

Adherence to green building standards in academic libraries: A qualitative study on sustainable library design and operations

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Green building standards are increasingly essential for creating sustainable commercial and residential atmosphere. Libraries, as key learning and information centers, are required to incorporate these standards into their design and operation. In Sri Lanka, most of the libraries were constructed without a strong focus on sustainability, resulting in limited green features such as energy efficiency, indoor environmental quality, and green landscaping. The high costs, lack of coordination, and technological challenges have restricted the green building practices in university libraries. This study aimed to (i) assess the current level of sustainability features in existing library buildings, (ii) explore the opinions of library professionals on adopting the UN's SDGs relevant to green building standards, and (iii) identify the challenges in embracing integral sustainable designs. This study employed qualitative research approach, including a literature review, document analysis, and semi-structured interviews with library professionals from selected universities who are involved in planning, management, and operations. The interview data were analyzed using thematic analysis to identify key patterns and themes related to green building practices and standards such as LEED, BREEAM and GreenSL. The findings indicated that most academic libraries in Sri Lanka have only a few basic sustainable features, with limited multipurpose spaces and a narrow scope for green building elements. Library professionals generally supported the adoption of green standards, mentioning potential benefits such as energy savings, improved user comfort, and more flexible learning spaces. However, challenges such as high construction and maintenance costs, lack of technical knowledge, limited policy support, and difficulties in modifying older buildings were identified as major barriers. The study suggests promoting awareness among university leaders, providing training for library staff, incorporating mandatory requirements in policies, and applying green adaptive reuse methods to existing buildings. Similarly, SDG and IFLA sustainability agenda help enhance the adoption of green building practices. Implementing these measures would help create environmentally responsible, cost-effective, and user-friendly library spaces that meet the future needs of students and staff in Sri Lankan universities.

Keywords: *Green library buildings, GreenSL, LEED Standards, BREEAM, Sustainable Development Goals*