



**INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI
SHORT ABSTRACT OF THESIS**

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SHORT ABSTRACT

This study intends to improve the overall user experience on digital design learning platforms through usability evaluation methods, design principles, and the redesign process. The study is based on Garrett's five-plane model of user experience. The user usability evaluation questionnaire, encompassing the identified five variables, exhibited a Cronbach's alpha value above 0.75, thus affirming its reliability. The study encompasses a statistical comparative analysis of three digital learning platforms with a focus on design learning. A triangulation method is employed to collect data, which includes questionnaire surveys, expert interviews, and web analytics data. By conducting one-way ANOVA and Post hoc tests, the significance of identified factors over the three platforms is determined. In addition, qualitative studies and web analytics were conducted to gain deeper insights. Redesign based on established design principles indicated significant improvements in user experience. The findings confirm that to improve the user experience of any design learning platform, there is a need to address factors such as visual design, interface design, content organization, functionality, and objectives. The results underline the need for continual user-centred evaluation in the development of educational technology and corroborate previous studies in learning experience design and human-computer interaction. This research emphasizes the necessity of a multi-faceted approach to design and evaluation in digital design learning platforms and suggests potential directions for future investigations.