

ABSTRAK

Puspita Siwi Mustikaningrum, 2026. *Pengembangan Digital worksheet Berbasis Model Pembelajaran Kooperatif Tipe NHT Untuk Meningkatkan Computational Thinking Siswa Kelas 5 SD*. Skripsi. Program Studi Pendidikan Guru Sekolah Dasar, FKIP, Universitas PGRI Madiun. Pembimbing (I) Dr. Rissa Prima Kurniawati, M.Pd., (II) Dr. Elly's Mersina Mursidik, M.Pd.

Pembelajaran matematika di sekolah dasar masih menggunakan lembar kerja yang kurang interaktif dan belum mengintegrasikan kemampuan *computational thinking* sehingga siswa mengalami kesulitan dalam menyelesaikan masalah secara sistematis. Hasil observasi menunjukkan bahwa bahan ajar yang digunakan guru masih terbatas pada LKS cetak dengan soal yang kurang kontekstual dan belum mendukung pengembangan keterampilan berpikir komputasional siswa. Oleh karena itu, diperlukan inovasi bahan ajar berupa *digital worksheet* berbasis model pembelajaran kooperatif tipe *Numbered Heads Together* (NHT) yang memadukan teknologi dan aktivitas pembelajaran interaktif. Penelitian ini bertujuan untuk mengembangkan dan mengetahui kelayakan *digital worksheet* berbasis model pembelajaran kooperatif tipe NHT untuk meningkatkan kemampuan *computational thinking* siswa kelas 5 SD. Penelitian ini menggunakan metode *Research and Development* (R&D) dengan model ADDIE (*Analysis, Design, Development, Implementation, Evaluation*). Teknik pengumpulan data menggunakan wawancara, angket validasi, angket respons guru dan siswa, tes (*pretest-posttest*), dan dokumentasi. Subjek penelitian adalah 14 siswa kelas 5 SDN Wayut 03, sedangkan data dianalisis secara deskriptif kuantitatif dan kualitatif. Hasil penelitian menunjukkan bahwa *digital worksheet* berbasis model pembelajaran kooperatif tipe NHT berhasil dikembangkan sesuai kebutuhan pembelajaran matematika materi luas dan keliling bangun datar dengan mengintegrasikan berbagai fitur interaktif. Selain itu, produk dinyatakan sangat layak digunakan berdasarkan validasi ahli media sebesar 100%, ahli bahasa sebesar 80%, ahli materi sebesar 77,78%, respon siswa sebesar 90,21%, dan respon guru sebesar 97%, serta terbukti efektif meningkatkan kemampuan *computational thinking* siswa yang ditunjukkan oleh peningkatan rata-rata nilai dari 68,92 pada *pretest* menjadi 85,35 pada *posttest*. Dengan demikian, *digital worksheet* berbasis model pembelajaran kooperatif tipe NHT dinyatakan layak dan efektif digunakan untuk meningkatkan kemampuan *computational thinking* siswa kelas 5 sekolah dasar pada materi luas dan keliling bangun datar.

Kata Kunci : *Digital worksheet, Model Pembelajaran Kooperatif Tipe NHT, Computational Thinking*

ABSTRACT

Puspita Siwi Mustikaningrum. 2026. Development of a Digital Worksheet Based on the Numbered Heads Together (NHT) Cooperative Learning Model to Improve Computational Thinking Skills of Fifth-Grade Elementary School Students. Undergraduate Thesis. Elementary School Teacher Education Study Program, Faculty of Teacher Training and Education, Universitas PGRI Madiun. Advisors: (I) Dr. Rissa Prima Kurniawati, M.Pd.; (II) Dr. Elly's Mersina Mursidik, M.Pd.

Mathematics learning in elementary schools still relies on worksheets that are less interactive and do not integrate computational thinking skills, making it difficult for students to solve problems systematically. The results of the preliminary observation revealed that the teaching materials used by teachers were limited to printed worksheets containing less contextual problems and had not yet supported the development of students' computational thinking skills. Therefore, an innovation in teaching materials is needed in the form of a digital worksheet based on the Numbered Heads Together (NHT) cooperative learning model, which integrates technology with interactive learning activities. This study aimed to develop and determine the feasibility of a digital worksheet based on the NHT cooperative learning model to improve the computational thinking skills of fifth-grade elementary school students. This study employed the Research and Development (R&D) method using the ADDIE model, which consists of Analysis, Design, Development, Implementation, and Evaluation. Data were collected through interviews, expert validation questionnaires, teacher and student response questionnaires, pretest–posttest assessments, and documentation. The research subjects consisted of 14 fifth-grade students at SDN Wayut 03. The collected data were analyzed using both quantitative and qualitative descriptive methods. The results indicated that the digital worksheet based on the NHT cooperative learning model was successfully developed in accordance with the learning needs for the topic of area and perimeter of two-dimensional shapes by integrating various interactive features. Furthermore, the product was considered highly feasible based on the expert validation results, obtaining scores of 100% from the media expert, 80% from the language expert, and 77.78% from the subject matter expert. It also received very positive responses from students (90.21%) and the teacher (97%). In addition, the digital worksheet proved to be effective in improving students' computational thinking skills, as demonstrated by the increase in the average score from 68.92 on the pretest to 85.35 on the posttest. Therefore, the digital worksheet based on the NHT cooperative learning model is considered both feasible and effective for improving the computational thinking skills of fifth-grade elementary school students in learning the topic of area and perimeter of two-dimensional shapes.

Keywords: *Digital Worksheet, Numbered Heads Together (NHT) Cooperative Learning Model, Computational Thinking*