

Pengembangan Program *Field Trip* berbasis Inkuiri untuk Meningkatkan Kemampuan Bekerja Ilmiah dan Memecahkan Masalah Calon Guru Biologi

Abstrak

Calon guru kurang dibekali perencanaan dan pengelolaan *field trip* pada saat kuliah, akibatnya banyak potensi belajar siswa yang tidak muncul. Tujuan penelitian untuk mengembangkan program *field trip* yang memfasilitasi peningkatan kemampuan bekerja ilmiah, memecahkan masalah dan merancang *field trip* berbasis inkuiri. Penelitian dan pengembangan (R dan D) ini menggunakan desain penelitian *one group pretest-posttest pre-experiment*. Partisipan adalah mahasiswa angkatan 2009 (n=43) dan angkatan 2010 (n=72) dan guru Biologi/IPA di Jawa Barat (n=35). Data kemampuan calon guru bekerja ilmiah, memecahkan masalah dan merancang *field trip* berbasis inkuiri diukur melalui tes tertulis. Pendapat calon guru dan guru mengenai *field trip* dan respon calon guru mengenai implementasi program FTBI dijangkau melalui angket. Wawancara dilakukan terhadap tiga orang guru dan enam calon guru. Asesmen formatif dilakukan melalui penilaian presentasi rancangan dan hasil riset, penilaian laporan riset, penilaian diri dan sebaya. Program FTBI terdiri atas enam siklus tahapan bekerja ilmiah yang terbagi ke dalam tiga fase: pengenalan program, fase *short field trip* dan fase *long field trip*. Strategi pembelajaran yang diterapkan dalam implementasi program, dilaksanakan secara bertahap dari inkuiri terbimbing menuju inkuiri bebas. Hasil penelitian menunjukkan bahwa Implementasi PFTBI meningkatkan kemampuan calon guru biologi bekerja ilmiah, memecahkan masalah dan merancang *field trip* berbasis inkuiri pada kategori sedang (N-gain). Kemampuan mahasiswi dalam memecahkan masalah lebih tinggi daripada mahasiswa.

Kata kunci: *field trip*, *bekerja ilmiah*, *kemampuan memecahkan masalah*

The Development of Inquiry-based Field Trip to Improve Scientific Inquiry and Solving Problem Ability of Biology Prospective Teachers

Abstract

A number of research reveals that the opportunity of student's field trip learning is not showed up since prospective teachers are less equipped with the planning and management of field trip during their lectures. In relation to the above-mentioned issue, the study aims to develop a field trip program to improve teachers's scientific inquiry, solving problem ability and inquiry-based field trip design skill. The study is a research and development program which uses one group pretest-posttest pre experiment design. The participants of the study are students of 2009 (43 persons) and 2010 (72 persons) who sign General Ecology and Biology subject and Biology teachers (35) in West Java. The participants were tested by a written test in order to find out their scientific inquiry, solving problem ability and inquiry-based field trip design skill. Their opinions about field trip and implementation of inquiry-based field trip program (FTBI) are gathered through questionnaires. In addition, interviews were conducted by participating only three teachers and six prospective teachers. At last, formative assessment is carried out by assessing the presentation of research design and result, research report, self performance and peer performance. The result of the study shows that the development of inquiry-based field trip program (PFTBI) are consisted of six stages of scientific inquiry cycle process which is divided into three phases: 1) introduction of the program; 2) short field trip; 3) long field trip. The development program has been proven in improving prospective biology teachers's scientific inquiry, solving problem ability and inquiry-based field trip skill at medium level (N-gain) and the female students ability in solving problem are higher than the male's.

Keywords: *field trip, scientific inquiry, problem-solving ability.*