A Conceptual Data Mining Model (DMM) used in Selective Dissemination of Information (SDI): a case study of Strathmore University library

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Abstract

Rationale - The process of locating and acquiring relevant information from libraries is getting more complicated due to the vast amount of information resources one has to plough through. To serve users purposefully, an academic library should be able to avail to users the tools and services that lessen the task of searching for information.

Design - The research proposed a two-phase data mining through analysing the access behaviour of users. In the first phase, the Ant Colony Clustering Algorithm was used as the data mining method and separated users into several clusters depending on access records used. The clusters were in the form of course groupings.

Users who have similar interests and behaviour were collected in the same cluster. In the second phase, the user records in the same cluster were analysed further. The second phase relied on association which was used to discover the relationship between users and information resources, users' interests and their information access behaviour.

Findings - It was ascertained that although users were able to locate and retrieve the information they needed, it was not up to the degree of satisfaction they expected. Furthermore, it took them some time to acquire the information. Using data mining together with selective dissemination of information would enable users to access relevant information without promptly thus saving time and other resources.

Practical implications - The mining of user data within library databases would facilitate a better understanding of user needs and requirements leading to the development and delivery of specialised and more fulfilling services.

Originality - The proposed DMM model is original as it is one of a kind that suggests integrating SDI with datamining in libraries.

Keywords: Data mining, bibliomining, Selective Dissemination of Information (SDI), information needs, knowledge discovery in databases (KDD), academic libraries