

PENGEMBANGAN KONTEN *E-LEARNING* BERBASIS MODEL ICARE UNTUK MENINGKATKAN *STUDENT ENGAGEMENT* DAN KETERAMPILAN BERPIKIR KREATIF PADA MATA KULIAH TEKNOLOGI BARU DALAM PENGAJARAN DAN PEMBELAJARAN

ALEXANDER HAMONANGAN SIMAMORA

ABSTRAK

Penelitian ini bertujuan untuk mengembangkan dan menguji efektivitas konten *e-learning* berbasis model *Introduction, Connect, Apply, Reflect, Extend* (ICARE) pada mata kuliah Teknologi Baru dalam Pengajaran dan Pembelajaran guna meningkatkan *student engagement* dan keterampilan berpikir kreatif. Metode penelitian yang digunakan adalah *Research and Development* (R&D) dengan model pengembangan *Define, Design, Develop, Disseminate* (4D). Validasi konten melibatkan ahli materi, desain, dan media, serta dilanjutkan dengan uji coba perorangan dan kelompok kecil. Aspek kepraktisan konten *e-learning* diukur menggunakan *System Usability Scale* (SUS), aspek *student engagement* diukur menggunakan angket, dan aspek keterampilan berpikir kreatif diukur menggunakan tes. Efektivitas konten *e-learning* berbasis model ICARE diujikan melalui desain *pretest-posttest control group* dan dianalisis menggunakan MANCOVA. Hasil penelitian menunjukkan bahwa konten *e-learning* berbasis model ICARE memenuhi aspek validitas, kepraktisan, dan secara signifikan lebih efektif dibandingkan model *Direct Instruction* (DI) dalam meningkatkan keterlibatan serta keterampilan berpikir kreatif mahasiswa. Setiap tahap model ICARE diintegrasikan dalam konten sehingga mendorong partisipasi aktif, pemecahan masalah, dan refleksi, sekaligus membangun komunitas belajar yang kolaboratif. Temuan ini merekomendasikan integrasi konten berbasis model ICARE secara luas dalam pembelajaran daring di pendidikan tinggi, khususnya melalui pelibatan aktivitas kolaboratif, pemecahan masalah, dan pemanfaatan media interaktif, untuk membangun keterampilan abad 21 dan memperkuat *student engagement* serta kreativitas mahasiswa secara berkelanjutan.

Kata kunci: *e-learning*, model ICARE, *student engagement*, berpikir kreatif

DEVELOPMENT OF ICARE-BASED E-LEARNING CONTENT TO ENHANCE STUDENT ENGAGEMENT AND CREATIVE THINKING SKILLS IN THE COURSE NEW TECHNOLOGIES IN TEACHING AND LEARNING

ALEXANDER HAMONANGAN SIMAMORA

ABSTRACT

This study aims to develop and evaluate the effectiveness of e-learning content based on the Introduction, Connect, Apply, Reflect, Extend (ICARE) model in the “New Technologies in Teaching and Learning” course to enhance student engagement and creative thinking skills. The research employed a Research and Development (R&D) approach using the Define, Design, Develop, and Disseminate (4D) model. Content validation involved material, design, and media experts, followed by individual and small-group trials. The practicality of the e-learning content was measured using the System Usability Scale (SUS), student engagement was assessed through questionnaires, and creative thinking skills were measured via tests. The effectiveness of the ICARE-based e-learning content was examined using a pretest-posttest control group design and analyzed through MANCOVA. The results demonstrated that the ICARE-based e-learning content fulfilled criteria of validity and practicality and was significantly more effective than the Direct Instruction (DI) model in improving both student engagement and creative thinking skills. Each stage of the ICARE model was integrated into the content to foster active participation, problem solving, and reflection, while cultivating a collaborative learning community. The findings suggest that ICARE-based e-learning content should be more widely implemented in online higher education to promote collaborative learning, problem-solving activities, and the use of interactive media, thereby strengthening student engagement and creative thinking as essential 21st-century skills.

Keywords: e-learning, ICARE model, student engagement, creative thinking

