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## **Application of Geographical Information System in library services: a case study based on University of Colombo**

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Information systems play a major part in the planning and development of library services. Geographic Information System (GIS) is one of the most important computer-based information technology tool for spatial planning, which is widely used for planning and managing databases. The GIS-based library system provides each book of the library with its location details and then complete bibliographical data can be linked to the floor maps through location codes. If the GIS based library system (LibGIS) is applied, the search results include not only the text information about the book's location but also a visual map. LibGIS system would be able to show the simulated view of the library floors and the book location on the computer screen. Also, it could enhance the efficiency of the OPAC. The general objective of the study is to identify and explore the possibilities of using GIS in library services. The study population was consisted of a total number of 5286 students in the selected state university. A sample of 361 students was stratified randomly selected from the study population based on the recommendations on sample size by Krejcie and Morgan. The data collection methods use an online questionnaire survey using Google forms. This study was mainly based on GIS 3D maps, Correlation analysis and Factor analysis. Thematic & 3D maps, tables and graphs were employed in data visualizing. To find out the readiness to the adoption of the LibGIS system, Technology Acceptance Model (TAM) was used. According to the results readiness to adopt of LibGIS system positively correlated with organizational, technological, perceived ease of use, and perceived usefulness factors. The organizational factor was the most important and it was near perfect (0.966) positive relationship. Factor analysis was done by identifying factors for association with the LibGIS system. Using this analysis, six main factors related to the LibGIS system were identified. The system could be used to answer any queries related to finding the location of specific library materials and thus could provide a location-based inventory management tool.

**Keywords:** *GIS, Library services, Library Information Systems, Mapping library collection*