

Ach. Nur Chalis. 2024. *Pengembangan Game Edukasi Pengenalan Jaringan Nirkabel Berbasis Android pada Kelas XI TKJ di SMKN 1 Labang*. Skripsi, Program Studi Pendidikan Informatika, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madura. Dosen Pembimbing Muhlis Tahir, S.Pd., M.Tr.Kom.

ABSTRAK

Kurangnya media pembelajaran yang inovatif menyebabkan pemahaman terhadap materi jaringan nirkabel menurun. Serta sarana prasarana yang masih terbatas dan tidak optimal. Karena dilihat dari karakteristik siswa di SMKN 1 Labang khususnya jurusan TKJ lebih cepat menangkap materi dan lebih fokus ketika berupa animasi. Penelitian ini bertujuan mengembangkan *game* edukasi pengenalan jaringan nirkabel berbasis *android* pada kelas XI TKJ. Penelitian ini menggunakan model penelitian pengembangan MDLC (*Multimedia Development Live Cycle*). Lokasi penelitian yaitu di SMKN 1 Labang, dan subjek penelitian adalah siswa kelas XI TKJ. Instrumen yang digunakan yaitu ISO 25010 yaitu aspek *functional suitability*, *performance efficiency*, *usability*, *maintability*, *portability*. Hasil instrumen penelitian uji coba ahli media kepada dosen menggunakan ISO 25010 sebesar 99% dengan kategori sangat layak, hasil instrumen uji coba ahli media kepada guru menggunakan ISO 25010 sebesar 99% dengan kategori sangat layak, uji ahli materi dosen mendapatkan 92% dengan kategori sangat layak, dan ahli materi guru 97% dengan kategori sangat layak, uji coba kelompok kecil 94%, dan 93% dari uji coba kelompok besar dengan kategori sangat layak. Maka dari itu, dapat disimpulkan bahwa pengembangan *game* edukasi pengenalan jaringan nirkabel berbasis *android* sangat layak digunakan dan siswa akan lebih tertarik dan termotivasi untuk belajar, dan mampu meningkatkan pemahaman tentang hasil belajar secara keseluruhan.

Kata kunci: Game Edukasi, ISO 25010, Jaringan Nirkabel, MDLC.

Ach. Nur Chalis. 2024. *Development of Android-Based Educational Game Introduction to Wireless Networks in Class XI TKJ AT SMKN 1 Labang*. Thesis, Informatics Education Study Program, Faculty of Education, Trunojoyo University Madura. Supervisor Muhlis Tahir, S.Pd., M.Tr.Kom.

ABSTRACT

The lack of innovative learning media causes understanding of wireless networking material to decrease. And infrastructure is still limited and not optimal. Because judging from the characteristics of students at SMKN 1 Labang, especially the TKJ department, they grasp the material more quickly and are more focused when it is in the form of animation. This research aims to develop an Android-based educational game for introducing wireless networks in class XI TKJ. This research uses the MDLC (Multimedia Development Live Cycle) development research model. The research location is at SMKN 1 Labang, and the research subjects are class XI TKJ students. The instrument used is ISO 25010, namely aspects of functional suitability, performance efficiency, usability, maintainability, portability. The results of the media expert trial research instrument on lecturers using ISO 25010 were 99% in the very feasible category, the results of the media expert trial instrument on teachers using ISO 25010 were 99% in the very feasible category, the lecturer's material expert test was 92% in the very feasible category, and teacher material experts 97% in the very feasible category, 94% of small group trials, and 93% of large group trials in the very feasible category. Therefore, it can be concluded that the development of an Android-based educational game introducing wireless networks is very suitable for use and students will be more interested and motivated to learn, and will be able to increase their understanding of overall learning outcomes.

Keywords: Educational Games, ISO 25010, Wireless Network, MDLC