ABSTRAK

RAUDATUL HUSNA, (2013). Peningkatan kemampuan pemecahan masalah dan komunikasi matematik melalui Pendekatan Matematika Realistik pada siswa SMP kelas VII Langsa. Tesis Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2013.

Kata Kunci: pendekatan matematika realistik, Kemampuan pemecahan masalah matematik dan kemampuan komunikasi matematik.

Tujuan dari penelitian ini untuk menelaah: (1) peningkatan kemampuan pemecahan masalah matematik siswa yang menggunakan Pendekatan Matematika Realistik (PMR) dan pembelajarannya menggunakan pembelajaran konvensional, (2) interaksi antara pendekatan pembelajaran dengan kemampuan awal matematika siswa terhadap peningkatan kemampuan pemecahan masalah matematik siswa, (3) peningkatan kemampuan komunikasi matematik siswa yang menggunakan Pendekatan Matematika Realistik (PMR) dan pembelajarannya menggunakan pembelajaran konvensional, (4) interaksi antara pendekatan pembelajaran dengan kemampuan awal matematika siswa terhadap peningkatan kemampuan komunikasi matematik siswa, (5) proses penyelesaian masalah yang dibuat siswa dalam menyelesaikan masalah mengenai kemampuan pemecahan masalah dan komunikasi matematik siswa pada Pendekatan Matematika Realistik (PMR) dan pembelajaran konvensional. Penelitian ini dilaksanakan di SMPN 1 Langsa sebanyak 40 siswa dan SMPN 9 Langsa sebanyak 40 siswa yang keseluruhan sebanyak 80 siswa SMP. Penelitian ini merupakan suatu studi eksperimen dengan desain penelitian *pre-test-post-test control group design*. Populasi dalam penelitian ini adalah seluruh siswa kelas VII (tujuh) dengan mengambil sampel dua kelas (kelas eksperimen dan kelas kontrol) melalui teknik random sampling. Instrumen yang digunakan terdiri dari: tes kemampuan pemecahan masalah matematik dan tes kemampuan komunikasi matematik. Instrumen tersebut dinyatakan telah memenuhi syarat validitas isi, serta koefisien reliabilitas. Data dianalisis dengan uji ANAVA dua jalur. Sebelum digunakan uji ANAVA dua jalur terlebih dahulu dilakukan uji homogenitas dalam penelitian dan normalitas dalam penelitian ini dengan taraf signifikan 5%. Berdasarkan hasil analisis tersebut diperoleh hasil penelitian yaitu: (1) peningkatan kemampuan pemecahan masalah matematik siswa yang memperoleh pendekatan matematika realistic lebih tinggi daripada siswa yang memperoleh pembelajaran konversional, (2) tidak terdapat interaksi antara pembelajaran dengan kemampuan awal siswa terhadap peningkatan kemampuan pemecahan masalah, (3) peningkatan kemampuan komunikasi matematik siswa yang memperoleh pendekatan matematika realistik lebih tinggi daripada siswa yang memperoleh pembelajaran konversional, (4) tidak terdapat interaksi antara pembelajaran dengan kemampuan awal siswa terhadap peningkatan komunikasi matematik, (5) Proses penyelasaian masalah yang dibuat oleh siswa dalam menyelesaikan masalah pada Pendekatan (PMR) lebih bervariasi daripada Pendekatan Pembelajaran Konvensional. Temuan penelitian merekomendasikan PMR dijadikan salah satu pendekatan pembelajaran yang digunakan di sekolah utamanya untuk mencapai kompetensi variatif dan inovatif.

ABSTRACT

RAUDATUL HUSNA. Increasing the Ability of Problem Solving and Student's Communication Mathematic by Using Mathematical approach is Realistic (PMR) in Seventh Year Student Class Langsa. Post Graduate Program of Medan University 2013.

Key word: Mathematical approach is Realistic (PMR), the Ability of Problem Solving and Student's Communication Mathematic.

The aims of this research are: (1) to know the increasing ability of problem solving mathematic student's by using Mathematical approach is Realistic (PMR) is better than usual learning, (2) to know there was the interaction between learning and first mathematic ability toward the increasing ability of problem solving mathematic student's, (3) to know the increasing ability of student's communication mathematic by using Mathematical approach is Realistic (PMR) is better than usual learning, (4) to know there was the interaction between learning and first mathematic ability toward the increasing ability of student's communication mathematic, (5) to know how the answering process are made by the students in finishing the questions by using Mathematical approach is Realistic (PMR) and usual learning. This research was carried out at SMPN 1 Langsa as much as 40 students and SMPN 9 Langsa as much as 40 students overall as much as 80 students of JUNIOR HIGH SCHOOL, this research is a study of experiments with design research pre test – post test control group design. The population in this research is the student grade 1 (one) by taking a sample of the two classes (experiment class and control class) through a random sampling technique. The Data obtained through test THURS, tests the ability of mathematical problem solving, mathematical communication skills test. The Data were analyzed with the test of ANAVA two lines. Before use test of ANAVA two lines first test carried out much of its homogeneity in research and normality in this study with a significant level of 5%. The result of this research shown that (1) there was the increasing ability in problem solving mathematic student's by using Mathematical approach is Realistic (PMR) is better than using usual learning, (2) there were no interaction between learning and student's ability level to the increasing ability of problem solving mathematic student's, (3) there was the increasing ability in communicaton mathematic student's by using Mathematical approach is Realistic (PMR) is better than using usual learning, (4) there were no interaction between learning and student's ability level to the increasing ability of problem solving and student's communicaton mathematic, (5) the process of problem solving in student's answering questions by using learning based problem is better than usual learning. Research findings recommend PMR was made one of the learning approaches used in primary schools to conduct varied and innovative learning.