

## ABSTRAK

Hariani Siregar: **Pengembangan Multimedia Pembelajaran Interaktif Dengan Menggunakan Program Adobe Flash Berbasis Problem Based Learning (PBL) Untuk Meningkatkan Motivasi dan Hasil Belajar Siswa pada Materi Hidrolisis Garam.** Tesis. Medan: Program Studi Pendidikan Kimia, Pascasarjana Universitas Negeri Medan, 2018.

Penelitian ini bertujuan untuk mengetahui apakah kelayakan media pembelajaran kimia materi hidrolisis garam yang telah digunakan di SMA sesuai BSNP; memperoleh media pembelajaran kimia interaktif yang dapat meningkatkan motivasi dan hasil belajar siswa yang dikembangkan telah sesuai dengan BSNP dan interaktif; mengetahui peningkatan motivasi dan hasil belajar siswa terhadap media pembelajaran interaktif yang dikembangkan. Penelitian ini termasuk penelitian pengembangan (*research and development*) dengan model pengembangan *Analysis–Design–Development–Implementation–Evaluation*. Populasi dalam penelitian ini adalah seluruh siswa kelas XI SMA T.A 2017/2018. Teknik pengambilan sampel adalah *purposive sampling*. Sampel penelitian ini adalah dua kelas yaitu siswa kelas XI IPA 2 dan siswa kelas XI IPA 3 masing – masing terdiri dari 25 siswa. Instrumen penelitian berupa angket modifikasi dari BSNP, angket penilaian pengembangan media pembelajaran interaktif, tes objektif hasil belajar yang valid dan reliable, lembar motivasi. Teknik analisis yang digunakan teknik *Two Way Anova* dengan uji *General Linear Model* pada program *SPSS 17.00*. Hasil penelitian disimpulkan bahwa: media pembelajaran dengan menggunakan *Powerpoint* yang digunakan di SMA pada materi hidrolisis garam dengan nilai rata – rata 2,99 memiliki kategori cukup layak untuk digunakan berdasarkan BSNP, namun ada beberapa komponen dari media tersebut yang perlu dikembangkan; media pembelajaran yang telah dikembangkan dengan menggunakan program *Adobe Flash* pada pokok bahasan hidrolisis garam dengan nilai rata – rata 3,76 berdasarkan BSNP, hal ini diperkuat dengan penilaian pengembangan media interaktif sesuai dengan Standar Isi yang ditetapkan oleh tim ahli dengan nilai rata – rata 4,68 sehingga sangat layak untuk digunakan dalam pembelajaran kimia; terdapat perbedaan hasil belajar melalui multimedia pembelajaran interaktif berbasis *Problem Based Learning* dan media pembelajaran *powerpoint* berbasis *Direct Instruction* ( $p = 0,000$ ); terdapat perbedaan hasil belajar melalui multimedia pembelajaran interaktif berbasis *Problem Based Learning* dan media pembelajaran *powerpoint* berbasis *Direct Instruction* pada tingkat motivasi tinggi dan rendah ( $p = 0,000$ ); terdapat interaksi yang signifikan antara penggunaan kedua media pembelajaran dengan tingkat motivasi terhadap peningkatan hasil belajar ( $p = 0,008$ ).

Kata Kunci: Multimedia Pembelajaran Interaktif, *Adobe Flash*, *Problem Based Learning* (PBL), Motivasi Siswa, Hasil Belajar Siswa, Hidrolisis Garam.

## ABSTRACT

Hariani Siregar: **Multimedia Development Learning Interactive by Using Program Adobe Flash Based on Problem Based Learning (PBL) to Increase Student Motivation and Learning Outcomes in Salt Hydrolysis Material.** Thesis. Medan: Chemical Education Study Program, Postgraduate of Medan State University, 2018.

This study aims to determine the feasibility of which chemical learning media for salt hydrolysis material that has been used in high school according to BSNP; obtain interactive chemistry learning media that can increase motivation and student learning outcomes developed according to BSNP and interactive; knowing the increase in motivation and student learning outcomes for the interactive learning media developed. This research includes research and development with the development model *Analysis-Design-Development-Implementation-Evaluate*. The population in this study were all XI classes of Barumon Tengah 1 High School, Padang Lawas District 2017/2018 school year. The sampling technique is purposive sampling. The Sample of this research consisted of two classes where The science Class 2 dan the Science Class 3 each consisted of 25 students. The research instruments were in the form of a modified questionnaire from the BSNP, an assessment questionnaire for the development of interactive learning media, a valid and reliable learning outcome test, a motivation sheet. The analysis technique used is the technique Two Way Anova with the test General Linear Model (GLM) in the program SPSS 17.00. The results of the study concluded that: the learning media using Powerpoint used in Barumon Tengah 1 Public High School on salt hydrolysis material with an average value of 2.99 had a fairly decent category to be used based on BSNP, but there were several components of the media that needed to be developed; learning media that have been developed using the program Adobe Flash on the subject of salt hydrolysis with an average value of 3.76 based on BSNP, this is reinforced by the evaluation of interactive media development in accordance with the Content Standards set by the expert team with an average value of 4,68 so that is very feasible to be used in chemistry learning; there are differences in learning outcomes through interactive learning multimedia based on Problem Based Learning (PBL) and learning media powerpoint based Direct Instruction (DI) ( $p = 0,000$ ); there are differences in learning outcomes through interactive learning multimedia based on PBL and learning media powerpoint DI-based at high and low motivation levels ( $p = 0,000$ ); there is a significant interaction between the use of both learning media and the level of motivation towards improving learning outcomes ( $p = 0.008$ ).

Keywords: Interactive Learning Multimedia, *Adobe Flash*, *Problem Based Learning* (PBL), Student Motivation, Student Learning Outcomes, Salt Hydrolysis.