

## Improving Basic Teaching Skill Quality through Peer Teaching Simulation which Based on Experiential Learning

Yani Supriani<sup>1</sup>, Tatang Herman<sup>2</sup>, Turmudi<sup>3</sup>, Rina Oktaviyanthi<sup>4</sup>, Ria Novia Agus<sup>5</sup>

<sup>1,4,5</sup>Mathematics Education Program, Universitas Serang Raya, Indonesia

<sup>2,3</sup>Mathematics Education Program, Universitas Pendidikan Indonesia

yanisupriani92@yahoo.com, turmudi@upi.edu, tatang\_herman@upi.edu, ria\_an99@yahoo.co.id,

rinaokta1210@yahoo.com

### Abstract

*This study aims to improve the basic skills of teaching fifth semester students of the Mathematic Education study program Serang Raya University 2020/2021 academic year through the application of peer teaching simulation based on Eksperiential Learning technique. The subjects in this study were the fifth semester students of the Mathematic Education Study Program 2020/2021 academic year totaling 31 people. The data in this study were collected by tests and the results were analyzed quantitatively supported by qualitative interpretations. The results show that the application of peer teaching simulation with Eksperiential Learning technique can improve the basic teaching skills of the sixth semester students of the Mathematic Education Study Program Serang Raya University 2020/2021 academic year from the percentage of success in the first cycle of 87,10% to 93,55% in cycle to 74, 97 in the second cycle. Therefore, the application of peer teaching simulation with eksperiential learning technique is recommended to be used in lectures that target the formation of skills or competencies of prospective teachers.*

### Keywords

peer teaching; experiential learning; improving basic teaching skill quality



## I. Introduction

Efforts to improve and improve the quality of education have never stopped being discussed by various groups, especially those who are involved in the field of education. Education is something important and cannot be separated from a person's life, both in the family, society and nation (Sari, 2021). Education has a very strategic role in determining the direction of the forthcoming of the nation's quality of community knowledge (Musdiani, 2019). This compulsory education program is expected to provide minimum education for Indonesian citizens to be able to develop their potential so that they can live independently in a community environment or continue their education to a higher level (Martono, 2020). The efforts made to improve and increase the quality of education are vary widely, starting from curriculum reforms to increasing teacher professionalism, which are intensively carried out through programs that are considered strategic, such as the teacher certification program. This clearly shows that efforts to improve and increase the quality of education can't be done by individuals, but have to synergize and every component involved in it must be optimized in such a way.

---

For example, efforts to improve the quality of education are not sufficient only in the field of curriculum renewal, without being followed by the preparation of professional and competent educators in their fields. Curriculum renewal will be more meaningful if it is followed by changes in learning practices inside or outside the classroom. Indicators of renewal curriculum are indicated by changes in patterns of learning activities, selection of educational media, determination of assessment patterns that determine educational outcomes. The success of implementing the curriculum is greatly influenced by the ability of teachers to apply and actualize the curriculum itself. The ability of the teacher is mainly related to knowledge and skill, as well as the tasks assigned to him. The failure of implementing the curriculum is caused by a lack of knowledge, skills, and the ability of teachers to understand the tasks that must be carried out. Therefore, it cannot be denied that the teacher factor is one of the determinants of the successful curriculum implementation which leads to the success of improving the quality of education or learning in the school.

Teachers in carrying out their profession are expected to have competence. According to Majid (2011: 5), teacher competence is a set of intelligent actions full of responsibility that must be possessed by a teacher as a condition to be considered capable of carrying out tasks in this field of work. The competencies that must be possessed by a teacher are pedagogical competence, professional competence, personal competence, and social competence.

Pedagogic competence is the ability to manage student learning which includes understanding of students, designing and implementing learning, learning outcomes evaluation and developing students to actualize their various potentials (SNP, Explanation of article 28 paragraph 3 point a). Professional competence is the ability to master learning materials broadly and deeply which enables them to guide students to meet the competency standards set out in the National Education Standards (SNP, explanation of Article 28 paragraph 3 point c). Personal competence is the ability of a personality that is stable, mature, wise, and dignified, becomes a role model for students, and has a noble character (SNP, explanation of article 28 paragraph 3 point b). Social competence is the ability of teachers as part of the community to communicate and interact effectively with students, fellow educators, educational staff, parents /guardians of students, and the surrounding community (SNP, Explanation of article 28 paragraph 3 point d).

Based on teacher competence description above, it can be seen that the teaching profession carries out complex tasks. Thus, higher education institutions that are engaged in producing educational personnel need to implement various strategies in order to prepare prospective teachers to be ready to compete and carry out educational missions, especially efforts that directly touch their future professions. These efforts can be applied through course management. One of them is the Teaching Theory and Practice Course which emphasizes the formation of basic teaching skills for prospective teacher students.

Basic teaching skills are one of the general characteristics of a person related to knowledge and skills that are manifested through actions. This basic teaching skill is important for every student who is a prospective teacher, because in the future the teaching profession that will be carried out requires their skills in teaching and teach their students. If they are not ready for these demands, of course they will be eliminated from the competition in the world of work.

The results of observations of classroom management during lectures indicate that the observed V semester students were still ashamed to present in front of the class. Classroom management lectures are used as the base for initial reflection because primarily appeared in the fifth semester which as prerequisites for teacher theory and practice lectures, the emphasis is on the practice of basic teaching skills, which appear in semester VI.

Besides being ashamed to appear in front of the class, students are also less enthusiastic in learning activities that do strived so that students obtain a model - a model of classroom management that can be used as provision in next lecture, which is theory and practice of education subject. In addition, the diversity of student characteristics in the class is also become a determining factor for the success of the learning activities..

One of the efforts made to optimize student potential exploration related to basic teaching skills is through peer teaching simulation based on experimental learning. Simulation can be interpreted as a way of presenting learning experiences by using mock situations to understand concepts, principles, or certain skills. Simulation can be used as a teaching method with the assumption that not all learning processes can be carried out directly on the actual object. For example, in Teaching Theory and Practice lecture, it does not allow the real situation to be brought to class, namely presenting real students in the lecture process. Therefore, it is necessary to conduct peer teaching simulation, in which students who practice basic teaching skills act as teachers, while other students take role as students and act as students. Each student takes turns doing a simulation. Such simulations are called peer teaching simulations, because students pretend to be a teacher who is facing a real classroom situation and students.

David Kolb (1984) defines that learning is a process of creating change through experience. The process of experiential learning that prioritizes experience is certainly not free from the good initial schemes of students. In their research, Ismail and Muis (2019) found that the effectiveness of experimental learning models not only attracts students 'interest in learning but can also improve students' critical thinking skills. Supriani and Sholahudin (2019) also found that there was model of experimental learning effectiveness in improving the ability to formulate conjectures, which answered an assumption with the learning experience they had..

Based on the background description, there was an interest in compiling a study entitled Improving Basic Teaching Skill Quality Through Peer Teaching Simulation Which Based On Experiential Learning for fifth semester students of the Mathematics Education Program of the Serang Raya University for the academic year 2020/2021.

Based on the background description, the problems formulated in this study is how the improvement of basic teaching skills the fifth semester students in Serang Raya University Mathematics Education Program academic year of 2020/2021 after the implementation of peer teaching simulation based on experimental learning?

In accordance to the problem formulation, the objective in this reasearch is to improve the basic teaching skills the fifth semester students in Serang Raya University Mathematics Education Program academic year of 2020/2021 after the implementation of peer teaching simulation based on experimental learning.

There are two benefits in this research, namely theoretical benefits and practical benefits. Theoretically, the results of this study are expected to add references related to efforts to improve basic teaching skills. In addition, the results of this study are expected to enrich the theoretical knowledge associated with peer teaching simulations and experimental learning in improving basic teaching skills.

In practical terms, the results of this research are expected to be of benefit to the following parties. For Students and Prospective Teachers, the results of this reasearch are expected to provide direct experience to prospective teacher students in managing learning activities, so that their basic teaching skills are more proficient and optimal. For lecturers, the results of this research are expected to be applied in similar lectures, especially in courses that emphasize skills so that lecture activities can take place optimally and the potential of students can be maximized

## II. Research Methods

There are two types of data collected in this research, namely (1) improvement of basic teaching skills after applying peer teaching simulation based on experimental learning and (2) constraints faced by students when conducting peer teaching simulations based on experimental learning. Based on this data, it is possible to know the proper way to collect this data. The data collection method used was a test.

The appropriate test used to measure the basic teaching skills possessed by students is the performance test / performance test or often referred to as practical tests or performance tests. In this research, practical tests / performance tests were used to collect data related to the first problem, namely the improvement of basic teaching skills of fifth semester students of the Mathematics Education Study Program. Through this performance test, it can be seen the basic teaching skills of the 6th semester students being observed.

The data analysis used in this research is a combination of quantitative descriptive data analysis and qualitative descriptive analysis. Quantitative descriptive is used to analyze data on the improvement of basic teaching skills, which are then interpreted qualitatively descriptive.

The classical average value is obtained by the following formula:

$$M = \frac{\sum X}{n}$$

Information:

M = class average value

$\sum X$  = total students' score

n = the number of students

(Sudijono, 2006: 81)

Besides analyzing by using the formula quantitatively, the results are also presented in a verbal narrative which is used as the basis for concluding.

This research is said to be successful if at least 75% of students score in the good category with an index of 3.0 according to the following table:

**Table 1.** Score of Analyzing

SCORE	ALPHABET	INDEX
80,00 - 100,00	A	4,00
70,00 - 79,00	B	3,00
60,00 - 69,00	C	2,00
50,00 - 59,00	D	1,00
40,00 - 49,00	E	1,00

### III. Discussion

The results of the evaluation of students' basic teaching skills after applying peer teaching simulation with experimental learning are as follows:

**Table 2.** The Results of Evaluation of Students' Basic Teaching Skills

NO	SCORE INTERVAL ( KATEGORI )	FREQUENCY	
		CYCLE I	CYCLE II
1	80 - 100 ( A )	3	3
2	70 - 79 ( B )	24	26
3	60 - 69 ( C )	4	2
4	50 - 59 ( D )	0	0
5	40 - 49 ( E )	0	0
	Total	31	31
	Total Score	2275	2324
	Score Average	73,42	74,97
	Success Percentage	87,10 %	93,55 %

Based on these results, it can be seen that the implementation of cycle I has been successful, but it is still continued in cycle II to prove that the success is due to the application of peer teaching simulation based on experimental learning, not due to other factors. From the results of this evaluation, it can be seen that there has been an increase in basic teaching skills in fifth semester students of the 2020/2021 academic year after the implementation of peer teaching simulation based on experimental learning.

This success happened because of several things as follows. First, peer teaching simulation can provide opportunities for students to observe other colleagues who are practicing teaching. Students who observe get new experiences from other students whom practice it, then compare them with the previous knowledge they have.

*Second, peer teaching simulation with experimental learning can help students to gain very useful experiences regarding learning techniques and methods in the classroom. Students are likely to be weak in the use of student teaching methods or techniques, then by observing other friends who practice, the student will gain additional knowledge regarding the application of methods or techniques in teaching students.*

*Third, peer teaching simulation using experimental learning techniques can provide motivation in teaching activities. Students can be motivated from activities carried out by other students. Through rotating practical activities, each student has the opportunity to be an observer and a model in front of the class. This direct experience is very meaningful in forming the students' skills.*

Fourth, peer teaching simulation with experimental learning can create an atmosphere of fairness in discussing the problems at hand. This happens because problems that arise can be observed together so that solutions to these problems can be sought together through discussions after lecture activities are carried out. This peer teaching simulation with experimental learning is felt to be more useful because it has been well planned with the cooperative principle between students.

Based on those several factors, the application of peer teaching simulation with experimental learning can improve basic teaching skills for fifth semester students of the Mathematics Education Program of Serang Raya Universiti in the academic year 2020/2021.

The hallmark of Honey and Mumford's presentation about the style of each stage in the environment or the four stages is related to the rotation of the flow diagram.

- a *Having an Experience stage 1, and activist (style 1): "here and now", gregarious, looking for challenges and hands-on experience, open hearted, bored with implementation.*
- b *Reviewing the Experience stage 2 and Reflectors (style 2): "stepping back", collecting data, pondering and analyzing, delay in reaching conclusions, listening before speaking, thoughtful*
- c *Concluding from the Experience stage 3 and Theorists (style 3): think logically in terms of through different steps change the facts into clear theories, reason goals, and reject subjectivity and frivolity.*
- d *Planning the next steps stage 4 and Pragmatists (style 4): looking for and trying new ideas, practical, down-to-earth, enjoying quick problem solving and fast decision making, bored with long discussions.*

Basic teaching skills are general characteristic of someone related to knowledge and skills that are manifested through action (Juliantari, 2013: 30). Basic teaching skills are basic and specific forms of behavior that a teacher must have as initial capital to carry out his learning tasks in a planned and professional manner.

The indicators of basic teaching skills can be illustrated through nine teaching skills, namely opening lessons skills, questioning skills, reinforcing skills, variation skills, explaining skills, small group guiding skills, classroom management skills, individual learning skills, and closing lessons skills.

Activities to open lessons are activities carried out to start learning. Opening lessons is an effort or activity carried out by the teacher in learning activities to create pre-conditions for students so that mental or student attention is focused on what they are going to learn. Therefore, these efforts will have a positive effect on learning activities.

In learning activities, asking plays an important role because well-structured questions and the technique of asking the right questions will have a positive impact on student activity and creativity, namely as follows: (a) Increase student participation in learning activities, (b) Generating interest and students' curiosity about a problem that is being discussed, (c) Developing students' thinking pattern and active learning from because thinking itself is actually asking. (d) Guiding students 'thought processes because good questions will help students determine good answers, and (e) focus students' attention on the problem being discussed.

Psychologically, individuals need appreciation for all the efforts they have done, especially if the work is considered good, successful, and effective. A good teacher must always provide reinforcement, both in the form of verbal reinforcement (expressed in direct words, such as one hundred, excellent, good, smart, yes, correct, precise, and the like) or nonverbal (usually done by gesturing, touching / strokes, approaches, and so on) which are part of the modification of the teacher's behavior towards students' behavior that aims to provide information or feedback to students for good deeds as an act of encouragement so that the action is repeated.

Students are unique individuals, heterogeneous, and have different interests. There are students who have an auditive tendency, which is like listening, visual, which is like seeing, and a kinesthetic tendency, which is happy to do. Therefore, teachers must have the ability to make variations in learning activities such as the use of multi-source, multi-media, multi-method, multi-strategic, and multi-model. Let the learning be done classically, but the touch must be individual. This means that teachers need to use lectures for auditive students, teachers need to use media and teaching aids for visual students, and teachers need to hold discussions, experiments, demonstrations, and practices for kinesthetic students. When the teacher has touched each student's interest, the results obtained will approach the actual assessment.

Explaining skills in learning present information orally which is organized systematically to show a relationship with one another, for example cause and effect. A well-planned delivery of information presented in a suitable order is the main feature of explaining activities. Giving explanations is a very important aspect of teacher activities in their interactions with students in the classroom.

Guiding small group discussions skill is one way that can be done to facilitate the learning system needed by students as a group. Therefore, teachers' skills must be trained and developed, so that teachers have the ability to serve students in small group learning activities.

Classroom management is the teacher's skill to create and maintain optimal learning conditions and restore them if there is disruptions in the learning process, such as stopping student behavior that shifts class attention, rewarding students on time in completing assignments or establishing productive group norms.

Individual learning is the most humane learning to meet the needs and intersections of students, although for the conditions of education in Indonesia, this is very rarely done. However, in essence the teacher can do it even though the learning is done classically, but the touch remains individual.

Closing lessons is an activity carried out by the teacher to end learning activities. This activity is intended to provide a comprehensive picture of what students have learned. Knowing the level of student achievement and the level of success of the teacher in the learning process. The component of closing the lesson is reviewing the assignment of the subject matter by summarizing or concluding the learning outcomes and evaluating, among others, by demonstrating skills, applying new ideas to other situations, exploring students' own opinions and providing written questions.

Therefore, simulation is very relevant to use as a teaching method with the assumption that not all learning processes can be carried out directly on the actual object in accordance with Yamin's opinion (2009: 149). Rehearsal is one example of a simulation, which is to demonstrate the process of a certain ceremony as an exercise for the actual ceremony so that it doesn't fail in time. Likewise, to develop an understanding and appreciation of an event, the use of simulation will be very useful. The simulation method aims to: (1) Train certain skills both professionally and for everyday life, (2) Obtain an understanding of a concept or principle, (3) practice problem solving, (4) Increase learning activeness, (5) Provide learning motivation to students, (6) Train students to collaborate in group situations, (7) Foster students' creativity, and (8) Train students to develop tolerance. Thus, it is considered natural that the application of peer teaching simulation with experimental learning is able to optimize student skills in class management or improve basic teaching skills.



Based on the description of the above discussion, it can be concluded that the application of peer teaching simulation with experiential learning can improve basic teaching skills for fifth semester students of the Mathematics Education Program of Serang Raya University for the academic year 2020/2021 from the percentage of success in cycle I of 87.10% to 93, 55 % in cycle II.

#### IV. Conclusion

Overall, object who received peer teaching simulation which based on experiential learning have better achievement and improvement at basic teaching skill quality. It was identified that the indicators of the related variables for the experiential learning group increased higher than the expository group. The increase was due to the use of experiential learning model, by which object directly experienced the material related basic teaching abilities. Therefore, they can represent ideas from the material contained in various media as learning resources

#### References

- Juliantari, N. K. (2013). Modul Teori dan Praktik Keguruan. Amlapura: STKIP Agama Hindu.
- Kolb David. (1984). Experiential Learning, Experiential as the Source of Learning and development. New York. International Inc Publishing.
- Martono, T., et.al. (2020). The Effectiveness of High School Affirmations (ADEM) Repatriation: Empirical Evidence from Central Java and Special Region of Yogyakarta, Indonesia. Budapest International Research and Critics in Linguistics and Education (BirLE) Journal Vol 3 (4): 1841-1847.
- Musdiani, Mardhatillah, and Khauser. (2019). Analysis the Role of Headmaster in Applying Quality of Education in Primary School Districts, Aceh Barat. Budapest International Research and Critics in Linguistics and Education (BirLE) Journal Vol 2 (3): 27-35.
- Sari, D.N. (2021). Implementation of Educative Learning Media Counting Tree to Improve Student's Cognitive Abilities in Kartika Tanjung Morawa Kindergarten. Britain International of Linguistics, Arts and Education (BIoLAE) Journal Vol. 3 (1): 22-28.
- Sudijono. (2006). Statistika pendidikan. Jakarta: PT Rajaa Grafindo Persada.
- Tim Penyusun. (2003). Undang - undang RI Nomor 20 Tahun 2003 tentang Standar Nasional Pendidikan. Jakarta: Depdiknas
- Yamin, M. (2009). Profesionalisme Guru dan Implementasi KTSP. Jakarta: Gaung Persada Press.