ABSTRAK

Ester Sari Pebrina Sinaga (NIM:8206176008). Pengembangan Modul IPA Berbasis *Problem Based Learning* untuk Meningkatkan Kemampuan Berpikir Kritis dan Kemampuan Berpikir Kreatif Siswa SMP. Tesis. Medan: Program Pascasarjana Universitas Negeri Medan, 2024.

Penelitian ini bertujuan untuk menghasilkan modul IPA berbasis *problem based learning* yang layak untuk meningkatkan kemampuan berpikir kritis dan berpikir kreatif siswa SMP dan mengetahui peningkatan kemampuan berpikir kritis dan berpikir kreatif siswa setelah diterapkan modul IPA berbasis *problem based learning.* Jenis penelitian adalah penelitian dan pengembangan *(Research and Development)* dengan menggunakan model ADDIE dengan tahapan analisis *(analysis)*, desain *(design)*, pengembangan *(development)*, implementasi *(Implementation)* dan evaluasi *(evalution*). Produk penelitian hasil pengembangan berupa modul IPA berbasis *problem based learning* pada materi usaha dan pesawat sederhana. Uji coba produk meliputi uji coba terbatas pada siswa kelas VIII SMP Swasta Tri Murni. Instrumen penelitian yang digunakan yaitu modul IPA berbasis *problem based learning*, soal pretest-posttest dan lembar observasi keterlaksanaan pembelajaran. Kelayakan modul fisika berbasis discovery learning dilihat dari rata-rata skor penilaian validator dan respon siswa yang diubah menjadi kategori kualitatif. Peningkatan kemampuan berpikir kritis dan berpikir kreatif siswa diketahui berdasarkan hasil *pretest* dan *posttest* siswa. Hasil penelitian menunjukkan bahwa modul IPA berbasis *problem based learning* yang dikembangkan layak digunakan untuk meningkatkan kemampuan berpikir kritis dan berpikir kreatif siswa SMP Swasta Tri Murni Medan berdasarkan penilaian dosen ahli dan guru mata pelajaran IPA kelas VIII SMP Swasta Tri Murni memiliki nilai rata-rata sebesar 92,05% dengan kategori sangat valid dan penerapan modul IPA berbasis *problem based learning* pada materi usaha dan pesawat sederhana mampu meningkatkan kemampuan berpikir kritis siswa kelas VIII SMP dengan nilai standar gain 0,71 dan termasuk kategori tinggi.

Kata kunci: Model *Problem Based Learning*, kemampuan berpikir kritis dan berpikir kreatif

ABSTRACT

Ester Sari Pebrina Sinaga (NIM: 8206176008). Development of a Science Module Based on Problem Based Learning to Improve Critical Thinking Abilities and Creative Thinking Abilities of Middle School Students. Thesis. Medan: Medan State University Postgraduate Program, 2024.

This research aims to produce a science module based on problem based learning that is suitable for improving the critical thinking and creative thinking skills of junior high school students and to determine the increase in students' critical thinking and creative thinking skills after implementing the science module based on problem based learning. The type of research is research and development (Research and Development) using the ADDIE model with stages of analysis, design, development, implementation and evaluation. The research product resulting from the development is a science module based on problem based learning on simple business and aircraft material. Product trials include limited trials on class VIII students at Tri Murni Private Middle School. The research instruments used were problem-based learning-based science modules, pretest-posttest questions and learning implementation observation sheets. The feasibility of a physics module based on discovery learning is seen from the average validator assessment score and student responses which are converted into qualitative categories. The increase in students' critical thinking and creative thinking skills is known based on the results of the students' pretest and posttest. The results of the research show that the science module based on problem based learning that was developed is suitable for use to improve the critical thinking and creative thinking skills of students at Tri Murni Private Middle School Medan based on the assessment of expert lecturers and class VIII science subject teachers at Tri Murni Private Middle School with an average score of 92. .05% with a very valid category and the application of a science module based on problem based learning on simple business and aircraft material was able to improve the critical thinking skills of class VIII SMP students with a standard gain value of 0.71 and was included in the high category.

Keywords: Problem Based Learning Model, critical thinking skills and creative thinking