

ABSTRAK

PURBA DIAMANSON PURBA. Penerapan Pembelajaran Kooperatif Tipe *Jigsaw* Dengan Pendekatan *Open Ended Problem* Sebagai Upaya Meningkatkan Kemampuan Pemecahan Masalah Dan Kemampuan Koneksi Matematika Siswa SMA. Tesis. Medan: Program Pascasarjana Universitas Negeri Medan, 2017.

Tujuan dari penelitian ini untuk mengetahui: (1) mengetahui peningkatan kemampuan pemecahan masalah matematika siswa yang diajar melalui penerapan pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem*, (2) mengetahui peningkatan kemampuan koneksi matematika siswa yang diajar melalui penerapan pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem*, (3) mendeskripsikan kadar aktivitas aktif siswa selama pembelajaran melalui penerapan pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem*, (4) mengetahui respon siswa terhadap pembelajaran melalui penerapan pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem*, (5) mengetahui kemampuan guru dalam mengelola pembelajaran selama pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem* berlangsung dan (6) mengetahui proses jawaban yang dibuat siswa dalam menyelesaikan soal-soal melalui penerapan pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem*.

Penelitian ini merupakan penelitian tindakan kelas. Subjek dalam penelitian ini adalah siswa kelas X₇ SMA Swasta GKPS 1 Pamatang Raya Tahun Ajaran 2016/2017 dengan jumlah siswa keseluruhan adalah 30 orang dengan objek penelitian adalah penerapan pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem* sebagai upaya meningkatkan kemampuan pemecahan masalah dan koneksi matematika siswa. Instrumen yang digunakan terdiri dari : (1) tes kemampuan pemecahan masalah matematika, (2) tes kemampuan koneksi matematika dan (3) Rencana Pelaksanaan Pembelajaran (RPP), (4) Lembar Aktivitas Siswa (LAS), (5) lembar observasi. Seluruh instrumen yang digunakan telah divalidasi oleh pakar dan diujicobakan di lapangan, hasilnya disimpulkan bahwa : (1) seluruh butir tes adalah valid dan memiliki tingkat reliabilitas dengan kategori baik, (2) RPP, Lembar Aktivitas Siswa (LAS), lembar observasi telah divalidasi oleh pakar dan dinyatakan layak digunakan dalam penelitian.

Penelitian terdiri dari dua siklus dan tes diberikan pada setiap akhir siklus. Hasil tindakan siklus I dan II : (1) Hasil tes kemampuan pemecahan masalah matematika siklus I sebesar 60,00% siswa memiliki tingkat kemampuan minimal sedang, pada siklus II sebesar 90,00%. Artinya ada peningkatan kemampuan pemecahan masalah matematika siswa dari siklus I ke siklus II yaitu sebesar 30,00%; (2) Hasil tes kemampuan koneksi matematika siswa siklus I sebesar 66,67% siswa memiliki tingkat kemampuan minimal sedang, pada siklus II sebesar 93,33%. Artinya ada peningkatan kemampuan koneksi matematika siswa dari siklus I ke siklus II yaitu sebesar 26,66%; (3) Respon siswa terhadap model pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem* pada siklus I adalah 93,33% dan II adalah 95,12% termasuk dalam kategori respon positif. (4). Kemampuan guru dalam mengelola pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem* berada pada kategori baik.

Kesimpulan penelitian ini adalah bahwa dengan penerapan pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem* dapat meningkatkan kemampuan pemecahan masalah matematika dan kemampuan koneksi matematika siswa. Selain itu, pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem* dapat meningkatkan aktifitas aktif dan respon siswa dalam pembelajaran. Dengan demikian yang menjadi saran selanjutnya : (1) kepada lembaga terkait dapat mensosialisasikan model pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem* dalam meningkatkan kemampuan pemecahan masalah dan koneksi matematika siswa, (2) kepada guru dapat menggunakan model pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem* pada pembelajaran matematika sebagai salah satu alternatif untuk menerapkan pembelajaran matematika yang inovatif, (3) kepada peneliti lain dapat melanjutkan penelitian pada pokok bahasan dan kemampuan matematik yang lain dengan menggunakan model pembelajaran kooperatif tipe *jigsaw* dengan pendekatan *open ended problem*.

Kata Kunci : Model Pembelajaran Kooperatif Tipe *Jigsaw* dengan Pendekatan *Open Ended Problem*, Pemecahan Masalah Matematika dan Koneksi Matematika

ABSTRACT

PURBA DIAMANSONPURBA. Application of Cooperative Learning Jigsaw Type With Open Ended Problem Approach For Efforts to Improve Problem Solving Ability And Mathematical Ability Connections High School Students. Thesis. Field: Mathematics Education Program Post-Graduate Studies, State University of Medan, in 2017.

The purpose of this study was to determine: (1) determine the improve in mathematical problem-solving ability of students who are taught through the application of cooperative learning jigsaw type with open ended problem approach, (2) determine the increase in mathematical connection sability of students who are taught through the application of cooperative learning jigsaw type with open ended problem approach, (3) describe the levels of active student activity during the learning through the implementation of cooperative learning jigsaw type with open ended problem approach, (4) evaluate the response of students to wards learning through the implementation of cooperative learning jigsaw type with open ended problem approach, (5) determine the ability of the teacher to manage learning for learning cooperative learning jigsaw type with open ended problem approach takes place and (6) knowing the answers that the students in solving problems through the application of cooperative learning jigsaw type with open ended problem approach.

This research is aclass act. Subjects in this study were grade studentsof SMA Swasta GKPS Pamatang Raya X7 academic year 2016/2017 the number of students over all are 30 people with the object of research is the application of cooperative learning jigsaw type with open ended problem approachas an effort to improve in mathematical problem-solving and mathematical connections ability of students. The instrument used consisted of: (1) test the ability of mathematical problem-solving, (2) test the ability of mathematical connections, and (3) the lesson plan, (4) the student activity sheet, (5) the observation sheet. The entire instrument used has been validated by experts and tested in the field, the results conclude that: (1) whole grains test is valid and has a good level of reliability with the category, (2) the lesson plan, student activity sheet and observation sheet has been validated by experts and declared fit for use in research.

The study consisted of two cycles and tests given at the end of each cycle. Results of cycle I and II: (1) The results of test the ability of mathematical problem-solving first cycle of 60.00 % of students have a minimum level of ability is, in the second cycle of 90.00 %. This means that there is an increase instudents' comprehension of mathematical problem-solving from the first cycle to the second cycleis equal to 30.00 %; (2) The results of students' mathematical connections ability test first cycle of 66.67% of students have a minimum level of abilityis, in the second cycle of 93.33%. This means that there isan increase in mathematical connections ability of students from the first cycle to the second cycleis equal to 26,66%; (3) The response of students to application of cooperative learning jigsaw type with open ended problem approach in cycle I is 93.33% and II is 95,12 % are included in the category of positive response. (4). The ability of teachers to manage cooperative learning jigsaw type with open ended problem approach are in good category.

The conclusion of this study is that the implementation ofcooperative learning jigsaw type with open ended problem approach can improve the mathematical problem solving ability and mathematical connections ability of students. In addition, cooperative learning jigsaw type with open ended problem approach can improve the activity and response of the students in active learning. Thus the next suggestions: (1) to the relevant institutions can socialize with the cooperative learning jigsaw type with open ended problem approach to improve the mathematical problem solving ability and mathematical connections ability of students, (2) the teacher can use a cooperative learning jigsaw type with open ended problem approach to learning mathematics as an alternative for implementing innovative math learning, (3) to other researchers can continue research on the subject and the ability of others to use the mathematical model of the cooperative learning jigsaw type with open ended problem approach.

Keywords: Cooperative Learning Jigsaw Type With Open Ended Problem Approach, Mathematical Problem Solving And Mathematical Connections.