

EFFECT OF ANIMATED MEDIA ANALYSIS ON CHANGE OF KNOWLEDGE AND ATTITUDE OF PLATE MEAL IN PERUMNAS 9 KARAWACI TANGERANG ELEMENTARY SCHOOLS

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Abstract

Background: My Meal Plate is a guideline which showing the portion of food we need to keep balanced and healthy diets. The portion that shows is a visualization of food we consume a day (England, 2016). Dewi et al., (2011) also show that students who learn with audiovisual media tend to have a higher mean score (80%) rather than students who not and just learn with conventional media (71.6%).

Objectives: Finding out about the change of knowledge and attitude about my plate on 5th grader student of SDN Perumnas 9 Karawaci Tangerang by using animation media.

Method: This research uses Quasi-Experiment method with One Equivalent Control Group Design. The sample size is 30 people and tested by Dependent T-Test.

Result: From the statistical test, there was a significant correlation between group treatment ($p = 0.0001$), treatment group attitude ($p = 0.002$), control group knowledge ($p = 0.0001$), and control group attitude ($p = 0.001$).

Conclusion: The animation media significantly affected the changing of knowledge and attitude about my plate.

Keywords: School children, animation, media, knowledge, attitude.

INTRODUCTION

Basic Health Research (RISKESDAS) 2010 shows that 41.2% of School-age Children consume food below their daily minimum requirement (<70% of Nutrition Adequacy Rate/AKG) than recommended in 2004. This is why school-age children are very susceptible to nutritional problem. One of the cause of nutritional problems in children is the wrong diet (Sa'diyah, 2015).

Low knowledge and attitude about my meal plate currently eyeing school-age children including 5th graders at Perumnas 9 Karawaci Tangerang Elementary School. Grade 5 students at Perumnas 9 Elementary School alone amounted to 30 people with a lifespan of 10 – 12 years. With learning hours/day and 1 rest time, the student spend their rest time with snack that are in school, only a few children who bring lunch from home. Nevertheless, snacks purchased and supplies that are not in accordance with the appropriate portion. Its caused by the knowledge of children and parents who are still fairy rending about the portion of the meal that match my dinner plate. Shown in the study Mulyani *et al*, (2014) who showed 50% of 34 respondents still do not know about balanced nutrition. Study conducted by Damayanti *et al*,

(2014) on the amount of food consumed each day with 88 samples found suprising results, of which 62 were still lacking in staple food, 53 people ate less, 56 werw less likely to eat vegetables and 75 people less in eating fruits.

Currently the Balanced Nutrition Guidelines (PGD) has been complemented by a visualization message for a daily food consumption depicted with Tumpeng and My Meal Plates, where my palte are a portion guide in one meal (Amelia, 2014).

Media animation is very appropriate media in increasing interest in learning, this is supported by the result of a survey conducted by Immaniar *et al*, (2011) where the category of students who learn though audiovisual media has a higher average value (80%) compared with students studying through conventional media (71.6%).

METHOD

Research do on child school 5th grade at Perumnas 9 Elementary School on February 2018 with population total of 30 people with range aged 10 – 12 years. This study used Quasy Eksperiment to find out the result changed after a given intervention. Sample diable with Non-Probability samplingtechnique with type of saturated sampling technique with type of saturated sampling. Data rivewed in

research this is score knowledge and attitude about my meal plates. Measurement score knowledge and attitude use design one equivalent control group, where this research has been done first observation (pre-test) to look result do observation end (post-test) with intervention with treatment group given material and animation media and control group only given material.

RESULT AND DISCUSSION

In research this respondents divided in 2 groups that is group treatment and group control. The 5th grader in this school numbered 30 students consisting of 18 male students and 12 female students.

Table 1. Characteristics of Students By Sex

Characteristics	Treatment		Control	
	(n)	(%)	(n)	(%)
Gender				
Man	9	60	9	60
Women	6	40	6	40
Total	15	100	15	100

Based on the above table, it shows that the number of respondents based on sex in the treatment and control group is 9

people (60%) for men and 6 (40%) for women.

Table 2 . Characteristics Student by Age

Characteristics	Treatment		Control	
	(n)	(%)	(n)	(%)
Age				
10	5	33.3	9	60
11	9	60	6	40
12	1	6.7	0	0
Total	15	100	15	100

Based on the above table, the treatment group is dominated by children aged 10 years (60%) while the control treatment group is dominated by children age 11

years (60%). For know the average score knowledge and attitude on group treatment and group control do with test continued normalitas with Dependent t-

test so could seen average score result on moment before do intervention (post-test).

Table 3. Average Knowledge Score About My Plate (Pre-test and Post-test)

Indicator	Treatment Group		Control Group	
	Pre Test	Post-Test	Pre- Test	Post-Test
<i>Mean</i>	9.73	14.93	12.13	14.67
Median	10:00	3pm	12:00	3pm
Standard Deviation	2.463	1.486	2.264	1.633
Standard Error	0.636	0.384	0.584	0.422
Minimum	6	12	9	11
Maximum	16	17	16	17

Based on the above table, in the treatment group the mean value of knowledge before being given intervention in the form of animation media on pre-test is 9.73 with standard deviation of 2,463. The minimum and maximum values in the pre-test are 6 and 16 while the median value at the post-test is 15.00 with a standard error of 0.384. the minimum and maximum values in the post-test also increased by 12 and 17.

In the control group the mean value of knowledge prior to the given

medium the lecture on the pre-test was 12.13 with the standard deviation of 2,264. Minimum and maximum values on pre-test 9 and 16. Then the median value at the time of post-test is 15.00 with a standard error of 0.422. the minimum and maximum values in the post-test are 11 and 17.

Based on the normality test, the data of both the treatment group and the control group had sig> 0.05 which means normal distributed data. Normally distributed data will be tested with statistical test of perametrik.

Table 4 . Average Attitude Score About My Food Plate (Pre-test and Post-test)

Indicator	Treatment Group		Control Group	
	Pre-Test	Post-Test	Pre- Test	Post-Test
<i>Mean</i>	10.73	12.67	11.20	12.53
Median	11:00	1pm	11:00	1pm
Standard Deviation	1.831	1.113	1.521	1.552
Standard Error	0.473	0.287	0.393	0.352
Minimum	7	11	9	10
Maximum	13	15	14	14

Based on the above table, in the treatment group the mean value of attitude before being given intervention in the form of media animation on pre-test is 10.73 with standard deviation 1.831. the minimum and maximum value in the pre-test are 7 and 13 while the median value at the post test is 13.00 with a standard error of 0.287. minimum and maximum values in the post-test also increased is 11 and 15.

In the control group the mean value of attitude before the media given lecture on the pre-test was 11.20 with the

standard deviation of 1.521. minimum and maximum values on pre-test 9 and 14. Than the median value at the time of post-test is 13.00 with a standard error of 0.352. the minimum and maximum values in the post-test are 10 and 14.

Based on the normality test, the data of both the treatment group and the control group had $sig > 0.05$ which means normal distributed data. Normally distributed data will be tested with statistical test of parametrik.

Table 5 . Analysis of Difference Knowledge Score Before And After Intervention In Treatment Group

Treatment Group	Mean± SD	t	P value
Pre Test	9.73 ± 2.463		
Post Test	14.93 ± 1.486	-8.856	0.0001 *
(Δ) = 5.2			

* there is a significant difference ($p < 0.05$)

* compared to the pre-test value

Based on the above table, we can see the mean value on the knowledge of my balanced nutritional meal plate in the treatment group at the *pre-test* with the *post-test* obtained by the delta value (Δ) = 5.2 and the mean value at the *pre-test* is 9.73 with the standard deviation of 2,463 while the mean value at the time of *post-test* is 14.93 with the standard deviation of 1.486 and the value $t = -8.856$. Paired Sample Test Results *t-test* obtained p value = 0.0001 ($p < 0.05$)

then there is a significant difference in the score of *pre-test* knowledge with *post-test* after given intervention in the form of *animation* media .

6. Difference Score Analysis Knowledge Before And After Intervention In The Control Group

Treatment Group	Mean ± SD	t	P value
Pre Test	12.13 ± 2.264		
Post Test	14.67 ± 1.633	-6.141	0.0001 *

(Δ) = 2.36

* there is a significant difference ($p < 0.05$)

* compared to the pre-test value

Based on above table, it can be seen the mean value on the knowledge of my eating plate balanced nutrition in the control group at the time of pre-test with post-test obtained the value of delta (Δ) = 2.36 and the mean value at the time of pre-test is 12.13 with standard deviation 2.264 while the mean value at the time of

post-test is 14.67 with the standard deviation of 1.633 and the value $t = -6.141$. test result; paired sample t-test p value = 0.0001 ($p < 0.05$), then there are significant in pre-test knowledge score with post-test after being given another intervention by lecture media

Table 7. Difference Analysis of Attitude Score Before And After Intervention In Treatment Group

Treatment Group	Mean ± SD	t	P value
Pre Test	10.73 ± 1.831		
Post Test	12.67 ± 1.113	-3.926	0.002 *

(Δ) = 1.94

* there is a significant difference ($p < 0.05$)

* compared to the pre-test value

Based on the above table, it can be seen the mean value on the attitude about my eating plate balanced nutrition in the treatment group at the pre-test with post-test obtained delta value (Δ) = 1.94 and the mean value at the time of pre-test is 10.73 with standard deviation 1.831 while the mean value at the time of the post-

test was 12.67 with a standard deviation of 1.113 and the obtained value of $t = -3.926$. Test Results Paired samples t-test p value = 0.002 ($p < 0.05$), then there are significant differences in pre-test knowledge score with post-test after a given intervention in the form of animation media.

Table 8. Difference Analysis of Attitude Score Before And After Intervention In Control Group

Treatment Group	Mean ± SD	t	P value
Pre Test	11.20 ± 1.521		
Post Test	12.53 ± 1.552	-4.036	0.001 *

(Δ) = 1.3

* there is a significant difference ($p < 0.05$)

* compared to the pre-test value

Based on the above table, it can be seen that the mean value on the attitude about my eating plate balanced nutrition in the control group at the time of pre-test with post-test obtained the value of delta (Δ) = 1.3 and the mean value at the time of pre-test is 11.20 with standard deviation 1.521 whereas the mean value at

the time of post-test is 12.53 with the standard deviation of 1.552 and the value of $t = -4.036$ is obtained. Paired Sample Test Results t-test obtained p value = 0.001 ($p < 0.05$) then there is a significant difference in the score of pre-test knowledge with post-test after given intervention in the form of lecture media.

Table 9. Differences Analysis of Post Test Score Knowledge between Treatment Group and Control Group

Knowledge Score	Mean ± SD	Difference	P Value
Treatment Group	14.93 ± 1.486		
Control Group	14.67 ± 1.633	0.26	0.0001 *

* there is a significant difference ($p < 0.05$)

Based on the above table, it is known that the average increase of *post-test* knowledge score in the treatment group is 14.93 with the standard deviation of 1.486, while the average increase of knowledge score in the control group is 14.67 with the standard deviation of 1.633. There is a difference of 0.26 points between the average increase in the knowledge scores of both

groups. Based on the results of statistical tests known p value value is 0.0001, this indicates that at 95% confidence degree there is a significant difference between the average increase in knowledge score between the treatment group and the control group. Difference increase in average score knowledge on group treatment and group control could be seen with chart below this

Gambar 1. Perbedaan Rata-rata Peningkatan Skor Pengetahuan Pada Kelompok Perlakuan dan Kontrol

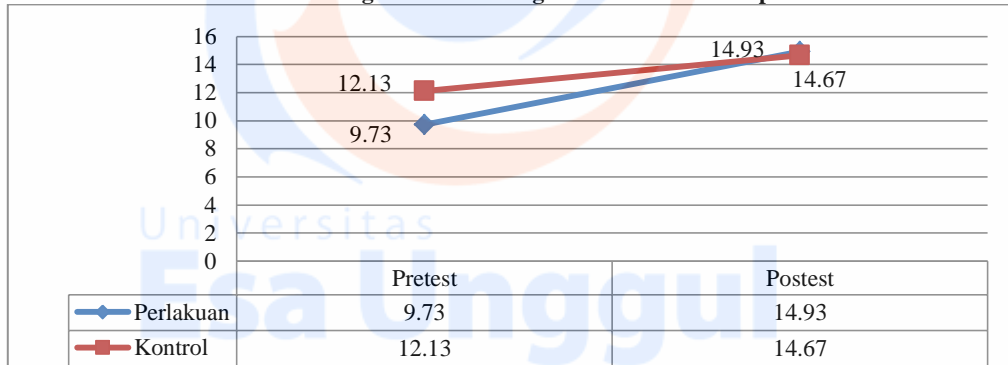


Table 10. Differences Analysis of Post Test Score Knowledge between Treatment Group and Control Group

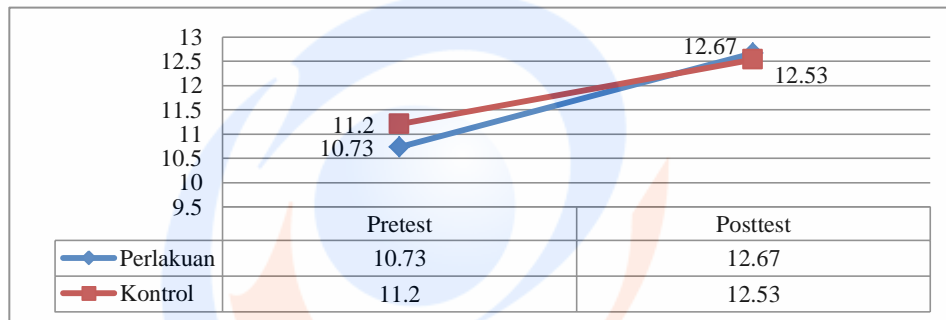
Attitude Score	Mean ± SD	Difference	P Value
Treatment Group	12.67 ± 1.113	0.14	0.001 *
Control Group	12.53 ± 1.552		

* there is a significant difference (p <0.05)

Based on table above, are known to the average increase in post-test attitude, scores in the treatment group amounted to 12.67 with a standard deviation of 1.113, while the average increase in score of attitude in the control group was at 12.53 with a standard deviation of 1.552. there is a difference of 0.14 points between the average increase in attitude scores of both

groups. Based on statistical test result known p value is 0.0001., this indicates that at 95% confidence degree the is a significany different between the treatment and the control group. Difference increase in average scores attitude on group treatment and group control could seen with chart below this.

Gambar 4.2. Perbedaan Rata-rata Peningkatan Skor Sikap Pada Kelompok Perlakuan dan Kontrol



CONCLUSION

Characteristics of the sample by sex and age did not change the number of respondents at the time of pre-test and post-test in the treatment and control group that is man amounted to 18 (60%) and women amounted to 12 (40%) with the majority of 11-year-old child in the treatment group (60%) and 10 years in the control group (60%).

Score of knowledge at the time before the intervention was given 9.73 in the treatment group and 12.13 in the control group. While the attitude score of 10.73 in the treatment group and 10.20 in the control group. The knowledge score at the time after intervention was given was 14.93 in the treatment group and 14.67 in the control group. While the attitude score of 12.67 in the treatment group and 12.53 in the control group.

There is significant changes on the increase of the knowledge score in the treatment group by 5 points ($\Delta = 5.2$) and in the control group by 2 points ($\Delta = 2.36$). And there is also a significant change on increase of attitude score in treatment group by 2 points ($\Delta = 1.94$) and in control group by 1 point ($\Delta = 1.3$).

SUGGESTION

On next research expected that the media of animation created could be good and more interesting and followed with made it real picture of my meal plate, than the respondent could more improve knowledge and his attitude about my meal plate.

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