

## ABSTRAK

Maria Meita Simanjuntak: Pengembangan Media Pembelajaran Online Pada Materi Substansi Genetika dan Pembelahan Sel di Kelas XII SMA Methodist El Shadday Perbaungan

Tesis: Program Pascasarjana Negeri Medan, Juli 2024

Penelitian ini dilaksanakan dengan tujuan untuk: (1) Pengembangan produk media pembelajaran online pada materi Substansi Genetik dan Pembelahan Sel melalui uji kelayakan dan validitas oleh ahli materi dan ahli media yang menyatakan bahwa media pembelajaran biologi ini layak digunakan di lapangan. ; (2) Berdasarkan hasil analisis data setelah dilaksanakan proses pembelajaran menggunakan media pembelajaran online berpengaruh terhadap hasil belajar siswa melalui aktivitas belajar siswa yang lebih aktif dan komunikatif; (3) Keefektifan media pembelajaran pada materi Substansi Genetika dan Pembelahan Sel melalui satu kali percobaan dengan persentase ketuntasan meningkat dan respon siswa sangat positif. Berdasarkan Gain Score, tingkat keefektifan media pembelajaran online pada materi Genetika dan Pembelahan Sel berpengaruh terhadap hasil belajar siswa. Pada uji coba lapangan syarat keefektifan terpenuhi, dapat disimpulkan bahwa media pembelajaran biologi online pada materi Substansi Genetik dan Pembelahan Sel yang dikembangkan telah efektif digunakan dan dapat meningkatkan hasil belajar siswa SMA pada materi Substansi Genetik dan Pembelahan Sel. Metode penelitian menganut model Borg and Gall 4-D yang meliputi tahap penentuan atau pendefinisian, tahap desain, tahap pengembangan, dan tahap diseminasi.

Kata Kunci: Media pembelajaran biologi online, Substansi Genetik dan Pembelahan Sel, Pengembangan Media Pembelajaran

## ABSTRACT

Maria Meita Simanjuntak: Development of Online learning Media Products on Genetics Substance and Cell Division material in Private High Schools Students Methodist El-Shadday Perbaungan.

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This development research aims of: (1) Development of online learning media products on Genetic Substance and Cell Division material through feasibility and validity tests by material experts and media experts stating that this biology learning media is suitable for use in the field; (2) Based on the results of data analysis after carrying out the learning process using online learning media, it influences student learning outcomes through more active and communicative student learning activities; (3) The effectiveness of learning media on Genetic Substance and Cell Division material through one trial with an increasing percentage of completion and very positive student responses. Based on the Gain Score, the level of effectiveness of online learning media on Genetic Substance and Cell Division material influences student learning outcomes. In the field trial, the requirements for effectiveness were met, it can be concluded that the online biology learning media on Genetic Substance and Cell Division material that has been developed has been effectively used and can improve high school students' learning outcomes on Genetic Substance and Cell Division material.. The research method adheres to Borg and Gall 4-D model, which includes the determination or definition step, the design stage, the development stage, and the dissemination stage.

Keywords:, Online Biology Learning Media, Genetic Substance and Cell Division, Learning Media Development.