

Applying Case Study Method at the Pre-Profession Pregnancy Course

Laila Rahmi^{1,*} Lusiana El Sinta B²

^{1,2}Midwifery Study Program, Medical Faculty, Andalas University

*Corresponding author: Laila Rahmi. Email: lailarahmi@med.unand.ac.id

ABSTRACT

National development in the educational sector is an effort to develop national interests and improve the quality of Indonesian people. Through education, the younger generation can develop self-potential, self-control, personality, intelligence, noble character, and skills. The method developed in this study was carried out by applying the Case Study Method at the Pre-Professional Pregnancy course. In this way, students are expected to attain better learning outcomes. The study involved the seventh-semester students of the Midwifery Study Program, Faculty of Medicine, Andalas University. Research activities were carried out by observing (observation) students' critical thinking skills and enthusiasm after being asked to find examples of cases in printed and electronic media. These examples, representing phenomena that occur in society, are relevant to the learning materials. The students were asked to discuss these phenomena in groups and present between groups, allowing them to learn the subject matter through three cycles of activities. The data were obtained directly from the running course as primary data and collected through a data collection format containing assessment items on students' abilities and results of observation during the learning process. The data were analyzed descriptively to get an overview of the research subject. The research was conducted in line with the academic calendar set by the academic office of Andalas University. The Case Study Method was put into practice at several meetings for further observations. Our observations of the method application led to the finding that there was an increase in student critical thinking and enthusiasm during the learning process at the Pre-Professional Pregnancy course.

Keywords: Case Study, Student Centre Learning, Classroom Action Research, Critical Thinking

1. INTRODUCTION

National development in the education domain is an effort to educate the nation's life and improve the quality of Indonesian people who are faithful, pious, and have noble character and master science, technology, and art. Lecturers as professional educators and scientists who have the main task of teaching, transforming, developing, and disseminating knowledge, technology, and art through education, research, and community service, have very strategic functions, roles, and positions in national education development^[1].

Education essentially includes educating, teaching, and training activities to transform values to students that can last a lifetime. Humans will have abilities and personalities that develop through education^[2]. National education in Indonesia is defined as a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential so that they have religious-spiritual strength, self-control, personality, intelligence, noble character, and skills needed both for students themselves, as well as society, nation, and country.

The learning atmosphere and learning process that can make students active in developing their potential can only be realized through an educational interaction between students as learning parties,

teachers as teaching parties, and students as the main subject^[3].

To train students' higher-order thinking skills (HOTS) and prepare graduates with global competitiveness, as well as increase the relevance of the educational process to the business world and industry (DUDI) and society, Lecturers as educators can apply several active and contextual learning strategies and Outcome-based learning achievement assessment method in learning in higher education^[4].

Critical thinking is a reflective thinking process that focuses on deciding what to believe or do, which includes skills in analyzing arguments, making conclusions using inductive or deductive reasoning, judgment or evaluation, and making decisions or solving problems. Students need critical thinking skills to be able to distinguish ideas clearly, argue well, solve problems, construct explanations, hypothesize and understand complex things more clearly^[5].

The Pre-Professional Pregnancy course is taught to the Midwifery Undergraduate Study Program students in the seventh semester. This course is prepared as a provision for students before entering the professional stage. Students who take this course will have the opportunity to remember and discuss all things related to learning during pregnancy, ranging from cognitive, affective, and psychomotor abilities. This course provides an opportunity for students to understand the basic concepts of pregnancy care,

changes in pregnancy, factors that affect pregnancy and pregnancy screening, assessment of pregnant women, documentation of midwifery care in pregnancy, and pregnancies with pathological conditions (hyperemesis gravidarum, bleeding in the first, second, and third trimesters of pregnancy, gestational age abnormalities, preeclampsia/eclampsia, and premature rupture of membranes). Students who want to enroll in this course must have passed lessons in Block 1A to Block 6C.

The learning approach used is Student-Centered Learning (SCL). The activities consist of discussions on certain topics, clinical skills training, independent study, introductory lectures, and expert consultation, if necessary. Student assessment is carried out through written examinations at the end of the course, assessments during discussions, assignments, and clinical skills assessments using a checklist at the end of the semester.

The method carried out in this research is to apply the case study method to seventh-semester students to train and improve students' critical thinking skills in the Pre-Professional Pregnancy course so that students are expected to master the learning outcomes of this course more optimally.

Research Purposes

1. Develop learning methods in fulfilling graduate learning outcomes.
2. Knowing the effectiveness of the application of the development of case study learning methods in pre-professional pregnancy courses.

2. THEORETICAL BASIS

2.1. Classroom Action Research

Classroom Action Research (CAR) is closely related to the problems of everyday learning practices faced by educators. Classroom Action Research (CAR) is a form of reflective research by taking certain actions to improve or improve learning practices in the classroom more professionally. CAR seeks to improve and develop the professionalism of educators in carrying out their duties.

Classroom action research has attracted the attention of world education experts, along with changes in the public's perspective on the task of educators as a profession that is no longer inferior. Classroom action research (CAR) is action research carried out by the teacher in the classroom. Action research is essentially a series of "action research-action research...", which is carried out cyclically to solve problems until the problem is solved. There are several types of action research; two of them are individual action research and collaborative action research (CAR). So CAR can mean two things, namely classroom action research, and collaborative action research; both refer to the same thing. With CAR, a teacher can try various actions in the form of

certain learning programs, such as using reading materials that have interesting pictures and stories and other ways to support learning effectiveness^[6].

2.2. Characteristics of Classroom Action Research

According to Richart Winter, there are six characteristics of CAR, namely (1) reflective criticism, (2) dialectical criticism, (3) collaborative, (4) risk, (5) plural arrangement, and (6) internalization of theory and practice. For more details, the following briefly describes the characteristics of the CAR :

1. Reflection Criticism; One of the steps in qualitative research in general and for CAR, in particular, is to reflect on the results of observations regarding the setting and activities of an action. However, in CAR, what is meant by reflection is an evaluation or assessment effort, and this reflection needs a critical effort so that it is possible at the evaluation level of changes.
2. Dialectical Criticism; With dialectical criticism, it is hoped that the research will be willing to criticize the phenomenon under study. Furthermore, the researcher will be willing to conduct an examination of:
 - a. The overall context of the relationship is a unit even though it can be separated, and
 - b. The structure of internal contradictions, meaning behind a clear unit, allows for a tendency to change even though something about the unit is stable.
3. Collaborative; In CAR, it is necessary to collaborate with other parties such as superiors, colleagues or colleagues, students, students, etc. All of these are expected to be used as data sources or data sources. In essence, the researcher's position in CAR is part of the situation and condition of the background being studied. The researcher is not only an observer, but he is also directly involved in the situations and conditions. The form of cooperation or collaboration among the group members in a particular setting causes a process to occur.
4. Risk; With risk characteristics, it is expected and demanded that researchers dare to take risks, especially during the research process. Risks that may exist include (a) a false hypothesis and (b) a demand to carry out a transformation. Furthermore, through involvement in the research process, the researcher's action is likely to experience a change of opinion because he witnessed the discussions or disagreements of the collaborators and subsequently caused his views to change.
5. Plural arrangement; In general, quantitative or traditional research has a single structure because a single voice, the researcher, determines it. However, CAR has a plural structure because it

is clear that this research is dialectical, reflective, participatory, or collaborative. This plural arrangement relates to the view that the phenomenon under study must include all the main components to be comprehensive. For example, if what is being researched is the situation and condition of the teaching and learning process, the situation must include at least the teacher, students, educational goals, learning objectives, teaching and learning interactions, graduates or results achieved, and so on.

6. Internalization of Theory and Practice; According to CAR experts, theory and practice are not two different worlds. However, they are two distinct, interdependent stages, and both serve to support the transformation. This opinion differs from the views of conventional research experts who think that theory and practice are two separate things. The existence of theory is intended for practice or vice versa and, for this reason, both can be used and developed together.

The form of CAR is completely different from other forms of research, be it research that uses a qualitative paradigm or a quantitative paradigm. Therefore, there is no need to doubt the existence of this form of CAR, especially as an effort to enrich the repertoire of research activities whose scientific level can be accounted for.

2.3. Classroom Action Research Purpose and Benefits

The purpose of classroom action research is to improve and improve the learning practices carried out by a teacher. As quoted by Suyatno, W.R. Borg stated that the main purpose of classroom action research is the development of teaching skills based on learning problems faced by teachers in their classrooms and not aimed at achieving general knowledge in the field of education.

With regard to objectives, CAR is one of the strategic ways for teachers to improve and improve educational services. McNiff stated that the main basis for conducting classroom action research is for improvement. The purpose of CAR can be achieved by taking various alternative actions in solving learning problems in the classroom. In this case, CAR should be focused on alternative actions planned by a teacher, then tried and evaluated, whether these alternative actions can be used for problem-solving or not to the problems he faces in learning activities. If professional teacher services in learning can be improved (benefitted from classroom action research), some accompanying objectives can also be achieved^[6].

The intended accompanying objective is the occurrence of an in-service training process during the classroom action research process. The objective

of this accompaniment is the improvement and improvement of educational services. Therefore, teachers will practice more applying various alternative actions in an effort to improve learning services. Through CAR, a teacher will gain more experience in reflective learning practice skills. The benefits of CAR related to the learning component are as follows:

1. Learning innovation
2. Curriculum development at the school level and the classroom level
3. Increasing teacher professionalism

2.4. Case Study Method

The case study method is a learning design based on the education unit level. This method is in the form of explaining a particular problem, event, or situation, and then students are tasked with finding alternative solutions. This method can also be used to develop critical thinking and find new solutions to a solved topic.

This method can be developed or applied to students when students have initial knowledge of the problem. Many cases are faced in human life as individuals and social beings, which need to be solved. This case study method encourages problem determination, investigation, and persuasion that students must carry out. Therefore, one of the most important elements of the case study method is that it includes a collaborative discussion of the issues in the case. In this way, students can identify what they know and need to understand the case and define the problem to investigate. Such a collaborative discussion likely allows students to interact with each other (group members) in carrying out the case study learning steps. Moreover, when students carry out problem-solving activities and make decisions, the interaction between students is needed^[7].

Case-based learning allows students to analyze content by first introducing the core knowledge domain and encouraging students to look for other knowledge domains relevant to the problem given in this case. A case defines a realistic problem scenario relevant to the part of the material being studied^[8]. Cases that arise in Case-Based Learning (CBL) contain problems related to the environment, conditions, situations, or a picture of students' future. A case is a story with a message where students can analyze and consider solutions to the story^[9]. CBL involves students learning by using realistic narratives, which will allow students to integrate multiple sources of information in an authentic context^[10].

2.5. Critical Thinking Ability

The lecture process should be able to train the intellectual, emotional, and skill aspects for students. One of these potentials is critical thinking skills, which lecturers must improve during the lecture

process. Every student needs to possess critical thinking ability because there are so many problems that must be solved and resolved in pre-professional lectures on pregnancy. Thinking critically is related to the assumption that thinking is a human potential that needs to be developed to achieve optimal capacity.

Indeed, increasing critical thinking skills in education is not a new thing, but in pre-professional pregnancy courses, it is a must. Critical thinking is a process of thinking by expressing judgments by setting appropriate norms and standards. Critical thinking is one of the higher-order thinking processes. In the learning process, critical thinking is very important because, with the ability to think critically, students are expected to be able to analyze various problems related to the model or lecture material, provide arguments, generate insights, and provide interpretations on the material^[11].

Someone who can be said to think critically can be seen from several indicators. Ennis in Costa, divides the indicators of critical thinking skills into five groups, namely: 1) providing a simple explanation (elementary clarification); 2) building basic skills (basic support); 3) making inferences (inferring); 4) making further explanation (advanced clarification); 5) setting the strategy and tactics (strategies and tactics)^[12].

3. RESEARCH METHODS

The study was conducted on seventh-semester students of the Midwifery Study Program, Faculty of Medicine, Andalas University. This classroom action research activity is conducted by observing students' critical thinking skills and enthusiasm after students were asked to find examples of cases in printed and electronic media. These phenomena that occur in society are relevant to the learning material. Students were then asked to discuss the cases in their own group and to the other groups in the classroom. The discussions in the Pre-Professional Pregnancy course learning were run in three cycles of activities. The data used is data directly obtained by the subject under study (primary data). Data was collected through a data collection format that contained several assessment items on the abilities possessed by students and observed during face-to-face learning. The data were analyzed descriptively to get an overview of the research subject.

This research was conducted by adjusting the schedule of activities carried out in academics. Researchers conduct learning according to the schedule set by the academic and then apply the case study method at several learning meetings for further observations.

4. RESULT AND DISCUSSION

4.1 Students' critical thinking skills in the Pre-Professional Pregnancy Course

The action was implemented in three research cycles; in each learning cycle carried out by students, observations were made on several aspects to assess students' critical thinking skills towards the expected learning outcomes.

The following are the results of the development of student's abilities in critical thinking towards case discussions:

Table 1. Students' critical thinking skills

No.	Aspects Observed	Cycle I			Cycle II			Cycle III		
		L	S	W	L	S	W	L	S	W
1	Students identify/formulate questions			√			√			√
2	Students provide clear answers to each question asked.		√				√			√
3	Students provide explanations with clear sources in answering questions.		√			√				√
4	Receive suggestions and input from others for additional answers		√				√			√
5	The student gives a different argument from the opinion of his or her classmate.	√				√				√
6	Students' ability to analyze problems		√			√			√	
7	Students express their opinions during discussions.		√				√			√
8	Students accept differences of opinion.		√			√				√
9	Students can provide examples in everyday life.		√				√			√
10	Students provide conclusions from the answers given.		√				√			√

From the observations made on the application of the case study learning method, it is known that there is an increase in students' critical skills seen from the observation aspect during the learning process in the pre-pregnancy course.

4.2 The level of enthusiasm of students in the Pre-Professional Pregnancy Course

The following are the responses given by students as a form of enthusiasm for the assignments given by the lecturer:

Table 2. Student enthusiasm

No.	Aspects Observed	Cycle I			Cycle II			Cycle III		
		L	S	W	L	S	W	L	S	W
1	Student attendance at learning meetings		√				√			√
2	Student participation in each session of learning activities		√			√				√
3	Students' ability to ask questions related to learning materials		√				√			√
4	The ability of students to express opinions during discussions		√				√			√
5	The ability of students to answer the questions asked.			√			√			√
6	The ability of students to respond to the answers given			√			√			√
7	The ability of students in the division of roles and tasks			√			√			√
8	The ability of students to use library resources related to the material		√				√			√
9	The ability of students to present material with an attractive appearance		√				√			√
10	The ability of students to provide examples of cases that are relevant to the learning material		√				√			√

From the observations made on the application of the case study learning method, it is known that there is an increase in student enthusiasm seen from the observation aspect during the learning process in the pre-professional pregnancy course.

Case Study, also known as Case-Based Learning, is generally related to Problem Based Learning, namely learning methods that use authentic problems as the basis. In Case-Based Learning, students will focus on building knowledge and group discussions to solve problems. With the application of Case-Based Learning, students can have the ability to develop analytical skills, improve their ability to deal with

problems, seek knowledge independently, manage cases based on the knowledge gained and improve their ability to communicate and collaborate with groups^[13].

The application of the case study learning method has provided opportunities for students to achieve the objectives of case-based learning as one of the Student Center Learning learning methods, including students being able to master learning materials, increasing interaction and togetherness skills in achieving the desired goals as (collaborative learning), improve thinking and communication skills^[14].

Learning with the Teacher-Centred Model (centered on the lecturer) has shifted and is replaced with student-centered learning, often referred to as Student-Centered Learning (SCL). The SCL approach method includes Problem-Based Learning (PBL) and Case-Based Learning (CBL). The characteristics of PBL and CBL are complementary. Many studies have stated that case study learning can be integrated into implementing the PBL method^[15]. PBL with integrated case studies in pre-professional pregnancy courses can increase students' critical thinking skills and enthusiasm.

The conclusions of the research conducted are:

1. The application of the case study method can improve the critical thinking skills of seventh-semester students in the Pre-Professional Pregnancy course in the Midwifery Study Program, Faculty of Medicine, Andalas University.
2. The application of the case study method can increase the enthusiasm of the seventh-semester students in the Pre-Professional Pregnancy course in the Midwifery Study Program, Faculty of Medicine, Andalas University.

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