ABSTRAK

Sofian Aritonang: **Pengembangan Bahan Ajar Kimia Inovatif dan Interaktif Berbasis Web Untuk Pengajaran Kimia SMA Kelas XI.** Tesis. Medan: Program Studi Pendidikan Kimia, Pascasarjana Universitas Negeri Medan, 2016

Penelitian ini bertujuan untuk memperoleh bahan ajar kimia interaktif berbasis web dan juga untuk mengetahui: (1) tingkat kelayakan bahan ajar kimia SMA Kelas XI yang telah beredar dalam bentuk *Web* dan buku pada Pokok Bahasan Kesetimbangan Kimia sesuai dengan standar isi. (2) pendapat siswa terhadap bahan ajar kimia SMA Kelas XI Pokok Bahasan Kesetimbangan Kimia Interaktif berbasis *Web* yang telah disusun;(3) pengaruh bahan ajar kimia SMA Kelas XI Pokok Bahasan Kesetimbangan Kimia Interaktif berbasis *Web* yang telah disusun terhadap peningkatan hasil belajar siswa. Jenis penelitian termasuk penelitian dan pengembangan (*research and development*). Subjek penelitian adalah bahan ajar pokok bahasan Kesetimbangan Kimia. Adapun,sampel yang digunakan pada penelitian ini terdiri dari 20 orang guru kimia kelas XI di kota Medan, 2 orang dosen kimia umum dan dosen media Universitas Negeri Medan, dan 80 orang siswa. Pemilihan sampel dalam penelitian menggunakan teknik *purposive sampling*. Berdasarkan hasil penelitian diperoleh: (1) Bahan ajar Kesetimbangan Kimia yang terdapat dalam bahan ajar *Web* A dan *Web* B sudah baik namun masih belum sesuai dengan tuntutan kurikulum artinya sebagian isi bahan ajar perlu direvisi. Oleh karena itu perlu dilakukan pengembangan pada bahan ajar tersebut.(2) Berdasarkan tanggapan siswa, Bahan Ajar Kimia Inovatif dan Interaktif berbasis *web* yang telah dikembangkan dapat diakses di *pianrajagukgukkimia.com* dan sudah memiliki tingkat kelayakan 3,97 sehingga valid untuk digunakan sebagai sumber belajar. (3) Hasil belajar siswa dengan menggunakan Bahan Ajar Kimia Interaktif berbasis *web* yang telah dikembangkan lebih tinggi dibandingkan hasil belajar siswa tanpa menggunakan web yang telah dikembangkan pada pokok bahasan Kesetimbangan Kimia berdasarkan hasil tes diperoleh peningkatan hasil belajar (gain) siswa kelas eksperimen (70,00 %) lebih tinggi di bandingkan hasil belajar (gain) siswa kelas kontrol (54,00%).

Kata Kunci: *Bahan Ajar Kimia Interaktif, Web,Penelitian dan Pengembangan, Kesetimbangan Kimia.*

ABSTRACT

Sofian Aritonang: **Chemical Material Development of Innovative and Interactive Web-Based on Teaching Chemistry Class XI SMA.** Thesis. Medan: Study Program of Chemistry, Postgraduate, Universitas Negeri Medan, 2016.

This study aimed to obtain teaching materials web-based interactive chemistry and also to determine: (1) the feasibility of high school chemistry teaching materials Class XI that has been circulating in the form of a book on the Web and Chemical Equilibrium Highlights in accordance with the content standards. (2) the level of eligibility based on the assessment of Lecturers and Teachers to the high school chemistry teaching materials Class XI Highlights Web-based Interactive Chemical Equilibrium has been prepared, (3) the effect of high school chemistry teaching materials Class XI Highlights Web-based Interactive Chemical Equilibrium has been prepared on improving student learning outcomes. This type of research, including research and development (research and development). The research subject is the subject of teaching materials Chemical Equilibrium. Meanwhile, the samples used in this study consisted of 20 people a chemistry teacher in class XI in the city of Medan, 2 general chemistry lecturer and media lecturer State University of Medan, and 80 students. Selection of the sample using purposive sampling techniques. Based on the results obtained: (1) teaching materials Chemical Equilibrium contained in teaching materials site A and site B is already good, but still not in accordance with the demands of the curriculum means that some of the contents of teaching materials need to be revised. Therefore it is necessary for the development of instructional materials. (2) Based on student feedback, Instructional Materials Chemistry Innovative and Interactive web-based that has been developed can be accessed at *pianrajagukgukkimia.com* and already has a valid eligibility rate of 3.97 so as to be used as a learning resource. (3) The results of student learning using Instructional Materials Chemistry Interactive web-based that has been developed is higher than student learning outcomes without the use of a web that has been developed on the subject of Chemical Equilibrium based on test results obtained learning outcome (gain) class students experiment (70, 00%) is higher than the increase in learning outcomes (gain) control class (54,00%).

Keyword: interactive chemistry teaching materials, *Web*, research and development, *Chemical ,Equilibrium.*