

**PENGARUH MODEL PEMBELAJARAN BERBASIS TANTANGAN ISU
SOSIOSAINS ARGUMEN TANDINGAN DAN MODEL
PEMBELAJARAN BERBASIS MASALAH TERHADAP PENGUASAAN
KONSEP KIMIA DAN KETERAMPILAN SOSIAL SISWA SMA**

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ABSTRAK

Penelitian ini bertujuan mendeskripsikan dan menjelaskan perbedaan penguasaan konsep dan keterampilan sosial siswa yang diajarkan menggunakan model pembelajaran berbasis tantangan isu sosiosains argumen tandingan, yaitu model yang melibatkan siswa dalam menganalisis isu kontekstual, berpikir kritis, dan menyusun argumen ilmiah, dengan model pembelajaran berbasis masalah (PBM). Jenis dan rancangan penelitian berupa quasi experiment dengan desain nonequivalent pretest-posttest control group. Populasi penelitian adalah siswa kelas XI MIPA di SMA Negeri 8 Denpasar, Bali. Sampel terdiri dari empat kelas: XI 1, XI 2, XI 3, dan XI 4 yang masing-masing berjumlah 45, 48, 46, dan 38 siswa. Kelompok kontrol dan eksperimen ditentukan menggunakan teknik *cluster random sampling*, yaitu pengambilan kelas utuh yang ditentukan secara acak ke dalam dua kelompok. Data dikumpulkan melalui tes penguasaan konsep dan keterampilan sosial, serta angket untuk mengukur respons siswa terhadap pembelajaran. Analisis data menggunakan statistik deskriptif dan Analysis of Covariance (Ancova) dengan taraf signifikansi 5%. Hasil penelitian menunjukkan bahwa terdapat perbedaan yang signifikan dalam penguasaan konsep dan respons siswa, baik berdasarkan uji ANCOVA untuk penguasaan konsep maupun uji Mann-Whitney U untuk respons peserta didik. Temuan ini menunjukkan bahwa model pembelajaran berbasis tantangan isu sosiosains argumen tandingan lebih efektif dalam mendorong keterlibatan dan tanggapan siswa dibandingkan model PBM. Akan tetapi, tidak terdapat perbedaan signifikan dalam keterampilan sosial siswa, yang diduga disebabkan oleh keterbatasan interaksi langsung dalam praktikum serta rendahnya partisipasi aktif dalam kegiatan argumentasi.

Kata Kunci: argumen tandingan, isu sosiosains, keterampilan sosial, model berbasis tantangan, penguasaan konsep

THE EFFECT OF SOCIOSCIENTIFIC ISSUE CHALLENGE COUNTER ARGUMENT BASED LEARNING MODEL AND PROBLEM-BASED LEARNING MODEL ON CHEMISTRY CONCEPT MASTERY AND SOCIAL SKILLS OF SENIOR HIGH SCHOOL STUDENTS

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ABSTRACT

This study aims to describe and explain the differences in students' conceptual understanding and social skills when taught using the socioscientific issue-based challenge learning model with a counter-argument strategy, a model that engages students in analyzing contextual issues, thinking critically, and constructing scientific arguments, compared to the problem-based learning model. This research employed a quasi experimental method with a nonequivalent pretest-posttest control group design. The population consisted of Grade XI science students at SMA Negeri 8 Denpasar, Bali. The sample comprised four classes: XI 1, XI 2, XI 3, and XI 4, with 45, 48, 46, and 38 students, respectively. The control and experimental groups were determined using cluster random sampling, in which intact classes were randomly assigned to each group. Data were collected through tests measuring conceptual understanding and social skills, as well as questionnaires to assess students' responses to the learning models. Data were analyzed using descriptive statistics and analysis of covariance at a 5% significance level. The results revealed significant differences in students' conceptual understanding and responses, based on the analysis of covariance for conceptual understanding and the Mann-Whitney U test for student responses. These findings suggest that the socioscientific issue based challenge learning model with a counter-argument strategy is more effective in encouraging student engagement and responses compared to the problem-based learning model. However, no significant difference was found in students' social skills, which is presumed to be due to limited direct interaction during home-based practical activities and the low level of active participation in argumentation sessions.

Keywords: counter-argument, socioscience issues, social skills, challenge-based model, concept mastery