

## ABSTRAK

**Nur Winda Adha. Pengembangan Bahan Ajar Kimia Inovatif Berbasis Multimedia Untuk Meningkatkan Hasil Belajar Siswa Pada Pengajaran Termokimia.** Tesis. Medan: Program Studi Pendidikan Kimia Pascasarjana Universitas Negeri Medan, 2016.

Penelitian ini bertujuan untuk mengembangkan bahan ajar kimia inovatif berbasis multimedia untuk meningkatkan hasil belajar siswa pada materi termokimia. Penelitian ini merupakan *Research and Development* (R&D). Penelitian ini dilaksanakan di tiga sekolah, yaitu SMA Negeri 1 Percut Sei Tuan, SMA Taman Siswa, dan SMA Al-Hidayah Medan. Sampel dalam penelitian ini dipilih secara *purposive sampling* yang diambil sebanyak dua kelas, yaitu kelas eksperimen dan kelas kontrol. Kelas eksperimen diberi perlakuan pengajaran menggunakan bahan ajar kimia inovatif berbasis multimedia sedangkan kelas kontrol menggunakan buku yang ada disekolah. Sebelum dilakukan penelitian bahan ajar telah dinilai oleh 2 orang dosen kimia dan 20 guru kimia dengan menggunakan angket BSNP. Hasil penelitian menunjukkan bahwa (1) Analisis buku kimia pada materi termokimia memberikan hasil rata-rata penilaian kelayakan isi sebesar 3,61, kelayakan bahasa sebesar 3,74 dan untuk kelayakan penyajian sebesar 3,59. (2) Komponen pembelajaran yang dintegrasikan kedalam bahan ajar kimia inovatif yang telah dikembangkan (integrasi kegiatan laboratorium dengan video praktikum yang dilakukan sendiri oleh peneliti, integrasi metode dan media pembelajaran, dan integrasi multimedia pembelajaran). (3) Analisis standar dosen dan guru kimia untuk analisis standar kelayakan isi sebesar 4,33, standar kelayakan bahasa sebesar 4,12, dan standar kelayakan penyajian sebesar 4,20. Ini menunjukkan bahwa hasil analisis untuk bahan ajar kimia inovatif berbasis multimedia yang diajukan telah valid dan tidak perlu direvisi. Sedangkan untuk penilaian terhadap multimedia pembelajaran yang telah dikembangkan diperoleh rata-rata sebesar 3,80 adalah valid untuk digunakan dan tidak perlu revisi. (4) Hasil penelitian eksperimen menunjukkan peningkatan hasil belajar kimia siswa dari masing-masing sampel, yaitu: SMA Negeri 1 Percut Sei Tuan memiliki peningkatan hasil belajar kimia sebesar 69%, SMA Taman Siswa sebesar 55,41% dan SMA Swasta Al-Hidayah sebesar 51,46%. (5) Analisis pengukuran motivasi belajar siswa dengan menggunakan bahan ajar kimia inovatif berbasis multimedia pada pengajaran materi termokimia pada kelas eksperimen tergolong tinggi dengan rata-rata 72,94., dan terdapat hubungan positif antara motivasi belajar dengan hasil belajar kimia siswa ( $r^2 = 0,969$ ) pada pengajaran termokimia. Dengan adanya peningkatan motivasi hasil belajar yang diketahui dari hasil penelitian menunjukkan bahwa hasil belajar kimia siswa yang diajar dengan menggunakan bahan ajar kimia inovatif berbasis multimedia lebih baik dibandingkan hasil belajar kimia siswa yang diajarkan tanpa menggunakan bahan ajar kimia inovatif berbasis multimedia.

**Kata Kunci:** Bahan ajar, Inovatif, Multimedia, Hasil Belajar, Termokimia

## ABSTRACT

**Nur Winda Adha. Development of Instructional Materials Chemistry-Based Innovative Multimedia To Improve Student Results In Teaching Thermochemistry.** Thesis. Medan: Chemistry Education Studies Program, Postgraduate School of State University of Medan, 2016.

This research aims to develop innovative teaching materials chemistry-based multimedia to improve student learning outcomes in thermochemical material. This study is a Research and Development (R & D). This research was conducted in three schools, namely SMA Negeri 1 Percut Sei Tuan, SMA Taman Siswa, and SMA Al-Hidayah Medan. The sample in this study were selected by purposive sampling taken as many as two classes, experimental and control classes. Classroom teaching experiment were treated using innovative teaching materials chemistry-based multimedia classroom control while using the existing books in school. Prior to this research teaching materials have been assessed by two lecturers and 20 teachers chemical chemistry using a questionnaire BSNP. The results showed that (1) Analysis of the chemical on the material thermochemical book gives an average yield of assessing the feasibility of the contents of 3.61, 3.74 and appropriateness of language for the presentation of the feasibility of 3.59. (2) The components of learning be integrated into innovative chemistry teaching materials have been developed (with video integration laboratory activities carried out by the lab which penelit, integration methods and instructional media, and integration of multimedia learning). (3) Analysis of chemistry teachers and lecturers standard for analysis of the contents of about 4.33 eligibility standards, eligibility standard language of 4.12, and the standard of presentation of the feasibility of 4.20. It shows that the results of chemical analysis for innovative teaching materials based multimedia submitted are valid and do not need direvisi.Sedangkan for assessment of learning that has been developed multimedia gained an average of 3.80 is valid for use and does not need revision. (4) The results of experiments showed an increase chemistry student learning outcomes of each sample, namely: SMA Negeri 1 Percut Sei Tuan has an increased chemical learning outcomes by 69%, the SMA Taman Siswa amounted to 55.41% and the Al-Hidayah Private High School for 51.46%. (5) Analysis of student motivation measurements using innovative teaching materials chemistry-based multimedia teaching materials thermochemical the experimental class is high with an average of 72.94, and there is a positive relationship between learning motivation denagn chemistry student learning outcomes ( $r^2 = 0.969$ ) on thermochemical teaching. With the increased motivation of learning outcomes that are known from the results indicated that the results of studying chemistry students who are taught by using innovative teaching materials based multimedia kmia better than the results of studying chemistry students taught without the use of innovative teaching materials chemistry-based multimedia.

**Keywords:** Learning Materials, Innovative, Multimedia, Students Achievement, Thermochemistry