

ABSTRAK

Rauli Eva Elfrida Sitorus Pane (NIM: 8206176001). Pengaruh Model Inquiry Training Terhadap Pemahaman Konsep dan Keterampilan Proses Sains Siswa Pada Materi Momentum dan Implus. Tesis Medan. Program Studi Pendidikan Fisika Pascasarjana Universitas Negeri Medan, 2023.

Tujuan penelitian ini adalah untuk mengetahui perbedaan: pemahaman konsep siswa yang dibelajarkan dengan model pembelajaran *inquiry training* dan pembelajaran konvensional, serta keterampilan proses sains siswa yang dibelajarkan dengan model pembelajaran *inquiry training* dan pembelajaran konvensional. Jenis penelitian ini merupakan penelitian dengan quasi eksperimen. populasi penelitian adalah siswa kelas XI SMAS Parulian 1 Medan. Pemilihan sampel dilakukan secara random dengan mengacak kelas. Instrumen yang digunakan terdiri dari: tes pemahaman konsep dan keterampilan proses sains berupa *essay*. Data dalam penelitian ini dianalisis dengan uji manova dengan hasil uji analisis data diperoleh nilai rata-rata pretes pemahaman konsep kelas eksperimen dan kelas kontrol masing-masing 39,25 dan 37. Analisis data diperoleh nilai rata-rata pretes keterampilan proses sains kelas eksperimen dan kelas kontrol masing-masing 33 dan 32,25. Nilai rata-rata postes pemahaman konsep kelas eksperimen dan kelas kontrol masing-masing 63,5 dan 52,5. Nilai rata-rata postes keterampilan proses sains kelas eksperimen dan kelas kontrol masing-masing 65,25 dan 61,75. Data dianalisis menggunakan uji manova untuk uji hipotesis pemahaman konsep dan keterampilan proses sains dengan hasil terdapat pengaruh pembelajaran *inquiry training* terhadap pemahaman konsep dan keterampilan proses sains siswa pada materi momentum dan implus. Persentasi peningkatan *N-Gain* pemahaman konsep pada kelas eksperimen adalah 0,39 dengan kategori sedang dan 0,24 pada kelas kontrol dengan kategori rendah. Persentasi peningkatan *N-Gain* keterampilan proses sains pada kelas eksperimen adalah 0,47 dengan kategori sedang dan 0,43 di kelas kontrol dengan kategori sedang. Hasil uji *correlation pearson* adalah 0,742 dengan signifikansi 0,000. Ketiga uji yang dilakukan maka dapat disimpulkan adanya pengaruh model pembelajaran *inquiry training* terhadap pemahaman konsep dan keterampilan proses sains siswa, adanya peningkatan pemahaman konsep dan keterampilan proses sains siswa pada model pembelajaran *inquiry training* , adanya korelasi pemahaman konsep dan keterampilan proses sains pada penerapan model pembelajaran *inquiry training* pada materi momentum dan implus.

Kata kunci: *Inquiry training, konvensional, pemahaman konsep, keterampilan proses sains*

ABSTRACT

Rauli Eva Elfrida Sitorus Pane (NIM: 8206176001). The Influence of the Inquiry Training Model on Students' Understanding of Concepts and Science Process Skills in Momentum and Impuls Material. Medan Thesis. Medan State University Postgraduate Physics Education Study Program, 2023.

The aim of this research is to determine the differences: students' conceptual understanding taught using the inquiry training learning model and conventional learning, as well as the science process skills of students taught using the inquiry training learning model and conventional learning. This type of research is quasi-experimental research. The research population was class XI students of SMAS Parulian 1 Medan. Sample selection was carried out randomly by randomizing the classes. The instruments used consisted of: tests of conceptual understanding and science process skills in the form of essays. The data in this study were analyzed using the Manova test with the results of the data analysis test obtaining an average pretest score for understanding concepts in the experimental class and control class, respectively 39.25 and 37. Data analysis obtained an average pretest score for science process skills in the experimental class and class. controls were 33 and 32.25, respectively. The average post-test scores for conceptual understanding in the experimental class and control class were 63.5 and 52.5, respectively. The average posttest scores for science process skills in the experimental class and control class were 65.25 and 61.75, respectively. Data were analyzed using the Manova test to test the hypothesis of understanding concepts and science process skills with the results that there was an influence of inquiry training learning on students' understanding of concepts and science process skills in momentum and impulse material. The percentage increase in N-Gain understanding of concepts in the experimental class was 0.39 in the medium category and 0.24 in the control class in the low category. The percentage increase in N-Gain in science process skills in the experimental class was 0.47 in the medium category and 0.43 in the control class in the medium category. The Pearson correlation test result is 0.742 with a significance of 0.000. From the three tests carried out, it can be concluded that there is an influence of the inquiry training learning model on students' understanding of concepts and science process skills, there is an increase in students' understanding of concepts and science process skills in the inquiry training learning model, there is a correlation between understanding concepts and science process skills in the application of the inquiry learning model training on momentum and impulse material.

Keywords: *Inquiry Training, conventional, Concept Understanding, Science Process Skills*