

UNIVERSITI TEKNOLOGI MARA

**FACILITATING RESOURCE
ALLOCATION DECISION
THROUGH BIBLIOMINING: THE
CASE OF UTM'S LIBRARY**

MD RAZIB BIN KARNO

Thesis submitted in fulfillment
of the requirements for the degree of
Master of Science

Faculty of Information Management

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I certify that a Panel of Examiners has met on 8th April 2014 to conduct the final examination of Md Razib Bin Karno on his Master of Science thesis entitled “Facilitating Resource Allocation Decision Through Bibliomining: The Case of UTM’s Library” in accordance with Universiti Teknologi MARA Act 1976 (Akta 1973). The Panel of Examiner was as follows:

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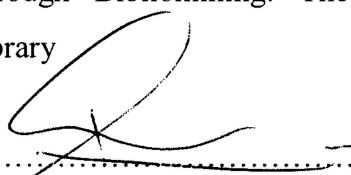
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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Library has vastly developed and demand from the users, institutions, international organization needs and technology advancement has changed the library planning and decision making approach in many ways including library budgeting, human resource and infrastructure allocations. This research described (a) the investigation undertaken to examine the characteristics of data from data reservoirs regarding user/patron information and circulation information. (b) The information seeking to explore the patterns and trends among these data reservoirs using data mining analysis with about 957,224 borrowing history and overall 31,052 registered readers and 139,195 title author of books from the Universiti Teknologi Malaysia library since 2008 to 2010. (c) To study how constructed patterns and trends generate informed decisions on resource allocation for circulation function by using cluster analysis, frequency statistics, averages and aggregates and market basket analysis algorithm. This thesis highlights the finding of a research using data mining technique (CRISP-DM) to explore the potentials of the bibliographic data of an academic library. With nearly 1 million records of collection in various formats, the Library of Universiti Teknologi Malaysia has been chosen as the case study for the research. The data mining technique was adopted to explore the relationship among statistically patterned and clustered bibliographic data. Bibliomining are tools that can visualize how libraries manage their costs, staff activity, customer service, user needs, marketing, popular books, circulation, reference transaction, quality of collection, educational programs etc. Similar data mining techniques are suggested to be employed in different library settings and even enterprises as to make more effective use of organizational resources.

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