Improving Student Learning Quality Through Jigsaw Cooperative Learning Methods in Communication Theory Courses

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Abstract: Action research is a classroom research that uses a cycle of planning, action, observation, and reflection. The main problem addressed in this study is the low creativity of students in class discussion in the application of Student Centered Learning in the Communication Theory course. Generally, this research aims to improve student learning in the Communication Science Study Program of the Faculty of Social and Political Science of Universitas Andalas using a Jigsaw Cooperative Learning model. Action Research was carried out in two ways with discussion material that had been prepared before the class and with students prepared discussion material for presentation in front of the class to be listened to by other students, which provides creativity space for them to conduct class presentations. The data collection tool used consisted of course materials (Papers and Power points), evaluations (tests and non-tests), and observations. The subjects studied were all second-semester students (2017/2018 academic year) of Communication Science Study Program who took Communication Theory courses. The results showed that using the Jigsaw model learning approach student learning outcomes each cycle resulted in a significant change. Before implementing the Jigsaw model almost all of the students were assessed as not good enough but in the process of discussing the presentations the student performance improved. From observations, students were able to show their creativity in discussions in front of the class. The discussion group consisted of 5 students who divided one topic between them. The implementation of the Jigsaw model learning approach could ultimately improve student learning outcomes in the presentation of lecture material every week. Students could apply effective communication skills to speak in the class and express their opinions and thoughts on the materials of the week in the Communication Theory course.

1 INTRODUCTION

The duties of lecturers set out in the *Tri Dharma Perguruan Tinggi*, include teaching and learning and require use of good and effective learning methods. The lecturer should act as a facilitator creating a situation that allows students to learn and as a learning manager in charge of creating learning activities that allow students to achieve optimal learning goals. The problems and experiences that the authors still face as a lecturer in Communication Science in Universitas Andalas are with the second-semester students. When the authors taught several times and delivered a course review every week, all students who took this course tended avoid asking questions or even discussing them. It led to a passive class atmosphere.

It also seemed that students were not confident and ashamed if they answered questions. Students also felt afraid to ask questions which eventually led them to becoming the focus of jokes by other students in the class.

Communication is a central human activity. In our daily lives we are never separated from communication activities. Watzlawick has said that humans need communication (Watzlawick, Weakland, and Fisch, 1974). Thus, learning and understanding communication theory will help students see things related to the activities in their surroundings. Therefore, to achieve the teaching objectives of the communication theory course, it is not appropriate if learning is only carried out with a lecture method which is unlikely to provide direct experience to students.

Communication theory courses are the subjects that should emphasise the use of communication. In fact, since almost all classroom activities are part of the communication process, it was decided, based on

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the results of discussions with teammates for this course, it is necessary to undertake action research to improve learning outcomes, generate student creativity and ideas that are fun for students, through use of Jigsaw cooperative learning. This would also build personal and group responsibility and change the learning method used by lecturers. The lecturer would not be the only source of learning (teacher centered) but peers could also become a source of knowledge. Because of these factors, the author designed and conducted this research with the title of Improving Student Learning Quality Through Jigsaw Cooperative Learning Methods in Communication Theory Courses.

2 METHOD

2.1 Jigsaw Method

Jigsaw method is a type of cooperative learning that encourages students to be active and help each other in mastering lecture material and gain understanding (Evcim and İpek, 2013; Hong et.al, 2012). Aronson first developed the jigsaw method. In this study students were put into small groups consisting of 4-6 people. Each group was given information that addressed one of the topics of the course.

In the implementation of jigsaw cooperative learning, students work in two different groups, in their own groups and in expert groups. A group of students that has the same information is known as the expert group. In this group, each student discusses and looks for the best way to explain that part of the information to their original group members. Then all students in this expert group returned to their original group, and each of them explains the information to their group friends.

2.2 The Basics of the Jigsaw Method

The Jigsaw method, as well as other group learning processes, is an effective way to vary the atmosphere of class discussion. Assuming that discussion requires arrangements to control the class as a whole, and the procedures used in the cooperative phase can give students more time to think, respond and help each other.

2.3 Elements of the Jigsaw Method

Jigsaw learning is more than learning in groups. Basic elements of learning that are carried out include (1) "Make it easy for students to learn using something "useful" such as facts, skills, values, concepts, and how to live in harmony with each other" (2) Knowledge, values and skills are recognized by those who are competent in assessing (Garcia et.al, 2017; Tewksbury, 1995; The Foundation Coalition, 2001). According to Anita Lie, the Jigsaw method, along with other group-based learning, contains interrelated elements, including:

1. Positive Interdependence.

It does not mean that students depend entirely on other students. If students rely on others without giving or being depended on by others it cannot be called positive interdependence. Johnson at the University of Minnesota, Shlomo Sharan (Sharan, 1999) at Tel Aviv University, and Robert E. Slavin (Slavin, 1980) at John Hopkins, have become researchers and practitioners who develop Cooperative Learning as a learning model that can improve student achievement while honing student interpersonal intelligence and create an atmosphere that encourages students to feel a mutual need. This feeling is called positive interdependence. This interdependence can be achieved through the use of goals, tasks, materials or learning resources, roles, and gifts.

2. Individual Accountability.

The jigsaw model requires individual accountability as it involves measuring the understanding of each group member and is gives feedback about the learning achievements of the members, so they know which partners who need help. Unlike in traditional groups where individual accountability is often overlooked so that a few members may do most of the tasks, in the jigsaw model students are responsible for the tasks carried out by each member.

3. Face to Face Interaction.

Cooperative interaction requires all members of the learning group to be face-to-face so that they can dialogue not only with lecturers but also with peers. Students often find it easier to learn from peers than from lecturers.

4. Social Skill.

This element requires students to be provided by a variety of social skills, such as leadership, decisions making, trust building, management communication, and conflict skills. Other social skills such as tolerance, politeness to peer, criticizing the ideas, daring to maintain a logical mindset, not dominating others, being

independent, and various other qualities that are useful in establishing interpersonal relationships are not only assumed but intentionally taught.

5. Group Processing.

This process occurs when each group member evaluates the extent to which they interacted effectively to achieve a common goal. The group needs to discuss the behavior of cooperative and uncooperative members and decide which behavioral decisions must be changed or maintained. This encourages the creation of a learning community where learning outcomes are obtained from the results of collaboration with other people in the form of sharing of individuals, between groups and between those who know and do not know.

3 RESULT AND DISCUSSION

The classroom action research was carried out by the Communication Science Study Program of Universitas Andalas to second-semester students every week from February to the end of May in 2 cycles. Each cycle was 2 x 60 minutes (1 x Meeting). During the implementation of the research the researcher was assisted by a peer observer from the Communication Science Study Program who observed the learning process, and assisted in collecting data. This research was a classroom action research with an emphasis on improving the quality of learning processes and practices and focuses on the use of Jigsaw Cooperative learning method as a way to develop students' abilities or improve their ability to think about Communication Theory.

Two cycles as described in the model adapted from Slavin (1995) were used. Each cycle in this study consisted of four components of primary activities: (a) planning; (b) acting; (c) observing (d) reflecting. The four components of these main activities operate continuously with some modifications in the planning component. The planned actions in each cycle consists of the following:

3.1 Planning

The researcher and colleague who form one team in the Communication Theory course discussed the material, learning activities and evaluation tools and prepared teaching aids/ instruments and observation guidelines.

3.2 Action Implementation.

In implementation, researcher's action steps according to the lesson plan as follows:

- Initial activities: Apperception, explanation of learning objectives and provision of material.
- Core activities: Class presentations, group division, Implementation of Jigsaw Cooperative Learning: weekly course material for selected students and their team who came to in front of the class. The implementation of observation assessment, Class presentations from the results of student discussion, both concluding and equating perceptions continued with evaluation.
- Final activities: Giving rewards, reaffirming the main/important matters, improvement/enrichment, and closing.

3.3 Observation

Observation was done during the activities in the class. Observations include both student and lecturer activities and used observation sheets. The researcher and colleague in the team observed the impact of the implementation, whether it went according to plan and what obstacles were faced by students. Data collection techniques during learning activities involved observing, documenting, and active learning discussion practices.

Observation is carried out using an instrument of affective and psychomotor performance, to measure the indicators of work, efficiency, and involvement of students in the learning process.

Active learning discussions were encouraged by explaining about how students must be able to speak and be active in front of the class in material discussion groups. Assessment was given on student activity and interest level of material and presentation slides. This was done to measure the ability and skills of students in understanding the communication theory material.

The material for each presentation was taken from the material contained in the semester learning plan (RPS). Assessment was performed to identify students' abilities before being given Jigsaw tasks and at the same time to determine the level of each student to form cooperative groups.

Table 1: Learning Acquisition from The First Cycle.

Cycle / Assessment area	Grades		Cognitive	Affective		Psychomotor		
I.Theory of Paradigm	80	60	50	7	47	10	46	11
Number of Students	57		57	57		57		

From the data obtained it was seen that the implementation of learning in each cycle varied greatly, especially in the shortcomings/weaknesses. In the first cycle, only 20 students of the 57 showed ability to work intelligently and creatively in conducting interesting class discussions. The rest of the students (37 students) were passive in class discussions, as indicated by the cognitive, affective, to psychomotor assessments. It was considered necessary to improve in the second cycle both the lecturer directives, and the students' understanding of the topic, provide motivation, guide the discussion and improve understanding of the material as all these were evident weaknesses in this cycle.

Table 2: Acquisition of The First Cycle.

Cycle / Assessments	Grades		Cognitive	Affective		Psychomotor		
I. Theory of Paradigm	80	60	50	7	47	10	46	11
Total of Student	57		57	57		57		

In the second cycle, achievement of the class showed a very significant improvement in the cognitive evaluation and observations of affective and psychomotor student behavior. The average achievement increased from 80 to 85 and 60 to 68. (in cycles 1 and II) meaning that students had mastered the subject matter and had fulfilled the achievements of the works.

Table 3: Learning Acquisition in The Second Cycle

Cycle / Assessments	Grades		Cognitive			Affective	Psychomotoric	
I. Theory of Paradigm	80	60	50	7	47	10	46	11
II. Theoretical Tradition	85	68	54	3	50	17	47	10
Total of Student	57		57		57		57	

From the assessment of each cycle, we can conclude that there was an improvement compared to the previous cycle, both in learning achievement measured through tests and observations during the activity. The improvement between the initial condition and first cycle especially on the average grade the observation results was under 50% (effective 47% and psychomotor 46%). Cooperative learning is a new method; students were not used to implementing it because they only had experience with traditional methods so they lacked to answer or give opinions.

The development between first and second cycles was encouraging both in the evaluation and from the observations. The average achievement grade result was 100% while the result of the average observation of student who was not passive was 60%, with cognitive factors 7%, affective factor 10%, psychomotor 11%. The low grade of some students is due to the lack of courage of students to express their opinions, while the improvements of observation result have proved the lecturers were mastering the classroom situation. In the second cycle, this is shown in teaching and learning activities.

The table, clearly shows that each cycle resulted in very significant changes and developments so that it can be said that the indicators in the improvement of learning have been reached. The application of cooperative learning improved the learning outcomes of the second-semester students of Communication Science Study Program Universitas Andalas; Academic Year 2017 / 2018. The following conclusions can be drawn:

1. The Jigsaw cooperative learning approach could stimulate students' creative thinking in solving problems they faced. Students could remember all forms of behavior, so that learning outcomes were improved.
2. The role of lecturers in the learning of communication theory courses using the Jigsaw cooperative learning approach is as a facilitator and learning resource that can guide students and

direct them to find solutions related to the problems they face.

3. Confidence and creative thinking skills are the necessary needs for students to use the Jigsaw cooperative learning approach more successfully.
4. Problems in learning by using the Jigsaw cooperative learning approach can be overcome jointly between students and lecturers until the most appropriate solution is finally found.
5. The results showed that by using the Jigsaw cooperative learning approach, student learning outcomes in each cycle experienced a significant improvement. The learning outcomes of the second-semester students of Communication Science, degree of understanding of the discussion material about the Paradigm of Communication Theory and the Theoretical Tradition as indicated by grades 80 and 60. Students who scored 80, cognitive average 54 % an increase from 50%, while affective scores rose from 47% to 50%, and psychomotor aspects from 46% to 47%. Meanwhile, students who scored 60 had an average increase that varied in both cycles. Cognitive factors decreased from 7% to 3%. Affective factors rose from 10% to 17%, and psychomotor aspects decreased from 11% to 10%.
6. The application of cooperative learning approach with the Jigsaw model ultimately improved the learning outcomes of the second-semester students of Communication Science Study Program, Faculty Social Political Science at Universitas Andalas.

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