

ABSTRAK

Dewi, Yuanita Ratna Sari, 2008. Pemahaman dan Miskonsepsi Siswa tentang Rangkaian Listrik Seri dan Paralel Serta Perubahannya Melalui Pembelajaran dengan Metode Eksperimen Terbimbing. Program Studi Pendidikan Fisika, Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma Yogyakarta.

Tujuan penelitian ini adalah untuk mengetahui : (1) pemahaman siswa mengenai konsep rangkaian listrik sebelum dan sesudah mengikuti pembelajaran dengan metode eksperimen terbimbing, (2) miskonsepsi yang terjadi pada materi rangkaian listrik seri paralel (3) perubahan konsep Rangkaian Listrik seri dan paralel yang terjadi pada siswa yang mengalami miskonsepsi setelah mengikuti pembelajaran dengan metode eksperimen terbimbing.

Penelitian dilaksanakan di SMA BOPKRI I Yogyakarta. Subyek penelitian yaitu siswa kelas X-C yang berjumlah 18 siswa. Pengumpulan data dalam penelitian ini dilakukan dalam lima tahap, yaitu pretest, wawancara I, pembelajaran, posttest, dan wawancara II. Soal pretest dan posttest berupa tes pilihan ganda dan esay yang disertai skala CRI (Certainty of Response Index) yang dimodifikasi untuk mengetahui tingkat keyakinan siswa dalam menjawab soal. Pembelajaran yang dilakukan menggunakan metode eksperimen terbimbing.

Hasil penelitian menunjukkan bahwa pemahaman siswa tentang Rangkaian seri dan Paralel sebelum pembelajaran masih kurang. Sebagian besar siswa mengalami miskonsepsi mengenai arus dan kuat arus.. Melalui pembelajaran dengan metode eksperimen terbimbing, pemahaman siswa tentang arus dan kuat arus mengalami perubahan konsep yaitu menjadi lebih baik dibandingkan sebelum pembelajaran, namun beberapa siswa belum mengalami perubahan pemahaman. Metode eksperimen terbimbing dapat membantu proses perubahan konsep siswa.

ABSTRACT

Dewi, Yuanita Ratna Sari, 2008. *Student's Understanding and Misconception on Series and Parallel Circuits and Its Change in Learning Process Using the Guided Experiment Method*. The Physics Education Study Program, The Department of Mathematics and Science Education, The Faculty of Teachers Training and Education, Sanata Dharma University Yogyakarta.

The purposes of the research were to find out : (1) the students understanding about the concept of electric circuit before and after attending a learning process using the guided experiment method, (2) the misconception related to the series and parallel circuit, and (3) the concept change on the series and parallel circuit occurred to the students who experienced the misconception after attending the learning using the guided experiment method.

The research was conducted at SMA BOPKRI I Yogyakarta. The subjects were 18 students of the X-C grade. The data gathering of this research was conducted in five steps, they were, the pre-test, the interview I, the learning process, the post-test, and the interview II. The pre-test and the post-test question lists were in form of multiple choice and essay using the CRI scale (Certainty of Response Index) which was modified in order to find out the level of the students certainty in answering the questions. The conducted learning process used the guided experiment method.

The result of the research showed that the students understanding about the series and parallel circuit before the learning process were still low. Most of the students experienced the misconception on the current and the power of the current. Through the learning process using the guided experiment method, the students understanding about current and the power of the current changed to be better than before the learning process. However, some students did not get the change in their understanding. The guided experiment method helped the students change their concepts.