BIG DATA: CONCEPT IN LIBRARY AND INFORMATION SCIENCE

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ABSTRACT:

This is the era of information explosion where information society like Governments, industries non profits and profits orgnaisation and social media plateform like Facebook,Youtube,Linkedin etc generating gigantic amount of data at very high speed. Libraries are also converting in new form i.e information centre and also converting their data in digital form. After a successful conversion of published matter in electronic form library/ information centre need to high speed server and system. When information officers give reference service then they also needed full knowledge of ICT and data analytcis. Big data is new concept specially uses and presents data in different form as user required. The management of Big data is also a challenge. In this paper we have discussed big data and its properties and uses of big data in library and information science.

KEYWORDS: *Big data, Information science,ICT,Library science.*

INTRODUCTION

"The library is growing organism" as Ranganathan said, In this era of information explosion in daily routine huge information generated in electronic form and library centre converting into information centre.In the information era, data is everything. In old days we need more space in library to manage new collections. But now there is need of institutional repositories to maintain data. If we focus on an example of UIDAI (Unique Identification Authority of India) data centre which is situated in IMT Manesar (Hariyana). This is one type of model centre have Big data. The report of Mckinsey Global Institute published a report in 2011 revealed that one Exabyte is the equivalent of over 4000 times the amount of information within the US library of Congress.

Big Data

Definition of Big data is hard to find. In **[De Mauro,Greco, Grimaldi 2016]** a syntheised definition is provided based on fifteen formal definitions categorized into 4 groups of essential features:

1.Information,2.Technology, 3 Methods,4.Impact Drawing from these features they offer the following definition:

"Big data is the information asset characterized by such High Volume Velocity and Variety to require specific Technology and Analytical Methods for its transformation into Vaule"(ibid.,p.131).

In general Its clear that Big data is larger amount of Data. It's a popular term used to express exponential growth of data.Big data is difficult to store,collect,analyze and visualize.Big data can be described by 3V i.e Volume,

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Variety and Velocity.Volume represents high volume of data like petabytes (1024 terabytes), exabytes(1024 petabytes) means billions of records of sources. Variety refers to number of types of data like structured data e.g MySal another form is semi structured data e.g xml, ison and unstructured data e.g text audio video file. Velocity represent the rate of which data is getting generated. Some Big data sources are Social media,Health care,Banking sector,instruments, Websites like online selling portal Flipkart and Amazon. Some most popular Big data tools are Hadoop, mongoDB, Google charts,Tableau etc.Hadoop provides rapid data transfer rate.it is developed by Doug Cutting and Mike Cafarella in 2006. it was inspired by Googles map reduce programming framework. Hadoop components are Name node, data node, YARN (Yet another resource Negotiator).

USE OF BIG DATA

   Big data analyzing call detail record,recommendation engines,fraud detection,market analysis and sentimental analysis.big data analytics have helped in cost reduction, new product development, optimize offering, time reduction, decision making, provide online survey and healthcare improve by providing personalized medicine and prescriptive analytics. Big data has increased the demand of its specialists to maintain data.which is huge in form like billion and trillion databases of it. Oracle Corporation, IBM,Microsoft, SAP,EMC,HP and Dell have spent more than $15 billion on software firms specializing in Big data management and analytics of such type of data. This industry was worth more than $100 billion and was growing at almost 10 percent a year in 2010. about much fast as the software business as a whole. In India, Government uses this data analytics to acertain how public give response on their scheme.

BIG DATA, LIBRARY AND INFORMATION SCIENCE

   According to the fifth Law of Library Science library is growing organism. Libraries can used Big data to make prominent decisions and provide reference services. Big data is considered as a relevent and significant concept for librarian. Traditional libraries are emerging into modern information centre. Librarians totally depends on such type of library like School library, Public library,Special library or Networks like Inflibnet, Delnet etc. but it is very hard to relate the Tradintional library data to Big data, because many of libraries work on database management system. there are many library software which are capable to do all library works and also solve storage problem. But the future of libraries will be depended on Big data management because in future resource sharing increase to its high level in comparision to present. Librarians will be needed of Big data tools to track and analyze the information which one is desired by users. this work could be done by data manager, data analytics or information scientists not by Traditional Library science professional.

The uses of Big data in library.

   Big data widely used in corporate sector. Some Libraries are also pursuing Big data concept . Automation of library is needed in this era of Knowledge explosion. It has become essential for librarians to provide a master key to this repository of knowledge. For upgradation the library activites enable the system to access enormous information at the tremendous speed. The role of librarians and information users is to increase access to information and side by side they are modifying the seeking behavior. It is the time for the librarians and also for information specialists to tackle the task systematically. Users can immediate acecess to specialized information, with greater efficiency, economy in human labour and large data can be handled with easiness and accuracy.As an example University researchers use world cat data to discover patterns in economic developments. OCLC research applies big data methods to improve WorldCat data quality, analyze aggregate collections, and innovate with semantic web applications. OCLC product teams leverage the cooperative's global data network to connect libraries to the future. Generally library patron deleted the log when barrowed material returned. After big data concept implemented, big data analytics can examine patterns of use of metarial like which one is the most popular and which one is underutilized and also provide meaningful results and recommendations to library users.

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PROBLEMS: LIBRARY WITH BIG DATA

It is true that library has many types information sources in different format which have different properties.Libraries data is also a big data but not like data of corporate sectors.To manage a library there are many types of Library management software. Big data concept is   new generation libraries need. In future, Libraries with big data needed storage,standards, tools, maintance of data repositories, skilled persons,Technical coopration and also finance. Big data can analyze users behaviours like comment, like, dislike etc on social media and also analyze public behaviours of browsing, so privacy is also a big issue. Big data within libraries can not give answer of users specific query.

CONCLUSION

This article is discussed about Big data,properties and how big data concept is applied in library and what   problems will be faced a librarian after upgradation. Big data is necessary for the development of library or organaizations. Big data concept and its implements in library automation, this could be an effective application. Tranditional library professionals should be needed special training of ICT and data analytics. Veracity,variability,visualization and value are also very important for developing a big data program. According to Librarian **Carol Simpson** recommendation in 2008 "Every patron his information" that is the edition of Ranganathan's second law of library science i.e Every person his/her Book will be prominent result of Big data application. Big data has given an opportunity to the librarians to play an important role in the big data universe because they have the skills, knowledge and service mentality to help all irrespective of their discipline.

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