

APPLICATION OF VIDEO TUTORIAL ON NAPKIN FOLDING TO IMPROVE LEARNING OUTCOMES OF CLASS XI CULINARY STUDENTS

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ABSTRACT

The Independent Curriculum provides flexibility for teachers in designing learning that is in accordance with the characteristics of students, one of which is in the napkin folding material in class XI Culinary at SMK Negeri 6 Surabaya. This study aims to determine the effect of the use of video tutorials on student learning outcomes in the cognitive, affective and psychomotor domains. The research method use is quantitative with a quasi-experimental design. Data collection techniques include tests and observations. Data analysis techniques use the independent t-test and effect size (Cohens'd). The results of the study showed: (1) Cognitive learning outcomes were in the very good category with a significance value of 0.000 and Cohens'd 0.050 (small). (2) Affective learning outcomes were in the very good category with a significance value of 0.000 and Cohens'd 10.8 (very large). (3) Psychomotor learning outcomes had a significance value of 0.000 and Cohens'd 7.09 (very large). It can be concluded that the use of video tutorials has a significant influence and has a large influence on student learning outcomes.

Keywords: video tutorials, napkin folding, learning outcomes

INTRODUCTION

The *Independent Curriculum* policy adopts the concept of freedom and changes in learning principles with the aim of providing more flexibility for teachers and schools to improve the learning environment, evaluate, and develop student learning outcomes (Rahmafutri et al., 2024). This policy has impacted the improvement of learning quality in vocational high schools (SMK), including State Vocational High School 6 Surabaya.

Students are granted the freedom to learn in ways that allow their imagination to develop more freely, unbound by rigid teacher-imposed limitations, while still integrating the values of the *Pancasila* student profile and aligned with the expected learning outcomes. Learning outcomes refer to students' abilities to communicate and reason in accordance with academic goals (Safira et al., 2023). In Class XI Culinary, specialization is determined at the beginning of Phase F, allowing students to acquire more specific competencies and better prepare for careers or entrepreneurship after graduation.

During Phase F, students learn the elements of food and beverage presentation, including napkin folding. Napkins function as table decorations, are used to cover guests' laps during meals, and for wiping the mouth (Tangian et al., 2020). Due to their importance, waitstaff in restaurants must be able to create various attractive napkin folds to enhance table aesthetics (Suyadnya, 2022). This knowledge enables students to master the arrangement of tableware in accordance with the dishes served, which is essential before undertaking internships in the hospitality industry (Rosita et al., 2021).

The learning process consists of both theory and practice. However, the lack of innovation in napkin folding instruction often results in low student engagement, leading to unsatisfactory learning outcomes. This is due to students' limited interest and attention during learning activities (Erniasih et al., 2019). When teachers use traditional one-way lectures, students have limited opportunities to revisit the material, particularly for practical learning.

Instructional media serve as intermediaries to deliver learning concepts and help create conducive learning conditions (Tarihoran et al., 2022). Schools now allow the use of technological devices such as smartphones and laptops during learning activities. Teachers must therefore be able to utilize technology to enhance learning quality and broaden access to education for students (Cholilah et al., 2023). Interviews with Class XI Culinary students revealed increased interest when learning was supported by videos and audio. Video tutorials can convey information through images, text, and sound, allowing students to absorb the material more easily, as the videos can be replayed anytime and downloaded for flexible use (Helsa Marsella Putri & Siti Aisyah, 2024). The advantages of video tutorials are expected to have a positive impact on students by improving their learning outcomes

RESEARCH METHODS

This study employed a quasi-experimental method with a non-equivalent control group design to examine the learning outcomes of students taught through different instructional treatments (Pratiwi, 2023). According Asher and Vockel, (1995) to (Abraham & Supriyati, 2022), the design used in the non-equivalent control group design in Table 1:

Table 1. Non-equivalent control group design

Pre-test	Treatments	Post-test
O1	X	O2
O3	-	O4

The population of this research consisted of class XI culinary students at State Vocational High School 6 Surabaya. The sample was taken from Class XI Culinary 1 and Class XI Culinary 5, with a total of 63 students as research subjects. The cognitive learning outcomes were measured using multiple-choice test items administered as a pretest and posttest. The affective and psychomotor domains were assessed using teacher-rated observation sheets based on a Likert scale, evaluating students' attitudes and performance during practical activities.

The learning materials used included self-developed instruments such as test items and assessment rubrics for affective and psychomotor domains. These instruments were previously validated by expert validators to ensure their relevance and reliability. Data analysis included prerequisite tests such as normality and homogeneity tests, followed by independent sample t-tests

for hypothesis testing. Additionally, effect size was calculated using Cohen's d, with the help of SPSS version 26.

This study was conducted in the school's culinary laboratory, and all teaching and assessment procedures were implemented under the supervision of culinary subject teachers. The cognitive learning outcome refers to students' ability to recall and apply theoretical knowledge as measured by multiple-choice tests. Affective outcomes refer to students' attitudes, motivation, and participation, while psychomotor outcomes focus on students' practical performance during napkin folding activities.

RESULTS AND DISCUSSION

This section presents an overview of the data obtained from a study conducted at SMK Negeri 6 Surabaya, which investigated the effect of using napkin folding tutorial videos on students' learning outcomes during practical sessions in both the experimental and control classes. The results of the descriptive statistical analysis are presented in the following Table 2.

Table 2. Descriptive Statistic of Students Learning Outcomes in the Experimental and Control Groups

No	Learning outcomes	Description	Experimental groups	Description	Control groups
1.	<i>Cognitive</i>	N	32	N	31
		Mean	87	Mean	73
		Min	77	Min	60
		Max	95	Max	85
		Range	18	Range	25
2.	<i>Affective</i>	N	32	N	31
		Mean	85	Mean	68
		Min	82	Min	62
		Max	88	Max	71
		Range	5	Range	9
3.	<i>Psychomotor</i>	N	32	N	31
		Mean	84	Mean	74
		Min	80	Min	70
		Max	89	Max	77
		Range	9	Range	7

Based on Table 1, the learning outcomes of napkin folding between the experimental and control classes indicate that the experimental class outperformed the control class across all assessed domains. The average cognitive learning score in the experimental class was 87, compared to 73 in the control class. In the affective domain, the experimental class achieved an average score of 85, while the control class scored 68. Similarly, the average psychomotor score in the experimental class was 84, exceeding the control class's score of 74. In terms of the cognitive domain, the highest score in the experimental class was 95, and the lowest was 77. Meanwhile, the control class recorded a highest score of 85 and a lowest score of 60. For the affective domain, the highest and lowest scores in the experimental class were 88 and 82, respectively, whereas the control class ranged from 71 to 62. In the psychomotor domain, scores in the experimental class ranged from 80 to 84, while the control class ranged from 70 to 77. These findings suggest that the use of video tutorials in the experimental class contributed to improved learning outcomes in cognitive, affective, and psychomotor aspects compared to conventional instruction in the control class. The cognitive learning outcome profiles of the experimental and control classes are as follows Tabel 3.

Table 3. Learning Outcomes Profiles

Learning Outcomes	Value	Frequency	Percentage	Criteria
Control Pretes	39 - 61	22	70%	Fair
Control Posttes	64 - 83	26	83%	Good
Experiment Pretes	37-68	25	78%	Fair
Experiment Posttes	76-96	32	100%	Excellent
Control Affective	66-74	28	91%	Poor
Experiment Affective	80-88	29	97%	Excellent
Control Psychomotor	73-78	27	88%	Fair
Experiment Psychomotor	80-88	30	94%	Excellent

The cognitive scores in the control class showed that 70% of students were in the *Fair* category in the pre-test, and 83% were in the *Good* category in the post-test. In the experimental class, 78% of students were in the *Fair* category in the pre-test, while 100% were in the *Excellent* category in the post-test. The affective score in the control class was 91%, categorized as *Poor*, while the affective score in the experimental class was 97%, categorized as *Excellent*. For psychomotor scores, the experimental class achieved 94% in the *Excellent* category, while the control class scored 88% in the *Fair* category.

Assumption test for analysis

Prior to hypothesis testing, the research data must undergo assumption testing, including tests of normality and homogeneity. The results of the assumption tests are presented in the following Table 3.

Table 4. Normality Data of Learning Outcomes Shapiro-Wilk

	Statistic	df	Sig.
Control Pretes	.946	31	.123
Control Posttes	.978	31	.745
Experiment Pretes	.971	31	.543
Experiment Posttes	.955	31	.212
Control Affective	.947	31	.133
Experiment Affective	.934	31	.057
Control Psychomotor	.961	31	.313
Experiment Psychomotor	.935	31	.061

Based on Table 4, the experimental class pretest yielded a t-value of 0.543, and the experimental class posttest yielded a t-value of 0.212 with a significance level of $\alpha = 0.05$. The normality test for the affective domain in the experimental class resulted in a t-value of 0.057, while the control class yielded a t-value of 0.133 with a significance level of $\alpha = 0.05$. For the psychomotor domain, the experimental class obtained a t-value of 0.061 and the control class obtained a t-value of 0.313 with the same significance level ($\alpha = 0.05$). Therefore, it can be concluded that the cognitive, affective, and psychomotor data in both the experimental and control classes are normally distributed. The homogeneity test can be conducted if the data are normally distributed, indicated by a significance value greater than 0.05 (Usmadi, 2020). The data analysis was continued with a homogeneity test.

Table 5. Homogeneity Data of Learning Outcomes

No	Ranah	N	Sig	P-value	Kriteria	Keterangan
1.	<i>Cognitive</i>	63	0.161	> 0.050	P-value > α	homogeneous
2.	<i>Affective</i>	63	0.200	> 0.050		homogeneous
3.	<i>Psychomotor</i>	63	0.960	> 0.050		homogeneous

Based on Table 5, the cognitive domain obtained a significance value of 0.161; the affective domain obtained a significance value of 0.200; and the psychomotor domain obtained a significance value of 0.960. Since all three significance values are greater than the probability level of 0.050, it can be concluded that the data are homogeneous. The assumption tests have been conducted, indicating that the data from both the experimental and control groups are normally distributed and homogeneous. Therefore, hypothesis testing can be performed using the independent t-test, with the

decision criteria being: Ha is accepted if the significance value is less than 0.05, and H0 is accepted if the significance value is greater than 0.05.

Hypothesis Test Result

The hypothesis testing was conducted using SPSS version 26, based on the following decision criteria:

Ha = Sig. value < 0.05 → the video tutorial has a significant effect on learning outcomes

H0 = Sig. value > 0.05 → the video tutorial does not have a significant effect on learning outcomes

The independent t-test, according to Rozak and Hidayati (as cited in(Izazayyah, 2023)), is used to determine the significance of the mean difference between two independent samples. Before performing the independent t-test, the data must meet the assumptions of normality and homogeneity tests, which can be assessed using SPSS version 26. Based on the analysis of learning outcomes between the control and experimental groups, the output is as follows.

Table 6. Hypothesis Test of Learning Outcomes
Independent t Test

	Mean	Std. Deviation	t	df	sig
Pre_Control & Post_Control	52.03	12.026	-7.422	60	0.000
	72.19	9.170			
Pre_Experiment & Post_Experiment	51.91	14.485	-10.301	62	0.000
	81.81	7.739			
Affective_Control & Affective_Experiment	67.84	2.131	-36.324	61	0.000
	84.75	1.524	-36.135	54	
Psychomotor_Control & Psychomotor_Experiment	73.77	1.802	-22.850	61	0.000
	84.31	1.857	-22.861	61	

Based on Table 6, the significance value obtained from the SPSS output is 0.000, which is lower than the significance threshold of 0.05. This indicates that there is a significant difference in learning outcomes between the control group and the experimental group. This difference can be attributed to the different treatments given to each group.

Cohen's d test was conducted to determine the magnitude of the effect or difference resulting from the t-test on the learning outcome scores (Umayrah et al., 2023). Based on the calculation of Cohen's d, the following results were obtained:

Table 7. Cohens'd of Learning Outcomes

Ranah	Hasil Uji Cohens'd
Cognitive	0.050
Affective	10,8
Psychomotor	7,09

Based on the output Table 7 of the effect size calculation using Cohen's d formula to measure the magnitude of the influence of the video tutorial implementation on learning outcomes, the cognitive learning outcome obtained a d value of 0.050, which falls into the small category; the affective learning outcome obtained a d value of 10.8, categorized as very large; and the psychomotor learning outcome obtained a d value of 7.09, also categorized as very large.

Discussion

In this study, the dependent variable targeted in this study is the students' cognitive, affective, and psychomotor learning outcomes in Grade XI Culinary class. Based on the descriptive data calculations presented in the frequency table, cognitive learning outcomes were in the "good to very good" category for 58% of students in the control class (pretest), 83% in the control class (posttest), 59% in the experimental class (pretest), and 100% in the experimental class (posttest). The calculated effect size was 0.050, which falls into the small category, indicating that the difference in students'

cognitive scores before and after the treatment had a very small impact from the implementation of the video tutorial.

In the frequency table for affective learning outcomes, 91% of students in the control class fell into the “poor” category, whereas 97% of students in the experimental class were categorized as “very good.” The effect size was 10.8, which is categorized as very large. This indicates that the difference in students’ affective scores before and after the treatment had a very strong impact from the use of the video tutorial. As for the psychomotor learning outcomes, 88% of students in the control class were in the “fairly good” category, while 94% of students in the experimental class were in the “very good” category. The effect size was 7.09, which is also categorized as very large, suggesting that the difference in students’ psychomotor scores before and after the treatment was greatly influenced by the implementation of the video tutorial.

According to Ananda Aditya Sari Harahap et al. (2023), several factors contribute to the low improvement in learning outcomes, which can be classified into internal and external factors such as environment, child development, family, school, and community—all of which require support to enhance and optimize student academic achievement. In an effort to improve the quality of learning, teachers must be able to utilize technology and expand access to learning for students (Cholilah et al., 2023). The findings of this study support the hypothesis that the use of video tutorials can improve the learning outcomes of Class XI Culinary students, particularly in the affective and psychomotor domains during practical learning.

The effect size (Cohen’s *d*) in the psychomotor domain was 7.09, categorized as a very large effect. This aligns with the findings of (Tani et al., 2022) who stated that “*watching the multimedia presentation raised the probability of correctly answering questions on a mid-term exam, with the strongest statistical improvement being students’ procedural knowledge,*” and that students appreciated the use of video tutorials, expressing a desire for them to be used in other subjects as well. This is supported by the study of (Mangesa et al., 2022), which highlights the benefits of video from a psychomotor perspective. One of the advantages of video tutorials is their ability to demonstrate actions in motion and record these activities, thereby providing students with the opportunity to observe and re-evaluate them.

In the affective domain, the use of video tutorials influenced students’ motivation, learning interest, and attitudes. This is reflected in the Cohen’s *d* value of 10.8, which is also classified as a very large effect, further reinforcing the evidence that video tutorials have a positive impact on learning, as also expressed in the aforementioned study. These results are supported by (Indah Kholila, Rusydi Ananda, 2021), who found that learning media utilizing video allows students to hear and see explanations similar to those delivered by the teacher in class—at any time and from any place—and enables them to repeat the material whenever they do not fully understand it. The results of this study are in line with affective assessments using the *Pancasila Student Profile*, as stated by (Darmayanti et al., 2024) The *Pancasila Student Profile* has been implemented since the adoption of the Merdeka Curriculum in schools, which provides teachers and students with the flexibility to engage in and carry out learning activities. This initiative is expected to improve the quality of education and human resources, equipping them with the competitiveness required to meet the demands of the times.

Regarding the cognitive domain, the use of video tutorials led to an increase in students’ learning outcomes, although the effect was small with a Cohen’s *d* value of 0.50, but still statistically significant. This finding is also supported by (Nazilah et al., 2022) who demonstrated that the use of animated videos resulted in a significantly higher average cognitive score in the experimental group compared to the control group, with a difference of 11 points, indicating the effectiveness of visual media in aiding students’ conceptual understanding of the subject matter. The study conducted by (Ardiyono et al., 2024) showed that students’ cognitive learning outcomes improved after the implementation of video tutorials, with the average pre-test score increasing from 71.40 to a post-test average of 91.5, which falls into the good category.

CONCLUSIONS

The overall profile of students’ cognitive outcomes in the control class showed that 58% were in the *Fair* category in the pre-test and 83% were in the *Good* category in the post-test. In the experimental class, 59% were in the *Fair* category in the pre-test, while 100% were in the *Excellent* category in the post-test. The Cohen’s *d* value was 0.050, indicating that the difference in students’ cognitive scores before and after the treatment had a *very small* effect on the application of the tutorial video. The

overall profile of students' affective outcomes showed that 91% of the control class were in the *Poor* category, while 97% of the experimental class were in the *Excellent* category. The Cohen's d value was 10.8, indicating that the difference in students' affective scores before and after the treatment had a *very large* effect on the application of the tutorial video. The overall profile of students' psychomotor outcomes showed that 88% of the control class were in the *Fair* category, while 94% of the experimental class were in the *Excellent* category. The Cohen's d value was 7.09, indicating that the difference in students' psychomotor scores before and after the treatment had a *very large* effect on the application of the tutorial video.

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