ABSTRAK

Materi sistem pernapasan yang abstrak dan kompleks memerlukan media yang mempertimbangkan beban kognitif. Penelitian ini bertujuan mengembangkan media pembelajaran *Augmented Reality* (AR), menguji validitas, dan mendeskripsikan profil beban kognitif siswa. Penelitian menggunakan *Design and Development Research* (D&D) melalui tahapan *Planning*, *Production*, dan *Evaluation*. Validitas konstruk diuji menggunakan Aiken's V oleh ahli media, materi, dan guru IPA, dengan rata-rata 0,870 (sangat valid). Selanjutnya, dilakukan implementasi terbatas pada 34 siswa kelas VIII menggunakan angket beban kognitif tervalidasi menunjukkan *Extraneous Cognitive Load* rendah (2,25), *Intrinsic Cognitive Load* sedang (3,29), dan *Germane Cognitive Load* tinggi (3,73). Media AR dinyatakan valid dan mendukung pengelolaan beban kognitif siswa.

Kata kunci: *Augmented Reality*, *Cognitive Load Theory*, beban kognitif, validitas media, sistem pernapasan

UNIVERSITAS ISLAM NEGERI
SUNAN GUNUNG DJATI
BANDUNG

ABSTRACT

Abstract and complex respiratory system content requires learning media that considers cognitive load management. This study aimed to develop Augmented Reality (AR) learning media for the respiratory system, assess its validity, and describe students' cognitive load profiles. The study employed Design and Development Research (D&D) through the Planning, Production, and Evaluation stages. Construct validity was assessed using Aiken's V by media experts, material experts, and science teachers, with an overall mean of 0.870 (highly valid). Subsequently, a limited-scale implementation was conducted with 34 eighth-grade students using a validated cognitive load questionnaire. The results showed low Extraneous Cognitive Load (2.25), moderate Intrinsic Cognitive Load (3.29), and high Germane Cognitive Load (3.73). The developed AR media was valid and supported the management of students' cognitive load.

Keywords: *Augmented Reality, Cognitive Load Theory, cognitive load, media validity, respiratory system*

UNIVERSITAS ISLAM NEGERI
SUNAN GUNUNG DJATI
BANDUNG