

The Influence of Using Prezi Media on Culinary Arts Learning Outcomes of Culinary Arts Education Students

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Abstract. The purpose of this research is to determine: 1) The learning outcomes of students in the Culinary Arts course using Prezi media. 2) The learning outcomes of students in the Culinary Arts course using PowerPoint media. 3) The effect of using Prezi media on learning outcomes in the Culinary Arts course. Research method. Quasi- experimental research design. The research location is Culinary Arts, State University of Medan. The research period is April-June 2025. The research population is all students of the Class of 2024 with a total of 60 people consisting of 2 classes. The sampling technique is class random. Class A is the experimental class and Class B is the control class. The data collection technique uses a test. The data analysis technique is descriptive data, analysis requirements and hypothesis testing using the t-test. Based on the results of the t-test analysis, there is a positive and significant influence on the use of Prezi learning media on student learning outcomes in culinary arts. This means that Prezi learning media has an effect on student learning outcomes in Culinary Arts.

Keywords: Media, Prezi, Arts, Culinary

1. Introduction

The use of technology in education is continually evolving, including in the field of culinary arts, which requires teaching methods that are not only effective but also engaging and innovative. One such technology with great potential to enhance the quality of learning is the Prezi application, a web-based presentation tool that allows users to create dynamic and interactive presentations [1]. Prezi offers various visual features such as zooming and transitions, which enable the material to be taught in a more engaging way and facilitate the understanding of concepts [2].

The Culinary Arts course focuses on the art of creating food garnishes, which requires expertise in garnish-making techniques and a deep understanding of food presentation aesthetics. Therefore, the use of learning media that presents information in a visual and interactive manner is crucial for facilitating the learning process. Prezi can help students comprehend various concepts in culinary arts in a more structured, engaging, and easily digestible way. Previous studies have shown that Prezi-based media is effective in enhancing student understanding across various disciplines, including technical and scientific education, which share similar learning characteristics with culinary arts.

In a study by [3], the use of Prezi media was shown to improve student learning outcomes in cultural arts education at vocational schools. The results of the study indicated that Prezi helped students become more engaged in learning through the visualization of more appealing content and clarified their understanding of the concepts being taught. In the Culinary Arts course, where both theoretical understanding and skills are crucial, Prezi can have the same positive impact. The use of Prezi in delivering material on garnish-making techniques and food presentation can enhance students' visual understanding of the processes involved at each stage of garnish creation, from preparation to the final presentation.

Moreover, in the context of educational environments that increasingly require the use of technology, Prezi offers considerable advantages in terms of accessibility and flexibility. Students are able to access lecture materials organized in Prezi format at any time and from anywhere, allowing for independent study. A study [4] demonstrates that the use of Prezi in Grade VII of junior high school successfully improved student learning outcomes, as evidenced by a significant increase in exam scores following the introduction of this media. A similar impact can be anticipated in culinary arts education, where students not only engage in direct learning but also have the opportunity to access course materials and visual demonstrations that support their understanding of the processes involved in culinary arts.

In another study [5], the use of Prezi in teaching short story writing in the classroom demonstrated that Prezi can improve students' writing skills by providing a clearer understanding of the structure and essential elements needed in written works. By visualizing the steps and key components involved in the process of creating garnishes in the Culinary Arts course, Prezi can serve as a tool to enrich the learning experience for students in Culinary Arts Education. For example, in lessons on plating techniques or food arrangement on a plate, Prezi allows students to view the overall picture, rather than just theoretical concepts or verbal instructions, enabling them to better visualize the final result.

The aim of this study is to examine the "Impact of Prezi Media Usage on Learning Outcomes in the Culinary Arts Course." This research is expected to provide deeper insights into how Prezi media can be implemented to support culinary arts education, enhance students' understanding of culinary concepts, and enrich their experience in practicing garnish creation and food presentation skills. Furthermore, the results of this study are anticipated to contribute to the development of technology-based teaching methods in Culinary Arts Education.

2. Research Methods

The research was conducted at the Culinary Arts Education Program, Faculty of Engineering, State University of Medan. The study was carried out from April to June 2025, involving two classes: a control group of 30 students and an experimental group of 30 students. The sampling technique used in this study was Random Sampling. The research design employed in this study was a Quasi-Experiment. Data collection was conducted through testing. The data analysis techniques included descriptive statistics, frequency distribution, trend analysis, normality tests, homogeneity tests, and t-tests.

3. Research Results

a. Frequency Distribution of Student Learning Outcomes in the Culinary Arts Course Using Prezi Media

Based on the results of this study, the highest score was 95, and the lowest score was 80, with a mean of 89 and a standard deviation of 13.05. The student learning outcomes in the Culinary Arts course using Prezi media showed that the highest score fell within the class interval of 89-91, accounting for 53.33%, while the lowest score was in the 92-94 interval, accounting for 3.33% (Table 1).

Table 1. Frequency Distribution of Student Learning Outcomes in the Culinary Arts Course Using Prezi Media

Class Number	Class Interval	Frequency	Relative Frequency (%)
1.	80-82	3	10,00
2.	83-85	0	0,00
3.	86-88	8	26,67
4.	89-91	16	53,33
5.	92-94	1	3,33
6.	95-97	2	6,67
Total		30	100,00

b. Frequency Distribution of Student Learning Outcomes in the Culinary Arts Course Using PowerPoint Media

Based on the results of this study, the highest score obtained was 92, and the lowest score was 72, with a mean of 83 and a standard deviation of 4.16. The student learning outcomes in the Culinary Arts course using PowerPoint media showed that the highest score fell within the class interval of 80-83, accounting for 56.67%, while the lowest score was in the 72-75 interval, accounting for 3.33% (Table 2).

Table 2. Frequency Distribution of Student Learning Outcomes in the Culinary Arts Course Using PowerPoint Media

Class Number	Class Interval	Frequency	Relative Frequency (%)
1.	72-75	1	3,33
2.	76-79	0	0,00
3.	80-83	17	56,67
4.	84-87	6	20,00
5.	88-91	4	13,33
6.	92-95	2	6,67
Total		30	100,00

c. Trend of Student Learning Outcomes in the Culinary Arts Course Using Prezi Media

The trend in student learning outcomes in the Culinary Arts course is divided into four categories: very good, good, adequate, and poor. The trend in student learning outcomes in the Culinary Arts course using Prezi media, which is 86.67%, falls into the "tends to be good" category.

Table 3. Trend of Student Learning Outcomes in the Culinary Arts Course Using Prezi

Media					
Number	Score Interval	n	%	Grade	Description
1	>92-100	3	10,00	A	Very Good
2	>83-92	26	86,67	B	Good
3	=75-83	1	3,33	C	Adequate
4	<75	0	0,00	D	Poor
Total		30	100,00		

d. Trend of Student Learning Outcomes in the Culinary Arts Course Using PowerPoint Media

The trend in student learning outcomes in the Culinary Arts course is categorized as follows: very good, good, adequate, and poor. The trend in student learning outcomes in the Culinary Arts course using PowerPoint media, which is 55.55%, falls into the "tends to be adequate" category.

Table 4. Trend of Student Learning Outcomes in the Culinary Arts Course Using PowerPoint Media

Number	Score Interval	n	%	Grade	Description
1	>92-100	0	0,00	A	Very Good
2	>83-92	9	30,00	B	Good
3	=75-83	17	56,67	C	Adequate
4	<75	4	13,33	D	Poor
Total		30	100,00		

e. Analysis Requirements

1. Normality Test

The normality test is used to determine whether the data of the research variables follow a normal distribution by using the Chi-Square (X^2) formula and comparing the calculated X^2 value ($X^2_{p,et}$) with the table value (X^2_{tbl}) at a 5% significance level. Therefore, the student learning outcomes in the Culinary Arts course using Prezi media showed a calculated X^2 value of 5.97, which is less than the table value of 11.07 ($5.97 < 11.07$). Similarly, the student learning outcomes using PowerPoint media showed a calculated X^2 value of 5.33, which is less than the table value of 11.07 ($5.33 < 11.07$). Thus, both data sets follow a normal distribution. The results of the normality test can be seen in Table 5.

Table 5. Normality Test Data of Student Learning Outcomes in the Culinary Arts Course

Number	Group	$X^2_{calculated}$	X^2_{table}	Conclusion
1	Student Learning Outcomes in the Culinary Arts Course Using Prezi Media	5,97	11,07	Normal
2	Student Learning Outcomes in the Culinary Arts Course Using PowerPoint Media	5,33	11,07	Normal

2. Homogeneity Test

The homogeneity test of the research data was conducted using the F-test, which compares the largest variance with the smallest variance. The calculated F-value ($F_{\text{calculate}}$) is then compared with the table F-value (F_{table}) at a 5% significance level. As shown in Table 6, the student learning outcomes in the Culinary Arts course using Prezi media and the student learning outcomes using PowerPoint media are homogeneous, with the calculated $F_{\text{calculate}}$ (1.61) being less than the table F-value (2.29) ($1.61 < 2.29$).

Table 6. Homogeneity Data of Indonesian Beverage Processing Practice Results

No	Group	Variance Value	$F_{\text{Calculated}}$	F_{Table}	Conclusion
1	Student Learning Outcomes in the Culinary Arts Course Using Prezi Media	10,34	1,61	2,29	Homogeneous
2	Student Learning Outcomes in the Culinary Arts Course Using PowerPoint Media	16,66			

f. Hypothesis Test

The hypothesis in this study suggests that there is a positive and significant effect of using Prezi media on student learning outcomes in the Culinary Arts course. Based on the results of this study, there is a positive and significant effect of using Prezi media on student learning outcomes in the Culinary Arts course, with the calculated t-value $>$ t-table value, which is ($2.09 > 1.74$) at the 5% significance level. This indicates that Prezi media can influence student learning outcomes in the Culinary Arts course.

4. Discussion

Based on the results of this study, the tendency level of student learning outcomes in the Culinary Arts course using Prezi media falls under the "tend to be good" category, with a percentage of 86.67%. This indicates that the use of Prezi media can improve student learning outcomes in the Culinary Arts course. Which indicated that the tendency of student learning outcomes in the Visual Arts subject at SMA 1 Sidoarjo using Prezi media was categorized as "tend to be good." This study's findings are also supported by the research [6], which showed that the tendency of student knowledge regarding their interest in learning mathematics in grade 2 Public Tanah Tinggi Elementary School 12 using Prezi media was categorized as "tend to be good." Additionally, the research [7] revealed that the tendency of student practice results on the spice and herb material at Cerme Gresik public vocational secondary schools 1, using Prezi media, was categorized as "tend to be good." Furthermore, the research conducted [8] showed that the tendency of student practice results in the basic culinary course at Panca Budi 2 Medan vocational secondary schools, using Prezi media, also fell under the "tend to be good" category.

Based on this study, the tendency level of student learning outcomes in the Culinary Arts course using PowerPoint media falls under the "tend to be sufficient" category, with a percentage of 56.67%. This finding is consistent with the research by Astri (2021) [9], which showed that the tendency of student learning outcomes in the Visual Arts subject at Padang public vocational secondary schools 9 using PowerPoint media was categorized as "tend to be sufficient." Furthermore, this study's results align with the research [10], which showed that the tendency

of student learning outcomes in the entrepreneurship subject aimed at improving students' skills at Singaraja public senior high school 4 using PowerPoint media was also categorized as "tend to be sufficient." Additionally, the research [11] revealed that the tendency of learning outcomes in science subjects for grade 9 students at Medan Public Middle School 29 using PowerPoint media was categorized as "tend to be sufficient." Moreover, the research conducted [12] showed that the tendency of learning outcomes for grade X students in Social Science at Model Islamic Public Secondary School 2 Medan using PowerPoint media was also categorized as "tend to be sufficient." Lastly, the research [13] demonstrated that the tendency of practical outcomes in Asian food processing for grade XI students at Vocational High School 10 Medan using PowerPoint media fell under the "tend to be sufficient" category.

Based on the results of this study, there is a positive and significant effect of using Prezi-based learning media on student learning outcomes in the Culinary Arts course, with a calculated t-value $>$ table t-value ($2.09 > 1.74$) at the 5% significance level. This indicates that Prezi learning media can influence student learning outcomes in the Culinary Arts course. These findings are consistent with the research [3], which showed a positive and significant effect of using Prezi media on entrepreneurship learning outcomes at Senior High School 4 Singaraja, indicating that Prezi media can influence student learning outcomes. Similarly, the research [14] showed a positive and significant effect of using Prezi media on math learning outcomes for grade 2 students at Muhammadiyah Elementary School 4, meaning that Prezi media can influence student learning outcomes in mathematics.

Furthermore, the research [7] showed a positive and significant effect of using Prezi media on student interest in learning the basic spice subject at Vocational High School 15 Samarinda, indicating that Prezi media influences student interest in learning the basic spice subject at Vocational High School 15 Samarinda. Additionally, the research [15] demonstrated a positive and significant effect of using Prezi media on student practical results in Asian food processing at Vocational High School 2 Tenggara, meaning that Prezi media can influence student practical outcomes in Asian food processing at Vocational High School 2 Tenggara. Furthermore, the research [16] showed a positive and significant effect of using Prezi media to improve students' knowledge of textile materials at Vocational High School Swasta Gelora Jaya Medan, indicating that Prezi media can influence student learning outcomes in textile materials knowledge at Vocational High School Swasta Gelora Jaya Medan.

5. Conclusion

Based on the results of this study, the following conclusions can be drawn the tendency level of student learning outcomes in the Culinary Arts course using Prezi media falls under the "tend to be good" category, with a percentage of 86.67%. The tendency level of student learning outcomes in the Culinary Arts course using PowerPoint media falls under the "tend to be sufficient" category, with a percentage of 56.67%. Based on the t-test analysis, there is a positive and significant effect of using Prezi-based learning media on student learning outcomes in the Culinary Arts course, with the calculated t-value $>$ table t-value ($2.09 > 1.74$) at the 5% significance level. This indicates that Prezi learning media can influence student learning outcomes in the Culinary Arts course.

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