

# Deployment of Information Technology in improving Knowledge Management Effect in Print Media(News paper, Meerut region)

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## ABSTRACT

Role of information technology gives its strong impact in all areas of life and every area is affected in one way or the other by information revolution, among those different areas one specific area is print media (News Paper). Information technology has changed the entire system of organization. Many IT tools and technology are available today with the help of which we can not only improve the impact of paper over nation but are able to improve the relation among the level of employees among organization. This paper deals with the impact of information technology and tries to demonstrate the role of information technology to manage the knowledge management tool in paper Industry. The paper is conceptual and looks at the impact of Information technology tools on the product design, quality, production process, cost, marketing and research and development and analyses the perceived improvements in the processes.

## KEYWORDS

Knowledge Management, Information Management, Data analysis.

## 1. INTRODUCTION

- Information Technology
- Knowledge Management
- IT impact in Print Media(News Paper)

### Information Technology

Information technology (IT) has become a vital and integral part of every organization. Its impact reflects on different units of the organization like: communication, inventory management, data management, management information system, customer relationship management and so on.

### Knowledge Management

KM is defined as the “collection of processes that govern the creation, dissemination and utilization of knowledge to fulfill organizational objectives”. by Alavi, Leidner (2001)

Knowledge Management means to acquire something from environment and to give back to the environment in modified way. We acquire data from environment in the form of collection of discrete objects and facts, than we process the data by prior information and perception and drive meaningful conclusion. Knowledge is the result of learning. Knowledge is basically a summation of information, data, and experience.

### IT impact in Print Media

Print media comprises of development and distribution of news paper, magazine, books, journals etc. Printing has been a basic tool for mass communication, storing and spreading of information and knowledge. Although

we are facing a big transition phase from print media to online media but still lots of awareness and updating are required by organization to improve the presentation and effect of News paper.

The print revolution started with the invention of printing by Johann Gutenberg in the fourteenth century. In that long period of journey, technology brings major changes in the scenario. The way of gathering reports, taking pictures and distribution of news is changing. By taking colorful and effective pictures and videos through Digital cameras and by using new information technologies, dispatching of recent updates are become enforcing source for the upliftment of the organization.

Impact of information technology not only uses to change the scenario of organization but also become an essential tool to change the management strategies, to manage the knowledge and to change interior environment of the system (interrelationship among the variables).

By using the technology or by making a **techno environment** top management can easily identified the problem by using Knowledge Management tools. Since print media comprises of different departments as shown in figure1.1 and each department is directly or indirectly affected with the influence of information technology. Tools include E-mail, telnet, Internet browsers and search engines, used as an important asset in media, reporting and editing sections. Similarly Electrographic, desktop publishing, offset printing etc are the latest technologies commonly used in printing department. With the advancement of technologies it becomes a simplest task to collect or to give advertisement.

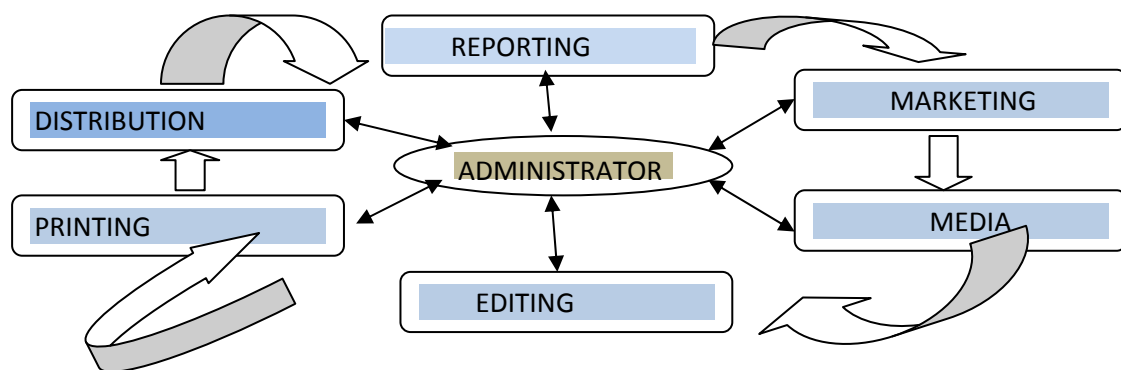


Figure1. Print media scenario

## 2. RESEARCH METHODS

Key method of research used in the paper:

**Background view of Print media:** To know the actual impact of information technology and to compare the present status of the organization regarding utilization of technology, it is necessary to understand the background/history of the print media.

**Questionnaire Survey:** The research conducted on Three Medium sized organizations (Print media, News Paper, Meerut Region), to know the percentage of utilization of information technology. The sample consisted of 20 questions. The questionnaire selected to know the use IT tools by middle and high level of organization and to know impact of technology in inter variable relationship.

## 3. BACKGROUND

Before discovery of paper people used palm leave to transmit their messages. The first printed book published in China was the Buddhist text, the "Diamond Sutra" by Wang Chick in 868 AD. Printing technology came to

India in 1556. It was the Jesuit priests who brought this technology to our country. The first book printed in India was in Portuguese language in Old Goa.

Although high speed printing press was developed in 1830, but the quality and the speed was not comparable, by using limited devices and huge human resources the outcomes are minimal. The quality and speed of printing improved tremendously in the latter half of the twentieth century. With the development of technology in different areas its colours spreads on printing area also. Transmission of newspaper pages by fax and inauguration of photocomposing was introduced on second half of twentieth century. The Japanese had started using facsimile transmission of the newspaper pages early in the fifties. THE HINDU was the first newspaper to introduce facsimile editions in India. [1] The modern printing in India originated in Goa in 1550 by Spanish Coadjutor, Brother John de Bustamante, also known as Indian Gutenberg. The first language printing press with vernacular types was established in 1557 at Vaipicotta.

[2] The first attempt to start a newspaper in India was made in Kolkata in 1766 by William Bolts, the well known author of consideration on Indian Affairs.[2]

Now with the influence of technologies like high speed modem, fibre optic cable and satellite links, whole paper can now be sent across one place to another in few minutes. Technology growth can also act as a good asset for the small investment purpose since the page making can now be done even from your home, the whole equipment would cost you only a few lakh rupees, and the power of publishing is in your hands. New technology like Photoshop and CorelDraw can enhance the quality of your photographs offer unlimited graphic and design opportunities. Word processor becomes an important and relevant tool for the journalists. Maintenance and retrieval of material from have become easier and quicker with electronic medium.

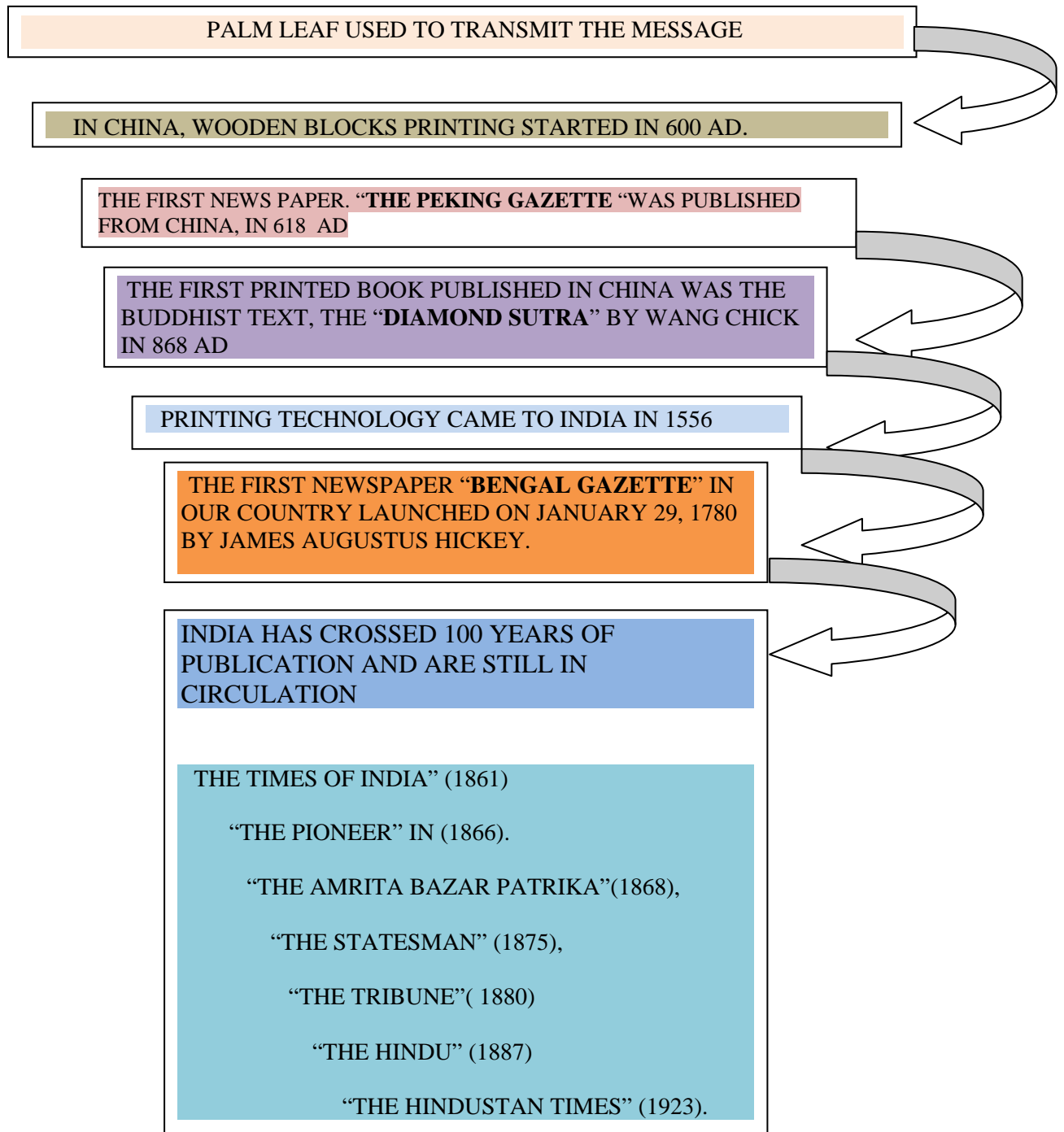
Advancement of technology shows its positive effect in various fields of print media like Transmission of news affected positively, delivery speed increases, Production and distribution costs would also increases.

### **Role of Information Technology in knowledge management**

**Nonaka and Konno (1999)** categorize knowledge as either explicit or tacit. Explicit knowledge can be thought of as knowledge that can be expressed in terms of words and numbers. It can be shared in the form of data. Tacit knowledge, on the other hand, is highly personal, hard to formalize, and difficult to communicate. According to the **Bose (2001)**, Knowledge Management Practices has three major components: 'People': who create, share and use knowledge, 'Process' the methods to acquire, create, organize and transfer knowledge and 'Technology' the mechanisms that store and provide access to data, information and knowledge created by people, **Edvinsson (2000)** contends that IT tools such as the Internet are merely 'enablers' and that the true asset of an organization is the brainpower of its workforce. **Dougherty (1999)** argues that IT should be seen as a tool to assist the process of Knowledge Management in organizations. Some organisations have developed software to encourage social interaction in organizations in the hope that a unique forum for tacit knowledge exchange will be established. For example, Teltech is a consultancy service offering KM services to businesses, including an Expert Network which brings together a network of thousands of technical experts to share and develop knowledge in technical areas (McCampbell et al). One of KM's leading practitioners Karl-Eric Sveiby describes the current practice of Knowledge Managements being divided into two tracks: **IT-Track KM** enables Management of Information. They are involved in construction of information management systems, AI [artificial intelligence], reengineering, groupware etc. To them Knowledge is Objects that can be identified and handled in information systems. This track is new and is growing very fast at the moment, assisted by new developments in IT. **People-Track KM** enables Management of People. They are primarily involved in assessing, changing and improving human individual skills and/or behavior. To them Knowledge is Processes, a complex set of dynamic skills, know-how etc, that is constantly changing. They are traditionally involved in learning and in managing these competencies. This track is very old, and is not growing so fast. The two tracks differ in their techniques and tools. In the IT track, the emphasis is on using software and the Internet capturing information in databases and improving communication.

## HISTORY CHART OF PRINTMEDIA [4]

(Step wise Development chart)



#### 4. SURVEY DATA INTERPRETATION

Since this paper tries to establish a correlation between information technology and print media. Although we know that in this era 90% of working people not only aware of internet but they used IT technology directly or in directly. When data is taken from 50 employees of paper industries from middle and higher level this proves the same.100% of the employees know about the information technology.100% aware about internet.90% of the employee having their mail-id.and 100% of employee gathered information from internet.

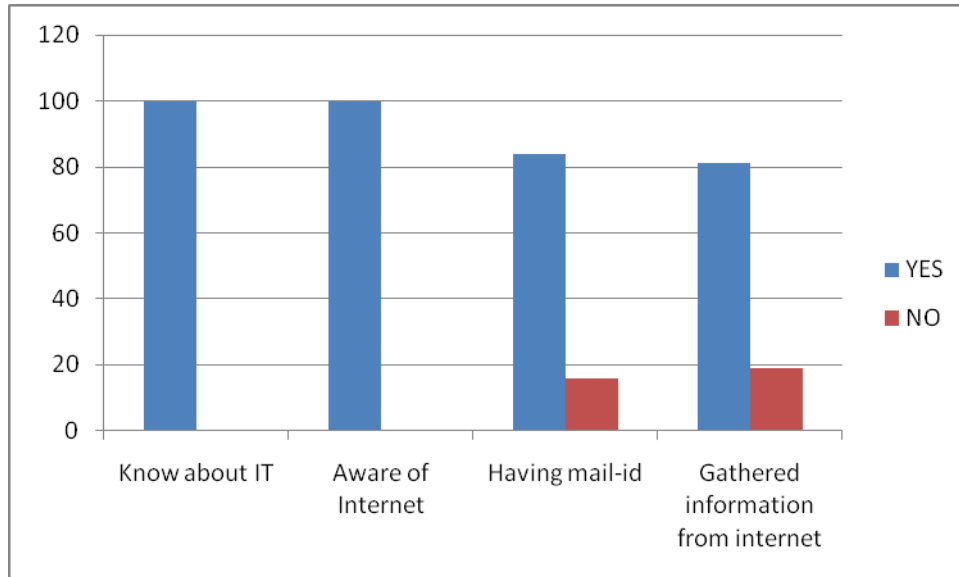


Fig 1.1. IT &Internet general awareness graph

Since we live in the time where everybody (belong to some organization) want to be a complete updated person of their respective field, because without updating is like wandering in the darkness and being incapable to do things right. When any employee like to join a company that adopted IT strategy, tools and technologies following questions arises in the mind of employer that : Does top management have a vision of IT? Is top management aware of global trends in IT? Is there a common understanding of the business needs and processes that IT is intended to satisfy? Only if company gives satisfactory answers on these questions there is a chance of successful development and realization of IT strategy. Otherwise the company is sentenced to high investments with low or no tangible returns, unsatisfied employees and even higher reluctance to IT. Now a day's information is acting as a key resource with in any business activity. Therefore also in the print media sectors the use of IT is becoming increasingly sophisticated with the virtual reality, knowledge-based systems, object-oriented approaches and neural networks among the latest technological advances. But on the other hand the thought given to the management implications of the technology are less advanced. According to the survey Figure 1.2 describes that 97 % of employee believes that Information Technology training is necessary to keep employee skill current, but still training is not provided to the workers in such a level as they required. Only 58% efforts are put by an organization in this field. If the organization like print media(News Paper) wants to give the best impact of their work in the external as well as internal environment then the primary task management is to design and manage the flow of information in an organization in a way that improves productivity and decision making. Data must be collected, stored, and synthesized in such a manner that it will answer important operating and strategic questions. An organization's information system can be strength or a weakness in multiple areas of strategic management. Now a day's IT used as a strategic weapon in gaining competitive advantage (Wheelen and Hunger, 2006).

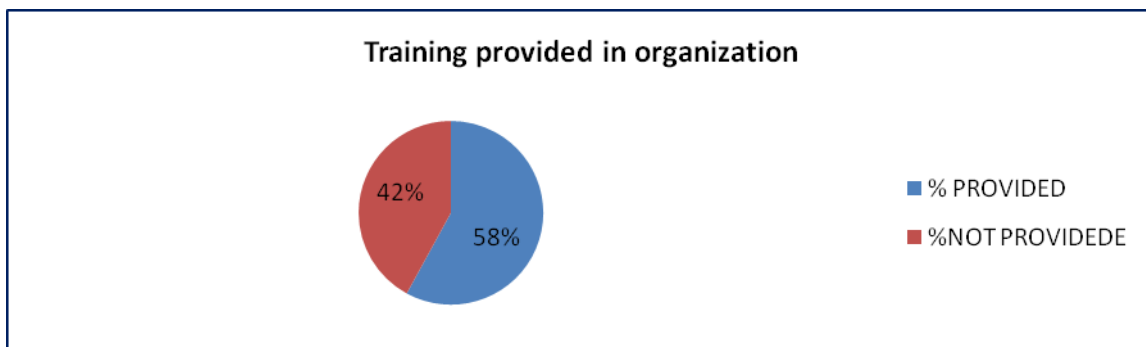
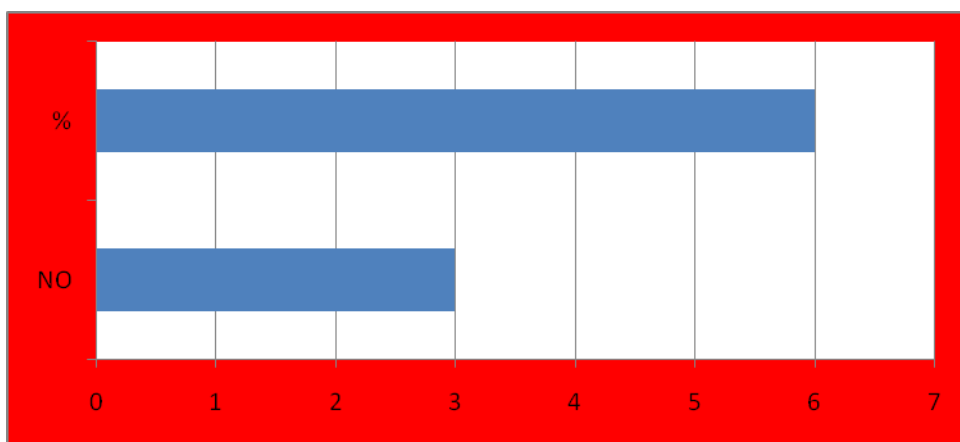
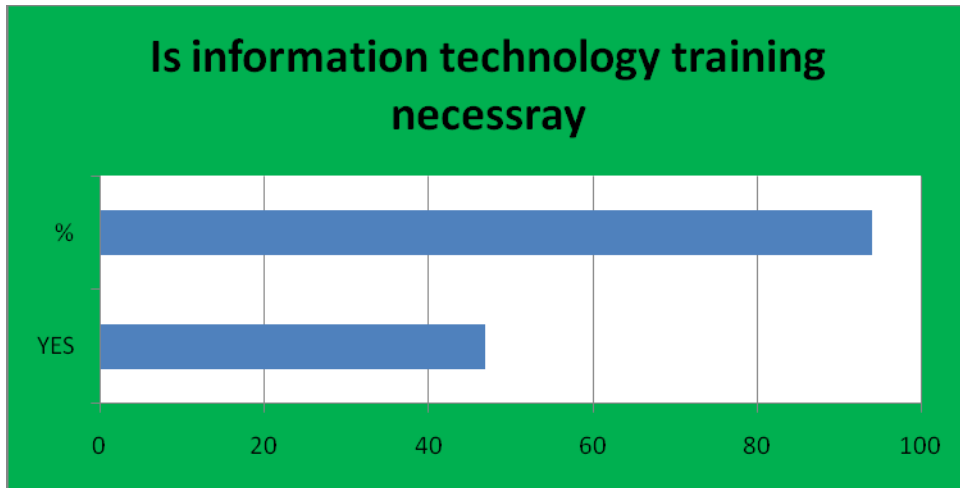


Fig 1.2 Information Technology necessity and percentage of training provided

Different organization has different and each units work independently. The need of IT technology is also vary from unit to unit. A Figure 1.3 shows that in News Paper industry 50% of work is depend on information technology and it depends upon the type of work. Since there are different departments in this type of organizations, in some of the department 76%-100% work is totally depends on technology so by seeing this type of figure, it will be the duty of higher level of organization to put some more efforts in this direction and for a that management also needs a matching IT adoption strategy (IT adoption strategy is the decision making adoption approach within an organization).

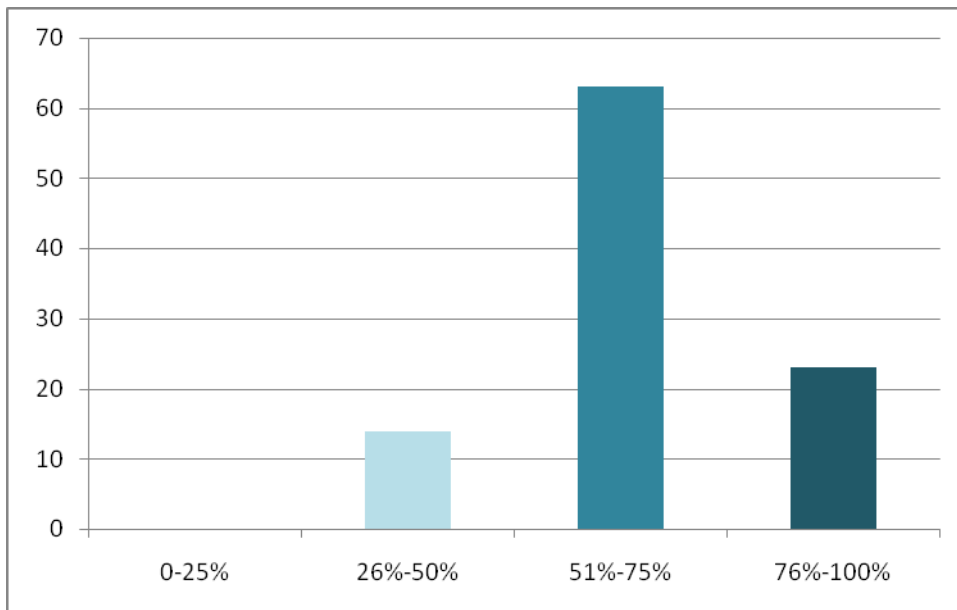


Fig 1.3 Role of information Technology in an organization

## 5. FINDINGS

By seeing the above data interpretations it is clear that Information technology Plays important role in maintaining the data as well as to maintain a knowledge management skills in print media.

One of the objectives of the survey is to find how information technology has changed the design and strategies of organization. According to the results shown in below mentioned Fig. 1.4, these changes have been both beneficial and detrimental. On one hand, the number of mistakes in documentation has decreased, the number of construction errors has not changed or has lowered, and the quality of documents and the speed of work have both increased.

On the other hand, the complexity of work, the administrative needs, the proportion of new operations and the costs of doing business have all increased.

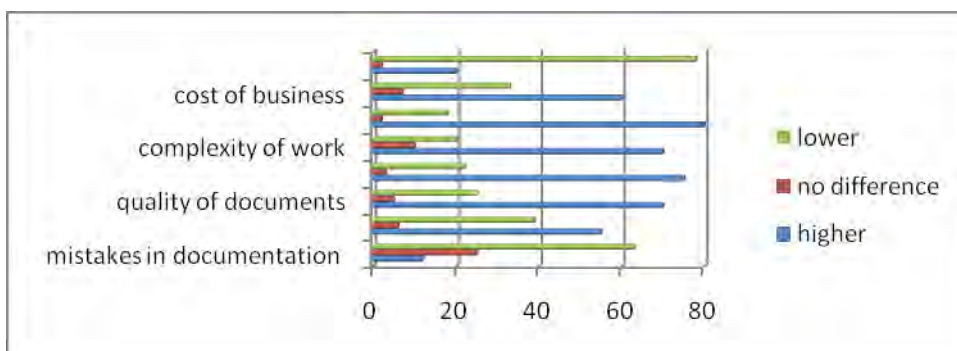


Fig.1.4 Changes caused by the introduction of information technology

Below Fig. 1.5 displays the main benefits achieved by the adoption of IT. The main advantages provided by a greater use of IT are better quality work, work done more quickly, better financial control, better communications and simpler and faster access to common data according to the respondents. These results correlate well with the findings shown in Fig. 14. Paper-less office which was advertise with the advent of IT seems to be a myth since almost no respondent selected that potential benefits. Telecommuting and staff contentment are also not considered as important benefits by most respondents.

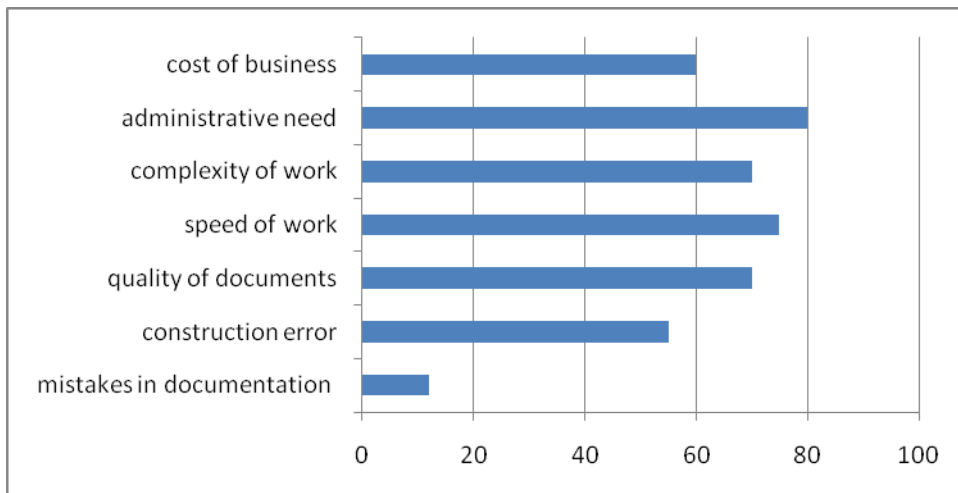


Fig 1.5 Benefits of information technology

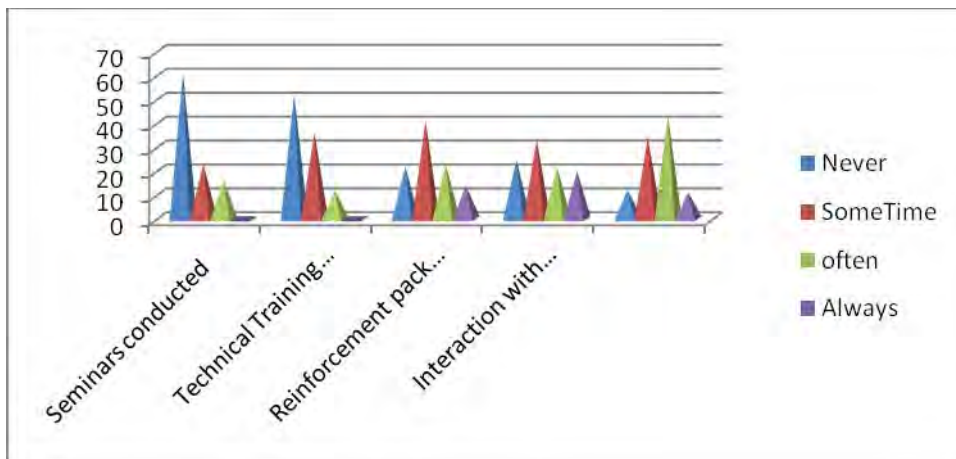


Fig1.6 Efforts Required by organization

Also by seeing the above interpretation some point click in the mind on which management has to put some extra efforts so that techno environment established in organization like print media. These points are:

- Lack of focus on Seminar and workshop
- Lack of performance indicators
- Local environmental impact
- Slow to give new and creative innovations

## 6. CONCLUSION

Information technology plays a key role in transfer of knowledge and management of information. The survey presented here was conducted on Dec 2011 on 3 print media (News Paper) industry, to determine the impact of this new technology on their workplace. Survey is taken from 100 employees with sample consist of 20 questions. It is clear from the survey that information technology and computers are now an integral part of the day to day business. Almost every single employee do work on a desktop computer and aware of internet. Many business processes such as bookkeeping, invoicing and Specification writing is now almost completely computerized and the tendency is toward a greater computerization of the remaining processes.

The staff is in general very receptive and even actively involved in the introduction of new IT solutions. The introduction of IT has been both beneficial and detrimental. According to the survey, IT has raised productivity in most business processes and particularly in general administration, design and project management. The main benefits achieved by the use of IT is an increase in the quality of documents, an increase in the speed of work, a



better financial control, better communications, simpler and faster access to common data as well as a decrease in the number of mistakes in documentation. However, the benefits of IT come at a cost since the complexity of work, the administrative needs, the proportion of new operations and the costs of doing business have all increased. Furthermore, the continual demand for upgrading hardware and software, the high investment costs and the greater know-how required from the staff are perceived as important obstacles to a greater use of IT.

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