

**PENGEMBANGAN MEDIA PEMBELAJARAN SISTEM PENYIRAMAN
TUMBUHAN OTOMATIS BERBASIS *NodeMCU* PADA MATA KULIAH
SISTEM KENDALI**

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ABSTRAK

Penelitian ini bertujuan untuk mengembangkan media pembelajaran berbasis *NodeMCU* yang dirancang untuk membantu proses pembelajaran pada Mata Kuliah Sistem Kendali Cerdas di Program Studi Pendidikan Teknik Elektro Undiksha. Jenis penelitian ini adalah *Research and Development* (R&D) dengan analisis data menggunakan teknik statistik persentase yang melibatkan masukan dari ahli isi, ahli media, serta uji coba lapangan. Instrumen pengumpulan data berupa angket yang diberikan kepada ahli isi, ahli media, dan mahasiswa. Hasil penelitian menunjukkan bahwa penilaian dari ahli isi mencapai persentase 96,25% dengan kategori sangat layak, sedangkan penilaian ahli media memperoleh persentase 94,1% yang juga tergolong sangat layak. Uji kelompok kecil menunjukkan skor terendah pada responden 1 (R1) sebesar 38, yang termasuk dalam kategori sangat baik. Sementara itu, uji kelompok besar menunjukkan skor terendah pada responden 2 (R2) sebesar 36, yang berada dalam kategori baik. Berdasarkan hasil penelitian tersebut, media pembelajaran berbasis *NodeMCU* dinyatakan layak digunakan dalam proses pembelajaran pada Mata Kuliah Sistem Kendali Cerdas di Program Studi Pendidikan Teknik Elektro Undiksha.

Kata Kunci : Media Pembelajaran Sistem Penyiraman Tumbuhan Berbasis *NodeMCU*.

**DEVELOPMENT OF LEARNING MEDIA FOR AUTOMATIC PLANT
WATERING SYSTEM BASED ON NodeMCU IN CONTROL SYSTEM
COURSE**

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ABSTRACT

This study aims to develop NodeMCU-based learning media designed to assist the learning process in the Intelligent Control System Course in the Electrical Engineering Education Study Program, Undiksha. This type of research is Research and Development (R&D) with data analysis using percentage statistical techniques involving input from content experts, media experts, and field trials. The data collection instrument was a questionnaire given to content experts, media experts, and students. The results of the study showed that the assessment of content experts reached a percentage of 96.25% with a very feasible category, while the assessment of media experts obtained a percentage of 94.1% which was also classified as very feasible. The small group test showed the lowest score in respondent 1 (R1) of 38, which was included in the very good category. Meanwhile, the large group test showed the lowest score in respondent 2 (R2) of 36, which was in the good category. Based on the results of the study, NodeMCU-based learning media was declared feasible for use in the learning process in the Intelligent Control System Course in the Electrical Engineering Education Study Program, Undiksha.

Keywords: *Learning Media for Plant Watering System Based on Node MCU.*