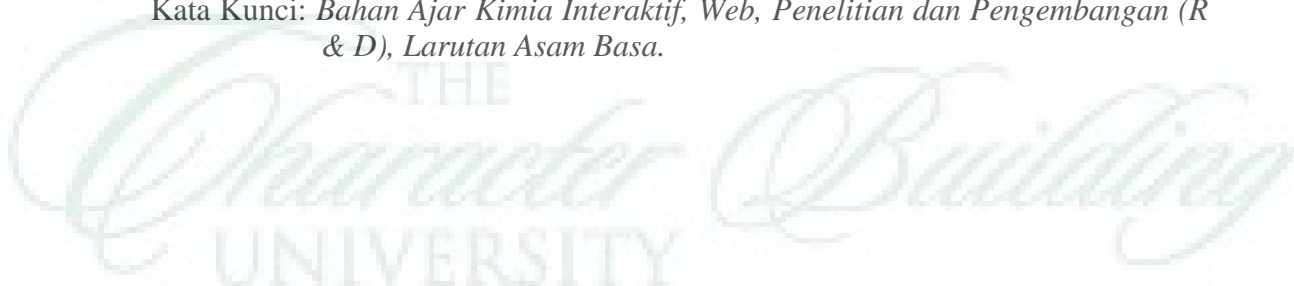


## ABSTRAK

Hairina: **Pengembangan Bahan Ajar Kimia Interaktif Berbasis Web pada Materi Pokok Larutan Asam Basa**. Tesis. Medan: Program Studi Pendidikan Kimia, Pascasarjana Universitas Negeri Medan, 2015

Penelitian ini bertujuan untuk memperoleh bahan ajar kimia interaktif berbasis web. Bentuk penelitian yang dilakukan adalah penelitian deskriptif. Jenis penelitian termasuk penelitian dan pengembangan (*research and development*). Subjek penelitian adalah bahan ajar materi pokok larutan asam basa. 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 40 orang siswa. Pemilihan sampel dalam penelitian menggunakan teknik *purposive sampling*. Hasil analisis berdasarkan BSNP diperoleh, aspek kelayakan isi 4,48 adalah sangat valid, artinya sangat layak dan tidak perlu revisi, kelayakan bahasa 4,72 adalah sangat valid, artinya sangat layak dan tidak perlu revisi, kelayakan penyajian 4,40 adalah valid, artinya layak dan tidak perlu revisi, dan kelayakan kegrafikan 4,63 adalah sangat valid, artinya sangat layak dan tidak perlu direvisi. Hasil pendapat siswa mengenai bahan ajar kimia interaktif memiliki nilai rata-rata sebesar 3,55 adalah valid, artinya layak untuk digunakan. Bahan ajar yang telah dikembangkan kemudian diuji kepada siswa. Pengujian terhadap siswa menggunakan 2 kelas, yaitu kelas eksperimen dan kelas kontrol. Terhadap siswa kelas eksperimen diberikan bahan ajar kimia interaktif berbasis web yang telah dikembangkan, sedangkan siswa kelas kontrol menggunakan bahan ajar yang disediakan sekolah. Berdasarkan hasil tes diperoleh peningkatan hasil belajar (*gain*) siswa kelas eksperimen (menggunakan bahan ajar kimia interaktif berbasis web) sebesar 72% dan peningkatan hasil belajar (*gain*) siswa kelas kontrol (tidak menggunakan web) sebesar 60%. Berdasarkan uji t-test terdapat perbedaan yang signifikan antara peningkatan hasil belajar siswa menggunakan bahan ajar kimia interaktif berbasis web dan tanpa menggunakan bahan ajar kimia interaktif berbasis web dengan nilai signifikan  $0,02 < 0,05$ .

Kata Kunci: *Bahan Ajar Kimia Interaktif, Web, Penelitian dan Pengembangan (R & D), Larutan Asam Basa.*



## ABSTRACT

Hairina: **Development of Interactive Chemistry Teaching Materials on the Web-Based Subject Matter Acid Base Solution.** Thesis. Medan: Study Program of Chemistry, Postgraduate, Universitas Negeri Medan, 2015.

This research aims to obtain the interactive we-based of chemistry teaching materials. Research is a descriptive study. This type of research, including research and development (research and development). Subjects were teaching materials on the subject of acid base solution. The sample used in this study consisted of 20 XI-class chemistry in the city of Medan, 2 general chemistry lecturers and media lecturers University of Medan, and 40 students. The selection of the sample in this study is using purposive sampling technique. The results of the analysis based on BSNP obtained, feasibility aspects of the content of 4.48 is very valid, it means very feasible and does not need to be revised, the feasibility of language 4.72 is very valid, it means very feasible and does not need to be revised, the feasibility of presenting 4.40 is valid, it means feasible and does not need to be revised, and the feasibility of graph 4.63 is very valid, it means very feasible and does not need to be revised. Teaching materials that have been developed then tested to students. Testing of students using two classes, experimental and control classes. The results of student opinion regarding the interactive chemistry teaching materials have an average value of 3.55 is valid, meaning that deserves to be used. Teaching materials that have been developed and then tested to students. Testing of students using two classes, experimental and control classes. Against the experimental class students were given an interactive chemistry teaching materials have been developed web-based, while the control class using teaching materials provided by the school. Based on test results obtained improvement of learning outcomes (gains) grade students experiment (using teaching materials web-based interactive chemistry) of 72% and an increase in learning outcomes (gain) control class (do not use the web) of 60%. Based on the t-test there are significant differences between improving student learning outcomes using interactive chemistry teaching materials and without the use of web-based teaching materials web-based interactive chemistry with significant value of  $0.02 < 0.05$ .

Keywords: *Interactive Chemistry Teaching Materials, Web, Research and Development (R & D), Acid Base Solution*