

ABSTRAK

Rendahnya kemampuan berpikir kritis siswa kelas V SDN 1 Muara Dua, Lhokseumawe disebabkan oleh pembelajaran yang masih berpusat pada guru, minimnya media interaktif, serta kesulitan memahami konsep abstrak seperti sistem pencernaan manusia. Penelitian ini bertujuan mengembangkan media IPAS berbantuan *Augmented Reality* (AR) serta menguji kevalidan, kepraktisan, keefektifan, dan peningkatan kemampuan berpikir kritis siswa setelah penggunaannya. Kebaruan penelitian terletak pada media AR yang dirancang khusus untuk melatih enam indikator berpikir kritis menurut Facione, yaitu interpretasi, analisis, evaluasi, inferensi, eksplanasi, dan regulasi diri, pada materi sistem pencernaan manusia yang masih terbatas diteliti. Metode yang digunakan adalah *Research and Development* (R&D) dengan model ADDIE, melibatkan 23 siswa kelas V SDN 1 Muara Dua sebagai subjek penelitian. Data dikumpulkan melalui lembar validasi ahli materi dan ahli media, angket kepraktisan guru, angket respons siswa, serta tes *pretest-posttest* bervalidasi tinggi ($\alpha = 0,82$). Hasil menunjukkan media dinyatakan sangat valid (ahli materi 88%, ahli media 89%), sangat praktis (penilaian guru 98%), dan mendapat respons sangat baik dari siswa (91%). Peningkatan berpikir kritis memperoleh nilai *N-Gain* rata-rata 0,62 (kategori sedang), dengan uji *t paired* yang membuktikan perbedaan signifikan antara *pretest* dan *posttest* ($t(22) = -14,23$, $p < 0,001$). Peningkatan tertinggi terjadi pada indikator interpretasi dan inferensi. Media IPAS berbantuan AR ini dinyatakan valid, praktis, dan efektif sebagai alternatif inovatif untuk memvisualisasikan konsep abstrak dan mendorong kemampuan berpikir kritis siswa sekolah dasar.

Kata Kunci: *Augmented Reality*, Berpikir Kritis, IPAS, Sistem Pencernaan, ADDIE

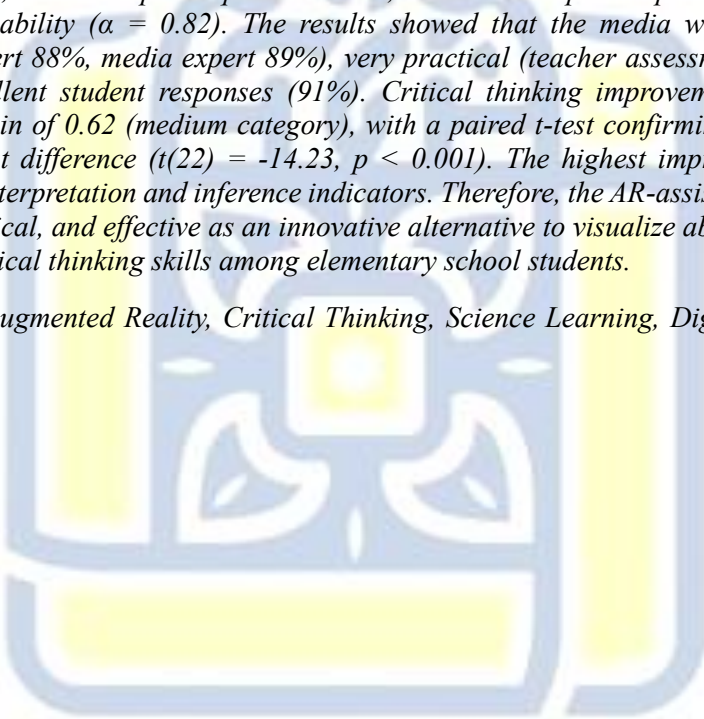


UNIVERSITAS ISLAM NEGERI
SULTANAH NAHRASIYAH
LHOKSEUMAWA

ABSTRACT

The low critical thinking skills of fifth-grade students at SDN 1 Muara Dua, Lhokseumawe were caused by teacher-centered instruction, limited use of interactive media, and difficulties in understanding abstract concepts such as the human digestive system. This study aimed to develop AR-assisted IPAS learning media and evaluate its validity, practicality, effectiveness, and impact on students' critical thinking improvement. The novelty lies in the AR media specifically designed to train six critical thinking indicators based on Facione — interpretation, analysis, evaluation, inference, explanation, and self-regulation — on the digestive system topic, which remains underexplored. This study employed a Research and Development (R&D) approach using the ADDIE model, involving 23 fifth-grade students at SDN 1 Muara Dua as research subjects. Data were collected through material and media expert validation sheets, teacher practicality questionnaires, student response questionnaires, and validated pretest-posttest instruments with high reliability ($\alpha = 0.82$). The results showed that the media was highly valid (material expert 88%, media expert 89%), very practical (teacher assessment 98%), and received excellent student responses (91%). Critical thinking improvement yielded an average N-Gain of 0.62 (medium category), with a paired t-test confirming a significant pretest-posttest difference ($t(22) = -14.23, p < 0.001$). The highest improvements were found in the interpretation and inference indicators. Therefore, the AR-assisted IPAS media is valid, practical, and effective as an innovative alternative to visualize abstract concepts and foster critical thinking skills among elementary school students.

Keywords*: *Augmented Reality, Critical Thinking, Science Learning, Digestive System, ADDIE**



UNIVERSITAS ISLAM NEGERI
SULTANAH NAHRASIYAH
LHOKSEUMAWA