

ABSTRAK

SINTA NURAENI. 2025. **Pengembangan E-LKPD Aritmetika Sosial Berbasis TaRL untuk Meningkatkan Kemampuan Bernalar Kritis Peserta Didik.** Program Studi Pendidikan Matematika, Program Pascasarjana Universitas Siliwangi.

Pengembangan E-LKPD berbasis TaRL merupakan salah satu upaya untuk meningkatkan kemampuan bernalar kritis peserta didik sesuai dengan tingkat kemampuan belajarnya. Penelitian ini bertujuan untuk mendeskripsikan pengembangan E-LKPD dan menganalisis peningkatan kemampuan bernalar kritis peserta didik. Penelitian dilaksanakan pada 29 peserta didik kelas VII B MTs Ar-Rahmah Kota Tasikmalaya. Penelitian ini menggunakan metode *Research and Development* (R&D) dengan model pengembangan ADDIE yang meliputi tahap *analyze, design, development, implementation, dan evaluation*. Teknik pengumpulan data dilakukan melalui observasi, wawancara, tes kemampuan bernalar kritis, dan angket. Instrumen yang digunakan meliputi lembar validasi ahli, angket respon, serta soal tes kemampuan bernalar kritis. Teknik analisis data menggunakan analisis deskriptif kualitatif dan statistik inferensial. Hasil penelitian menunjukkan bahwa pada tahap *analyze*, pembelajaran masih bersifat prosedural dan belum menerapkan diferensiasi. Tahap *design* menghasilkan rancangan E-LKPD yang terdiferensiasi dalam tiga level kemampuan, yaitu perlu bimbingan, cakap, dan mahir. Pada tahap *development*, E-LKPD dinyatakan sangat layak dengan persentase kelayakan materi sebesar 88% dan media sebesar 93%, serta instrumen tes sebesar 85% dengan kategori sangat layak. Produk juga dinyatakan sangat praktis berdasarkan respon guru sebesar 84% dan peserta didik sebesar 80,86%. Pada tahap *implementation*, pembelajaran dilaksanakan dalam tiga pertemuan. Selanjutnya, pada tahap *evaluation*, hasil analisis menunjukkan adanya peningkatan signifikan kemampuan bernalar kritis peserta didik, yang ditunjukkan oleh peningkatan rata-rata nilai dari 21,72 menjadi 76,59, nilai *N-Gain* sebesar 0,70 (kategori tinggi), serta hasil *uji paired sample t-test* sebesar $p = 0,000 (<0,05)$. Dengan demikian, terdapat peningkatan yang signifikan pada kemampuan bernalar kritis peserta didik setelah diterapkan E-LKPD Aritmetika Sosial berbasis TaRL.

Kata kunci: Aritmetika sosial, E-LKPD, Kemampuan bernalar kritis, TaRL.

ABSTRACT

SINTA NURAENI. 2025. *Development of a TaRL-Based Social Arithmetic E-LKPD to Improve Students' Critical Reasoning Skills*. Mathematics Education Study Program, Postgraduate Program, Siliwangi University.

The development of TaRL-based E-LKPD is an effort to improve students' critical reasoning skills according to their learning ability level. This study aims to describe the development of E-LKPD and analyze the improvement of students' critical reasoning skills. The study was conducted on 29 students of class VII B MTs Ar-Rahmah, Tasikmalaya City. This study used the Research and Development (R&D) method with the ADDIE development model which includes the stages of analyze, design, development, implementation, and evaluation. Data collection techniques were carried out through observation, interviews, critical reasoning ability tests, and questionnaires. The instruments used included expert validation sheets, response questionnaires, and critical reasoning ability test questions. Data analysis techniques used qualitative descriptive analysis and inferential statistics. The results of the study showed that at the analyze stage, learning was still procedural and had not implemented differentiation. The design stage resulted in an E-LKPD design that was differentiated into three levels of ability, namely need guidance, proficient, and advanced. During the development phase, the E-LKPD was declared highly feasible, with material feasibility of 88%, media feasibility of 93%, and test instrument feasibility of 85%, categorized as very feasible. The product was also deemed highly practical, based on responses from teachers (84%) and students (80.86%). During the implementation phase, learning took place over three sessions. Furthermore, during the evaluation phase, analysis results showed a significant increase in students' critical reasoning skills, as indicated by an increase in the average score from 21.72 to 76.59, an N-Gain value of 0.70 (high category), and a paired sample t-test result of $p = 0.000$ (<0.05). Thus, there was a significant increase in students' critical reasoning abilities after implementing TaRL-based Social Arithmetic E-LKPD

Keywords: *Critical reasoning skills, E-LKPD, Social arithmetic, TaRL.*