

ABSTRAK

PENGARUH MINI RISET “PENCEMARAN LINGKUNGAN” TERHADAP KETERAMPILAN PROSES SAINS TERINTEGRASI DAN SIKAP ILMIAH SISWA

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Mini riset identik dengan salah satu jenis inkuiri, yaitu *free inquiry*. *Free inquiry* merupakan salah satu level dalam pembelajaran inkuiri yang mendorong siswa mengidentifikasi suatu masalah, mencari solusi permasalahan tersebut melalui sebuah percobaan yang didesain secara mandiri. Tujuan penelitian ini adalah untuk menyelidiki pengaruh mini riset berbasis pencemaran lingkungan terhadap keterampilan proses sains terintegrasi dan sikap ilmiah siswa. Penelitian ini menggunakan kelas kontrol (praktikum) dan kelas eksperimen (mini riset) yang keduanya diberikan melalui kegiatan pembelajaran mengenai pencemaran lingkungan. Penelitian ini merupakan kuasi eksperimen dengan menggunakan desain *the matching-only pretest-posttest control group design*, dimana pengambilan sampel dilakukan secara *purposive sampling* yang dipilih berdasarkan persamaan karakter. Subjek penelitian ini adalah siswa SMA Kelas X yang mengambil peminatan Matematika Ilmu Pengetahuan Alam (MIPA) di sebuah SMAN negeri di Majalengka. Siswa berasal dari dua kelas, yang masing-masing berjumlah 36 dan 37 orang. Pengumpulan data dilakukan dengan menggunakan tes Keterampilan Proses Sains (KPS) terintegrasi, angket sikap ilmiah, penilaian kinerja mini riset, serta angket respon siswa mengenai penerapan pembelajaran yang menyertakan KPS terintegrasi dan sikap ilmiah. Hasil penelitian menunjukkan bahwa terdapat perbedaan signifikan pada keterampilan proses sains terintegrasi siswa antara kelas eksperimen dan kelas kontrol serta tidak terdapat perbedaan signifikan pada sikap ilmiah siswa antara kelas eksperimen dan kelas kontrol. Penilaian kinerja mini riset juga menunjukkan hasil yang baik, disertai dengan respon yang baik pula terhadap kegiatan praktikum dan mini riset dimana siswa belajar dengan menerapkan pendekatan saintifik.

Kata Kunci: Mini riset, Keterampilan Proses Sains (KPS) Terintegrasi, Sikap Ilmiah, Pencemaran Lingkungan

ABSTRACT

THE EFFECT OF “ENVIRONMENTAL POLLUTION” MINI RESEARCH TOWARDS STUDENTS’ INTEGRATED SCIENCE PROCESS SKILL AND SCIENTIFIC ATTITUDES

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In some perspectives, mini research is related with free inquiry. However, the term free inquiry itself is one of the levels in inquiry learning that encourage the students to identify and solve the problem independently through an experiment. In line with this statement, the aim of this study was to investigate the influence of ‘environmental pollution’ mini research towards students’ integrated Science Process Skills (SPS) and scientific attitude. This study used control class (practical work) and experimental class (mini research) as the subjects of this study. Both of the classes were given the same learning activities about environmental pollution. Then, since this study was a quasi-experimental design, matching-only pre-test - post-test control group design was used. In this case, the samples were taken as purposive sampling, which were selected based on the similar character. The participants in this study were tenth grade of Senior High School students (in science major) at one state of Senior High School in Majalengka. They were divided into two classes; consist of 36 and 37 students. Furthermore, the data were obtained from integrated Science Process Skills (SPS), questionnaire of the scientific attitude, assessment of mini research performance, and questionnaire related to the students' response to the application of integrated SPS and scientific attitude in the learning activities. Finally, the results showed that there were significant differences in students’ integrated SPS between the experimental class and control class. On the other hand, there was no significance difference of students’ scientific attitude in experimental class and control class. In addition, there was a good improvement based on the assessment of mini research as well the students’ response toward practical work and mini research.

Keywords: Mini Research, Integrated Science Process Skills (SPS), Scientific Attitude, Environmental Pollution