

Mutiara Tsani, 2026, Pengembangan Media Pixel Coding Untuk Menstimulasi Kemampuan Berpikir Komputasional Anak Usia 5-6 Tahun. Skripsi, Program Studi Pendidikan Guru Pendidikan Anak Usia Dini, Fakultas Keguruan Ilmu Pendidikan, Universitas Trunodjoyo Madura.
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ABSTRAK

Kemampuan berpikir komputasional merupakan salah satu kemampuan penting yang perlu dikembangkan sejak usia dini untuk melatih cara berpikir logis, sistematis, dan pemecahan masalah anak. Penelitian ini bertujuan untuk mengembangkan media *pixel coding* berbasis *unplugged coding* dalam menstimulasi kemampuan berpikir komputasional anak usia 5–6 tahun. Penelitian ini menggunakan model pengembangan Borg & Gall dengan 10 tahapan. Penelitian pengembangan dilakukan di PAUD Anna Husada Bangkalan pada anak usia 5–6 tahun sebanyak 29 anak. Teknik pengumpulan data menggunakan angket (ahli materi, ahli media, dan respon anak), observasi, wawancara, dan dokumentasi. Hasil penelitian dan pengembangan ini menunjukkan bahwa media *pixel coding* yang dikembangkan memperoleh kriteria “Sangat Tinggi” sehingga dinyatakan sangat layak dan tidak memerlukan revisi. Hasil respon anak menunjukkan persentase sebesar 86,11% dengan kategori “Sangat Tinggi”. Maka hasil uji coba yang telah dilakukan dapat disimpulkan bahwa media *pixel coding* mampu menstimulasi kemampuan berpikir komputasional anak yang meliputi aspek *sequencing, pattern recognition, algorithm, debugging, dan decomposition*. Pada uji efektivitas menggunakan uji *paired sample t-test* menunjukkan adanya peningkatan kemampuan berpikir komputasional anak sebelum dan sesudah menggunakan media *pixel coding*. Dengan demikian, media *pixel coding* efektif digunakan sebagai media pembelajaran dalam menstimulasi kemampuan berpikir komputasional anak usia 5–6 tahun.

Kata Kunci: Anak Usia Dini, Berpikir Komputasional, Media Pembelajaran, *Pixel Coding*

Mutiara Tsani, 2026, Development of Pixel Coding Media to Stimulate Computational Thinking Skills in Children Aged 5–6 Years. Thesis, Early Childhood Education Teacher Education Study Program, Faculty of Teacher Training and Education, Trunodjoyo University, Madura. Advisor: Titin Faridatun Nisa', S.Pd., M.Pd

ABSTRACT

Computational thinking skills are one of the important abilities that need to be developed from an early age in order to train children's logical, systematic thinking and problem-solving skills. This study aimed to develop pixel coding media based on unplugged coding to stimulate computational thinking skills in children aged 5–6 years. This study employed the Borg & Gall development model consisting of 10 stages. The research and development were conducted at PAUD Anna Husada Bangkalan involving 29 children aged 5–6 years. The data collection techniques used questionnaires (material expert validation, media expert validation, and children's responses), observations, interviews, and documentation. The results of this research and development showed that the developed pixel coding media obtained a "Very High" category, indicating that the media was highly feasible and did not require revision. The results of children's responses showed a percentage of 86.11% categorized as "Very High". Therefore, the trial results concluded that the pixel coding media was able to stimulate children's computational thinking skills, including sequencing, pattern recognition, algorithm, debugging, and decomposition aspects. The effectiveness test using a paired sample t-test showed an improvement in children's computational thinking skills before and after using the pixel coding media. Thus, pixel coding media is effective to be used as a learning medium in stimulating computational thinking skills in children aged 5–6 years.

Keywords: Early Childhood, Computational Thinking, Learning Media, Pixel Coding