

Improving Teaching Ability with Eight Teaching Skills

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Abstract—In a teaching process, learning media should be developed to engage students in a classroom. This study aimed at developing learning media for microteaching courses in the form of teaching simulation videos. The development model used in making this media was the ADDIE model (Analysis, Design, Development, Implementation, Evaluation) carried out for two years. On the first year of activities, it was determined standardization of teaching skills, compiling storyboards, teaching scenarios and testing content experts and design learning. In the second year, it was planned video capture and media testing which includes media expert testing, individual trials, small group trials and large group trials. The results revealed eight teaching skills in sequence: (1) question skills, (2) reinforcement skill, (3) variation skill, (4) explaining skill, (5) opening and close skill, (6) small group discussions skill, (7) class management skills, (8) skill of organizing small group work and individual work.

Keywords—*microteaching; eight teaching skills; ADDIE.*

I. INTRODUCTION

Basic teaching skills are the skills or abilities of teachers to explain concepts related to learning material [1]. Teaching skills are pedagogical competences of a teacher. Pedagogic competence is the way teachers teach and regulate the learning system in the classroom by establishing good interactions with students [2]. Teachers' pedagogical competence is one's ability to teach which includes various aspects related to the science of educating as well as basic teaching skills [3]. The principles of implementing basic teaching skills are as follows [4]:

1. Relevant

The suitability of the intent is relevant in selecting and determining the elements of the type of basic teaching skills to be implemented. This adjustment is very important, so that in applying each element of learning, it can further improve the quality of the

process and learning outcomes. For example, when applying skills to provide stimulus through the use of varied media, it should be adjusted to the learning objectives to be achieved.

2. Creativity and Innovation

Being creative and innovative in implementing the basic teaching skills elements are very necessary so that the learning atmosphere is always interesting and enjoyable for students. Creativity means that the elements of the basic teaching skills used are delivered more interestingly. Through creativity, new ideas will emerge and are different from the way it was done before (innovative). For example, when applying skills to open the lessons, it can be done by giving pre-tests, quizzes, games in the form of body movements, or providing illustrations so that it can increase the enthusiasm and motivation of students.

3. Accuracy

The use of each element of basic teaching skills is intended so that the learning process can run effectively and efficiently. Therefore the use of elements of basic teaching skills must be based on aspects of accuracy, so as to achieve the expected learning goals. For example, when applying basic questioning skills, if a teacher's question is not responded by students, that question is poorly understood and needs to be replaced or modified by another question.

4. Utilization

The elements of the basic teaching skills that are applied must have value to the development of students' potential. Learning is a process of improving students' behavior including knowledge, attitudes and skills. Therefore, the use of basic

teaching skills must have value or benefits to further improvement in the quality of learning.

E. *Generating Attention And Motivation*

Attention and motivation are included in the principle of learning which is very important, so the application of learning elements must increase the attention and motivation of students. Therefore, during the learning process, students' attention and motivation are always maintained in the learning activities.

F. *Fun*

A pleasant learning atmosphere is one of the learning elements that must always be created by the teacher. Through fun learning activities, students will feel excited in learning according to their potential and talents. Therefore the elements of basic teaching skills must be able to create a learning atmosphere that is fun and enjoyable for students.

According to [5], there are 14 teaching skills including. The first skill on the list is the ability to create stimulus variation. The second skill is the ability to set induction. The next skill is covers to skill to provide Closure. The fourth skill includes the skill to use silence and nonverbal cues. The fourth skill on the list is the ability to reinforce pupil participation. The sixth skill is fluency in questioning, followed by the skill in probing questions. The eighth skill is include the skill to use of higher questions followed by the skill to create divergent questions. The tenth skill deals with the ability to recognize the students' attendance pattern. The next skill on the list is the capability of giving illustration of concepts and providing related examples. The twelfth skill is the skill in lecturing. The thirteenth skill is the ability to create planned repetition, and the last skill is the ability to create complete communications. According to [6], there are 9 teaching skills, namely: 1) Reinforcement, 2) Basic Questioning, 3) Variability, 4) Explaining, 5) Introductory Procedures and Closure, 6) Advanced Questioning, 7) Classroom Management and Discipline, 8) Guiding Small Group Discussion, 9) Small Group Teaching and Individualized Instruction [6]. According to [7], there are 13 teaching skills. The first skill on this list is writing instructional objectives, followed by the skills in introducing a lesson and the fluency in questioning. The fourth skill in this list is the skill in probing questioning. The fifth is the skill in explaining. The sixth skill deals with the ability in illustrating with examples. The seventh skill is the capability in creating stimulus variation. The eighth skill is the ability in using silence and nonverbal cues. The ninth skill deals with the skill in giving reinforcement. The tenth skill in this list is the ability in increasing the students' participation. The eleventh skill is the skill in using black board effectively. The twelfth skill is the ability in achieving closure. And the last skill in this list is the ability in recognizing attending behavior.

According to [8], there are 21 teaching skills, namely: the skills in writing instructional objectives, the skills in introducing the lesson, the skills in questioning, the skills in explaining, the skills in probing questions, the skills in illustrating with examples, the skills in giving variation, the skills in using silence and nonverbal cues, the skills in giving reinforcement, the skills in increasing pupil's participation, the skills in using black board, the skills in achieving closure, the skills in recognizing attending behavior, the skills in experimentation, the skills in diagnosing difficulties of students related to subject matter, the skills in using teaching aids, the skills in maintaining the science laboratory, the skills in giving assignment, the skills in developing critical and independent thinking among the students, the skills in maintaining discipline, and the skills in pacing the lesson [8].

Of the many teaching skills listed above, it is necessary to have standardization of teaching skills used in Indonesia, so that there is no differences in the mastery of basic teaching skills by prospective teacher students. The quality of teaching is determined by the teachers' ability in teaching. A person's ability to teach skillfully must be trained, for example, through video simulations of teaching skills based on the theory of appropriate teaching skills.

II. METHOD

There are several steps involved in establishing teaching skills, namely:

A. *Analysis*

In the analysis phase, curriculum and syllabus analysis was conducted on microteaching courses. The micro teaching syllabus was compiled based on Permenristekdikti No. 44, 2015.

B. *Content Expert Judgment*

The content expert judgment was conducted when a draft of eight teaching skills had been compiled. The content expert judge aims at validating the contents of the eight teaching skills whether they are in accordance with the curriculum or not. In this study, two lecturers were appointed who were considered experts in the content of teaching skills. The results of the content expert test were analyzed by Gregory Formula [9].

TABLE I. GREGORY TABLE

		Expert 1	
		Not relevant (skor 1-2)	relevant (skor 3-4)
Expert 2	Not relevant (skor 1-2)	(A)	(B)
	relevant (skor 3-4)	(C)	(D)

From the above table, you can find the Gregory coefficient by using the formula:

$$\text{Gregory Formula} = \frac{D}{A+B+C+D}$$

Explanation:

- A = cell that shows disagreement between both evaluator.
- B and C = cell that shows the difference in answers between evaluator.
- D = cell that shows valid agreement between evaluator

The criteria for the level of content validity can be seen in Table II.

TABLE II. GREGORY'S COEFFICIENT CRITERIA

Gregory Coefficient	Validity Level
0,91 - 1,00	Very high
0,71 - 0,90	High
0,41 - 0,70	Enough
0,21 - 0,40	Low
0,00 - 0,20	Very low

C. Test The Learning Design

After the content expert judge was conducted, the next step is the learning design expert test. Design expert test aims at testing the sequence and steps of learning. The results of the content expert test were analyzed by use Gregory Formula.

D. Focus Group Discussion

Focus Group Discussion (FGD) was conducted in order to discuss and review the results of research. The FGD participants were lecturers teaching on microteaching.

III. RESULTS

Based on the stages of the research carried out, the standardization of basic teaching skills used is the basic teaching skills developed by the Educational Teaching Institution Development Team in 1984, covering 8 (eight) basic teaching skills. It is just that giving material is sorted based on the most basic skills, which starts from questioning skills, folowed by reinforcement skills and variation skill, an then explaining skills, opening and closing skill, followed by small group discussion skill, classroom management skills, and the last is the skill of organizing small group work and individual work.

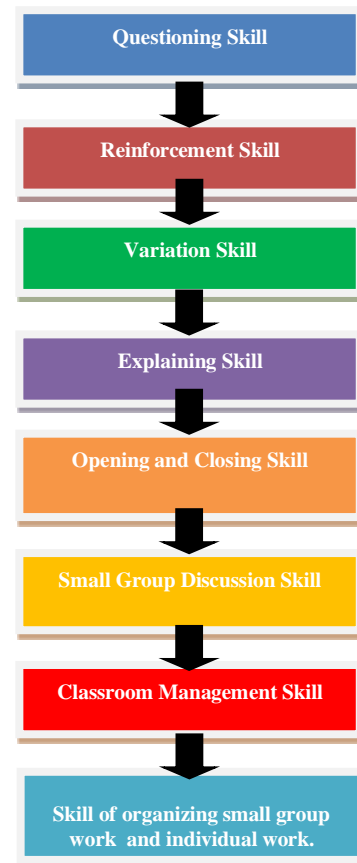


Fig. 1. Eight teaching skills

The types and components (indicators) of each basic teaching skill are briefly explained as follows.

A. Question Skill

Questioning is one of many teaching strategies applied to facilitate the development of critical thinking skills which are integral to nursing practice. Questioning skill is the teacher's ability to ask question in a learning process to improve students' ability to think critically and problem solving skills [10]. The questioning skills include competency in asking questions, probing questions, formulating higher order questions, and divergent questions. Questioning skill is the ability practiced to develop an alternate teaching pattern and is particularly helpful to the pre-service teacher who tends to rely too heavily on the lecture method. Prospective teachers who have competency in questioning skill are ready for the tasks of higher order questions and open-ended questions. Higher order questions cannot be answered simply by only rote memory. These questions require finding a rule or principle. With open-ended questions, there are no singular answers but require students to think creatively. With probing, a number of techniques are utilized. Teachers may ask students for more information; require a justification for an answer; refocus the answer to another aspect of the question; prompt the pupils; or ask other students to enter the discussion. Components of skills in asking questions are expressing questions clearly and concisely, giving references, focusing, distributing questions, shifting turns, giving time to think, giving

assistance by expressing questions in other ways, simplifying questions, repeating previous explanations. Continuous questioning skill concerns with changing cognitive level demands in answering questions, setting the order of questions, using tracking questions with various techniques, increasing the occurrence of interactions.

The use of questioning skills is very important in as a method of investigation. According [11] to when a someone does an investigation, he should asks questions around the phenomenon that triggers the investigation. It is also emphasized that this questioning process should be focused on the search of information related to that phenomenon. In this case, the teacher should synthesize what has been discovered along the process of investigation, from which the conclusions resulting from investigations are evaluated. It is further argued that the use of questioning to assist learning process is quite recent. In the past, teachers dominated the questioning process by asking the students whether or not they have understood the learning content and to check the students' attention in the class. However, with the shift of goal from mastering learning content to mastering life skills that are in trend nowadays, questioning is now a skill that has to be mastered as part of the students' investigating skills [11]. This is aimed at building the investigating skills among the students to enable them to analyze phenomena around their lives and in other people's lives. Reference [11] argues that this life skills should start as early as possible and school should play its part in developing this skill. It is from the learning process that the investigation skills can be practiced so the students will have the skills ready when they face real life and real life problems. This is, [11] argues, part of a process to build a rational being, which is the main focus of education today. To be a rational being, according to [11], a student has to have an effective memory while having the ability to react to facts that act as data for their investigation. A rational being has a proactive countenance in understanding problems that they face or that occur around their life. That is why, it is further emphasized, that questioning skills should play a central role in the learning process [11].

In this case, a teacher should be able to give examples of how questioning should be done. This entails the ability to predict all the possible questions related the topic of the discussions in the classrooms that will prompt the students to do further investigation about the concepts that becomes the topic of the lesson. A good example of the use of question will set an example for the students about how questioning skills can be a very useful tool for learning. That is why, the questions used by the teacher in the class should be systematic and coherence, so the students will also build good organizational skills that can help them focus their investigations [11]. With good questioning skills, the students will develop into rational beings that can seek information's around a problem in their life, and to find possible solutions to solve these problems.

B. Reinforcement Skill

Skills to provide reinforcement are all forms of response that are part of the modification of teachers' behavior toward

students which aims at providing feedback on student actions or responses [12]. There are two types of reinforcement, namely: (1) Provision of verbal retribution in the form of words or sentences of praise and (2) non-verbal reinforcement by approaching gestures, expressions and body movements, touch, fun activities, and tokens (symbols or other small objects).

C. Variation Skill

Variations skills are the actions of the teacher / educator in the context of the teaching and learning process which aim at overcoming the boredom of students, so that in the teaching and learning process, students always show perseverance, enthusiasm, and actively participation. Components of skills of conducting variations can be in the form of teaching styles, variations in media use, variations in patterns of interaction and activities.

D. Explaining Skill

Explaining skills are the ability to present information orally that is organized systematically, about an object, situation, facts, and data in accordance with the time and applicable laws. The explaining skills component includes planning an explanation and presenting an explanation. Explaining skill is related with the ability in presenting a learning content in a manner that will make it easier for the students to understand the learning content [13]. It is also emphasized by [13] that explaining skill involves the ability to logically describe and elaborate how something happened, why it happened, and what actually happened, or in other words "the 'How', 'Why' and 'What' of concept or event" [13] A good explaining skill is displayed through clear beginning statement, lack of irrelevant statement, fluent arrangement of sentences, coherent connecting links, and a proper use of words that can relate the explanation with the students' context.

E. Opening and closing skill

The skills to open the lessons are the activities of the teacher / educator in preparing students to take part in learning. It includes the condition for creating an atmosphere of mental readiness of students, creating a communicative atmosphere between the teacher / educator and students, raising the attention of students to what will be learned which can be started from the daily situation of students to the material to be learned. Components of opening skills include attracting students' attention, giving references and making connections. While closing skills are the ability to close the lesson of the teacher / educator to end the core learning activities carried out by providing a comprehensive view of all the material that has been learned, knowing the level of absorption of students towards the teaching and learning process. The skills component of closing the lesson includes reviewing, conducting evaluations, and giving follow up.

F. Small group discussion skill

The skill of guiding small group discussion is an organized process by involving a group of students in optimal cooperative face-to-face interaction with the aim of various information or experiences of making decisions or solving a problem. The

components of guiding small group discussion skill include Focusing attention, clarifying problems or order of opinions, analyzing students' views, improving students' description, spreading opportunities to participate, and closing discussions.

G. Classroom management skill

Classroom management skills are the skills of teachers in creating and maintaining optimal learning conditions and the teacher is able to restore them when problems and disturbances occur in the learning process. In a sense, activities to maintain optimal learning conditions and maintain learning conditions in the event of an interruption and problems during the teaching and learning process takes place. The purpose of classroom management is that every child in the class can learn in an orderly manner so that the teaching objectives are achieved effectively and efficiently. The components of classroom management skills include skills related to the creation and maintenance of optimal learning conditions and skills related to optimal learning condition control (behavior modification, group management / process, finding and coping with behaviors that cause problems).

H. Skill of organizing small group work and individual work

Teaching skills for small groups and individuals are the actions of the teacher / educator in the context of the teaching and learning process which only serves 3 - 8 participants. Physically this form of teaching is limited in number, which ranges from 3 (three) and 8 (eight) people for small groups, and one for individuals. Small group and individual teaching allow teachers to pay attention to each student and the occurrence of a closer relationship between a teacher and students. Components of teaching skills for small groups and individuals include skills in a personal approach, organizational skills, skills in guiding and facilitating learning, and skills in planning and implementing learning activities.

Based on the results of the expert test analysis with the Gregory formula which includes the expert content test and learning design, the Gregory score is obtained for each expert test, as shown in Table III.

TABLE III. EXPERT TEST RESULTS

Formatif Test	Gregory Coefficient	Result
Expert Test Content	1	Very high
Learning Design Test	1	Very high

Based on Table III, the validity level of the expert test content is considered very high. It happens because after it is validated through the process of content validity, the Gregory Coefficient is 1. Besides, after the learning design test is also validated through the process of content validity, its Gregory Coefficient is also 1, so the validity level is also considered very high.

IV. CONCLUSION

The standardization of basic teaching skills used is the basic teaching skills developed by the Educational Teaching Institution Development Team in 1984 covers 8 (eight) basic teaching skills. It concerns with giving material which is sorted based on the most basic skills, which starts from (1) questioning skills, (2) reinforcement skills, (3) variation skill, (4) explaining skills, (5) opening and closing skill, (6) small group discussion skill, (7) classroom management skills, and (8) skill of organizing small group work and individual work.

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