

The effect of using web-based *book creator* on culinary arts learning outcomes of culinary arts education students

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Abstract. Study This aiming For analyze influence Use of Book Creator media web based on results Study students in the eyes studying art culinary Culinary Arts Education Study Program . Place study Program Study of Culinary Arts Education, State University of Medan. Research time month July -September 2024 . Population study all over Culinary Arts Education students who take subject Art Culinary as many as 90 students . The sampling technique sample class that is in a way random sampling. So that it is obtained sample class A as many as 31 people as class experiment and class B as many as 28 people as class control . Data collection techniques use results Study pre test and post test . Data analysis techniques data description , requirements testing analysis namely the normality test and the homogeneity test and hypothesis testing using the t-test. Research results show that , level trend results Study students who use art teaching materials Culinary based on web book creator including category tend very Good as big as 58.06 percent . Learning outcomes students who use Art textbook Culinary including category tend Enough by 53.57 percent . The results of the t-test analysis show there is positive and significant influence on the use of art teaching materials Culinary based on web book creator to results Study student , with t value count $>$ t table ($10,795 > 2,002$) at the level significant 5 percent . This means art teaching materials Culinary based on web book creator can influence results Study student Unimed . Conclusion research ; use Book Creator as a learning medium proven web based more effective in support learning practical on the eyes studying art culinary.

Keywords. Book Creator, Learning Outcomes, Arts Culinary, Web Based Media, Culinary Arts

Introduction

In the era of the Revolution Industry 4.0, jobs the more leading to digitalization and made easier with help technology . Similar things happen in the learning process at school both at college high , where Generation Z, the next generation moment this , with easy can access and update information through technology . Generation This proficient use technology Because Lots time they spent For look for information with tools technology . Condition This is also driven by increasing global competition . strict , forcing every nation and state for Keep going innovate and improve quality source Power the human being (Barella et al., 2021) . The same thing also happened in the world of education in Indonesia, where technology must in harmony and support the learning process . No only Revolution Industry 4.0, but also the concept of Education 4.0 which encourages education For Keep going follow trend digital learning .

In an increasingly digital era developing, education web based has become innovation important For increase quality learning, especially in areas that emphasize skills practical like art culinary. According to research, use technology web based in education culinary can support more learning effective, interactive, and flexible. The learning process own role important in the world of education because in it happen interaction between lecturers and students, learning process is activity learning and teaching carried out with use plans and materials as Supporter For support the way learning (Farkhanah, 2023). In the learning process, lecturer convey material in accordance with eye college and students learn every material explained by the lecturer. The success of this process can measured from method lecturer convey material as well as quality teaching materials used.

Subject Art Culinary is one of Culinary Arts Education Study Program courses. Courses This No only focused on theory, but also on practice directly in the field art culinary. Courses This learn about draft art culinary; ingredients, equipment and methods in art culinary; Art decorate cakes, food and drinks with various materials, art carve fruit and vegetables, arrangement food and Drink For chance special, components field art culinary, folds leaves, *chocolate modeling*, *food modeling*, products imitation (*mock up product*), *food stylist and jelly art* (Ubadillah et al., 2017).

Based on results observations that have been implemented in learning art culinary in the Culinary Arts Education Study Program, various problem often faced by students and lecturers, which encourages the need implementation of learning platform web based like *Book Creator*. One of the problem main is limitations material visual and interactive learning. Art culinary need clear visualization, especially For understand technique like method make garnish, and serve dish with food garnish. However, the existing material like book text No always capable serve sufficient visualization. *Book Creator*, with multimedia features such as images, videos, and animations, providing solution with present material in a way more interactive and easy understood. Problems second is difficulty student in repeat and remember material art culinary. Learning art culinary need repetition For control techniques and procedures with good, but limitations class time and delivery instructions that only very make student difficult For fully understand material. With *Book Creator*, student can access material When just and repeat it in accordance needs, help student Study in a way independent.

Book Creator is a media that functions For make digital books (e-books) that can load text and images, as well as equipped with additional audio and video. Application This is one of the media that supports learning For increase ability speaking, writing and reading student (Kusumawati, 2022). Through learning with teaching materials based on *Book Creator*, lecturer can convey material in accordance with creativity each. According to Lailiyah and Arsana (2023), the use of *Book Creator* can increase interest Study students and can interesting attention as well as express students' thoughts and ideas (Lailiyah & Arsana, 2023). Related study relevant according to Rahman (2023) shows that web-based multimedia learning is capable increase results Study student in field culinary until reached 91.5% in aspect results study and 66.9% in activity student (Rahman, 2023). Besides that, Kim and Lee (2021) found that quality content and environment online education is influential significant to satisfaction Study students, who finally influence achievement academic they (Kim & Lee, 2021). Similar results obtained by Ibrahim and Alqahtani (2018), where e-books are based on Web 2.0 technology in effective increase skills student in designing and using data-based *cloud* (Ibrahim & Alqahtani, 2018). The use of web-based media, such as *Book Creator*, has proven effective in help student access various material learning in a way more flexible and interactive. Kang (2010) shows that material culinary web-based which includes images, videos and animations

very support the learning process student in understand steps practical art culinary . This media give convenience for student For repeat material in accordance needs , and can increase results Study student (Hsu et al., 2015) .

Based on description said , research This aiming For analyze influence use *Book Creator* web based on results Study students in the eyes studying Art Culinary . Research This expected can give outlook new about effectiveness of learning media web based in increase results Study Culinary Arts students , as well as give recommendation for development curriculum based on technology For field education that is of a nature practical and visual.

Research methods

Place study This implemented at Medan State University, Culinary Arts Education study program , Course Art Culinary . Research time implemented in odd semester July - September 2024. The research design used is *Quasi Experiment* , which is a research method used to find the effect of certain treatments on subjects (students) under controlled conditions (Sugiyono, 2018) . Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics that are determined by research to be studied and then conclusions are drawn (Sugiyono, 2018) . Population study all over Culinary Arts Education students who take subject Art Culinary as many as 90 students . The sampling technique sample class that is in a way *random sampling*. So that it is obtained sample class A as many as 31 people as class experiment and class B as many as 28 people as class control . Data collection techniques use results Study pre test and post test . Data analysis techniques data description , requirements testing analysis namely the normality test and the homogeneity test and hypothesis testing using the t-test.

Research result

1. Research Data Description

1.1 Distribution Frequency of Pre-Test Arts Learning Outcomes Culinary Using Media *Book Creator*

Based on results study This obtained mark highest of 75 and the value lowest 50, with mark average 65.79 and standard deviation 26.23. In Table 1 it can be seen seen that distribution frequency mark student pre-test results on results Study art culinary using *Book Creator* media the highest interval class is in the interval class 68-71 at 35.48 percent , and the lowest is in the 50-53 interval class at 3.23 percent .

1.2 Table 1 Distribution Frequency Art Pre-Test Learning Outcomes Culinary Using Media *Book Creator*

Class No.	Class Interval	Frequency	Frequency Relative (%)
1	50-53	1	3.23
2	54-57	5	16.13
3	58-62	3	9.68
4	63-67	5	16.13
5	68-71	11	35.48
6	72-75	6	19.35
Amount		31	100.00

1.3 Distribution Frequency of Pre-Test Arts Learning Outcomes Culinary Using Power Point Media

Based on results study This obtained mark highest of 75 and the value lowest 35 with mark average 57.75 and standard deviation 12.21. In Table 2 it can be seen seen distribution frequency mark results study art pre-test culinary using the highest interval class video tutorial media is in the 70-76 interval class at 25.00 percent , and the lowest is in the interval class 42-48 at 7.14 percent .

Table 2 Distribution Frequency of Learning Outcomes *Pre-test* Art Culinary Using Power Point Media

Class No.	Class Interval	frequenc y	Frequency Relative (%)
1	35-41	4	14.29
2	42-48	2	7.14
3	49-55	7	25.00
4	56-62	4	14.29
5	63-69	4	14.29
6	70-76	7	25.00
Amount		28	100.00

1.4 Distribution Frequency of Learning Outcomes Art Culinary Using Media Book Creator

Based on results study This obtained mark highest of 96 and the value lowest 82 with mark average 90.74 and standard deviation 3.61. In Table 3 it can be seen seen distribution frequency mark results Study art culinary using Book Creator media , the highest interval class is in the 91-93 interval class at 32.26 percent , and the lowest is in the 97-99 interval class at 0.00 percent .

Table 3 Distribution Frequency of Learning Outcomes Art Culinary Using Media Book Creator

Class	Class Interval	f	Frequency Relative (%)
1	82-84	2	6.45
2	85-87	4	12.90
3	88-90	7	22.58
4	91-93	10	32.26
5	94-96	8	25.81
6	97-99	0	0.00
Amount		31	100.00

1.5 Distribution Frequency Learning outcomes Art Culinary Using Power Point Media

Based on results study This obtained mark highest of 89 and the value lowest of 75 and with mark average 82.86 and standard deviation 3.81. In Table 4 it can be seen seen distribution frequency results Study art culinary using the highest interval class power point media is in the 81-83 interval class at 35.71 percent.

Table 4 Distribution Frequency of Learning Outcomes Art Culinary Using Power Point Media

Class	Class Interval	f	Frequency Relative (%)
1	75-77	3	10.71
2	78-80	2	7.14
3	81-83	10	35.71
4	84-86	10	35.71
5	87-89	3	10.71
6	90-92	0	0.00
AMOUNT		28	100.00

2. Tendency Level

2.1 Tendency Level Learning outcomes Art Culinary Using Media Book Creator

For identify level trend results Study art culinary use four category that is category tend very Good , Good , sufficient and less . In Table 5 we can seen level trend results Study art culinary who use book creator media, which includes category very Good by 58.06 percent , and the category tend okay by 41.94 percent .

Table 5 Level of Learning Outcome Tendency Art Culinary Using Media Book Creator

No	Range	n	%	Predicate	Category
1	>92-100	18	58.06	A	Very good
2	>83-91	13	41.94	B	Good
3	=75-82	0	0.00	C	Enough
4	<75	0	0.00	D	Not enough
Amount		31	100.00		

2.2 Level of Learning Outcome Tendency Art Culinary Using Power Point Media

For identify level trend results Study art culinary using power point media using four category , namely Category tend very Good , Good , sufficient and less . In Table 6 we can seen level trend results Study art culinary using power point learning media including category tend Enough by 53.57 percent .

Table 6. Tendency Level Learning outcomes Art Culinary Using Power Point Media

No	Range	n	%	Predicate	Category
1	>92-100	0	0.00	A	Very good
2	>83-91	13	46.43	B	Good
3	=75-82	15	53.57	C	Enough
4	<75	0	0.00	D	Not enough
Amount		28	100.00		

3. Requirements Test Data analysis

Condition analysis used in study This namely data normality test and data homogeneity test . The data normality test used For see whether both data are normally distributed or no , and the data homogeneity test is used For see , whether both data are homogeneous If second condition the fulfilled then the research data can analyzed to the hypothesis test . Here This results of data normality test and data homogeneity test .

3.1 Normality Test

Testing normality done with use technique Chi- square analysis (χ^2) to see whether the data is normal or not, is done by comparing the $\chi^2_{\text{calculated}}$ values with χ^2_{table} at level significant 5

percent . While degrees his freedom determined with use k-1 formula based on the normal curve . Summary of normality tests can seen in Table 7 as following .

Table 7of Data Normality Test

No	Class	χ^2_{count}	χ^2_{table}	Information
1	results Study art culinary using Book Creator media	7.75	11.07	Normal
2	results Study art culinary which uses power point media	10.50	11.07	Normal

Based on Table 7 show that mark $\chi^2_{\text{count}} < \chi^2_{\text{abel}}$ at the level significant 5 percent . With thus can concluded that results Study art culinary using Book Creator media obtained mark $\chi^2_{\text{count}} < \chi^2_{\text{table}}$ of 7.75 < 11.07 and the result Study art culinary using power point media is 10.50 < 11.07 then both data distributed **Normal**.

4. Homogeneity Test

Data that has been tested its normality , it is necessary tested homogeneity before proving it Research hypothesis. For homogeneity of research data, F test or Barlet test is used. Homogeneity test is done by comparing the largest variance and the smallest variance by calculating F_{count} consulted on F_{table} with a significance level of 0.05. After testing, it was obtained that the $F_{\text{count value}}$ 1.11 and F_{table} 1.8 8 then it can be concluded that $F_{\text{count}} < F_{\text{table}}$ (1.11 < 1.88), meaning that results Study art culinary using *Book Creator* media and results Study art culinary which uses power point media has same variance or homogeneous . Calculation results homogeneity can seen in Table 8.

Table 8Homogeneity Test Data of Research Results

Group	Variance	F_{count}	F_{table}	Information
results Study art culinary using Book Creator media	13.06	1.11	1.88	Homogeneous
results Study art culinary which uses power point media	14.52			

5. Testing Hypothesis

As for hypothesis tested research in study This there is positive and significant influence on the use of media *book creator* to results Study art culinary , based on results study This there is positive and significant influence on the use of media *book creator* to results Study art culinary with $t_{\text{value}} > t_{\text{table}}$ namely 10,795 > 2,002 meaning learning media *Book Creator* can influence results Study art culinary Culinary Arts Education student .

Discussion

Based on results study this , distribution frequency pre-test and post-test results of students in the course art culinary using *Book Creator* and PowerPoint media to show difference results significant learning . Students who use *book creator* media , with mark the highest in the post-test results was 96 and the average was 90.74, indicating greater effectiveness tall compared to PowerPoint media, which has mark highest 89 with average 82.86. Hsu and Chien's study (2015) found that use deep web multimedia technologies learning culinary produce

performance more students Good in task practical , supportive results achieved in study This (Hsu et al., 2015) . Wang and Tsai (2017) also support that web -based media increases trust self and understanding student in control skills culinary , in line with results obtained in study This (Wang & Tsai, 2017) . This result is also supported by research Sugiarto et al. (2023) who showed that learning media ICT based has effectiveness high in all level education , including in improvement results Study student (Sugiarto et al., 2023)

Distribution frequency show that part big student reach results learn more tall moment using Book Creator, especially in the 91-93 class interval with frequency 32.26%. Research relevant by Aprilianu et al. (2020) highlighted that learning model based on applied problem in art culinary show improvement significant in results Study student when supported by tools learning web -based (Aprilianu et al., 2020) . Salas-Rueda (2019) also reported that application web based enhance retention and comprehension student in learning statistics , support effectiveness *Book Creator* as an interactive media in learning culinary (Salas-Rueda, 2019) . Use of *Book Creator* interactive can influence results Study student in visualization and repetition material , support ability student For understand and apply technique culinary .

Normality test results show that the result data Study student with Both media are normally distributed ($\chi^2_{count} < \chi^2_{table}$) , so that analysis can to be continued with hypothesis testing . The results of the homogeneity test with $F_{count} < F_{table}$ also shows that second data group has same variance , strengthens assumption that difference results Study caused by differences in learning media . Research by Wang and Tsai (2017) shows use of learning media web based shows that self-efficacy and attitude student affect the results study , especially in increase ability students , who can applied through the *Book Creator* media (Wang & Tsai, 2017) .

Based on results study this , shows there is positive and significant influence on the use of *Web -based Book Creator* for results Study Art Culinary Culinary Arts Education students , with $t_{count} > t_{table}$ ($10,795 > 2,002$). This confirm that learning media web based more effective in increase results study . Research similar by Putri (2021) regarding influence system online learning in education culinary find that learning web based influential positive on results Study Because allow access flexible and deep visualization to material culinary (Princess, 2021) .

In general overall , research This show that Book Creator, as a learning medium web based , more effective than PowerPoint in support learning art culinary . This is relevant with findings Asrial et al. (2023), who showed that evaluation web based in education characters are also accepted with good by students Because convenience access and speed bait feedback provided by web technologies (Asrial et al., 2023) . Book Creator does not only give convenience access , but also support skills practical through Features interactive that allows student For practice and revise material in accordance need .

Conclusion

Based on results analysis and discussion research , can concluded that The use of Book Creator media is proven more effective compared to with PowerPoint in increase results Study art culinary . This is indicated by a higher average post-test score high in the group using Book Creator, which is supported by an increase understanding and involvement students . These results in line with a number of study previous one that shows that the web- based book creator learning media is significant capable increase effectiveness learning in Culinary Arts Education students , especially in material art culinary .

Research result This show that learning media *Book Creator* web based , very effective in support learning art culinary , because very easy For access material and repeat it in

accordance needs , as well as increase motivation and understanding student to the material taught .

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