Application of Google Analytics to Optimize User Engagement on University Library Websites: A Case Study based on a State University in Sri Lanka

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The digital era has significantly reshaped the role of university libraries, transforming them into essential digital platforms that support academic research and learning. The library website is crucial as it serves as a central hub for accessing resources, services, and information, enhancing the library's accessibility and supporting the academic community's needs. This study examines the effectiveness of a state university library website in Sri Lanka, employing Google Analytics to track and analyse website traffic, user behaviour, and engagement metrics. In the first stage of the process, the Global Site Tag was added to the website's header section to measure site visits and other related data. The study was conducted from July 2022 to July 2024. The findings reveal that the library website attracted 46,000 visitors, with 95.7% of the new users continuously improving access. Engagement metrics were positive, with an engagement rate of 61.06% and an average session duration of 1.53 minutes. However, the site's bounce rate is 42.7%, which indicates that many visitors left after viewing only one page. The study identifies significant correlations between device type, user interactions, and engagement metrics. Correlation analysis revealed a statistically significant moderate positive correlation between device type and engagement time ($r = 0.560$, $p = 0.002$), as well as strong positive correlations between new users and sessions ($r = 0.925$, $p < 0.001$), event count and average engagement time ($r = 0.780$, $p < 0.001$), and engaged sessions and average engagement time ($r = 0.926$, $p < 0.001$). These results suggest that device type, user interactions, and session engagement are significant factors influencing the user engagement of the library website. The study concludes with several recommendations to optimize the library website. These include mobile optimization to cater to the higher percentage of mobile users, enhanced SEO strategies to increase organic traffic, and improvements in user engagement through site redesign and better navigation. Additionally, targeted marketing campaigns and ongoing assessments using Google Analytics and other tools are recommended to ensure the library remains responsive to user needs and adapts to changing user behaviours. This study emphasizes the value of web analytics in informing strategic decisions that enhance the usability and impact of library website, ultimately supporting the academic community more effectively in the digital age.

Keywords: *Google Analytics, University Library Websites, User Engagement*