

ABSTRAK

Sri Wahyuni: Pengaruh Model *Connecting, Organizing, Reflecting, Extending* Terhadap Kemampuan Koneksi dan Penalaran Matematis Siswa.

Program Studi Pendidikan Matematika FKIP Universitas Malikussaleh, 2026

Penyebab rendahnya kemampuan koneksi dan penalaran matematis antara lain siswa cenderung bergantung pada penjelasan guru dalam proses pembelajaran dan siswa juga lebih mengandalkan hafalan rumus daripada memahami matematika secara mendalam. Oleh karena itu, diperlukan model pembelajaran yang dapat mendorong siswa lebih aktif berpikir dan mampu memahami matematika secara lebih bermakna. Salah satunya adalah penggunaan model *Connecting, Organizing, Reflecting, Extending*. Penelitian ini bertujuan untuk mengetahui pengaruh model pembelajaran *Connecting, Organizing, Reflecting, Extending* terhadap kemampuan koneksi dan penalaran matematis siswa kelas XI SMA Negeri 1 banda Baro . Penelitian ini menggunakan pendekatan kuantitatif dengan metode *quasi experiment* dan desain *non-equivalent control group design*. Populasi penelitian adalah seluruh siswa kelas XI SMA Negeri 1 banda Baro, dengan pengambilan sampel melalui teknik sampel jenuh, sehingga diperoleh kelas XII sebagai kelas eksperimen dan XII sebagai kelas kontrol. Instrumen penelitian berupa tes kemampuan koneksi dan penalaran matematis siswa, instrumen tes diberikan sebelum dan sesudah pembelajaran. Selain itu, digunakan pula lembar observasi untuk mengamati aktivitas guru dan siswa selama proses pembelajaran berlangsung. Pengujian hipotesis dilakukan dengan menggunakan uji korelasi *product moment* untuk mengetahui hubungan antara kemampuan koneksi dan penalaran matematis, dan uji MANOVA untuk mengetahui pengaruh model pembelajaran *Connecting, Organizing, Reflecting, Extending* terhadap kemampuan koneksi dan penalaran matematis siswa. Berdasarkan hasil pengujian hipotesis hubungan antara kemampuan koneksi dan penalaran matematis diperoleh nilai Sig. (2-tailed) sebesar 0.000, sesuai dengan kriteria pengujian hipotesis H_1 diterima artinya ketika Sig. (2-tailed) ≤ 0.05 , artinya terdapat hubungan yang signifikan antara kemampuan koneksi dan penalaran matematis. Selanjutnya, hasil pengujian hipotesis pada kemampuan koneksi dan penalaran matematis menggunakan uji MANOVA diperoleh nilai signifikansi sebesar 0.036, sesuai dengan kriteria pengujian hipotesis H_1 diterima ketika Sig. (2-tailed) < 0.05 , artinya terdapat pengaruh model pembelajaran *Connecting, Organizing, Reflecting, Extending* terhadap kemampuan koneksi dan penalaran matematis siswa kelas XI SMA Negeri 1 banda Baro.

Kata Kunci: Kemampuan koneksi Matematis, Kemampuan Penalaran Matematis, Model pembelajaran *Connecting, Organizing, Reflecting, Extending*

ABSTRACT

Sri wahyuni: *The Influence of the Connecting, Organizing, Reflecting, Extending Model on Students' Mathematical Connection and Reasoning Abilities.*

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The causes of low mathematical connection and reasoning abilities include students tending to teacher explanations in the learning process and students also relying more on memorizing formulas rather than understanding mathematics in depth. Therefore, a learning model is needed that can encourage students to think more actively and be able to understand mathematics more meaningfully. One of them is the use of the Connecting, Organizing, Reflecting, Extending model. This study aims to determine the effect of the Connecting, Organizing, Reflecting, Extending learning model on the mathematical connection and reasoning abilities of class XI students of SMA Negeri 1 Banda Baro. This study uses a quantitative approach with a quasi-experimental method and a non-equivalent control group design. The study population was all class XI students of SMA Negeri 1 Banda Baro, with sampling using a saturated sampling technique, so that class XI1 was obtained as the experimental class and XI2 as the control class. The research instrument was a test of students' mathematical connection and reasoning abilities, the test instrument was given before and after learning. In addition, an observation sheet was also used to observe the activities of teachers and students during the learning process. Hypothesis testing was conducted using the product moment correlation test to determine the relationship between connection ability and mathematical reasoning, and the MANOVA test to determine the effect of the Connecting, Organizing, Reflecting, Extending learning model on students' connection and mathematical reasoning abilities. Based on the results of the hypothesis testing of the relationship between connection ability and mathematical reasoning, the Sig. (2-tailed) value of 0.000 was obtained, in accordance with the criteria for testing the hypothesis H_1 was accepted, meaning when Sig. (2-tailed) ≤ 0.05 , meaning that there was a significant relationship between connection ability and mathematical reasoning. Furthermore, the results of hypothesis testing on connection ability and mathematical reasoning using the MANOVA test obtained a significance value of 0.036, in accordance with the criteria for testing the hypothesis H_1 was accepted when Sig. (2-tailed) < 0.05 , meaning that there was an influence of the Connecting, Organizing, Reflecting, Extending learning model on connection ability and mathematical reasoning of class XI students of SMA Negeri 1 Banda Baro.

Keywords: *Mathematical connection ability, Mathematical reasoning ability, Connecting, Organizing, Reflecting, Extending learning model*