

ABSTRAK

Aryani, Wayan. 2025. Pengaruh Model Pembelajaran *Collaborative Inquiry* Berbantuan Aplikasi *Mathway* Terhadap Keterampilan Berpikir Kritis dan Kolaborasi Siswa Pada Mata Pelajaran Matematika. Singaraja: Program Pascasarjana, Universitas Pendidikan Ganesha.

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Kata-kata Kunci: Model Pembelajaran *Collaborative Inquiry*, Aplikasi *Mathway*, Keterampilan Berpikir Kritis, Keterampilan Kolaborasi

Keterampilan berpikir kritis dan kolaborasi merupakan kompetensi esensial yang diperlukan dalam rangka menyongsong era *Society 5.0*. Namun, kenyataan di lapangan, hasil studi PISA dan TIMSS menunjukkan bahwa keterampilan berpikir kritis siswa usia 15 tahun atau setingkat sekolah menengah pertama masih rendah. Penelitian ini bertujuan mendeskripsikan perbedaan pengaruh model pembelajaran *Collaborative Inquiry* berbantuan aplikasi *Mathway* terhadap keterampilan berpikir kritis dan kolaborasi siswa pada mata pelajaran matematika. Penelitian ini dirancang dalam bentuk penelitian eksperimen semu dengan *non equivalent pretest-posttest control group design*. Populasi dalam penelitian ini adalah siswa kelas VII SMP Negeri 2 Denpasar Tahun Pelajaran 2024/2025 yang terdiri dari 11 kelas dengan 447 orang siswa. Penentuan sampel pada penelitian ini menggunakan teknik *group random sampling* dan menetapkan tiga kelas sebagai sampel. Kelas VII-1 sebagai kelompok eksperimen 1 yang diberikan perlakuan model pembelajaran *Collaborative Inquiry* berbantuan aplikasi *Mathway*, kelas VII-3 sebagai kelompok eksperimen 2 yang diberikan perlakuan model pembelajaran *Collaborative Inquiry*, dan kelas VII-5 sebagai kelompok kontrol yang diberikan perlakuan model pembelajaran langsung (*Direct Instruction*). Data keterampilan berpikir kritis dikumpulkan dengan tes uraian dan data keterampilan kolaborasi siswa dikumpulkan dengan menggunakan kuesioner. Data dianalisis menggunakan *Multivariate Analysis of Covariance* (MANCOVA). Pengujian hipotesis menggunakan taraf signifikansi 5%. Hasil penelitian ini menunjukkan bahwa: (1) Terdapat perbedaan keterampilan berpikir kritis dan kolaborasi secara bersama-sama antara siswa yang belajar dengan model pembelajaran *Collaborative Inquiry* berbantuan aplikasi *Mathway*, model pembelajaran *Collaborative Inquiry*, dan model pembelajaran langsung (2) Terdapat perbedaan keterampilan berpikir kritis siswa yang belajar dengan model pembelajaran *Collaborative Inquiry* berbantuan aplikasi *Mathway*, model pembelajaran *Collaborative Inquiry*, dan model pembelajaran langsung (3) Terdapat perbedaan keterampilan kolaborasi siswa yang belajar dengan model pembelajaran *Collaborative Inquiry* berbantuan aplikasi *Mathway*, model pembelajaran *Collaborative Inquiry*, dan model pembelajaran langsung Berdasarkan temuan tersebut dapat disimpulkan, bahwa model pembelajaran *Collaborative Inquiry* berbantuan aplikasi *Mathway* secara signifikan berpengaruh terhadap keterampilan berpikir kritis dan kolaborasi siswa pada mata pelajaran matematika di kelas VII SMP.

ABSTRACT

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Keywords: Collaborative Inquiry Learning Model, Mathway Application, Critical Thinking Skills, Collaboration Skills

Critical thinking and collaboration skills are essential competencies needed to face the Society 5.0 era. However, the results of PISA and TIMSS study research show that students' critical thinking skills of 15 year old students or junior high school level are still low. This study aims to describe the differences in the influence of the Collaborative Inquiry learning model assisted by the Mathway application on students' critical thinking and collaboration skills in mathematics. This study was designed in the form of a quasi-experimental study with a non-equivalent pretest-posttest control group design. The population in this study were grade VII students of SMP Negeri 2 Denpasar in the 2024/2025 Academic Year consisting of 11 classes with 447 students. The determination of the sample in this study used the group random sampling technique and determined three classes as samples. Class VII-1 as experimental group 1 which was given the Collaborative Inquiry learning model treatment assisted by the Mathway application, class VII-3 as experimental group 2 which was given the Collaborative Inquiry learning model treatment, and class VII.5 as the control group which was given the direct instruction learning model treatment. Critical thinking skills data were collected using essay tests and students' collaboration skills data were collected using questionnaires. Data were analyzed using Multivariate Analysis of Covariance (MANCOVA). Hypothesis testing uses a significance level of 5%. The results of this study indicate that: (1) There are differences in critical thinking and collaborative skills between students who learn with the Collaborative Inquiry learning model assisted by the Mathway application, the Collaborative Inquiry learning model, and the direct learning model (2) There are differences in critical thinking skills of students who learn with the Collaborative Inquiry learning model assisted by the Mathway application, the Collaborative Inquiry learning model, and the direct learning model (3) There are differences in collaboration skills of students who learn with the Collaborative Inquiry learning model assisted by the Mathway application, the Collaborative Inquiry learning model, and the direct learning model Based on these findings, it can be concluded that the Collaborative Inquiry learning model assisted by the Mathway application significantly influences students' critical thinking and collaboration skills in mathematics subjects in grade VII of junior high school.