

**EVALUATION OF CONTRAST RATIO ON
UNIVERSITAS PENDIDIKAN GANESHA E-LEARNING WEBSITE
FOR PARTIAL COLOR BLINDNESS PEOPLE USING
WEB CONTENT ACCESSIBILITY GUIDELINES (WCAG) 2.1**

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ABSTRACT

This research aims to determine the results of evaluating the contrast ratio of the Universitas Pendidikan Ganesha e-learning website for people with partial color blindness using the Web Content Accessibility Guidelines (WCAG) 2.1, as well as knowing the results of the contrast ratio recommendation for the website based on the results of the contrast ratio evaluation conducted. This research uses one of the success criteria from WCAG 2.1 as a reference, namely the minimum contrast ratio level AA, where the minimum value of the contrast ratio between foreground and background is 4.5:1. To help the process of evaluating and recommending contrast ratios, two evaluation automation tools are used, namely the WCAG Color Contrast Checker to evaluate contrast ratios, and the Polypane Color Contrast Checker to design contrast ratio recommendations. The evaluation was carried out on two major classes: login not required and login required. Pages to be evaluated include pages of all navigation menus and pages contained in one course that applies the default template. The login not required class consists of 11 pages, with a total of 707 components. From the total components, there are 516 or an average of 73% of components that comply with the minimum contrast ratio. Then as many as 191 components, or an average of 27% components, do not comply with the minimum contrast ratio. The login required class consists of 17 pages with a total of 1916 components. From the total components, there are 1257 components or an average of 66% of components that comply with the minimum contrast ratio. Then as many as 659 components, or an average of 34% of the components, do not comply with the minimum contrast ratio. Contrast ratio recommendations are made for components with a contrast ratio below the minimum WCAG 2.1 standard. From the total components that failed, 191 components for the login not required class and 659 components for the login required class. The results obtained from the contrast ratio recommendations given were 100% of the components that had passed or complied with the minimum contrast ratio standard WCAG 2.1.

Keywords: evaluation, contrast ratio, e-learning, color blindness, wcag 2.1