

ABSTRAK

Nurul Rachmawati Amanda (2023). **Peningkatan Kemampuan Komunikasi Matematis dan *Self-Confidence* melalui Model *Contextual Teaching and Learning* Berbantuan GeoGebra pada Siswa SMP.**

Kemampuan dasar matematika bisa dikelompokkan menjadi lima jenis, salah satu kemampuan yang perlu oleh siswa punya ialah kemampuan komunikasi matematis. Selain itu, kepercayaan diri yaitu sikap yang perlu siswa miliki supaya mampu menggapai hasil terbaik dalam pembelajaran matematika. Akan tetapi kenyataannya, kemampuan komunikasi matematis serta *self-confidence* siswa di Indonesia masih rendah. Alternatif pembelajaran yang bisa digunakan dalam meningkatkan kemampuan komunikasi matematis serta *self-confidence* salah satunya yaitu model *Contextual Teaching and Learning* (CTL) berbantuan GeoGebra. Tujuan penelitian ialah untuk mengetahui: 1) peningkatan kemampuan komunikasi matematis siswa yang memperoleh model CTL berbantuan GeoGebra lebih tinggi daripada siswa yang memperoleh model pembelajaran konvensional, 2) pencapaian *self-confidence* siswa yang memperoleh model CTL berbantuan GeoGebra lebih baik daripada siswa yang memperoleh model pembelajaran konvensional, 3) terdapat korelasi antara kemampuan komunikasi matematis dengan *self-confidence* siswa yang memperoleh model CTL berbantuan GeoGebra. Metode penelitian menggunakan *quasi experimental design* dengan *non-equivalent control group design*. Populasi penelitian yaitu siswa kelas VIII SMPN 2 Tanjungkerta Sumedang dengan sampel penelitian kelas VIII-C menjadi kelas eksperimen serta kelas VIII-A menjadi kelas kontrol. Instrumen penelitian menggunakan instrumen tes kemampuan komunikasi matematis berbentuk pertanyaan uraian serta instrumen non tes berupa angket *self-confidence*. Data yang terhimpun dihitung memakai *software SPSS 23 for windows*. Berlandaskan hasil penelitian, diperoleh kesimpulan: 1) peningkatan kemampuan komunikasi matematis siswa yang memperoleh model CTL berbantuan GeoGebra lebih tinggi daripada siswa yang memperoleh model pembelajaran konvensional, 2) pencapaian *self-confidence* siswa yang memperoleh model CTL berbantuan GeoGebra lebih baik daripada siswa yang memperoleh model pembelajaran konvensional, 3) tidak terdapat korelasi antara kemampuan komunikasi matematis dan *self-confidence* siswa yang memperoleh model CTL berbantuan GeoGebra.

Kata Kunci: Kemampuan Komunikasi Matematis, *Self-Confidence*, *Contextual Teaching and Learning*, GeoGebra

ABSTRACT

Nurul Rachmawati Amanda (2023). ***Improving Mathematical Communication Ability and Self-Confidence Through a Contextual Teaching and Learning Model Assisted by GeoGebra for Junior High School Students***

Basic math skills can be grouped into five types, one of the skills that students need to have are mathematical communication skills. In addition, self-confidence is an attitude that students need to have in order to achieve the best results in learning mathematics. However, in reality, the mathematical communication skills and self-confidence of students in Indonesia are still low. One of the learning alternatives that can be used to improve mathematical communication skills and self-confidence is the Contextual Teaching and Learning (CTL) model assisted by GeoGebra. The research objectives were to find out: 1) the improvement of mathematical communication skills of students who obtained the CTL model assisted by GeoGebra was higher than students who obtained the conventional learning model, 2) the achievement of self-confidence of students who obtained the CTL model assisted by GeoGebra was better than students who obtained the conventional learning model, 3) there was a correlation between mathematical communication skills and the self-confidence of students who obtained the CTL model assisted by GeoGebra. The research method used was a quasi-experimental design with a non-equivalent control group design. The research population was the VIII grade students of SMPN 2 Tanjungkerta Sumedang, with the research sample of class VIII-C being the experimental class and class VIII-A being the control class. The research instruments used were mathematical communication ability test instruments in the form of description questions and non-test instruments in the form of self-confidence questionnaires. The collected data were processed with the help of SPSS 23 for windows software. Based on the results of the study, the following conclusions were drawn: 1) the improvement of mathematical communication ability of students who obtained the CTL model assisted by GeoGebra was higher than students who obtained the conventional learning model, 2) the achievement of self-confidence of students who obtained the CTL model assisted by GeoGebra was better than students who obtained the conventional learning model, 3) there was no correlation between mathematical communication ability and self-confidence of students who obtained the CTL model assisted by GeoGebra.

Keywords: *Mathematical Communication Skills, Self-Confidence, Contextual Teaching and Learning, GeoGebra*

ABSTRAK

Nurul Rachmawati Amanda (2023). *Ngaronjatkeun Kamampuh Komunikasi Matématis Sareng Kapercayaan Diri Ngaliwatan Modél Contextual Teaching and Learning Nu Dirojong ku Géogébra ka Murid SMP*

Kamampuh dasar matematika tiasa dikelompokeun kana lima rupa, salah sahiji kamampuh murid anu kudu dipiboga, nyaéta kamampuh komunikasi matématika. Salian ti éta, kapercayaan diri mangrupa sikep murid anu kudu dipiboga pikeun ngahontal hasil anu pangsaéna dina diajar matématika. Nanging dinu kanyataanna, kamampuh komunikasi matématis sareng kapercayaan diri murid di Indonésia masih kagolong handap. Cara lain pangajaran nu bisa dipaké kanggo ningkatkeun kamampuh komunikasi matématis sareng kapercayaan diri téh salah sahijina nyaéta modél Contextual Teaching and Learning (CTL) nu dirojong ku Géogébra. Tujuan tina panalungtikan nyaéta pikeun nerangkeun: 1) ngaronjatna kamampuh komunikasi matématis murid anu narima modél CTL nu dirojong ku Géogébra langkung luhur tibatan murid anu narima modél pangajaran konvensional, 2) ngahontal kapercayaan diri murid anu narima modél CTL nu dirojong ku Géogébra langkung saé tibatan murid anu narima modél pangajaran konvensional, 3) aya korélasi antara kamampuh komunikasi matématis jeung rasa percaya diri murid anu narima modél CTL nu dirojong ku Géogébra. Méthode panalungtikan anu dipaké nyaéta kuasi ékspérimén kalawan equivalent control group design. Populasi dina ieu panalungtikan nyaéta murid kelas VIII SMPN 2 Tanjungkerta Sumedang kalawan sampel panalungtikan kelas VIII-C salaku kelas ékspérimén sareng kelas VIII-A salaku kelas kontrol. Instrumén panalungtikan anu dipaké nyaéta instrumén tés kamampuh komunikasi matématis mangrupa soal ésai sareng instrumén non-tés mangrupa angkét kapercayaan diri. Data anu tos kakumpul diolah kalawan bantuan software SPSS 23 for windows. Dumasar kana hasil panalungtikan, tiasa disimpulkeun: 1) ngaronjatna kamampuh komunikasi matématis murid anu narima modél CTL nu nu dirojong ku Géogébra langkung luhur tibatan murid anu narima modél pangajaran konvensional, 2) ngahontal kapercayaan diri murid anu narima modél CTL nu nu dirojong ku Géogébra langkung saé tibatan murid anu narima modél pangajaran konvensional, 3) teu aya korélasi antawis kamampuh komunikasi matématis sareng kapercayaan diri murid anu narima modél CTL nu nu dirojong ku Géogébra.

Kata Konci: Kamampuh komunikasi matématis, kapercayaan diri, Contextual Teaching and Learning, Géogébra