

The Tests of Media Education Nutritional and Reproductive Online to Improve Cognitive Ability Students

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Abstract—Media education nutritional and reproductive online had developed to obtain the right information about the nutritional and reproductive. The purpose of this research was to know cognitive ability students from application of media education nutritional and reproductive online. Type of research was quasi experiment with pretest-posttest design. Research respondents were 20 teenagers aged 18-20 years which status as students in Faculty of technology Surabaya State University. Data collection by tests, then analysis with t-test. Result showed pretest score their nutrition knowledge (instant food) known as many as 2(10,00%) respondents were good and 9(45,00%) respondents were fair and 9(45,00%) were poor, while the score postes showed 5(25,00%) respondents were good and 15(75,00%) respondent was fair. Then, reproduction knowledge (sexual deviance) known pretes score as many as 6(30,00%) respondents were good, 11(55,00) were fair and 3(15,00%) was poor, while the score postes known 16 (80,00%) were good and 4(20,00%) were fair. The analysis of the nutritional and reproductive knowledge among pretes and postes showed significant differences so that it can be said the media effective reproduction and nutrition education improves cognitive ability of student.

Keywords—cognitive ability, students, education nutritional and reproductive online

I. INTRODUCTION

Learning models is a learning system to be developed continue in accordance with the demands of times. A model ducation system that carried out in the future determines the success of schools in dridging the interests of students to get their future. To create ideal learning process necessary many supporting factors: teacher, the head of school, students, employee, infrastucture and management of education. A model of learning on the line being alternative answer to take students to get their future with all advantages and lacks [7]. Online education is an education that demands students go to class through internet as main media, to delivery material of learning and supporting interaction of class.

The advantage of online system is knowlegde of learners will be easier to obtain, more widely because a lot of source of learning not only from teachers but many sources that can be access by internet [7]. In term of time and place, learning process more efficient and effective because students can access from anywhere and anytime. In term of tools of learning, it is very effective,easy to understood because it can support on picture displayed that can be accordance with the needs of learning.

Otherwise, online education can be access by all community both in formal education and hose who are school had opportunity.

Adolescence period marked by rapid growth of physical and psychologic [4]. In its development, adoluscence is very vulnerable to influence of broad globalization. The spread of pornography and porno action tat can be accessed by internet, magazine, television, film, video and compact disc also accelerate maturity biological of adolescent. The source of teenage information about nutrition and health are known as many as 80,8% obtained from print and electronic media and only 39,6% get from medical workers. Some fact prove that many teens who get caught up in free and illegal sexual intercourse [1]. As reported in Global TV about video of teenage abortions in a private clinic in Pasuruan. Wacana daily news in Denpasar alerts a dentist ever done abortions of fetus that 1500 most of his patients are teenagers [9]. It is also reported PKBI Counseling Yogyakarta, which has been handling 3000 cases of unplanned pregnancy and 560 cases from the total occurs on teenagers [10].

Nutrition education be directed to give community has ability to maintain the health of his body. The preventive effort disease through food and how to overcome the nutrition problem in society. Nutrition education in developed country regularly has started since early age so they can be critical and cautions about their food consumption [5]. Research on knowledge of nutrition and health teenagers in Surabaya showed 60% teenagers had poor and 40% had fair knowledge [2]. Educational model being in demand by teenagers was educated at a school by using mass media [5].

Research was conducted BKKBN about reproductive health education at SMU in Majalengka District showed that (1) implementation of reproductive health education teaching done teachers of BK, PPKN, biology, religion, and physical education, (2) teaching facilities of reproductive health very limited, (3) the matter and materials not structured and systematic, (4) most of teaching method used question and answer, discussion, role play and assignment. The limited application of method and media reproductive health education cause learning tends monotonous and not exciting [11]. Reproductive health education was still using traditional learning models. Otherside, a conception of reproductive

health has not been systemized, especially on material that must be presented to students.

Cognitive domain includes mental activities. Cognitive domain contains behaviour or intellectual ability such as knowledge and thinking. The purpose of cognitive aspects oriented on ability of thinking, ability of considering, ability of solving problems that require to connect and combine some ideas. The measurement of cognitive learning outcomes done with a written test, such as (1) test or oral question in the class, (2) multiple choice, (3) objective test, (4) objective test with description, (5) short answer, (6) matching, (7) portfolio and (8) performans.

This research intend to follow up the result of previous studies on nutritional and reproductive education media based on internet (online). The purpose of research to know cognitive ability of student before and after use nutritional and reproductive education online.

II. METHOD

This research is a quasi experiment with pretest-posttest design. Research do in Surabaya State University. Respondent are 20 students (18-20 years old) of Engineering Faculty. Data collected by test, consist of nutritional and reproductive knowledge before the trial (pretest) and nutritional and reproductive knowledge after the trial (posttest). Topics of nutritional and reproductive education are sexual deviance and instant food.

Nutritional and reproductive knowledge of respondent assess from respondents answer about sexual deviance and instant food. Their knowledge will being good if they answer more than 80% true, fair if 60-80% true and poor if they answer less than 60% true. The cognitif ability of respondent on pre and posttest analysis using paired sample t-test (SPSS program).

III. RESULT AND DISCUSSION

Media nutritional and reproductive online developed through five phases: investigation, design, realization, evaluation and implementation [8]. The result of developing media nutritional and reproductive online showed (1) media was already considered valid by expert with mean value 4,58, (2) practicality media that discerned from using device easily, obstacles the field and response students, and (3) media was considered very effective [3]. Based on the result of developing media, then done test to know the influence media to increase cognitive ability of student.

Activities of test begins with (1) providing pretes about nutritional nd reproductive knowledge, (2) using media, include: opening article of instant food and sexual device, working test on quiz as postest. The number of cognitive test as many as 20 items. The achievement of score of cognitive ability obtained from pretes given students before opening media, while score of postes obtained from students ability to answer quiz on website pages nutritional and reproductive. Result of media nutritional and reproductive test on 20 respondents get pretest-posttest score, as shown in Fig. 1.

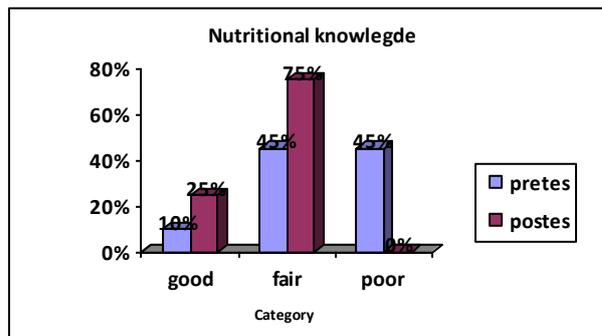


Figure 1. The score pretes and postes student knowledge about nutrition (instant food)

Cognitive test score on pretes show there 2(10.00%) respondents have good nutritional knowledge, 9(45.00%) respondents have fair, and 9(45.00%) have poor nutritional knowledge. The postest cognitive score of respondents obtained results as many as 5(25.00%) have good knowledge, and 15 (75.00%) respondents have fair knowledge. Base on Fig. 1, the mean score of pretes is 58 that mean nutrition knowledge is poor and mean score of postes 78 or it means category nutritional knowledge of postes is fair. From description of data, know that in general results of cognitive ability postest better than pretest. Analysis t-test conducted to determinine to know the real difference means of pretest and postest. The following table of t-test analysis.

TABLE I. RESULTS OF T-TEST COGNITIVE ABILITY OF NUTRITION KNOWLEDGE RESPONDENTS

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
pre - pos	-1.900	2.149	.480	-2.906	-.893	-3.95	19	.001

From Table 1, known that results of nutritional education online shows a significant difference. The result means that media nutrition education effective to increase cognitive ability of respondents, capable to being a source information for teenagers in dealing with the change in physical or psychological period and it will be increase to understand the the subject matter that has been accepted before.

Result of assessment pretest in cognitive ability indicate that mean score of reproductive knowledge (sexual deviance topic) is 74,40 or fair category while mean score postes 90,50 and their knowledge in good category. Reproductive knowledge distribution of pretest score acquired in good category 6(30%) respondents, fair category 11(55%) respondents and poor category 3(15%) respondents. Furthermore, results of postes respondents in quiz online show 16(80%) have good knowledge and 4(20%) have fair knowledge. Detail of reproductive knowledge distribution pretes-postest as shown in Fig. 2.

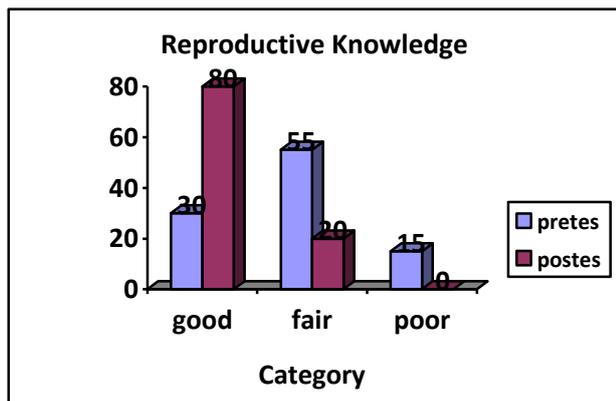


Figure 2. The score pretes and postes student knowledge about reproduction (sexual device)

Base on Fig. 2 known that in general cognitive ability reproductive respondents after using media nutritional and reproductive online better than before using media. To know whereabouts pretes-postes differences statistically, as shown in Tabel 2.

TABLE II. RESULTS OF T-TEST COGNITIVE ABILITY OF REPRODUCTIVE KNOWLEDGE RESPONDENTS

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
pre - pos	-1.000	2.583	.578	-2.809	-.391	-2.77	9	.012

Data in Tabel 2 showing that score significance of 0,012 which means there is a real difference cognitive ability reproduction respondents before and after use media reproductive education online.

Base on exposure to the result it is known that media education nutritional and reproductive online has been proven to form the character of teenagers namely the emergence of the attitude of self-reliance and curiosity teenagers to obtain information, grow interest to reading as well as responsibility in carrying out the task in their life so these media fit for use to enhance cognitive ability of students or teenagers.

IV. CONCLUSION AND RECOMMENDATION

Based on exposure the results of research, can be concluded that results of test media education nutritional and reproductive online give increased cognitive ability students about the nutritional and reproductive media so its can be applied in learning process of teenagers through formal or informal educations.

Recommendation of research related the findings are (1) should be repaired or refinement continuously on nutritional and reproductive media that information given fixed up to date and relevant to teenagers development, and (2) the need extending scope of target media nutrition and reproductive education so community can get a source right information about nutrition and reproduction.

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