

## Abstract

Library systems are transforming into hybrid library systems that provide traditional and electronic services with the rapid advancement of technology. For insightful planning towards a benefit for the community, there is a need for continuous assessing the effectiveness of the library services. Based on the above concept, this research proposes a Multi-Criteria Decision Making framework for evaluating the effectiveness of library services by investigating the issue of service effectiveness. The study conducted a comprehensive literature review related to library service effectiveness to identify, determine and suggest evaluation criteria that can be affected to the effectiveness. Ten key criteria and 45 measurement indicators were identified after examining the names and definitions of the identified key criteria considering synonyms and homonyms, which designed the basis of the evaluation framework. Furthermore, subject experts, including library and information science professionals, participated in formal and informal conversations to assess relative relevance and guarantee that content validity meets the defined criteria and measurement indicators. The contribution weightage of key criteria and measure indicators to the effectiveness were examined with the help of experts in the field. The study employed Analytic Hierarchy Process Multi-Criteria Decision Making theories with the expectation of examining the relative weightings. The framework was designed based on the key criteria, measuring indicators, and their contribution to the effectiveness. Then the framework has converted to the real-time web-based system that will produce the overall effectiveness score and scores regarding each evaluation criteria. The effectiveness level of the services given by the library network of the University of Ruhuna was evaluated to test the applicability and practicality of the framework. The findings of this pilot study show that the proposed framework can assist librarians in providing more effective library services. In contrast, the framework minimizes the ambiguity and unclearness of human judgments.

**Keywords:** *Evaluation Model, Multi-Criteria Decision Making, Analytic Hierarchy Process, Services Effectiveness, University Libraries*