

ABSTRAK

PUTRI SUCI MARDHATILLAH. Pengembangan Media Pembelajaran Berbasis *Adobe Flash* Menggunakan Model Pembelajaran *Thinking Aloud Pair Problem Solving* Untuk Meningkatkan Kemampuan Spasial Dan Resiliensi Matematis Siswa. Tesis. Medan: Program Studi Pendidikan Matematika Pascasarjana Universitas Medan. 2022.

Penelitian ini bertujuan untuk mendeskripsikan: 1) Kevalidan media pembelajaran berbasis *Adobe Flash* yang telah dikembangkan; 2) Kepraktisan media pembelajaran berbasis *Adobe Flash* yang telah dikembangkan 3) Keefektifan media pembelajaran berbasis *Adobe Flash* yang telah dikembangkan; 4) Peningkatan kemampuan spasial siswa yang diajarkan dengan media pembelajaran berbasis *Adobe Flash* yang telah dikembangkan; dan 5) pencapaian resiliensi matematis siswa yang diajarkan dengan media pembelajaran berbasis *Adobe Flash* yang telah dikembangkan; (6) Proses jawaban siswa dalam menyelesaikan soal kemampuan spasial. Penelitian ini merupakan penelitian pengembangan. Model Pengembangan yang digunakan adalah model pengembangan Tessmer, Penelitian ini dilakukan melalui dua tahap, yakni tahap *preliminary* dan tahap *formative evaluation (prototyping)* yang meliputi *expert review*, *one-to-one* dan *small group* serta *field test*. Dari hasil uji coba I dan uji coba II diperoleh: 1) Pengembangan media pembelajaran matematika berbasis *Adobe Flash* menggunakan model pembelajaran *Thinking Aloud Pair Problem Solving* termasuk dalam kategori valid, ditinjau dari : a) penilaian ahli/praktisi; dan b) komponen bahan ajar dinyatakan dapat diterapkan; 2) Pengembangan media pembelajaran berbasis *Adobe Flash* menggunakan model pembelajaran *Thinking Aloud Pair Problem Solving* juga telah memenuhi kriteria praktis ditinjau dari : a) angket guru; b) respon siswa; dan c) ketuntasan Lembar Kerja Peserta Didik (LKPD) kelompok pada setiap pertemuan yang mencapai 50% atau lebih dari setengah kelompok tuntas; 3) Pengembangan media pembelajaran matematika berbasis *Adobe Flash* menggunakan model pembelajaran *Thinking Aloud Pair Problem Solving* memenuhi kriteria efektif, ditinjau dari : a) ketuntasan belajar siswa secara klasikal; dan b) penggunaan waktu penelitian sesuai rencana pelaksanaan pembelajaran; 4) Terdapat peningkatan kemampuan spasial siswa menggunakan media pembelajaran yang dikembangkan; 5) Pencapaian resiliensi matematis siswa menggunakan pengembangan media pembelajaran berbasis *Adobe Flash* mengalami peningkatan dari kategori rendah ke kategori tinggi; dan 5) proses jawaban siswa pada uji coba II lebih baik dari uji coba I.

Kata kunci : Media Pembelajaran, *Thinking Aloud Pair Problem Solving*, Kemampuan Spasial, Resiliensi Matematis.

ABSTRACT

PUTRI SUCI MARDHATILAH. Development of Adobe Flash-Based Learning Media Using Thinking Aloud Pair Problem Solving Learning Model to Improve Students' Spatial Ability and Mathematical Resilience. Thesis. Medan: Postgraduate Mathematics Education Study Program, University of Medan. 2022.

This study aims to describe: 1) the validity of the Adobe Flash-based learning media that has been developed; 2) The practicality of the developed Adobe Flash-based learning media; 3) The effectiveness of the developed Adobe Flash-based learning media; 4) Increasing the spatial ability of students who are taught using Adobe Flash-based learning media that has been developed; and 5) the achievement of students' mathematical resilience taught with Adobe Flash-based learning media that has been developed; (6) The process of student answers in solving spatial ability questions. This research is a development research. The development model used is the Tessmer development model. This research was carried out in two stages, namely the preliminary stage and the formative evaluation (prototyping) stage which included expert review, one-to-one and small group and field tests. From the results of trial I and trial II obtained: 1) Development of Adobe Flash-based mathematics learning media using the Thinking Aloud Pair Problem Solving learning model is included in the valid category, in terms of: a) expert/practitioner assessment; and b) the components of teaching materials are declared applicable; 2) The development of learning media based on Adobe Flash using the Thinking Aloud Pair Problem Solving learning model has also met the practical criteria in terms of: a) teacher questionnaires; b) student responses; and c) the completeness of the Group Student Worksheet (LKPD) at each meeting which reaches 50% or more than half of the group completes; 3) Development of Adobe Flash-based mathematics learning media using the Thinking Aloud Pair Problem Solving learning model meets the effective criteria, in terms of: a) classical student learning completeness; and b) the use of research time according to the lesson plan; 4) There is an increase in students' spatial ability using the developed learning media; 5) The achievement of students' mathematical resilience using the development of learning media based on Adobe Flash has increased from the low category to the high category; and 5) the student's answer process in the second trial was better than the first trial.

Keywords : Learning Media, Thinking Aloud Pair Problem Solving, Spatial Ability, Mathematical Resilience.