

## ABSTRAK

Lamtiur Dermawan Sihotang: **Pengembangan Bahan Ajar Inovatif dan Interaktif Melalui Pendekatan Sainstifik pada Pengajaran Struktur Atom dan Sistem Periodik Unsur.** Tesis. Medan: Program Studi Pendidikan Kimia, Pascasarjana Universitas Negeri Medan, 2017

Penelitian ini bertujuan untuk mengembangkan bahan ajar struktur atom dan sistem periodik unsur yang memenuhi standar kelayakan merujuk BSNP. Bahan ajar terstandar dan inovatif dapat meningkatkan prestasi belajar mahasiswa karena mahasiswa termotivasi untuk menggunakan bahan ajar. Sampel dalam penelitian ini adalah dosen kimia Universitas Negeri Medan yang dipilih secara *purposive sampling*. Dosen yang dipilih sesuai dengan kriteria pendidikan minimal S2, memiliki pengalaman mengajar minimal 5 tahun, dan sedang aktif mengajar sebanyak 2 orang, (2) Mahasiswa jurusan kimia program studi pendidikan kimia tingkat dua sebanyak 20 orang. Instrumen pengumpulan data digunakan lembar standarisasi BNSP. Penelitian ini merupakan penelitian pengembangan dengan tahap pertama analisis, setelah diperoleh hasil analisis terhadap bahan ajar dilanjutkan dengan tahap kedua pengembangan yaitu dengan mengembangkan bahan ajar inovatif dan interaktif dilanjutkan dengan tahap ketiga standarisasi, dilakukan dengan validasi bahan ajar yang telah dikembangkan dan tahap keempat revisi yang dilakukan berdasarkan hasil validasi bahan ajar. Berdasarkan hasil analisis data dan pembahasan maka diperoleh rata-rata pendapat dari 22 responden yang terdiri dari 2 orang dosen kimia pengampu mata kuliah umum dan 20 orang mahasiswa jurusan kimia terhadap kualitas bahan ajar yang dikembangkan sebesar 3,31 yang tergolong dalam kriteria sangat valid artinya bahan ajar hasil pengembangan sangat layak untuk dipergunakan dalam pembelajaran. Penjabaran dari keseluruhan rata-rata responden terhadap kualitas bahan ajar yang dikembangkan adalah rata-rata hasil penilaian dosen pengampu Kimia Umum yaitu sebesar 3,36 dan rata-rata hasil penilaian mahasiswa pendidikan Kimia yaitu sebesar 3,26. Berdasarkan hasil analisa ini dapat disimpulkan bahwa bahan ajar yang telah dikembangkan telah layak digunakan berdasarkan uji kelayakan BSNP dengan tanggapan dan penilaian oleh beberapa pihak yaitu tim validator ahli, dosen pengampu mata kuliah kimia umum dan mahasiswa jurusan kimia.

**Kata Kunci :** Bahan ajar inovatif dan interaktif, struktur atom dan sistem periodik, Badan Standarisasi Nasional Pendidikan, Pendekatan Sainstifik

## ABSTRACT

Lamtiur Dermawan Sihotang: **Development Innovative And Interactive Teaching Materials Through Saintific Approach in Structure of the atom and Periodic System.** Thesis. Medan: Chemistry Education Studies Program, Postgraduate School of State University of Medan, 2017

This study aims to develop the teaching materials of atomic structures and the periodic system of elements that meet the feasibility standards refer to BSNP. Standardized and innovative teaching materials can improve students' learning achievement because students are motivated to use teaching materials. The sample in this research is chemistry lecturer of State University of Medan selected by purposive sampling. Lecturers are selected in accordance with the minimum education criteria of S2, have teaching experience of at least 5 years, and are currently teaching as many as 2 people, (2) Chemistry students of chemical education study program level two as many as 20 people. The instrument of data collection is used BNSP standardization sheet. This research is a research development with the first stage of analysis, after obtained the results of analysis on teaching materials followed by the second stage of development that is by developing innovative and interactive teaching materials followed by the third stage of standardization, done with validation of teaching materials that have been developed and the fourth stage of revision made Based on the validation of teaching materials. Based on the results of data analysis and discussion then obtained an average opinion of 22 respondents consisting of 2 lecturers of chemistry pengampu general courses and 20 students majoring in chemistry of the quality of teaching materials developed for 3.31 which belong to the criteria is very valid means the material Teach the results of development is very feasible to be used in learning. Translation of the overall average of respondents to the quality of teaching materials developed is the average result of the General Chemistry lecturer rating that is 3.36 and the average result of the Chemistry student's appraisal is 3.26. Based on the results of this analysis can be concluded that the teaching materials that have been developed have been feasible to use based on the feasibility test of BSNP with the responses and assessments by several parties, namely expert validator team, lecturer of general chemistry lecturer and chemistry students.

**Keywords:** innovative and interactive teaching materials, atomic structure and the periodic system, the National Education Standards, Scientific Approach.