RESEARCH ARTICLE

DATA MANAGEMENT

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ABSTRACT

As the saying, the future is where the destiny goes….the future of any organization is going to be the number crunch that is data management. It goes like the destiny is going to be based on the big data management. In today's scenario, Challenges faced are capturing, storage, analysis, search, sharing, transfer, visualization, querying, updating, privacy, meeting the need for speed, data quality, understanding data& many more to go. The analysis techniques used also matters a lot. In 2001, Bank of America solved the problems with managing the data across the enterprise. Through a single enterprise data model & standards, the bank could achieve the consistent, timely, & accurate data it was lacking across its franchisee. Data extracted from the data warehouse are analyzed by data mining software to discover the hidden patterns based on which decisions were made easy. Our desk research work is concentrating on the importance of number crunch or data management in this competitive Corporate World. Companies have to create an edge to stay in the market. Not only the survival is vital but having potential customers base is also utmost important. As it is seen Reliance Jio is creating a customer base leaving the competitors such as Airtel and other telecommunication service companies work hard for the survival. Motto of this desk research work is to analyze the importance of data management in various sector but the focus is on academics.

INTRODUCTION

As the market is changing furiously, data being cumbersome and competition being on edge, organizations need to gear up with new techniques & innovations which can win the market. In this digital world, data sets grow rapidly because they are increasingly gathered by cheap & numerous information through sensing mobile devices, RFID, microphones, camera and wireless sensor networks. Every day the total amount of digital data created worldwide would mushroom from 4.4 Zettabytes (10^{21} bytes) in 2013 to 44 zettabytes by 2020 and by 2025 it will hit 180 zettabytes. Business Intelligence, Cloud computing, Database management systems, decision support systems, Electronic Commerce systems and many technologies are being used now. The largest retailer in US, Walmart has 11,695 stores & clubs in 28 countries. Datamining software typically includes neural nets, statistical analysis, & expert systems with if-then rules that mimic the logic of human experts. This enables the Walmart to predict sales of every product at each store with uncanny accuracy, translating into huge savings in inventories & maximum payoff from promotional spending. Similarly the other companies are like Bank Financial, HP enterprise systems, Procter & Gamble.

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For instance, some of the retailers couldn't make the space in market as they failed in data analysis & predictions which led to customer dissatisfaction. In this cyberspace world, cloud computing is stealing the show. A software manager goes to the flower store & orders flower and then goes to the ticket shop & gets the ticket for the show, everything is communicated to both parties in cloud computing. In 2011, Microsoft committed 90 percent of its $9.6 billion R&D budget to its cloud. It is forecasted that the revenue would grow from $13.5 billion in 2011 to $32.8 billion in 2016. Statistical tools are also available to analyze the data in detail. Software tools such as SPSS, Excel, & so on allows to do analysis such as t-test, p-test, sensitivity analysis, what- if analysis, engineering formulas and more are available to managers based on which graphs & decision are taken. A simple example of this is the way the Indian Government utilizes numerous techniques to ascertain how the Indian electorate is responding to government action. Managing data is in every field from internet search, finance, Urban informatics to every area in business informatics. Users of the data are normal person, for getting the information online regarding hotels, trips etc. Scientists, business executives, practitioners of medicine, advertising, sales, customers & governments face many problems in handling this huge data. With each online mouse click, either a fresh bit of data is created or already stored data are retrieved from all

those business websites. All that's on top of the heavy demand for industrial – strength data storage is already in use by scores of big corporations. Thus database management systems are booming into key strategic role of information age. Similarly while organising Olympics in Athens 2004, Atos Origin Company had 3400 employees, 2000 servers, 3 different LAN configurations, & many more as backup plans and with a goal to have the results on commentators screen 0.3 seconds after the athletes has crossed the line, complete with rankings, statistics, & biographies. With the mentioned above examples, it is clear that importance of data management is very important. So our desk research is of data management in colleges and there importance to colleges. The observation of data management is done while mentioning the reports required, maintained and its drawback.

Literature review

Even in the College's data capturing, modifying and analysis is a cumbersome task. Maintaining records of students, Faculty (Technical & Non –technical) is common. In today's scenario this is not enough as colleges are focusing on number of lectures planned and in real conducted. A record of all this is maintained in ERP software for anytime use and accessibility.

An analysis of what data are required to be maintained by colleges and have to be included in ERP are listed as follows:

- List of all faculties and their accounts
- List of subjects
- Assignment of subjects to faculties
- Preparation of time table
- Allotment of subjects weekly through code
- Allotment of subjects to faculties
- List of subjects with faculties and student details
- Access to faculty to enter lesson plan and attendance for particular subject.
- Each and every particular data /information of student and faculty.
- List of books in library with code and details of student and faculty who issues it.
- Thumb, signature and photo of people related to every person related to ERP, data is maintained.
- Students absent and present records are maintained & so on.

This maintaining of record helps the institute in many ways too; which are as follows:

- It helps in easy access of information related to various aspects.
- The records are available online. So when some lecturer/employee is absent, data retrieval becomes easy for others
- Maintenance of records manually is cumbersome but with software tools it is easy and backup will there on mail.
- Information sharing through mail is done easy for lecturers and students
- Online records of previous year or from the starting of institution is maintained
- The records of guest lectures and visiting lectures conducted are maintained year wise.
- The records maintained are very useful while the institution gets certification from NIRF, NAAC and so on.
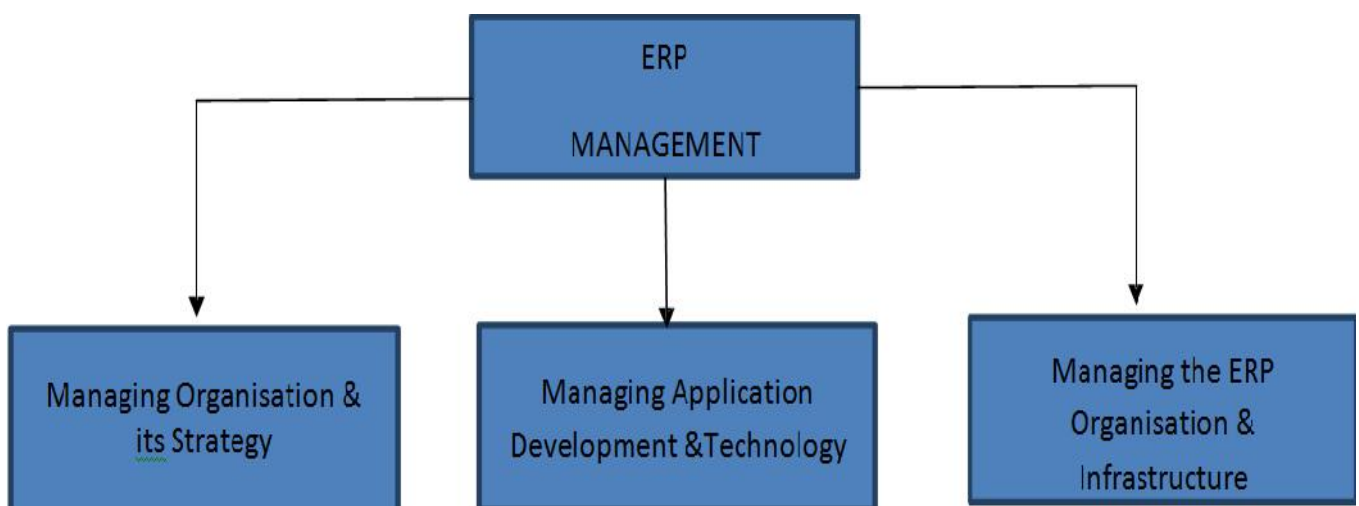- Department wise information maintained by institutions.

Managing information based on organisation is important. A model has been observed as follows:

ERP

An ERP has been bought for example for 200 crore and the design for the particular has been made according to institution requirement. An IT department has formed a management team for the same. A design is made according to the strategy of Organization. Different applications/ modules are prepared according to the department requirement. In next stage application development and technology is done. Managing the Organisation and infrastructure accordingly is done. Updating of data is done in every department and data is being maintained. Any problem and error occurs the IT department is reported regarding it and the IT department takes care of it.

Drawbacks in the ERP systems observed are:

- Errors occur if fault in system.
- Requirement of continuous internet connection

- If technical problem takes place it takes lot of time to get connected.
- Dependency on ERP totally create imbalance at workplace.
- Short circuit, fire and so on problem incurs which creates disturbance.

The list goes on. So IT department should be prepared for various circumstances to handle it. As it is said even IT has its own drawbacks that are need to be managed for smooth running of the software.

Conclusion

Many companies plan really well, yet few translate strategy into action, even though senior management consistently identifies e-business as an area of great opportunity and one in which the company needs stronger capabilities. Moving to an e-environment involves a major organisational change. The issues institute face while handling this data is security, ethical & societal things. Handling the big data is difficult, but providing safety & avoiding issues is pivotal too.

Technical mangers need to work on it a lot. Storage & backup of data is vital that's why State Bank of India has two backup centers in India. Role of managers in handling the technical aspects & Information system is paving the way for future challenges. Most of the job openings for managers in this field giving them the opportunity to bloom high. For many large institutions the huge investment is worth thinking but return on investment pays off wonders. "Without big data analytics, companies are blind & deaf, wandering out onto the web like deer on a freeway" – Geoffrey Moore

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