ABSTRAK

Tasya Azizah Mubarokiyah. 2024. **IMPLEMENTASI MODEL PEMBELAJARAN *READ-ANSWER-DISCUSS*-EXPLAIN-*CREATE* (RADEC) DENGAN METODE PRAKTIKUM DALAM MENINGKATKAN KETERAMPILAN PROSES SAINS PESERTA DIDIK PADA MATERI SUHU DAN KALOR**

Motivasi penelitian ini adalah rendahnya keterampilan proses sains peserta didik di MA Negeri 1 Tasikmalaya, peneliti berupaya mengatasi masalah tersebut dengan penerapan model pembelajaran *Read-Answer-Discuss-Explain-Create* (RADEC) dengan metode praktikum. Penelitian ini bertujuan untuk menganalisis penerapan model pembelajaran *Read-Answer-Discuss-Explain-Create* (RADEC) dengan metode praktikum dalam meningkatkan keterampilan proses sains peserta didik pada materi suhu dan kalor. Metode yang digunakan dalam penelitian ini adalah *quasi experiment* dengan *nonequivalent control group design*. Penelitian ini dilaksanakan di MA Negeri 1 Tasikmalaya dengan populasi penelitian sebanyak 263 peserta didik yang termuat dalam 8 kelas XI MIPA. Pemilihan sampel menggunakan teknik *purposive sampling*, diperoleh kelas XI MIPA 5 (33 orang) sebagai kelas eksperimen dan kelas XI MIPA 3 (33 orang) sebagai kelas kontrol. Untuk mengukur keterampilan proses sains peserta didik maka dilakukan tes sebelum diberi perlakuan (*pretest*) dan tes setelah diberi perlakuan (*posttest*) berupa soal pilihan ganda beralasan. Soal yang diberikan sebanyak 12 butir yang mewakili 6 indikator keterampilan proses sains dasar pada materi suhu dan kalor. Teknik analisis data yang digunakan meliputi validasi ahli, uji coba instrumen, analisis penguasaan keterampilan proses sains, analisis keterlaksanaan model pembelajaran, analisis *N-Gain*, uji prasyarat, dan uji hipotesis. Hasil uji hipotesis menggunakan uji t pada taraf signifikansi (α = 0,05) menunjukkan bahwa setelah diterapkannya model pembelajaran *Read-Answer-Discuss-Explain-Create* (RADEC) dengan metode praktikum diperoleh $t_{hitung} > t_{tabel}$ yakni 3,43 > 1,67 sehingga H_0 ditolak dan H_a diterima. Artinya pada taraf kepercayaan 95% dapat disimpulkan bahwa penerapan model pembelajaran *Read-Answer-Discuss-Explain-Create* (RADEC) dengan metode praktikum dapat meningkatkan keterampilan proses sains peserta didik pada materi suhu dan kalor.

Kata kunci: keterampilan proses sains, model pembelajaran RADEC, suhu dan kalor.

ABSTRACT

Tasya Azizah Mubarokiyah. 2024. ***IMPLEMENTATION OF THE READ-ANSWER-DISCUSS-EXPLAIN-CREATE (RADEC) LEARNING MODEL WITH PRACTICUM METHODS IN IMPROVING STUDENTS' SCIENCE PROCESS SKILLS ON TEMPERATURE AND HEAT MATERIAL***

The motivation of this study is the low skill of the science process of students at MA Negeri 1 Tasikmalaya, researchers are trying to overcome these problems by applying the Read-Answer-Discuss-Explain-Create (RADEC) learning model with the practicum method. This study aims to analyze the application of the Read-Answer-Discuss-Explain-Create (RADEC) learning model with practicum methods in improving students' science process skills on temperature and heat material. The method used in this study is quasi experiment with nonequivalent control group design. This research was conducted at MA Negeri 1 Tasikmalaya with a research population of 263 students contained in 8 classes XI MIPA. Sample selection using purposive sampling technique, obtained class XI MIPA 5 (33 people) as an experimental class and class XI MIPA 3 (33 people) as a control class. To measure the skills of the science process of students, a test is carried out before being given treatment (pretest) and a test after being given treatment (posttest) in the form of reasoned multiple-choice questions. The questions given were 12 items representing 6 indicators of basic science process skills on temperature and heat matter. Data analysis techniques used include expert validation, instrument trials, analysis of mastery of science process skills, analysis of learning model implementation, N-Gain analysis, prerequisite tests, and hypothesis tests. The results of the hypothesis test using the t test at the level of significance ($\alpha = 0.05$) showed that after the application of the Read-Answer-Discuss-Explain-Create (RADEC) learning model with the practicum method, it was obtained $t_{calculate} > t_{table}$ which was 3.43 > 1.67 so that it was H_0 rejected and accepted H_a. This means that at the 95% confidence level, it can be concluded that the application of the Read-Answer-Discuss-Explain-Create (RADEC) learning model with the practicum method can improve students' science process skills on temperature and heat material.

Keywords: science process skills, RADEC learning model, temperature and heat.