Chapter 36
Intelligent Information System for Academic Institutions:
Using Big Data Analytic Approach

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ABSTRACT

Research and publication is considered an authenticated certificate of innovative work done by researchers in various fields. In research, new scientific results may be assessed, corrected, and further built up by the scientific neighborhood only if they are available in published form. Guidelines on accountable research and publication are currently set to encourage and promote high ethical standards in the conduct of research and in biomedical publications. They address various aspects of the research and publishing including duties of editors and authorship determination. The chapter presents research and publication system using big data analytics and research data management techniques with a background of information systems and need of information in research data management.

INTRODUCTION

Research which is an essential section of advanced higher education system is experiencing a transformation. Researchers crosswise over controls are progressively using electronic apparatuses to gather, break down, and sort out data. They are presently delivering, putting away, and spreading advanced data in substantially bigger volumes than the text.Vast amounts of conceived computerized data are being delivered in a wide assortment of structures at a quick rate in colleges and research institutes (Cox AM et.al, 2014).This "data storm" makes a need to create approaches, foundations and administrations in associations, with the target of helping researchers in making, gathering, controlling, breaking down, transporting, putting away and protecting datasets. This blast of conceived computerized research (data that are made in advanced shape) implies that the time of BIG DATA has arrived (Whyte A et.al, 2011). Alongside this computerized over-burden comes the developing requirement for astute and viable Research Data Management (RDM).

The proceeded with presence and access of this data is worry since the data isn't at present efficient and put away in libraries. Research is presently led in the computerized domain, with researchers producing and trading data among themselves (Whyte A et.al, 2011). Sharing research data and grant is of national significance because of the expanded spotlight on augmenting return on the administration's interest in research programs. Research funders are proactive and urge great practices and to accomplish more noteworthy quantifiable profit and incentive for the research supported, and in this manner require or command certain particular measures of data administration and sharing to be trailed by the researchers.

Research data administration (RDM) is about "the association of data, from its entrance to the research push through the spread and chronicling of profitable outcomes" (Whyte and Tedds, 2011).Cox and Pinfield(2014)mentioned that RDM comprises of various diverse exercises and procedures related with the data lifecycle, including the plan and formation of data, stockpiling, security, protection, recovery, sharing, and reuse, all considering specialized abilities, moral contemplations, lawful issues and administration systems. Data created as a feature of research take an extensive variety of structures, from insights and exploratory outcomes to talk with chronicles and transcripts (Borgman, 2012). Data could exist as physical records or documents on a researcher's PC or terabytes of data on shared servers.

INFORMATION IN RESEARCH

All people, organizations and, when all is said in done, all associations are constantly catching data, a considerable lot of which are of no essentialness to them by any means. Nonetheless, other data are accessible that would bear the cost of them their very own superior comprehension condition and of themselves. These data – what we know as data – empower them to settle on more precise choices. Hence, the appropriate measure of data at the ideal time is a key factor for each association. Organization administrators take choices, get ready designs and control their organization's exercises utilizing data that they can get either from formal sources or through casual stations, for example, eye to eye discussions, phone calls, social contacts, and so on. Chiefs are tested by an inexorably mind boggling and indeterminate condition. In these conditions, administrators ought to hypothetically have the capacity to characterize and acquire the sort of data they require. Notwithstanding, this isn't what occurs by and by; rather, the manner in which supervisors play out their work relies upon the accessible data that they approach. Most choices are in this manner made without total learning, either on the grounds that the data isn't accessible or on the grounds that entrance to it would be expensive.

All people, organizations and all associations are constantly communicating information, a significant number of which are of no hugeness to them by any means. Be that as it may, other information are accessible that would bear the cost of them a superior comprehension of their claim condition and of themselves. These information – what we know as information empower them to settle on more exact choices. Hence, the perfect measure of information at the ideal time is a key factor for each association. Organization chiefs take selection, get ready designs and control their organization's exercises utilizing information that they can acquire either from formal sources or through casual stations, for example, up close and personal discussions, phone calls, social contacts, and so forth. Supervisors are tested by an undeniably perplexing and indeterminate condition. In these conditions, supervisors ought to hypothetically be ready to characterize and get the sort of information they require. Be that as it may, this isn't what occurs practically speaking; rather, the manner in which administrators play out their work depends on the accessible information that they approach. Most choices are in this manner made without supreme

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