

ABSTRAK

Dika Anggara, I Made dkk (2025), Pengembangan Multimedia Pembelajaran Interaktif Berbasis *Contextual Teaching and Learning* Materi Jaringan Komputer untuk Meningkatkan Keterampilan Berpikir Kritis Peserta Didik Kelas X SMA Negeri 2 Denpasar. Tesis, Teknologi Pendidikan, Program Pascasarjana, Universitas Pendidikan Ganesha.

Tesi ini sudah disetujui dan diperiksa oleh Pembimbing I : Prof. Dr. Ketut Agustini, S.Si., M.Si., dan Pembimbing II : Prof. Dr. I Gde Wawan Sudatha, S.Pd., S.T., M.Pd.

Kata-kata kunci : multimedia pembelajaran interaktif, contextual teaching and learning, berpikir kritis, jaringan komputer, informatika.

Peserta didik sulit memahami materi pelajaran sehingga keterampilan berpikir kritis peserta didik kurang berkembang yang berdampak pada rendahnya hasil belajar peserta didik. Sumber belajar yang tersedia masih kurang bervariasi untuk memicu semangat belajar peserta didik karena menuntut peserta didik untuk menghafal, sementara tidak semua peserta didik dapat dengan mudah menghafal suatu materi. Peserta didik juga lebih senang mempelajari materi melalui media digital interaktif serta lebih mudah mempelajari materi yang dikaitkan dengan kehidupan sehari-hari peserta didik. Penelitian ini bertujuan untuk mengembangkan dan menguji validitas, kepraktisan, dan efektivitas multimedia pembelajaran interaktif berbasis *contextual teaching and learning* materi jaringan komputer untuk meningkatkan keterampilan berpikir kritis peserta didik kelas X di SMA Negeri 2 Denpasar. Multimedia dirancang dengan menggunakan model pengembangan AM3PU3. Validitas multimedia diukur melalui uji ahli isi, uji ahli media dan uji ahli desain menggunakan instrumen berdasarkan LORI versi 2.0, kepraktisan multimedia diukur dengan instrumen UEQ dan efektivitas multimedia diukur dengan instrumen tes berpikir kritis dasar-dasar jaringan komputer. Penelitian pengembangan ini menghasilkan multimedia pembelajaran interaktif berbasis *contextual teaching and learning* bernama SIBIJAK dengan kriteria sangat valid dari ahli isi, ahli media dan ahli desain. Total skor sebesar 100% dari ahli isi pertama, 96,67% dari ahli isi kedua, 100% dari ahli media pertama, 92% dari ahli media kedua, 100% dari ahli desain pertama dan 89% dari ahli desain kedua. Multimedia bersifat praktis dengan skor rata-rata melebihi atau sama dengan kategori *above average* pada setiap aspek UEQ pada uji coba perorangan, uji coba kelompok kecil dan uji coba lapangan. Efektivitas multimedia pembelajaran interaktif memperoleh nilai rata-rata N-Gain sebesar 0,68 dengan kategori sedang. Persentase ketuntasan klasikal sebesar 84,38% dengan kategori sangat baik, dari 32 peserta didik, sebanyak 27 peserta didik mencapai kriteria ketuntasan yang telah ditentukan, sedangkan 5 peserta didik belum mencapai ketuntasan. Hasil penelitian ini mendukung bahwa multimedia pembelajaran interaktif berbasis *contextual teaching and learning* dapat mempengaruhi peningkatan keterampilan berpikir kritis peserta didik.

ABSTRACT

Dika Anggara, I Made et al (2025), Development of Interactive Learning Multimedia Based on Contextual Teaching and Learning Computer Network Material to Improve Critical Thinking Skills of Class X Students of SMA Negeri 2 Denpasar. Thesis, Educational Technology, Graduate Study Program, University of Education Ganesha.

This thesis has also been approved and reviewed by the Supervisor 1 : Prof. Dr. Ketut Agustini, S.Si., M.Si., and Supervisor 2 : Prof. Dr. I Gde Wawan Sudatha, S.Pd., S.T., M.Pd.

Keywords: interactive learning multimedia, contextual teaching and learning, critical thinking, computer networks, informatics.

Students found it difficult to understand the subject matter so that the critical thinking skills of students are less developed which this affects students' learning outcomes. The available learning resources are still not varied enough to trigger students' enthusiasm for learning because they require students to memorize, while not all students can easily memorize material. Learners also prefer to learn material through interactive digital media and easier to learn material that is related to the students' daily lives. This study aims to develop and test the validity, practicality, and effectiveness of interactive learning multimedia based on contextual teaching and learning of computer network material to improve the critical thinking skills of class X students at SMA Negeri 2 Denpasar. Multimedia is designed using the AM3PU3 development model. The validity of multimedia was measured through content expert test, media expert test and design expert test using instruments based on LORI version 2.0, the practicality of multimedia was measured by UEQ instrument and the effectiveness of multimedia was measured by critical thinking test instrument of computer network basics. This development research produced an interactive learning multimedia based on contextual teaching and learning called SIBIJAK with very valid criteria from content experts, media experts and design experts. The total score was 100% from the first content expert, 96.67% from the second content expert, 100% from the first media expert, 92% from the second media expert, 100% from the first design expert and 89% from the second design expert. Multimedia is practical with an average score exceeding or equal to the above average category in each aspect of UEQ in individual trials, small group trials and field trials. The effectiveness of interactive learning multimedia obtained an average N-Gain score of 0.68 with a medium category. The percentage of classical completeness was 84.38% with a very good category, out of 32 students, 27 students reached the predetermined completeness criteria, while 5 students had not reached completeness. The results of this study support that interactive learning multimedia based on contextual teaching and learning can affect the improvement of students' critical thinking skills.