Chapter 5
Data Mining, Linked Data, and Library Service Delivery

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ABSTRACT

There is no doubt that data mining and linked data can enhance library service delivery. Data mining aspects such as text and image mining will enable libraries to have access to data that can be used to discover new knowledge aid planning for effective service delivery or service improvement. Also, linked data will enable libraries connect with other libraries to share such data that can enhance job performance leading to enhanced productivity, improved service delivery, and wider visibility and access to library resources.

INTRODUCTION

Libraries generate lots of data on a daily basis. Such data may include list of materials ordered for or newly acquired materials, shelf list, list of daily library users, number of checked out books per day or number of consulted materials per hour etc. Such statistical data are essential for planning and key to making decisions that can assist in effective management of the library staff, users, materials/ resources and services. Although, empirical studies on the use of such generic data on library management in Nigeria are scarce, but libraries refer to them on timely basis for performing related tasks. Omekwu (2010) underscores the significance of statistical data to library activities by pointing out that use of statistical data establishes the values that libraries provide. Similarly, Eiriemiokhale, Isiwele-Ishola and Ishola (2016) observe that data in the library are mostly used for some housekeeping functions, like ordering and processing of information materials, reference analysis, preparing library budget and determining extent of library use.

Attention is currently shifting by many libraries from the traditional method of data acquisition and its passive application to housekeeping roles to new methods of active use of data for enhancing quality service delivery and also, to generate a plan for an improved library future. This was observed by Sahu (2007) and Egberongbe (2018) that the traditional method no longer fits in to evaluate users demand and quality service deliver, hence, the need for new methods that can be potent in driving effective library service delivery. While it is a general knowledge that libraries depend on current technologies to function, the COVID-19 era has further reinforced the need for enhanced remote accessibility to library resources and services. Many libraries across the globe are responding by making their resources and services accessible remotely (International Federation of Library Associations and Institutions (IFLA), 2020). At least, society has come to terms with the new realities brought about by the pandemic. More so, many librarians were also working remotely. This new reality- the new normal- has further reinforced the 21st Century library as one that needs to serve its users irrespective of their physical location. While serving the library users is one side of the coin, the other beingeffectiveness of such services.

Having access to timely data and feedbacks from library users, in addition to keeping track of activities taking place in the library (as a physical place and cyberspace) are germane to achieving effective library service delivery (Adebayo, Ahmed & Adeniran, 2018; Ekere, Ewulum, Eze, Okpala & Ebobo, 2019). As many libraries move to the cyberspace with social media accounts such as Facebook, Twitter, Instagram, and WhatsApp, interactions with users and marketing of library resources and services have improved; so also feedbacks, comments and questions which may come as texts or images. However, while such web postings and comments may just be viewed and responses or reactions made without further processing, it suffices to state that processing of such dormant data can be the missing link that libraries need to engender effective service delivery required by the 21st Century information users. Mining of texts and images on libraries web or social media accounts will give meaning to areas left unnoticed before. For instance, analyzing Facebook comments about a library reference service can provide a use pattern or feedbacks to assess the effectiveness of such service. These new areas of data mining need to be explored by the library.

Data must be processed, interpreted and used; not only for library housekeeping routine, such as acquisition or how many titles of x book is the library having? But beyond this, data should be used for robust planning and key to decision on enhancing quality library service delivery. This may include using data to plan for introduction of new services, or using a different approach to deliver existing services in away to bring more satisfaction to the users. Also, library staff productivity can be enhanced through sharing of data with other libraries and similar institutions which can enhance visibility of library materials.This is termed linked data. Data mining and linked data can enhance library service delivery (Kovacevic, Devedzic, & Pocajt, 2010; Janikova, 2016).

WHAT IS DATA?

On a daily basis, we are faced with diverse situations and challenges that require us to plan, forecast, review, take decisions, complete a given task or simply just to *know* (satisfy our curious mind), or reduce our uncertainty level. All these afore-mentioned activities require that we are equipped with facts that can aid or facilitate theexecution of such activities. For instance, a librarian in a public library, who is at a crossroad as to what type of information materials to acquire for his users, may need to first carry out an analysis and profiling of his community of users. This will be done by collecting relevant facts (data)

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