

Application of Innovative Flipped Classroom Learning on Improving Motivation of Midwifery Students in the Antenatal Care

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ABSTRACT

Background: Weak learning process is one of the problems that in the world of education today. The quality of health personnel graduates is determined by the learner team in the education process, so it is necessary to improve the quality of teaching the midwifery diploma program. **Objective:** The purpose of this study is to improve the motivation of midwifery diploma program in the subject of antenatal care. **Methods:** This type of research is quantitative qualitative research with classroom action research design. The population is the second semester students of the Diploma Program of Midwifery. Instrument is motivation questionnaire, field observation, sheet covering lecturer activity, student activity and application of flipped classroom. The results of motivational questionnaires were tested by paired comparative of Wilcoxon test, hypothesis is accepted if $p < 0.05$. **Results:** The results showed that there are significant differences between motivation before and after implementation of Flipped Classroom also showed a significant difference with $p = .000$. **Conclusion:** Implementation of Flipped Classroom increase attention and confidence of the students on the antenatal care this case it shows students' learning motivation also increases. Increased motivation is expected to improve the achievement of students.

Keywords: Flipped Classroom, Motivation, Midwifery diploma program

INTRODUCTION

Weak learning process is one of the problems faced in the world of education, so it is necessary to improve the quality of the teaching process. The quality of graduates of health workers is determined by the competence of learners during the education process. The process of learning in the classroom just to guide the child's ability to memorize the given material (Sanjaya, 2011). Learning process needs to be developed, among others, by applying the method of appropriate methods and can increase student motivation to learn. Improper methods can affect students' understanding of the competencies to be achieved.

The subject of midwifery care is one of the subjects of competence in DIII Midwifery study program, where this course provides the ability to learners to provide midwifery care to normal pregnant women by taking into account the cultural aspects based on concepts, attitudes and skills as well Evidence-based results in antenatal practice using a midwifery management approach that focuses on preventive and promotive efforts, early detection of complications and documentation (Pusat Pendidikan dan Pelatihan Tenaga Kesehatan, 2011).

Midwifery students must be competent in pregnancy midwifery care, requiring good material understanding, appropriate delivery methods and the lecturer have appeal to students, but can not be separated from the student's own learning style. Student learning styles serve as a filter for learning, processing and communication. Pregnancy midwifery care requires the learning of laboratories and clinics so that an active learning method is required so that students have a broader perspective. So to improve the role of students to be more active than the learning methods that can be used, among other methods of learning Flipped Classroom. Flipped Classroom is a learning model that "reverses" traditional methods, where material is usually given in the classroom and students do the work at home. The concept of Flipped Classroom includes active learning, student engagement, and podcasting. In the flipped classroom, the material is given in advance through the instructional videos that students must watch in their homes. In contrast, classroom learning sessions are used for group discussions and work on assignments. Here, the lecturer acts as an adviser or adviser (Johnson, 2013).

Flipped Learning innovative learning model, the teacher provides student learning materials to be accessible whenever and wherever comfortable. Students can access materials at home, during travel or when to be admitted to the hospital. The material is delivered by the teacher through trusted videos and websites so that students can access whenever they need. Face to face classes are used more too actively learn and actively support each other in learning (Hamdan, et al, 2013).

Currently there is no classroom action research in the Midwifery Study program that uses flipped Classroom, so the researchers intend to apply innovative methods Flipped Classroom to increase the motivation to learn in the subjects of midwifery care.

METHOD

This type of research is quantitative qualitative research with classroom action research design. The population is the second semester students of the Diploma Program of Midwifery. Research instrument is motivation questionnaire, field observation sheet covering lecturer activity, student activity and application of flipped classroom. The results of motivational questionnaires were tested by paired comparative test of Wilcoxon test. Hypothesis is accepted if $p < 0.05$

RESULT AND DISCUSSION

Learning of pregnancy midwifery care started with pretest resulted that knowledge and understanding of student about pregnancy midwifery care 60% still less. The learning is followed by the application of conventional learning model with lectures for 15 face to face and assessed student learning motivation and learning observation during conventional method. The application of innovative learning model Flipped Classroom on the subject of midwifery care of pregnancy starts in the middle of 2nd semester for 15 face to face.

During the learning process with innovative learning methods Flipped Classroom observations were made to students and facilitators. Motivation assessment is done after the learning process is complete, so that the motivation score is obtained before and after the application of innovative learning model Flipped Classroom.

Table 1 Frequency Distribution of motivation before the application of innovative learning Flipped Classroom

Motivation before the application Flipped Classroom	Frequency	%
High	14	35
Medium	20	50
Low	6	15
Total	40	100

Source: Primary data of 2017

Table 1 shows that half (50%) of respondents have medium motivation in the subject of antenatal care before the application of innovative learning Flipped Classroom.

Table 2 Frequency Distribution Motivation after the application of innovative learning Flipped Classroom

Motivation after the application Flipped Classroom	Frequency	%
High	24	60
Medium	25	37.5
Low	1	2.5
Total	40	100

Table 2 shows that most (60%) of respondents have high motivation in the subject of antenatal care after the application of innovative learning Flipped Classroom.

Table 3 Test results Normality of data on student achievement and motivation in the subjects of Midwifery Care of pregnancy.

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Motivation before	.149	40	.026	.928	40	.013
Motivation after	.143	40	.040	.928	40	.014

Table 3 shows that motivational data prior to the application of innovative learning Flipped Classroom and motivation after the application of innovative learning Flipped Classroom shows data not normally distributed results $p < 0.05$. Statistical test results shows that there is 1 student with lower motivation after application of Flipped Classroom, 1 student with fixed motivation and 38 students have higher motivation after application of Flipped Classroom. Wilcoxon test results show that there is a significant learning motivation difference before and after the application of innovative learning method Flipped Classroom, indicated significant value 0.000.

The result mean of motivation score before the application of innovative learning method Flipped Classroom got the average score of learning motivation is 61,5 with 6 respondents (15%) have low motivation and 20 respondents (50%) have moderate motivation and 14 respondents (35%) have high motivation. After the application of innovative learning method Flipped Classroom obtained an average score of 75.32 with 1 respondent (2.5%) have low motivation and 15 respondents (37.5%) have moderate motivation and 24 respondents (60%) have high

motivation. This shows that students' learning motivation increases after the application of innovative learning method of Flipped Classroom.

Determine the significant differences in scores before and after the application of innovative Flipped Classroom learning models to test paired data with abnormal data distribution with the Wilcoxon test. The statistical test results that there is a significant difference in learning motivation before and after the application of innovative learning methods Flipped Classroom, showing a significant value of 0.000. This suggests that the motivation to learn pregnancy midwifery care increases after the application of innovative learning methods Flipped Classroom. This research started with the application of conventional method that is lecture in class by lecturer then continued by method of flipped classroom. Conventional learning where the facilitator as an informant is always ready in the classroom is different from the method of learning flipped classroom where students are required to actively interact with friends and get the material before the learning process begins.

According to Shimamoto (2012) in an international journal entitled implementing a Flipped Classroom: An Instructional Module concludes that flipped classroom has the opportunity to make significant shifts in the way the instructions are delivered. Students can engage in active learning with a mix of technology and traditional learning-based models. The application of innovative learning method of flipped classroom begins with the provision of maternity midwifery care materials that can be accessed online by the students then studied and understood at home before being held face-to-face in class. The material can be accessed on your channel tube "Midwife Stikes Pemkab Jombang". Students are required to study the material presented in the YouTube channel before face to face.

This is consistent with Johnson (2013) who found that Flipped Classroom is a learning strategy by minimizing the number of direct instruction in the learning process but maximizing the interaction with each other. This strategy utilizes technology that supports learning materials for students that can be accessed online. This study also supported the results of Stephanie et al (2015) study where the learning process begins after the students learn actively in the home material that has been submitted through online video then continued active discussion in the classroom. The reversing class is a role change for the instructor,

Educause learning Initiative (2012) states that the flipped classroom model changes the position of students who are in front actively in the learning process. Discussion activities are led by students, and communication becomes the determinant of class dynamics. Implementation on learning of antenatal care of students was formed in 4 groups where each group presented the results of their discussion about learning topics that have been studied through video. Students become actively expressing opinions and asking each other questions between groups.

The application of the flipped classroom method is the opposite of the conventional method, in the flipped classroom method the material is studied at home so that face-to-face time is more effective for discussing with friends and facilitators. The time of interaction between students and facilitators will make the learning atmosphere more lively and active. According to Roehl and Sweta (2013) time in the classroom is used to solve problems, developing concepts and actively engaging in the learning process. The result of observation on the students is known that the students are more interested in the Flipped Classroom learning method, where the students can get the material in the form of video then record the difficult material and that need explanation from the lecturer. Students can play many times the material in the form of video and download the material so that it can be opened whenever needed. The material in the form of video also appeals to students where it is accompanied by pictures so as to make it easier to

remember the learning materials. This is in accordance with Berrett (2012) that the advantages of Flipped Classroom among other students have the opportunity to study the material at home with a comfortable atmosphere and in accordance with its ability before the process of learning in the classroom. Students can also learn from a variety of learning media whether books, videos or websites.

Flipped Classroom learning method also has limitations, the results of observations from students said that there are some video quality that is less than the maximum so as to make different perceptions between one student with another student. Students also cannot ask questions directly at the time of playing the video so as to cause different perceptions. It is also supported by Natalie (2012) that the flipped classroom method also has flaws, that is to be able to access the required video laptop or computer that must be connected to the internet, so that required supporting facilities. Videos that need to be downloaded with a good internet connection so that they can be completely downloaded, inadequate internet connection will hamper downloading the learning video. Implementation of flipped classroom method can be applied if there are facilities and good infrastructure so that the material can be downloaded properly (Velegol, Zappe, & Mahoney, 2015).

The learning process is done to achieve the learning objectives, and obtained the maximum learning outcomes. For that required a driving process of learning involving learners and teachers, namely motivation. One of the factors that influence learning achievement is motivation, where one will succeed in learning if in itself there is a desire to learn. Other factors that influence learning achievement according to Milman (2017) are internal factors that include physical condition and psychological factors including learning motivation and factors that come from outside. Tuan, et al (2005) suggests that varied learning models can improve student motivation rather than traditional learning. Application of flipped classroom is a way to increase student's motivation to learn. This is shown by the enthusiasm of the students during the class discussion, the students are active in asking questions and answering questions from other discussion groups.

Learning process is expected to change behavior, hence required method that fun so student participate actively in process of learning so that not bored. Student activity can be seen at the time of application of flipped classroom where discussion runs and almost every member of the group express their opinions and there is feedback from other groups. Student activity in discussion shows high confidence this is because students have studied material that has been given before through channel you tube. Confidence is part of a high motivation. This is consistent with Halili and Zainuddin (2015) concludes that learning Flipped Classroom has some advantages so that students become more motivated and confident when discussing the material in the classroom as they get by watching the video before coming to class, the class activities become more student-centered and not teacher-centered.

The results of classroom observations indicate that students have high enthusiasm in the material presented on the channel you tube with the number of viewers and who follow the channel. Students also download the material (Andrini, et al, 2017). Good attention from students on the material provided also shows a high motivation in learning materials pregnancy midwifery care. This is in accordance with Abeysekera and Dawson (2015) found evidence that Flipped Classroom was able to improve students' motivation and cognition.

CONCLUSION

The expected end result with the application of Flipped Classroom method can increase students' attention and confidence in pregnancy midwifery subject matter so that student's learning motivation also increases. Increased motivation is expected to improve student achievement.

REFERENCES

- Abeyssekera & Dawson. (2015). Motivation and cognitive load in the flipped classroom: definition, rationale and a call for research. *Higher Education Research & Development*, volume 34 issue 1, 2015
<http://www.tandfonline.com/doi/abs/10.1080/07294360.2014.934336>
- Andrini, VA, Setyosari, P, Zubaidah, S & Ulfa, S. (2017). The Effect of Flipped Classroom Model through Handout and Virtual Approaches on Learning Outcomes for the Students of Universitas Terbuka Who Have Different Level of Motivation and Learning. *Global Journal of Pure and Applied Mathematics*. ISSN 0973-1768 Volume 13, Number 7 (2017), pp. 3145-3156. Research India Publications <http://www.ripublication.com>
- Berrett, D. (2012). *How 'Flipping' the Classroom Can Improve the Traditional Lecture*. Journal Science and Education An Open Acces and Academic Publiser. <http://chronicle.com/article/How-Flipping-theClassroom/130857/>
- Educause Learning Initiative. (2012). *Things You Should Know About Flipped Classrooms*. This work is licensed under a Creative Commons, Attribution-Non Commercial-No Derivs 3.0 License. <https://www.educause.edu/eli>
- Halili & Zainuddin. (2015). Flipping The Classroom: What We Know And What We Don't. *The Online Journal of Distance Education and e-Learning*, Volume 3, Issue 1
- Hamdan, N, McKnight, PE, McKnight, K, & Arfstrom, KM. (2013). *The Flipped Model: A White Paper Based On The Literature Review Titled A Review of Flipped Learning*. *Flipped Learning Network*. Scientific Research An Academic Publisher.
- Johnson, GB. (2013). *Student Perceptions Of The Flipped Classroom*. Columbia: The University Of British Columbia. <https://open.library.ubc.ca/media/download/pdf/24/1.0073641/1>
- Milman, N. (2012). The Flipped Classroom Strategy What is it and How Can it Best be Used?. *Jurnal Internasional*, Volume 9, Issue 3: The George Washington University. [asbbs.org/files/ASBBS2014/PDF/P/Phillips_Trainor\(P519-530\).pdf](http://asbbs.org/files/ASBBS2014/PDF/P/Phillips_Trainor(P519-530).pdf)
- Pusat Pendidikan dan Pelatihan Tenaga Kesehatan. (2011). *Panduan Asuhan Antenatal Untuk Mahasiswa*. Jakarta
- Roehl, A, & Shweta, L. (2013). The Flipped Classroom: An Opportunity To Engage Millennial Students Through Active Learning Strategies. Texas: Christian University, *Jurnal Internasional* Vol. 105. No. 2. 2013 JFCS. <https://eric.ed.gov/?id=EJ1045858>
- Sanjaya, A. (2011). *Model-model Pembelajaran*. Bumi Aksara. Jakarta
- Shimamoto, DN. (2012). *Implementing a Flipped Classroom: An Instructional Module*. Hawaii Amerika Serikat: Department of Educational Technology University of Hawaii Manoa.
- Tuan, H. L., Chin C. C., Tsai, C.C., & Cheng, S. F. (2005). Investigating the Effectiveness of Inquiry Instruction On The Motivation of Different Learning Styles Students. *International Journal of Science and Mathematics Education*. (Online), (3):541-566

Velegol, SB, Zappe, SB & Mahoney, E. (2015). *The Evolution of a Flipped Classroom: Evidence-Based recommendations*. American Society for Engineering education. Pennsylvania. ERIC Journal EJ 1076140 ISSN 1941-1766
<https://eric.ed.gov/?id=EJ1076140>