# ABSTRAK

**Wulandari Nasution, NIM 4163311071 (2016). Pengembangan Buku Digital Berbasis Model Pembelajaran Discovery Learning untuk Meningkatkan Kemampuan Pemecahan Masalah Matematis Siswa di SMP Negeri 3 Medan**

Penelitian ini bertujuan untuk memperoleh buku digital berbasis model pembelajaran discovery learning yang valid, praktis, dan efektif, sehingga dapat meningkatkan kemampuan pemecahan masalah matematis siswa pada materi jajargenjang. Instrumen penelitian yang digunakan adalah lembar validasi angket dan instrumen, lembar validasi RPP, lembar validasi media, angket respon siswa dan guru terhadap buku digital. Setelah seluruh instrumen dinyatakan valid oleh validator, kemudian dilakukan uji keterbacaan dan uji coba lapangan. Berdasarkan hasil penelitian yang menunjukkan bahwa buku digital berbasis model pembelajaran discovery learning pada materi jajargenjang yang dikembangkan adalah: (1) perangkat pembelajaran berbasis model pembelajaran discovery learning yang telah dikembangkan sudah memenuhi kriteria kevalidan berdasarkan penilaian validator dengan nilai validitas materi sejumlah 3,17 tergolong kategori sangat layak dan nilai validitas materi sejumlah 3,05 tergolong kategori layak. (2) Buku digital berbasis model pembelajaran discovery learning pada materi jajargenjang yang dikembangkan telah memenuhi kreteria melalui : a) hasil angket respon guru terhadap buku digital menunjukkan nilai kepratisan sejumlah 3,29 tergolong kategori sangat praktis b) hasil angket respon siswa terhadap buku digital menunjukkan niali kepraktisan sebesar 3,46 dengan kategori sangat praktis. (3) Buku digital berbasis model pembelajaran discovery learning yang dikembangkan memenuhi kriteria efektif dengan: a) ketuntasan belajar siswa secara klasikal 88%; b) lebih dari 65% siswa mencapai 75% tujuan pembelajaran untuk setiap indikator; c) waktu pembelajaran sama dengan pembelajaran biasa pada uji coba lapangan serta respon siswa baik terhadap bahan ajar yang dikembangkan. Melalui uji Gain, terlihat bahwa kemampuan pemecahan masalah matematis siswa menggunakan buku digital berbasis model pembelajaran discovery learning mengalami peningkatan sebesar 0,79 artinya dalam kategori tinggi.

**Kata Kunci**: Buku Digital, Validitas, Praktis, Efektif, Model Pembelajaran Discovery Learning, Kemampuan Pemecahan Masalah, jajargenjang.

# ABSTRACT

**Wulandari Nasution, NIM 4163311071 (2016). Development of Digital Books Based on Discovery Learning Learning Models to Improve Students' Mathematical Problem Solving Ability at SMP Negeri 3 Medan**

This study aims to obtain a digital book based on a valid, practical, and effective discovery learning learning model, so that it can improve students' mathematical problem solving abilities on parallelogram material. The research instruments used were questionnaire and instrument validation sheets, lesson plans validation sheets, media validation sheets, student and teacher response questionnaires to digital books. After all instruments are declared valid by the validator, then the readability test and field trials are carried out. Based on the results of research showing that digital books based on discovery learning learning models on parallelogram materials developed are: (1) learning devices based on discovery learning learning models that have been developed have met the validity criteria based on the validator's assessment with a material validity value of 3.17 belonging to the category very feasible and the material validity value of 3.05 is classified as a decent category. (2) The digital book based on the discovery learning learning model on the developed parallelogram material has met the criteria through: a) the results of the teacher's response questionnaire to the digital book show a practical value of 3.29 belonging to the very practical category b) the results of the student response questionnaire to the digital book show practicality value is 3.46 with very practical category. (3) The digital book based on the discovery learning learning model that was developed meets the effective criteria by: a) classically 88% mastery of student learning; b) more than 65% of students achieved 75% of the learning objectives for each indicator; c) learning time is the same as ordinary learning in field trials and good student responses to the developed teaching materials. Through the Gain test, it can be seen that the mathematical problem solving ability of students using digital books based on the discovery learning learning model has increased by 0.79, meaning that it is in the high category.

**Keywords:** Digital Books, Validity, Practicality, Effectiveness, Discovery Learning Learning Model, Problem Solving Ability, parallelogram.