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The Influence of Problem Based Learning Model Based on Midwifery First Stage of Childbirth Care Module in Improving Learning Quality

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Abstract--- *The emphasis of midwifery education is the process of educating and increasing the ability of individuals to become midwives who are carrying out professional midwifery practice. Several factors cause the low quality of education. One of them is the learning process, another one is the lack of learning media and the selection of inappropriate learning methods. The aim of this study was to analyze the effects of PBL based on midwifery 1st stage of child care module in improving learning quality. This research is a quasi experiment with one group pre-test and post-test design, carried out at the Pelamonia academy of D3 study program in Makassar in December 2019. Harry King nomograme large sample formula is used with 114 samples withdrawn with purposive sampling technique. The instruments of the study were module preparation instruments in the form of validation sheet from student activity observation sheets, partograph problems and student responses questionnaires. Data were analyzed with Wilcoxon test, N-Gain Test and Fisher Test. Module research results are categorized as very feasible to use, student learning activities are very good with an average of 89.96%, learning outcomes indicate an influence of module based PBL (Wilcoxon Test) p-value 0,000 <0.05, and there is no relationship of GPA with student learning outcame with fisher p-value 0.631> 0.05, Student Responses is 76 with an interesting category.*

Keywords--- *1st Stage Model, Problem Based Learning Model, Learning, Effective Learning.*

I. INTRODUCTION

Learning is defined as an activity that gives a change in behavior taken by practices or other experiences (Schunk 2012). According to National Standard, attitudes, knowledge and skills are competencies in which the qualifications of graduates' abilities have been determined (Law No. 20 of 2003). Nurach-mach (2007) in Noor Cholifah, Rusnoto, (2015) explained that midwifery education is education focused on the process of educating and increasing the ability of individuals to become midwives who are able to carry out professional midwifery practices

The phenomenon above illustrates to us that currently the ability of graduates' midwife has not met expectations and this should not occur due to the importance of the roles and responsibilities of midwives in society. The factors that influence the achievement of competencies are the learning process, the quality of practical experience, case training, and academic ability of students (Gaurenti L, 2006 in Winarni et al., 2014). One of the factors that cause the low quality of education is the factor of teaching and learning (*teaching-learning*) (NilaYuliani

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& Primanda, 2017). Good teaching methods are the main and fundamental things in improving students' abilities (Hameed & Jan, 2016).

Learning models which its learning strategies are concern on problem-based students known as Problem Based Learning, (Fredrikson, Jha & Ristenpart, 2015). It was initially developed by the faculty of Health Sciences at Mc Masters University in 1965 (Schmidt HG, 1993 in Yue et al., 2018). And it was generally defined as an active teaching approach and student-centered collaborative learning (Nerantzi, 2012). Constructively teaching methods had positive learning outcomes (Alharbi, 2017) arranged to help students for deciphering and activating prior information (Schmidt HG, 2011 in Saqr & Alamro, 2019). Learning was intended to find alternative solutions to problems in the context of existing knowledge (Orozco & Yangco, 2016). Learning with PBL started with problem analysis, independent learning, and reporting which were very important to predict students' abilities (Yew & Goh, 2016). Through PBL, students would get used to working in groups and solving their problems together (Huang & Wang, 2012). PBL became an alternative teaching method to improve student academic achievement (Shishigu & Bashu 2017).According to Roopashree BJ (2014) cycle learning with PBL models had several characteristics, starting with problems given to students, conducting experiments or collecting activity data, identifying concepts that must be mastered to solve problems, rearranging to discuss and share (Khamis et al. 2018)

Table 1.1 Steps of 7 *Jump* (Patria 2014)

NO	STEPS
1	Explain unfamiliar terms and concepts in problems that you do not know about.
2	Define the problem, which is a list of phenomena to be explained. Explain the problem;
3	Make as many different explanations as possible for each phenomenon you think of.
4	Use prior knowledge and common sense. Set the proposed explanation.
5	Formulate learning objectives
6	Try to fill the void in knowledge through individual learning.
7	Share the findings with the group and try to integrate the knowledge gained into a comprehensive explanation for the phenomenon. Check whether you know enough.

Learning process is said to be complete or successful when the number of students who have achieved the KKM score (Minimum completeness criteria) is at least 85% of the total students (Trianto, 2012 in Lies Pebruanti, 2015). Thus, one of the recommended alternative ways to be used as an effort to improve student learning outcomes is to improve students' understanding and mastery of the material in conducting practice. Conducting practicum with limited time inflict the lack interaction in teaching and learning process between lecturers and students,so that it results the lack of interaction during the teaching and learning process which causes the level of students' understanding of the material delivered by the lecturer is not optimal. Therefore, we need a learning media that is able to present material without certain boundaries (Lies Pebruanti, 2015).Achievement of standard and basic competencies that must be achieved by students is influenced by the selection of teaching materials (Masruroh, 2015). The teaching and learning process using modules is able to make students learning individually, so that the students are able to adjust the pace of learning according to their abilities. In addition students can measure the level of their mastery of the material provided by the use of teaching modules. (Hartono and Aisyah, 2008 in Septiani & Sumarni, 2014)

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Some studies describe the success of the use of modules including: The use of learning modules can increase motivation and outcomes of students which include the value of knowledge and the practice of attitudes (Lies Pebruanti, 2015). The existing integration in the problem based learning model and the discourse model in describing the diagnosis of education is able to produce good teaching effects (Yue et al. 2018). The results of the application of the Problem Based Learning model have an effect on improving students' problem solving abilities, reviewed from student activities, PBL can improve quality in the learning process and it also can improve students' learning outcomes (Musriadi & Rubiah 2015). The results of previous studies show that the integration of Problem Based Learning and discourse models in describing educational diagnoses produces good teaching effects (Yue et. Al. 2018). In addition, the application of Problem Based Learning models can improve students' ability to solve problems, improve the quality of the learning process in terms of student activities, and improve students' learning outcomes (Musriadi & Rubiah, 2015) Mehadizadeh et.al (2008) in Zhang et.al (2008) 2015). It showed that anatomy students who had been instructed through PBL teaching methods not only achieve higher test scores, but were also very satisfied with this teaching method. The application of learning media as a learning resource is expected to increase students' understanding accompanied by the improvement of learning performance, (Lies Pebruanti, 2015).

Based on the results of a preliminary survey conducted at the Midwifery Academy of Plamonia Makassar, the results of the percentage oflearning evaluation in the midwifery by academic year 2018/2019 found that 20.91% students with low standard graduation (receiving C, D and E grades) and this percentage was considerably quite high by seeing that Midwifery Nursing course is one of the core courses of midwifery diploma programs. In addition, the results of a preliminary study by interviewing five (5) students,four (4) of them stated that one of the materials that were quite difficult to understand in the midwifery care course was partographical documentation. Partographs are important tools in managing labor by producing description of progress in giving birth, condition of mother and fetus, on a piece of paper, which allows health workers to have the opportunity to identify and diagnose pre-emptive symptoms of abnormal labor (Zelellw & Tegegne, 2018). Besides, partofgraph is also the 4th competence of the basic skills of midwives in monitoring the progress of labor (Rosanti, Teak & Bm 2018), Partographs also have an impact on improving the quality of intrapartum services, maternal health and childbirth (Wall SN, et. Al, 2010). The lack of availability of learning media and the selection of inappropriate learning methods gave an impact on the percentage of unsatisfactory success of students' learning. Management of labor as early as possible has a good impact on the mother and fetus (Rahnama P, 2006 in Zelellw & Tegegne, 2018).

Based on the theory and the results of previous studies, this study proposes a hypothesis:

1. There was an influence of the Problem Based Bearning model based on midwifery care module in the 1st stage of labor in improving the quality of student learning, especially documentation of partographs
2. There was no influence of the Problem Based Learning model based on midwifery care module in the 1st stage of labor in improving the quality of student learning, especially documentation of partographs

II. METHOD

Research Design

The design of this study was Quasi Experiment (one group pretest and posttest design) by taking samples in the second semester III Midwifery DIII students at Akbid Pelamonia Makassar (Midwifery Academy of Pelamonia

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Makassar) as many as 114 respondents who had a GPA ≥3.50. The big sample formula used refers to the Harry King Nomogram. Sample was taken by using *purposive sampling* which was held from December 1 to December 14, 2019.

Instruments

1. Instrument of Module Arrangement
   a. Instrumental validation of media expert. There viewed aspects by media experts were the aspects of format, organization, attractiveness, size and shape of letters, and spaces (empty space) , and their consistency
   b. Instrumental validation of material expert. The reviewed aspects were aspects of Self-Instructional, Self-Contained, Stand Alone, Adaptive, and User Friendly.
   c. Students' response instrument. The aspects that were reviewed by students are aspects of material presentation, media / display aspects, aspects of learning module, and aspects of benefits.
2. Module based Instrument of *Problem Based Learning*
   a. Observation sheet activity. It was the observation sheet of students' activities during the learning process by using module-based learning of Problem Based Learning (PBL) while validation of the observation sheet uses expert judgment.
   b. Partograph problems. The form of narrative that illustrated the observing results of the 1st stage of labor taken from empirical case studies from the delivery room. Validation of questions used expert judgment
   c. Students' Questionnaire Response. This was to find out how the students' responses to the module-based learning by Problem Based Learning (PBL) which then validated back to the expert judgment. To convince researchers that the questionnaire used was truly valid, so the test with the valid use was conducted.

III. ANALYSIS DATA

1. The 1st Step of Midwifery's Care Module Labor

Data analysis technique used in the preparation of the module was a quantitative descriptive analysis, and technique Descriptive analysis was carried out with the following calculations:

$$\text{Percentage of Eligibility (\%)} = \frac{\text{(Observation score)}}{\text{(Expected score)}} \text{x } 100\%$$

2. Model of Module-Based learning to Problem Based Learning
   a. Data Analysis of Student Learning Activity

   Analysis of students' activities with the formula:

$$\text{P} = \frac{\text{(Number of Activity for Scores of each group)}}{\text{(Maximum score)}} \times 100\%$$

   b. Analysis of Students' Learning Outcomes

   Description of initial stage: carried out by calculating the average count, the Normality Test and the Homogeneity Test. Final Stage Description: Wilcoxon Signed Rank Test hypothesis, N-Gain Fisher Test

   c. Analysis of Students' Responses

   The presentation formula is:

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$$P = \frac{(\text{Number of Student Responses})}{(\text{Number of expected Responses})} \times 100\%$$

IV. RESULT

Table 2. Distribution's Result of Respondents' Frequency

Characteristics	Classroom IIA		Classroom IIB		Classroom IIC		Total	
	n = 40	%	n = 36	%	n = 38	%	n =114	%
Age								
<19	36	90	35	97.2	37	93.7	108	94.7
≥19	4	10	1	2.8	1	2.7	6	5.3
GPA								
Very Satisfying	38	95	32	88.9	28	73.7	98	86
With Praise	2	5	4	11.1	10	26.3	16	14
Total	**40**	**100**	**36**	**100**	**38**	**100**	**114**	**100**

Source:Data of Research Observations result atMidwifery Academy atPelamonia Makassar 2019.

Table 2. shows that the age of respondents in classroom IIA is around 36 or 90% of respondents under the age of 19 years and four (4) or 10% of respondents aged above 19, for classroom II B there are 35 or 97.2% of respondents under the age of 19 and one (1) or2.7% of respondents whose age is more than or equal to 19 years, for classroom IIC there are 37 or 97.3% of respondents under the age of 19 years and one (1) or 2.7% of respondents whose age is more than or equal to 19 years, from the age characteristics of the respondents, it can be concluded that the age of dominant respondents is the age less than 19 with the total 108 respondents with a percentage of 94.7%.

Cumulative Performance Index (GPA), according to the data in the table above, it can be grouped into two(2) categories which are very satisfying and with praise. Based on the acquisition of classroom IIA, the data as many as 38 or 95% of respondents have a very satisfactory GPA and two(2) or 5% of respondents get the title with praise. Classroom IIB as many as 32 or 88.9% of respondents have a very satisfactory GPA and four(4) or 11.1% of respondents received the praised title. ClassroomIIC as many as 28 or 73.7% of respondents have a very satisfactory GPA and ten (10) or 26.3% of respondents received the praised title. From the characteristics of the cumulative achievement index (GPA) of respondents, it can be concluded that the GPA of the dominant respondents is the GPA with the title of Very Satisfactory with a total of 98 respondents with a percentage of 86%.

1. Students' Learning Activities

Based on the data exposure, it can be concluded that the results of observations on student activities in the learning process by model of Problem Based Learning based on midwifery care module,group four (4) classroom 2 A get the highest score as 96% . This is in accordance with the criteria of student activity where 85 % ≤ P ≥100%: Very Good. Furthermore, the lowest value is 80% for groups four(4) and groups five (5) for classroom 2B which is classified as good; this is in accordance with the criteria for student activities where 75% ≤ P ≥ 84% is good.

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2.Students' Learning Outcomes

a. Data Normality Test

The normality of the tested data can be determined by simply reading the Sig (p-Value) in the SPSS output. Data requirements are normally distributed if the p-value obtained from the calculation results is greater than the alpha level of 5% or p-value> 0.05. This normality test uses the Kolmogorov Smirov method (K-S test). The output can be seen in the following table

Table. 3. Kolmogorov-Smirnov Test

Statistical Data	P-Value	Conclusions
Pretest	0.131	0,000p <0.05 (abnormal distribution)
Posttest	0.132	0,000 p <0.05 (abnormal distribution)

b. Data Homogeneity Test

The formula for finding F arithmetic as follows:

F = (big S) / (small S) F = 22.55 / 6.78 F = 3.32

As for searching: (k; n-k)

Note:

k = Number of variables n = number of samples

The data above is known that the value of k = 2 and the value of n = 114. From the formula, the number (2; 114-2) = (2; 112) is obtained, this number then becomes a reference to find out the $ftabel$ in the distribution of statistical score. Then it is known that the score of $ftabel$ is 3.08. From the calculation above, it is known that the score of $fhitung$ is 3.32. Because the score of $fhitung$ is 3.32>$ftabel$ 3.08 according to the basis of decision making, it can be concluded that the data are not homogeneous. From the test results, the data of the two groups have unequal variants, so it is done with the similarity of hypothesis testing using the Wilcoxon test

c. Wilcoxon Test

Table 4. Analysis:Results of the Wilcoxon Test Analysis

	Median	Maximum	P-Value
Pretest (n = 114)	37.50	10 - 89	0,000
Post Test (n = 114)	89.00	71 - 100	

The table above shows the median pretest score of 37.50 from these data can be concluded that students are declared not meet the KMK standard of 75 (not graduated) and for the posttest 89.00 students were declared to meet the KMK standard of 75 (graduated) minimum score on the results of significance -score of 0,000 <0.05 then $H0$ is rejected and Ha is accepted. So that the conclusion is that there is an influence of the problem based learning model

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based on midwifery care in the 1st stage of labor in improving the success of student learning, especially documenting partographs.

d. N-Gain Test

From the calculation results of the N-Gain test obtained 0.8 according to the N-Gain criteria, it can be concluded that the increase in student learning outcomes using the Problem Based Learning model based on midwifery care module 1st stage of labor in the high category according to the criteria of N-Gain.

e. Fisher's Test

Fisher test results shows that between learning outcomes with a total GPA of all 114 respondents stated that respondents who have a GPA category with honors passed the posttest (≥75) are 16 or 14.03% of respondents, and none (0%) respondents who do not pass or get a score of <75. While respondents who have a very satisfactory GPA graduated at posttest (≥70) were 97 or 85.07% of respondents. Respondents who donot pass the posttest (<75) is one(1) or 0.9%. P-Value results of 0, 860 and because the value of p> 0.05, it can be concluded that there was no relationship between the cumulative achievement index with student learning outcomes at posttest.

f. Results of response analysis

Based on the data of students' response results, it can be explained that the average percentage of students' responses to the application of the Problem Based Learning model based on midwifery care module step one of labor on partographic documentation material by the number of students' stating was 76%. Thus the number can be concluded that students were interested in using a module-based Problem based learning model.

V. DISCUSSION

In the learning process, the lecturer started the lesson by giving greetings and attendant list and then he/she began the learning process by conveying the objectives of learning partographical documentation material and he/she also explained the model that will be applied to partograph documentation material. Lecturers must give apperception to students and students mustrespond it actively. The next step was the steps of module-based problem Based Learning model which focuses on learning activities two especially documentation of partographs

Researchers divided students into five groups; each group consisted to eight students. Each student had previously been socialized about the implementation of the module"Problem Based Learning" model and each student got a module of midwifery care at the stage one of labor, after that the students were instructed by the lecturer to open an example of a partograph filling case on page 77 of the midwifery care module at the stage one of labor.

Then, the students began to think about the problems contained in the module, and the lecturer directed the *7 jump* steps in the problem solving process that started from the 1st step to explain the terms and concepts that were unfamiliar problems and unrecognized bystudents, this step gave time to students to recognize more details about the case to be solved. Then in the 2nd step, students defined the problem about a list of phenomena that would be explained. In this activity, students looked for phenomena that would be explained to be the next discussion material and solved it with group members. Then in the 3rd step, students made as many different explanations as possible for each phenomenon, each student of group member tried to find their own explanation in accordance with the list of phenomena that existed in the previous step.

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In the 4th step, students used prior knowledge and common sense to organize the proposed explanation; then they tried to produce a coherent description of the process underlying the phenomena proposed in the previous step. In the 5th step, students formulated learning objectives, which are then followed by 6thstepwhere students tried to have the knowledge through individual learning. In this step, students tried to absorb as much information as possible and tried to complete the partograph according to the case provided. 7thStep, the students shared their findings among the groups and tried to integrate the gained knowledge into a comprehensive explanation for the existed phenomena and complete and document the case into a closed partograph with individual's checking activities on which parts of the partograph were poorly understood. After finishing the discussion, each group presented their findings and the other groups were welcome to respond to the presentation. During the discussion process, all students participated actively because students were very eager to know and they had a good ability to document partographs because partograph is one of the competencies of midwives.

1. Students' Learning Activities

The results of observations of student learning activities during the learning activities took place using the model of problem based learning based on midwifery care 1st stage of labor as measured using the student learning activity observation sheet instrument (appendix 9). By exposing the cases in the module and explaining the solving case, it can be said that students were moreactive. During the process of Problem Based Learning model based on midwifery care module in the 1st stage of labor, students actively discussed and though critically by submitting the results of their thoughts within their groups in an effort to document the partograph. In addition, students were given the opportunity to ask questions and gave additional responses to the presentations of other groups at the end of learning activities.

The results of this study were also supported by the results of research conducted by Wasonowati (2014). Regarding to the learning model based on problems, it stated that the highest score for the evaluation aspects of the design of practicum procedures was a score of 87.50, while for the lowest score was 68.75. The quality of evaluation aspect of practicum with the highest score was 92.86 and the lowest was 82.14. The highest score of evaluation aspect for the practicum report was 90.00 and the lowest score was 69.44. Furthermore, a similar study was carried out by Oderinu, et.al (2019) who tried to compare the problem based learning model with the classic method stated that there was a statistically significant difference between the PBL teaching method and the classic method to the aspect of hand for critical thinking, communication with peers, usability as a pedagogical method, and organization and interaction between students and tutors. In other studies also showed that PBL models assisted with virtual media influenced the mastery of students' physics concepts and increase student learning activities (Hastuti, Sahidu & Gunawan 2017).

The method of Problem Based Learning was conducted by virtually showing clinical cases to students and the students were assigned to make decisions based on the case given. The application of this method made students used their knowledge to be more focus on analyzing given cases, so that they can formulate the precise diagnostics (Kononowicz et al. 2015). Based on the results of research that had been done, it showed that the uses of appropriate learning methods (PBL) can provide better learning outcomes and be able to stimulate students to participate in the learning process (Farashahi & Tajeddin 2018). Learning with the Problem Based Learning (PBL) model started with

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problem analysis, independent learning, and reporting was very important to predict learning activities and student abilities (Yew & Goh, 2016).

Based on the results of observations to students' activities during the learning activities model of Problem Based Learning based on midwifery care module 1st stage delivery in partographical documentation material can be concluded that the results of observation to student activities gotthe very good grades. It can be seen from the average percentage of three lecturers doing observation and the score was 89.96%. This was in accordance with the criteria of student's activity, where 85% ≤ P ≥100% = very good. The results of this study were supported by several studies that had been presented previously where the Problem Based Learning model was very important for predicting learning activities and the ability of students (Yew & Goh 2016), such as improving aspects of pratikum quality assessment (Wasonowati, 2014), there were significant differences related to communication with friends peer group by Oderinu, et.al (2019) and increased student learning activities (Hastuti, Sahidu & Gunawan 2017). Students' activity in the learning process must be applied if you want the students obtain relevant knowledge, improve thinking ability, and able to implement their knowledge. One method that was widely used to improve student activity in the learning process was the method of Problem Based Learning (Amir 2016).

2. The Results Of Student's Learning

In general, students experienced the improvement of learning outcomes with an average pretest40.13 and it increased to an average posttest with the score of 89.48. The increase in the average score of student's success in documenting partographs was equal to 49.35 obtained from the difference between the posttest and the pretest score. Based on the results of the N-Gain test, the increase in students' learning outcomes using the model of Problem Based Learning based on midwifery care modules in the 1st stage of labor in the high category according to N-Gain criteria g <0.7: High. So that the researchers can draw conclusions that the model of Problem-Based Learning module-based midwifery care in the 1st stage of labor affects the success of student's learning and improve the quality of learning. Fisher test results in the table above show that there was no relationship between the cumulative achievement indexes with student's learning outcomes in posttest.

The results of this study were in line with the research conducted by Susanne Gerhardt-Szep, et.al (2016). Quantitative results showed that the overall results of the post-PBL test were significantly better than the pretest-PBL. Similar research was also carried out by Xin Zhaoa, Lin Cong, (2019) presented that the use of problem based technology and script based learning (PSBL) can stimulate students' desire and increase pre-surgery readiness and intra-surgery knowledge and the ability to resolve clinical problems. Research by Akiko Ikegami, et.al (2017) and Alfa Cronbach's results from the questionnaire was 0.861. Video-based PBL hadmuch higher level of achievement for "Development of effective clinical recognition processes," one of five target items for universities' PBL tutorials (p = 0.042). No. Video-based PBL was significantly higher in the level of achievement for "imagining authentic patients (p = 0.001)" and "combining comprehensive approaches including psychosocial aspects (p <0.001)," and "satisfaction with sessions (p = 0.001)"

Similar research was also carried out by Rizwan Faisal, Khalil-ur-Rehman, Sher Bahadur, Laiyla Shinwari, (2016). Academic performance of students' attending PBL sessions was better than LBL sessions with a significant difference of p = 0.001. The mean scores for PBL and LBL sessions were 3.2 ± 0.7 and 2.7 ± 0.8, respectively.

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Other studies also had the effect of PBL learning models and cooperative scripts (CS) on student's learning outcomes, students' critical thinking skills through PBL learning models were significantly higher when compared to CS learning models (Florentina Y. Sepe 2018). Other results of research also showed that the use of this method can form a cognitive framework which is an important tool for increasing readiness to pre-surgery forresident students of China Medical University (Cong et al. 2017). The results showed that using the Problem Based Learning method can improve student's learning achievement. Problem Based Learning becomes an alternative teaching method to improve student's academic achievement (Shishigu & Bashu 2017).

Some of the research stated above was in line with the results of this study called the Problem Based Learning model that can improve student learning outcomes even more when compared with other learning models. However, from several studies that have been carried out, there was no comparison between PBL and learning modules. A good teaching method is the main and fundamental thing in improving students' abilities, the achievement of standard and basic competencies thatmust be achieved by students influenced by the selection of teaching media (Masrruroh , 2015). The Problem Based Learning process was structured for helping students to elaborate and activate prior information (Schmidt HG, 2011 in Saqr & Alamro, 2019)

3. Student's Response

Student's learning responses were given at the end of the meeting after completing the final test of learning outcomes. Student's responses (Appendix 11) were seen based on questionnaire answers filled by 114 students. The results of the percentage of student responses by 76% showed that students were very interested in the application of the Problem Based Learning model based on midwifery care module 1st stage of labor paired up with the table percentage of criteria for student's responses is 61% - 90% = Interested.

There were some studies receiving good responses to the Problem Based Learning model, such the research was conducted by Simorangkir (2014), this research was about the differences in mathematical problem solving abilities of students taught by Problem Based Learning and conventional learning stating that in the application of PBL models, students had positive responses that is known by the expression of students' satisfaction with the learning component by 90%.

Research conducted by Nurafiah (2013) was the comparison of increasing critical thinking skills of junior high school students between those who obtained means-ends analysis (MEA) and PBL learning shown that PBL class students gave a positive response to learning mathematics, it was seen from students' interests and student enthusiasm in participating learning in the classroom. From the results of the questionnaire calculation, it was found that the average score of students towards PBL learning was 3.80 (more than 3), which means that most (56.94%) students' responses to PBL learning were positive.

Varsha Raghunath More, Girish Singh and Kishor Patwardhan, (2019) also presented the similar results of research. The HPBL group had better performance on all aspects assessed with 90 questions answered correctly while the LBL (Lecture Based Learning) group only answered 72 questions correctly ($p = 0.046$). The feedback blank obtained 53 students which showed that the HPBL method was acceptable to all students.

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In Yan's research, Qiu Ma, Li Zhu, Lina Zhang, Wenli, (2017) suggested that the Hybrid-PBL curriculum was well received by international students as an effective supplement for teaching programs that were focused on the lectures. Students gained moreability, higher exam scores, and better understanding of biomedical information from the Hybrid-PBL program rather than conventional teaching methods. This was parallel with the students' responses in this study. Hybrid PBL's can be used in large classroom to apply the method of PBL hybrid that can increase student involvement (Kharay, Sharma & Bansal 2018). The PBL' method can grow the ability of orthopedic nurse in surgery room to use previous knowledge and flexibly cognitive frameworks in solving the problem. It also can train and increase the confidence of nurse in orthopedic surgery room (Zhao & Cong 2019).

The result analyses of students' responses in this study were supported by several previous studies where the students gave positive responses to the Problem Based earning model. The problem in the problem based learning approach became a stimulus for students in learning activities while the aim of studying is to find alternative solutions of problems suitable with the context of existing knowledge (Orozco & Yangco 2016). The ultimate goal of Problem Based Learning was to help students to increase the intrinsic motivation, build thinking skills, develop high-level knowledge, and became independent learners who can work together and collaborate in groups. Therefore, through the Problem Based Learning model, students would get used to working in groups and solving the problems together (Huang & Wang, 2012).

VI. CONCLUSION

Based on the results of research and data analysis conducted by researchers, conclusions can be drawn as:

1. The 1st stage of obstetric care learning module in labor was categorized as very appropriate to be used according to the table of module eligibility criteria
2. Students' activities with the application of the model of Problem Based Learning based on midwifery care module I (one) delivery were categorized as Very Good
3. There was an effect of the Problem Based Learning model based on midwifery care module I (one) in labor in improving the quality of learning
4. The response of students was interested in the model of Problem Based Learning based on midwifery care module I (one) delivery

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