

ABSTRAK

Muhiddin, 2026. Pengembangan E-Book Matematika Berbasis Budaya Papua Barat untuk Materi Aritmatika Sosial di Sekolah Dasar. Tesis. Program Studi Magister Pendidikan Matematika Program Pascasarjana Universitas Muhammadiyah Makassar. Pembimbing I Irwan Akib dan pembimbing II Sitti Fithriani Saleh.

Penelitian ini bertujuan 1) mendeskripsikan proses pengembangan *e-book* matematika berbasis budaya Papua Barat untuk materi aritmatika sosial di kelas IV sekolah dasar; 2) mendeskripsikan kevalidan *e-book* matematika berbasis budaya Papua Barat untuk materi aritmatika sosial di kelas IV sekolah dasar; 3) mendeskripsikan kepraktisan *e-book* matematika berbasis budaya Papua Barat untuk materi aritmatika sosial di kelas IV sekolah dasar; 4) mendeskripsikan keefektifan *e-book* matematika berbasis budaya Papua Barat untuk materi aritmatika sosial di kelas IV sekolah dasar. Penelitian ini merupakan *design research* (penelitian pengembangan) dengan jenis penelitian *development studies* (studi pengembangan). Prosedur penelitian tahapan *educational design research* Plomp yang terdiri atas tiga tahap, yaitu studi pendahuluan, pengembangan atau prototipe, dan penilaian.

Penelitian ini menghasilkan produk *e-book* matematika berbasis budaya Papua Barat yang terdiri dari tiga bagian yaitu awal, inti, dan akhir. Bagian awal terdiri dari komponen capaian pembelajaran dan elemen, peta konsep, petunjuk penggunaan buku, pengenalan tokoh. Bagian inti berisi materi pelajaran dan kegiatan belajar yang dikaitkan dengan budaya Papua Barat. Kegiatan dalam *e-book* yaitu Ayo Membaca, Ayo Belajar Bersama, Ayo Berlatih, Ayo Berpetualang, dan Ayo Bercerita. Bagian akhir berisi daftar pustaka *e-book*. *e-book* dibuat menggunakan *web tool* Book Creator. Hasil penilaian validator pendidikan matematika sekolah dasar, validator bahasa Indonesia, dan validator teknologi pendidikan terhadap *e-book* berada pada kategori valid. Hasil penilaian guru terhadap *e-book* berada pada kategori praktis. Setelah dilakukan uji coba di lapangan, diperoleh hasil tiga indikator keefektifan, yaitu keterlaksanaan *e-book* matematika berbasis budaya Papua Barat, respon peserta didik terhadap *e-book* matematika berbasis budaya papua barat, serta hasil belajar peserta didik menunjukkan hasil positif. Dengan demikian, *e-book* matematika berbasis budaya Papua Barat valid, praktis, dan efektif digunakan dalam pembelajaran aritmatika sosial di kelas IV sekolah dasar.

Kata Kunci: *e-book*, budaya Papua Barat, Aritmatika Sosial, sekolah dasar

ABSTRACT

Muhiddin, 2026. *Development of a West Papua Culture-Based Mathematics E-Book for Social Arithmetic in Elementary Schools.* Thesis. Master's Program in Mathematics Education, Postgraduate Program, Universitas Muhammadiyah Makassar. Supervised by Irwan Akib and Sitti Fithriani Saleh.

This study aimed to 1) describe the development process of a West Papua culture-based mathematics e-book for social arithmetic in Grade IV elementary school; 2) describe the validity of the West Papua culture-based mathematics e-book for social arithmetic in Grade IV elementary school; 3) describe the practicality of the West Papua culture-based mathematics e-book for social arithmetic in Grade IV elementary school; and 4) describe the effectiveness of the West Papua culture-based mathematics e-book for social arithmetic in Grade IV elementary school. This study employed design research with the type of development studies. The research procedure followed the Plomp educational design research model, which consists of three stages: preliminary research, development or prototyping, and assessment.

The study produced a West Papua culture-based mathematics e-book consisting of three main sections: introduction, main content, and closing. The introductory section includes learning outcomes and elements, a conceptual map, instructions for using the e-book, and character introductions. The main content section presents learning materials and activities integrated with West Papuan culture. The learning activities in the e-book include *Let's Read*, *Let's Learn Together*, *Let's Practice*, *Let's Explore*, and *Let's Tell Stories*. The closing section contains the e-book references. The e-book was developed using the Book Creator web tool. The validation results from elementary mathematics education experts, Indonesian language experts, and educational technology experts indicated that the e-book was in the valid category. The teachers' evaluation results indicated that the e-book was in the practical category. After the field implementation, three indicators of effectiveness were obtained, namely the implementation of the West Papua culture-based mathematics e-book, students' responses to the e-book, and students' learning outcomes, all of which showed positive results. Therefore, the West Papua culture-based mathematics e-book is valid, practical, and effective for use in teaching social arithmetic in Grade IV elementary school.