ABSTRAK

Riski Dwi Saputri. 2024. Pengembangan Panduan Praktikum Elektronik Berbasis *Green Chemistry* Dengan Model *Problem Based Learning* Materi Ikatan Kimia. Skripsi, Tanjungpinang: Jurusan Pendidikan Kimia, Fakultas Keguruan Dan Ilmu Pendidikan, Universitas Maritim Raja Ali Haji, Pembimbing I: Dr. Nancy Willian, S.Si., M.Si. Pembimbing II: Yudi Umara, S.Pd.I., M.Pd.

Kata kunci: Bahan Ajar, Panduan Praktikum Elektronik, *Green Chemistry*, *ProblemBased Leaaring*, Ikatan Kimia.

Penelitian ini membahas tentang pengembangan panduan praktikum elektronik berbasis *green chemistry* dengan model *problem based learning* pada materi ikatan kimia. Penelitian ini bertujuan 1) mengetahui proses pengembangan panduan praktikum elektronik berbasis *green chemistry* dengan model *problem based learning* pada materi ikatan kimia: 2) mengetahui validitas pengembangan panduan praktikum elektronik berbasis *green chemistry* dengan model *problem based learning* pada materi ikatan kimia: 3) mengetahui praktikalitas pengembangan panduan praktikum elektronik berbasis *green chemistry* dengan model *problem based learning* pada materi ikatan kimia. Penelitian ini adalah penelitian pengembangan yang menggunakan model Hannafin dan Peck terdiri dari 3 tahap yaitu tahap analisis kebutuhan, desain, pengembangan serta implementasi. Hasil pengembangan bahan ajar pembelajaran panduan praktikum elektronik berbasis *green chemistry* dengan model *problem based learning* pada materi ikatan kimia ini memenuhi kriteria valid dengan hasil uji validasi materi sebesar 75,00% dengan kategori valid. Hasil uji validasi bahan ajar mendapat nilai sebesar 75,00% dengan kategori valid. Hasil uji praktikalitas respon guru mendapat nilai sebesar 87,50% dengan kategori sangat praktis serta praktikalitas respon peserta didik sebesar 83,55% dengan kategori sangat praktis. Berdasarkan hasil penelitian yang telah dilakukan dapat disimpulkan bahwa panduan praktikum elektronik berbasis *green chemistry* dengan model *problem based learning* valid dan praktis digunakan sebagai bahan ajar.

ABSTRACT

Riski Dwi Saputri. 2024. Development of Green Chemistry Based Electronic Practicum Guide Using Problem Based Learning Model on Chemical Bonding Material. Thesis, Tanjungpinang: Department of Chemistry Education, Faculty ofTeacher Training and Education, Raja Ali Haji Maritime University, Supervisor I: Dr. Nancy Willian, S.Si., M.Sc. Supervisor II: Yudi Umara, S.Pd.I., M.Pd.

Keywords: *Teaching Materials, Electronic Practical Guide, Green Chemistry, ProblemBased Learning, Chemical Bonding.*

This research discusses the development of a green chemistry-based electronic practicum guide with a problem based learning model on chemical bonding material. This research aims 1) determine the process of developing a green chemistry-based electronic practicum guide with a problem based learning model on chemical bond material: 2) determine the validity of developing a green chemistry-based electronic practicum guide with a problem based learning model on chemical bond material: 3) find out the practicality of developing a green chemistry-based electronic practicum guide with a problem based learning model on chemical bonding material. This research is development research using the Hannafin and Peck model consisting of 3 stages, namely the needs analysis, design, development and implementation stages. The resultsof the development of green chemistry-based electronic practical learning teaching materials with a problem based learning model on chemical bond material meet the validcriteria with material validation test results of 75.00% in the valid category. The resultsof the validation test for teaching materials received a score of 75.00% in the valid category. The practicality test results of the teacher's responses received a score of 87.50% in the very practical category and the practicality of the students' responses was83.55% in the very practical category. Based on the results of the research that has beencarried out, it can be concluded that the electronic practical guide based on green chemistry with a problem based learning model is valid and practically used as teaching material.