of 0.05.

Table 2. Validity Test

Variable	Statement	P Correlation
Ceramah (X1)	X1.1	0,533
	X1.2	0,410
	X1.3	0,558
	X1.4	0,629
	X1.5	0,448
Demonstration (X2)	X2.6	0,718
	X2.7	0,698
	X2.8	0,795
	X2.9	0,706
	X2.10	0,587
Capabilities Communicate (Y)	Y11	0,651
	Y12	0,743
	Y13	0,772
	Y14	0,396
	Y15	0,564
	Y16	0,653
	Y17	0,677
	Y18	0,678
	Y19	0,401
	Y20	0,832

Based on Table 3.2, each variable is considered valid if the calculated r-value exceeds the r-value of the table at a significance level of 0.05.

Reliability Test

The purpose of reliability testing is to check how consistently the research tool, in this case a questionnaire, works. For the purposes of this study, reliability was evaluated using Alpha Cronbach. An Alpha Cronbach score higher than 0.70 (or 0.60 in certain studies) indicates that the instrument is reliable which signifies stability and consistency in measuring results over time (Ghozali, 2021). This document includes the results of reliability assessments for lecture techniques, demonstration methods, and communication skills.

Tabel 3. Reliability Statistics

Variable	Cronbach's Values Alpha		Results Reliability SPSS	Remarks
Method Ceramah (X1)	0.7	<	0,874	Reliable
Method Demonstration (X2)	0.7	<	0,874	Reliable
Capabilities Communicate (Y)	0.7	<	0,874	Reliable

Reliability Statistics

Cronbach's Alpha	N of Items
.874	20

The reliability test of the research instrument yielded data in Table 3.3, which showed that 20 items had an Alpha Cronbach value of 0.874. The high level of internal consistency demonstrated by this rating makes this research instrument an excellent choice for data collection.

Classical Assumption Test

To ensure that the research regression model meets the requirements of linear regression analysis, an assessment step known as the classical assumption test is performed. The researchers in this study used conventional assumption tests that included checking heteroscedasticity, multicollinearity, and normality using SPSS software.

Normality Test

The purpose of the normality test is to find out if the residual of the regression is normally distributed. The Normal Probability Plot (Q-Q Plot) method is used to determine whether the data is normal. If the residual points are scattered around the diagonal line and parallel to the trajectory, then the data is said to be appropriately distributed. The assumption of normality can be checked against the regression model after this condition is met. The following are
Visual representation of the normality evaluation findings:

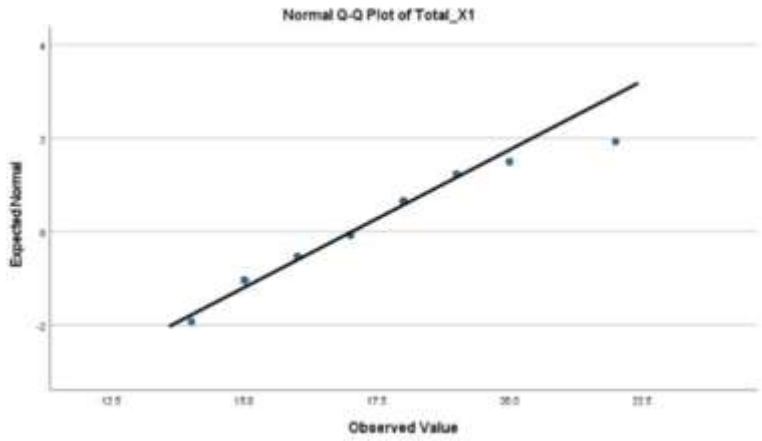


Figure 1. Independent Variable: Lecture Method

Figure 1 above shows that the diagonal distribution of the variable X1 of the dots meets the assumption of normality or is close to the normal distribution.

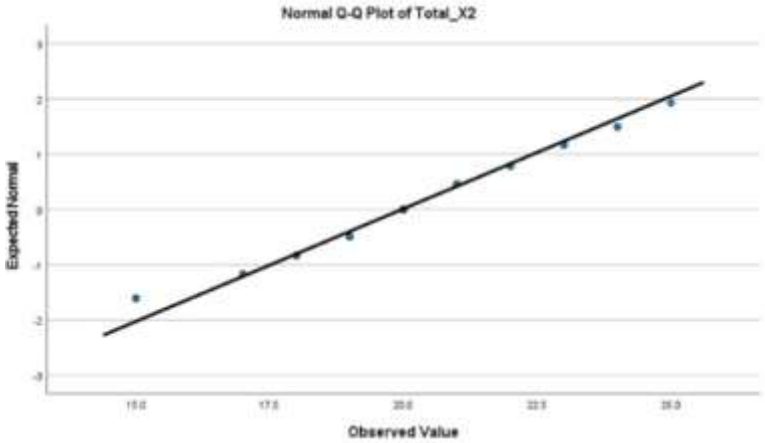


Figure 2. Independent Variable: Demonstration Method

Figure 2 illustrates that the X2 variable shows a distribution of data that is parallel to the diagonal line, indicating that the X2 data is normally distributed.

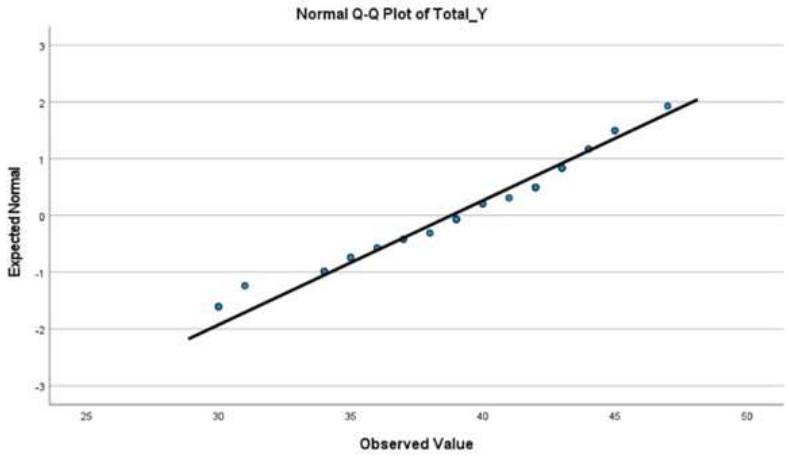


Figure 3. Dependent Variable: Communication Ability

Figure 3 illustrates that the data distribution for variable Y shows points that are mostly parallel to the diagonal line. This signifies that the Y data has a normal distribution.

Multicollinearity Test

The purpose of the multicollinearity test is to determine the relationships between independent variables in the regression model. If the tolerance value and the Variance Inflation Factor (VIF) are less than 10, then the regression model is said to contain no multicollinearity. You can see the results of the multicollinearity test in the table below.

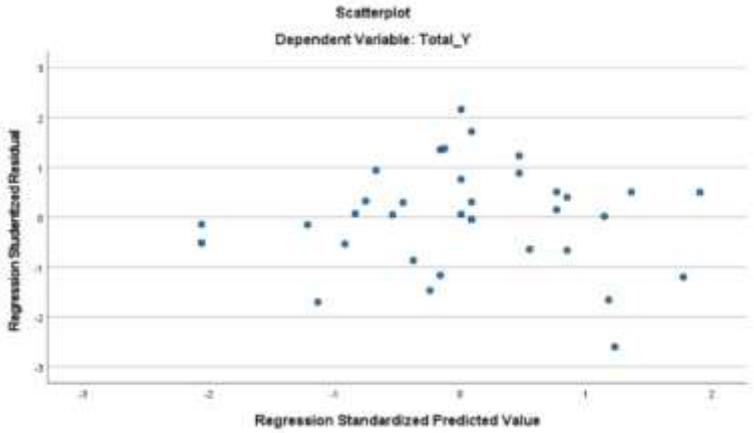
Tabel 4. Multicollinearity Statistics

Method	Collinearity Statistics	
	Tolerance	**VIF**
Ceramah (X1)	0,819	1,220
Demonstration (X2)	0,819	1,220

A tolerance value of 0.819 (>0.10) and a Variance Inflation Factor (VIF) of 1.220 (<10) were found for the lecture approach (X1) and the demonstration method (X2) in the multicollinearity test, as shown in Table 3.4. These findings validate the application of the regression model in this study by showing that independent variables do not show multicollinearity.

Heteroscedasticity Test

The heteroscedasticity test, according to Ghozali (2021), is intended to find out whether the residual variance in the regression model is different for each data set. Finding heteroscedasticity in SRESID (standardized residual) and ZPRED (standardized predictive values) scatterplots is possible. Heteroscedasticity cannot be demonstrated if the data points do not follow a clear pattern and appear to be randomly distributed. On the contrary, the appearance of certain patterns is an indication of heteroscedasticity.



Gambar 4. Heteroscedasticity Statistics

As seen in Figure 3.4, the dots are randomly and uniformly scattered above and below zero. This means that the regression model shows no indication of heteroscedasticity, making it suitable for testing.

Hypothesis Test

T test

The t-test is a statistical tool to determine the relative importance of independent variables in explaining dependent variables. The following t-test findings were generated from data analysis conducted using SPSS software

Table 5. T test

Model (1)	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.336	5.342		1.186	.244
Ceramah	.299	.317	.111	.940	.354
Demonstration	1.371	.220	.736	6.243	<,001

a. Dependent Variable: Communication Ability

The first hypothesis is rejected because the lecture method does not significantly affect the communication ability of students (t-value 0.940 with a significance level of 0.354, greater than 0.05), as shown in Table 3.5 of the results of the t-test. The second hypothesis is supported because the t-value of 6.243 for the demonstration technique (X2) is less than 0.05 and the significance criterion is 0.001. This shows that this approach has a positive and considerable influence on students' communication skills.

F Test

To find out whether the lecture and demonstration methods affect students' communication skills simultaneously, we use the F test. The following table shows the results of the F test

Table 6. F Test

Model (1)	Sum of Squares	df	Mean Square	F	Sig.
Regression	456,456	2	228.228	27.369	<,001[b]
Residual	275.183	33	8.399		
Total	731.639	35			

a. Dependent Variable: Ability to Communicate

b. Predictors: (Constant), Lecture, Demonstration

Based on Table 6, the F-value is 27.369, and the significance level is 0.001, which is lower than the critical threshold of 0.05. Based on these findings, it is clear that students' communication skills improve tremendously by combining lectures with demonstrations. So, it can be said that the regression model used in this study is practical and appropriate.

Coefficient of Determination

How much variance in the dependent variable can be explained by the independent variable is measured by the coefficient of determination. Table 3.7 below shows the determination coefficients generated through data processing using SPSS software

Table 7. Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.783	.614	.602	2.883

1. Predictors: (Constant), Total_X2
2. Dependent Variable: Total_Y

Based on Table 7, the value of the Adjusted R Square is 0.602. This shows that the lecture and demonstration approaches simultaneously explain 60% of the variance in the communication skills of students enrolled in the Chinese Language Study Program. In contrast, the other 40% were influenced by factors beyond the variables analyzed in the study, including alternative learning techniques, motivation, learning environment, and individual student characteristics.

Discussion

This study aims to examine the impact of lecture approach (X1) and demonstration method (X2) on the communication skills of students of the Chinese Language Study Program (Y). The next comment is taken from the findings of the data analysis conducted

Effectiveness of Lecture Methods in Improving Students' Communication Skills

The lecture approach improves students' communication skills in the Chinese Language Study Program, according to regression analysis. The regression coefficient is 0.111. However, the value of this coefficient is smaller than the one used in the presentation. With a calculated t-value of 0.940 and a significance level of 0.354 (> 0.05), the first hypothesis in this study was rejected based on the results of hypothesis testing. Thus, students' communication skills do not increase significantly with the lecture style because this method tends to be one-way and does not provide opportunities for students to practice communicating directly.

Effectiveness of Demonstration Methods in Improving Students' Communication Skills

With a regression coefficient of 0.736, the analysis findings for the Chinese Language Study Program showed that the demonstration approach had a positive impact on students' communication skills. This coefficient value is higher for the demonstration approach compared to the lecture technique, indicating that the demonstration approach is more effective in improving students' communication skills. We accept the second hypothesis of this study because the hypothesis testing findings show a calculated t-value of 6.243 at a significance level of 0.001 (<0.05). Thus, the demonstration method is considered more effective because students can see and practice the use of Chinese directly in the learning process.

CONCLUSION

Based on the analysis and discussion of the effectiveness of lecture and demonstration methods in improving the communication skills of Chinese language students, it was concluded that the lecture method (X1) had a positive but not statistically significant effect (Sig. = 0.354 > 0.05), indicating that the proposed hypothesis was not supported, whereas the demonstration method (X2) showed a statistically significant positive effect on students' communication skills (Y), supporting the research hypothesis. These findings suggest that instructors should prioritize the use of demonstration methods, particularly for materials focused on practical communication, as they enhance student engagement and provide experiential learning

opportunities; students are also encouraged to participate more actively and confidently in using Chinese during learning activities, while educational institutions should support this approach by providing adequate facilities and resources. For future research, it is recommended to examine a combination of lecture and demonstration methods or include additional variables such as motivation, learning styles, or technological integration to gain a more comprehensive understanding of factors influencing Chinese language communication skills.

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