

Interactive Multimedia as an Effective learning Media for Family Nursing Care Subject

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Abstract— The purpose of this study is to notice the effectiveness of using interactive multimedia on family nursing care to the result of student learning by the nursing student over the program. This study was using quasy experiment design (one group pretest-posttest design). The sample of this study was the nursing students over the program in University of Riau which was including 50 respondents. The instrument was using questioner in multiple choices about family nursing care. Data analyzes both in univariate and bivariate which was using T- dependent test. The result showed that majority score of students before learning process using interactive multimedia was in score group: C (40%) and E (26%) and then after the learning process, majority score of students was in score group A (50%) and B (32%). The result concluded that the mean group before and after using interactive multimedia was different significantly (p value=0,000). The differentiation of the mean before and after using interactive multimedia was 26,3. Hopefully the interactive multimedia can be used as an alternative media in another nursing subject.

Keywords—*interactive multimedia, Family Nursing Care subject*

I. INTRODUCTION

Family nursing care is an important subject in curriculum of nursing in Nursing program, University of Riau. This subject focused on family concepts, family health, family safety concepts, and also nursing care in each stage of family growth which is started from married couples in to the aging family. This family nursing care subject is not only given theoretically but also applicated by the students in nursing clinical profession (Ners stage). The important aspect that been understood in this subject was about nursing care plans in family concepts. Students have to be able understand about the process of family nursing care which is started from how to do an assessment (collecting the data), to analyze the data, to take a nursing diagnose, to arrange nursing care plans, to implement a nursing intervention, and also to make an evaluation process. Including all the nursing care process, students have to learn many aspects, so need the effective learning media that can be given to show all the process clearly. It also can be showed how the implementation going act by the students.

Learning media hold an important role on student's success in this subject of study, whether the learning methods. Because of this subject using the conventional learning methods, such as discussion

and case presentation, the students cannot catch the real condition about how to implement the nursing process of family nursing care correctly. It can impact the whole of students comprehension about family nursing care. It also can impact their final result score of study. The last result of student over the program in this subject of study on 3 generation (B 2008, B 2009, B 2010) was unsatisfactory. Majority of students were not pass the exam, especially in this family nursing subject.

Base on Research before showed that 100% students using drill method by case study perform excellent score (A) and good (B). Using this method, student can be motivated to undertake and finish the case appropriate with step of family nursing care plans so that they can also perform the nursing care correctly. The result showed that this method can suitable use in family nursing subject, but cannot be implicated in over program students (program B), because of the limitation chance to run this method [1].

According to the situation, it necessary to have such an appropriate learning media as interactive multimedia based multimedia system which can show the step of family nursing process. It can be inferred by some examples that can be tried by the students. When the students need some guide and instructor in learning process, they can lively show the process of nursing care plans through the multimedia system. The multimedia system is about using all kind of media such as texts, sounds, graphics, animations, and video. It can use to prolong the information and then can be added the other element such an interactive system. Using interactive multimedia can improve the student interest so that they can reach the high score in the examination. Multimedia can also be able to present the information attractively and clearly. The information will easily understand because include all of the sense part, especially eyes and ears [2].

Students of nursing program University of Riau over the program have a difficulty in understanding family nursing care plan, especially on nursing process. It was happen because there were no appropriate learning media that can be used to illustrate the process. The development of interactive multimedia hopefully can improve the passion of the students to learn the family nursing care correctly. The formula of problem in this study is "Did using learning media based on interactive multimedia could increase the result of study in nursing students over the program University of Riau?"

The purpose of this study is to notice the effectiveness of using interactive multimedia on family nursing care to the result of student learning by the nursing student over the program

II. RESEARCH METHOD

This study was using quasy experiment design (one group pretest-posttest design). The sample of this study was the nursing students over the program in University of Riau which was including 50 respondents. The instrument was using questioner in multiple choices about family nursing care. Data analyzes both in univariate and bivariate which was using T- dependent test. The result of study in nursing student use range :

< 40 Very Bad (E)
40 – 55 Bad (D)
56 – 70 Enough (C)
71 – 80 Good (B)
81 – 100: Excellent (A)
[3]

III. RESULTS AND DISCUSSIONS

According to the study, the result is:

TABLE I. THE DISTRIBUTION FREQUENCY OF SCORING RESULT ABOUT FAMILY NURSING CARE BEFORE USING INTERACTIVE MULTIMEDIA

No	Score Category	Total	Percentage (%)
1.	Excellent (A)	0	0
2.	Good (B)	7	14
3.	Enough (C)	20	40
4.	Bad (D)	10	20
5.	Very Bad (E)	13	26
	Total	50	100

The table 1 showed that scoring result about family nursing care by students before using interactive multimedia was in Enough Category (40%) and Very Bad Category (26%).

TABLE II. THE DISTRIBUTION FREQUENCY OF SCORING RESULT ABOUT FAMILY NURSING CARE BEFORE USING INTERACTIVE MULTIMEDIA

No	Score Category	Total	Percentage (%)
1.	Excellent (A)	25	50
2.	Good (B)	16	32
3.	Enough (C)	9	18
4.	Bad (D)	0	0
5.	Very Bad (E)	0	0
	Total	50	100

Table 2 showed that scoring result about family nursing care by students after using interactive multimedia was in Excellent Category (50%) and Good Category (32%).

TABLE III. THE AVERAGE DISTRIBUTION OF SCORING RESULT ABOUT FAMILY NURSING CARE IN NURSING STUDENTS OVER THE PROGRAM UNIVERSITY OF RIAU BEFORE AND AFTER USING INTERACTIVE MULTIMEDIA

Variable	Mean	SD	SE	p value	N
- Score before using multimedia	53,4	13,4	1,9	0,000	50
- Score after using multimedia	79,73	10,8	1,5		

Table 3 showed that the average of scoring result in family nursing care by the students before using interactive multimedia was 53,4 with standard deviation 13,4 and after using interactive multimedia was 79,73 with standard deviation 10,8. The differentiation mean before and after using interactive multimedia was 26,3 with standard deviation 12,5. The statistic test result showed $p=0,000$, so that the differentiation result score family nursing care before and after using interactive multimedia was significant.

The results of this study showed that the students score improved significantly after using interactive multimedia on learning family nursing process. The using of interactive multimedia will increase interest in learning process. Multimedia was used to present information in the form of a fun, excitement, easy to understand, and clear. The information will be easy to understand as much as possible in senses, especially the ears and eyes, which is used to absorb the information [4].

The development of interactive multimedia as learning media can motivate and increase student interest of nursing student in understanding the steps of family nursing process activities because it was presenting in various forms and displayed in a actual form. The nursing process can understand with all from assessment of families nursing steps, formulation of nursing diagnoses, nursing care plans, and the implementation and evaluation of nursing actions on the family.

Interactive multimedia uses many types of media for examples text, sound, graphics, animation and video to conduct the information and the last element is interactive. Interactive elements can only be displayed on the computer. Interactive aspects of the multimedia as navigation, simulations, games and exercises [5]

The results of this study showed that the selection of media was important to student learning outcomes as well as the selection of learning methods. The media has the effect in learning process because media can broadcast important information to motivate students in class, increase the outcome of learning, can show the relationships, can provide experiences that can not be shown by teachers, can help individuals learn and can bring the things that exist outside into the classroom [6].

The role of media in learning is able to learn, able to repeat what they have learned, stimulate students to learn energetically, activating student response, and immediate feedback obtained from the students. Seeing the many functions of the media needs to really consider what the appropriate media to meet the overall role of the media in learning process is. Many benefits can be obtained if the media can be maximized by each other [6].

The other results of a study showing how the use of media can affect the results of the research study showed that the use of computer-assisted learning media has a significant effect on the attraction of students to learn the competencies taught [6]. The results of other studies conducted showed an increase in activity in student learning outcomes in math by using video media [7]. The other results of the study also showed a differentiation in the average value of the ability of students between the control and intervention in examinations growth and development of young children using the medium of video [8]. Media can motivate students to study [9].

IV. CONCLUSION

Based on this study it can be concluded that the use of interactive multimedia very effective in improving student learning outcomes on family nursing care by nursing students over the program. It is suggested that the use of interactive multimedia can be inferred on subjects that require an explanation as the real condition of community nursing care.

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