

**PENGEMBANGAN *E-BOOK* INTERAKTIF MATERI SISTEM  
EKSKRESI UNTUK SISWA KELAS XI MA UNGGULAN HIKMATUL  
AMANAH PACET MOJOKERTO JAWA TIMUR**

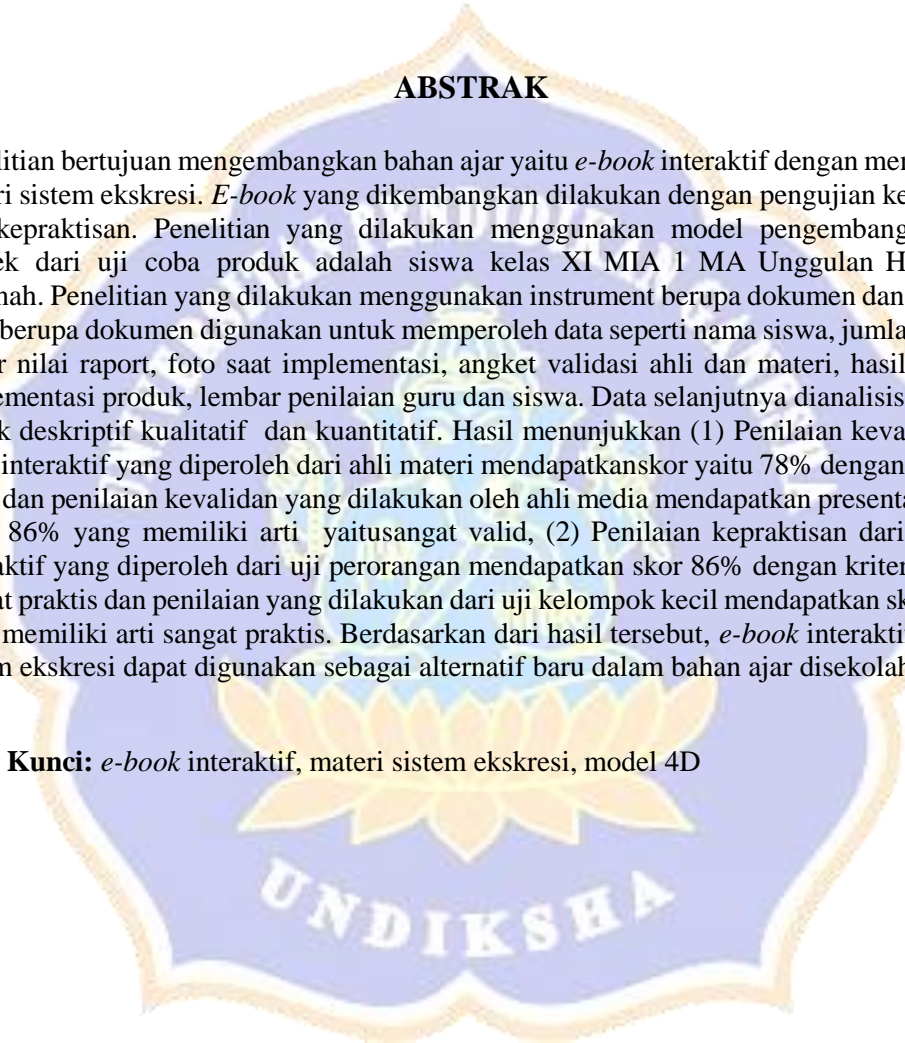
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**ABSTRAK**

Penelitian bertujuan mengembangkan bahan ajar yaitu *e-book* interaktif dengan mengambil materi sistem ekskresi. *E-book* yang dikembangkan dilakukan dengan pengujian kevalidan dan kepraktisan. Penelitian yang dilakukan menggunakan model pengembangan 4D. Subjek dari uji coba produk adalah siswa kelas XI MIA 1 MA Unggulan Hikmatul Amanah. Penelitian yang dilakukan menggunakan instrument berupa dokumen dan angket. Data berupa dokumen digunakan untuk memperoleh data seperti nama siswa, jumlah kelas, daftar nilai raport, foto saat implementasi, angket validasi ahli dan materi, hasil belajar implementasi produk, lembar penilaian guru dan siswa. Data selanjutnya dianalisis dengan teknik deskriptif kualitatif dan kuantitatif. Hasil menunjukkan (1) Penilaian kevalidan *e-book* interaktif yang diperoleh dari ahli materi mendapatkanskor yaitu 78% dengan kriteria valid dan penilaian kevalidan yang dilakukan oleh ahli media mendapatkan presentase skor yaitu 86% yang memiliki arti yaitusangat valid, (2) Penilaian kepraktisan dari *e-book* interaktif yang diperoleh dari uji perorangan mendapatkan skor 86% dengan kriteria yaitu sangat praktis dan penilaian yang dilakukan dari uji kelompok kecil mendapatkan skor 95% yang memiliki arti sangat praktis. Berdasarkan dari hasil tersebut, *e-book* interaktif materi sistem ekskresi dapat digunakan sebagai alternatif baru dalam bahan ajar disekolah.

**Kata Kunci:** *e-book* interaktif, materi sistem ekskresi, model 4D



**DEVELOPMENT OF INTERACTIVE E-BOOK EXCRETION SYSTEM  
MATERIALS FOR CLASS XI STUDENTS MA UNGGULAN HIKMATUL  
AMANAH PACET MOJOKERTO EAST JAVA**

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**ABSTRACT**

*This study aims to develop teaching materials, namely interactive e-books by taking excretory system materials. The developed e-book is carried out by testing its validity and practicality. The research was conducted using a 4D development model. The subjects of the product trial were students of class XI MIA 1 MA Unggulan Hikmatul Amanah. The research was conducted using instruments in the form of documents and questionnaires. Data in the form of documents is used to obtain data such as student names, number of classes, list of report cards, photos during implementation, expert and material validation questionnaires, product implementation learning outcomes, teacher and student assessment sheets. The data were then analyzed using qualitative and quantitative descriptive techniques. The results show (1) The interactive e-book validity assessment obtained from material experts gets a score of 78% with valid criteria and the validity assessment carried out by media experts gets a score percentage of 86% which means that it is very valid, (2) Practicality assessment the interactive e-book obtained from the individual test got a score of 86% with the criteria that it was very practical and the assessment made from the small group test got a score of 95% which has a very practical meaning. Based on these results, an interactive e-book of excretory system materials can be used as a new alternative in teaching materials in schools.*

**Keywords:** *interactive e-book, excretory system material, 4D model*

