ABSTRAK

Day Dosmayhot Simaremare: **Pengembangan *E-book* Biokimia untuk Meningkatkan Hasil Belajar dan Motivasi Belajar Calon Guru Kimia.** Tesis. Medan: Program Studi Pendidikan Kimia, Pascasarjana Universitas Negeri Medan, 2022.

Teknologi merupakan basis kehidupan manusia sehingga pendidik sebagai fasilitator harus kreatif dan inovatif dalam proses pembelajaran. *E-book* merupakan inovasi pengembangan bahan ajar dengan menggunakan teknologi. Penelitian ini bertujuan untuk mengetahui (1) hasil analisis kebutuhan bahan ajar, (2) kelayakan *e-book* biokimia metabolisme berdasarkan Badan Standar nasional Pendidikan (BNSP), (3) peningkatan hasil belajar calon guru kimia setelah menggunakan *e-book* biokimia metabolisme, (4) motivasi belajar calon guru kimia setelah menggunakan *e-book* biokimia metabolisme, (5) adanya korelasi yang positif dan signifikan antara motivasi belajar dengan peningkatan hasil belajar calon guru kimia yang menggunakan *e-book* biokima, (6) Mengetahui respon calon guru kimia terhadap *e-book* biokimia metabolisme untuk pembelajaran biokimia metabolisme. Penelitian ini merupakan penelitian pengembangan dengan model ADDIE. Data diolah menggunakan metode statistic deskriptif. Hasil penelitian menunjukkan bahwa (1) adanya kebutuhan bahan ajar biokimia metabolisme, (2) kelayakan *e-book* biokimia metabolisme yang dikembangkan telah memenuhi kriteria kelayakan 3.45 dengan kategori sangat layak, (3) Peningkatan hasil belajar calon guru kimia setelah menggunakan *e-book* biokimia sebesar 0,74 (kategori tinggi), (4) motivasi belajar calon guru kimia setelah menggunakan *e-book* biokimia sebesar 83,19% dengan kategori sangat termotivasi, (5) Adanya korelasi yang positif signifikan antara motivasi belajar dengan peningkatan hasil belajar calon guru kimia yang menggunakan *e-book* biokimia metabolisme sebesar 0.719 dan nilai signifikansi sebesar 0.006 dengan kriteria mempunyai hubungan yang kuat, (6) respon calon guru kimia terhadap *e-book* biokimia dikategorikan sangat baik dengan rata-rata 85,1%.

Kata Kunci: *E-book* biokimia metabolisme, hasil belajar, motivasi belajar, respon calon guru kimia

ABSTRACT

Day Dosmayhot Simaremare: **Development e-book of Biochemistry metabolism to Improve Learning Outcomes and Learning Motivation of Chemistry Teacher Candidat.** Thesis. Medan. Chemical Education Studi Program. Postgraduate Program, State University of medan, 2022.

Technology is the basis of human life so that education as a facilitator must be creative and innovative in the learning process. E-books are innovations in developing teaching materials using technology. This study aims to determine (1) the results of the analysis of the need for teaching materials, (2) the feasibility of the metabolic biochemistry e-book based on the National Education Standards Agency (BNSP), (3) the improvement in the learning outcomes of chemistry teacher candidates after using the metabolic biochemistry e-book , (4) knowing the learning motivation of chemistry teacher candidates after using the metabolic biochemistry e-book, (5) Knowing the positive and significant correlation between learning motivation and chemistry candidate teacher learning outcomes using the biochemistry e-book, (6) Knowing the response of prospective chemistry teachers to the metabolic biochemistry e-book for the study of metabolic biochemistry. This research is a development research with ADDIE model. The data was processed using descriptive statistical methods. The results showed that (1) there is a need for metabolic biochemistry book, (2) the feasibility of the metabolic biochemistry e-book developed had met the eligibility criteria of 3.45 with a very feasible category, (2) The improvement in the learning outcomes of prospective chemistry teachers after using the biochemistry e-book was 0.74 (high category), (3) find out the learning motivation of chemistry teacher candidates after using the use of biochemistry e-books with a value of 83.19%, (4) There is a positive and significant correlation between learning motivation and learning outcomes of chemistry teacher candidates who use metabolic biochemistry e-books of 0.719 and a significance value of 0.006 with the criteria having a strong relationship, (5) the response of prospective chemistry teachers to biochemistry e-books is categorized as very good with an average of 85.1%.

Key Word: E-book biochemistry metabolism, learning outcomes, Learning motivation, The responses of student