

THE EFFECTIVE IMPLEMENTATION OF ICT TOOLS IN BUSINESS

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ABSTRACT

Over the past years, technology has created a revolution in business and commerce. It revolutionized the business by changing the entire perception of the market and expanding the business opportunities. Business tools refers to different applications and softwares which are designed to help the organizations perform their tasks very efficiently and effectively. Implementing Technology into business helps the organizations to streamline, automate and optimize the internal activities. Technology will also help the employees to communicate more effectively thereby increasing their work efficiency. Technology will help us to set the KPI's and self-objectives which will help in the growth of the company. The effective use of technology will help us to gain insight into the varying market trends, customer preferences, understanding the target market, knowing the competitors, financial matters, and the overall performance of the business. The ICT tools can help the business in many areas like design, planning, production and manufacturing, research, and development and so on. We can design different productivity apps, back up files, innovative marketing, effective use of social media and many more by incorporating different ICT tools in business. The main challenge will be the requirement of a deep analysis of the impact of information and communication technologies for growth and development. This will include the analysis of economic, financial, and technological aspects along with a wide range of other services like the online services provided by the company.

Keywords: Information and Communication Technology, Database Management Systems, Management Information Systems, Customer Relationship Management.

Introduction

Management of businesses is a very challenging task nowadays. The main reason for this is increase of human complexity at work. The efficiency of any management depends on the tools used. The management has the responsibility to use ICT technologies that will help to manage the activities in an efficient manner. Information Communication Technology (ICT) will include all and any type of software and other software solutions including ICT applications, ICT services, related software products and other embedded softwares. Some examples of them include customized ICT solutions, mobile application development, website design, designing animations and so on. Broadly speaking, ICT has become an integral part of business now throughout the world.

Businesses cannot survive in 21st century without using technology because every aspect of business is now controlled using different technological tools starting from connecting devices onto the network, e commerce, centralized financial management systems, different applications development and what not.

It is common knowledge that the business sector produces products and services for profit generation. Information Technology utilizes different technologies to create, analyze, process, and evaluate information which is very critical for the business performance. The process of office automation as a management tool usually decreases the number of employees required. Information optimization has reduced the overall cost of business to produce different products and service. All this led to a bring a positive effect on the financial goals of business.

The automation of different processes using technology has increased the productivity to a great extent. With the help of fewer and limited resources, the quality of products and services are improved at a low cost. Technology also makes it possible to store sensitive and confidential data in a safe way so that the chances for data breach is minimal and thus the data is not vulnerable to any threats. Information retrieval is also hassle free. This will definitely help with decision making process.

Quality assurance and testing brings assurance that the products and services produced by a business is at par with the expected quality for the customers. Rigorous quality checking will help the business outputs to meet the required standard specifications. Different processes like marketing, accounting, customer support, product testing can make use of quality assurance standards. An efficient and effective information processing related to quality assurance goals is the key to deliver quality products and services. Various investments in IT can boost

the company's operational processes in a more efficient manner and the managerial processes become much effective.

Literature Review

Barlow & Graham, (1999) conducted a study about the use of different information and communication technologies by taking a sample of 120 industrial and normal commercial libraries. As per their survey, 96% of the organizations utilized computers for gathering information. The use of ICT tools for a range of applications like email, ranking and ordering, word processing, presentation tools, spreadsheets, and database management systems. Furthermore, 91% of the sample uses internet to access different websites, email, e commerce websites and so on. As per the results of the survey, the current ICT methods are described, and the future automation plans are also included.

Maldonado (2002), in his study found that due to the growth of technology, Information and Communication Technologies (ICTs) became the pivot of education and training. The author has taken Library and Information Science/Service (LIS) and has portrayed the influence of technologies in the current world. The study aims at exploring and auditing different types of technologies and nature of ICT in the field of LIS education in Africa. According to the finding, almost all the schools in Kenya, Africa have adopted the use of ICT but with varying terms of applications. One school showed an exception and was offering different varieties of ICT courses including core modules.

Salwani, Marthandan, Norzaiddi & Chong, (2009). They conducted an analysis about the use of E commerce for business and how business improved its performance after that. The factors that were taken into account were Technological context, Technological competence, firm size, organizational context, the scope of firm and the environmental context. Back-end configuration was also studied and its influence on e-commerce usage was analyzed. The importance of e-commerce tools and the relationship to improve the performance was studied and evaluated.

Kabanda (2011), in his paper, explained that with the rapid expansion of technology, the access to internet became very easy and the services provided varied within countries with some countries depending too much on and others being very less dependent. Developing countries use internet for their growth and development but may face challenges while utilizing it because of the lack of infrastructural facilities. Almost 75% of the population even after living in emerging markets have only limited access to internet. This has to be trespassed especially for the developing countries.

Amandeep (2020) in his study described the role of ICT in different areas of business-like communication, inventory management, management information system, customer relationship management, business decision-making, health, and security. The other ways in which technology has affected business include various mobile solutions, advent of cloud computing, internet enabled systems, different analytic services and so on.

Nikoloski (2014) mentioned that effective use of Information Technology can change the way businesses compete. Because of this, we should view information systems in a strategic way, as important as competitive networks, and should be considered as a necessary investment to do in technologies which will help the organization to achieve its objectives. The evidence he submitted also suggested that turning investment into ICT for higher productivity is not much straightforward. He also concluded that small enterprises are investing in communication and information technologies to support their strategies and to establish competitive advantages.

Teryima, (2018) conducted a study on importance of computers to human development and behavior, the role of ICT in the administration of Local Government. He concluded that the major existing issues are lack of technical skills, poor technological know-how, constrained ICT development, lack of computerization, negative attitude of government and so on. As a conclusion, these benefits include; enhanced operational efficiency, improved performance, improved quality of service delivery resulting to customer satisfaction, increase in market share growth and to a greater extent will result to enhanced sustainable competitive advantage.

Adengua (2013) & Ajayi (2015) conducted separate studies and concluded that ICT have created a lot of new opportunities for employees in areas such as research and development as well as a better information system design which will improve the quality of decision-making. They also focused on achieving competitive advantages. They also suggested on using better technologies for evaluating their assets and investments. According to them, the management must focus more on the efficient utilization of the assets and investments by investing more on technology and other ICT tools. Experts must be appointed to make this job easier.

Macapagal (2020), in her study, concluded that the below mentioned principles must be observed for any ICT Project to be successful – Participation of all the people, Local ownership and capacity development, Mix of technology by choosing appropriate technologies, Multi stakeholder partnerships, alignment with larger demand driven development, institutional ownership and leadership, competitive enabling environment, financial and social sustainability, and risk considerations.

Moses (2019), did a study on the technological development in Uganda, Africa and carried out primary and secondary research to analyze the impact of ICT technologies used there. He concluded that ICT tools were not effectively used for communications, especially in schools and colleges. He also discovered that lack of adequate facilities limited the people from expanding the businesses. He also focused on the fact that effective MIS systems are not used by both large and small organizations which could help them to achieve their business goals faster. He also found out that many issues happened because the information was wrongly entered into the system. He also suggested some methods that can be used to improve the efficiency of the ICT tools used.

Objectives

The main objective of this study is to study the different ICT tools used by companies to improve their business.

- a. To assess the impact of the ICT tools on business
- b. To identify the different issues faced by the organizations while using the different tools
- c. To recommend suggestions on improvements to be carried out.

Research Methodology

The paper aims to analyze the use of different ICT applications and technologies among the business corporations and organizations. Intensive secondary research has been carried out to understand the impact of technology in different areas of business and the changes and effects of using them. Secondary data was collected from journals, books, magazines, and research monographs.

Data Analysis and Interpretation

Management Information Systems

Management Information Systems or MIS normally refers to the computer-based systems that provides the manager with different tools to organize, manage and evaluate different departments within an organization. An MIS will include softwares that will help in decision making, data resourcing such as database management systems, the various hardware resources of the system, decision support systems, different project management applications, people management tools, and all the computerized processes that can be used to run the departments efficiently. (Imeh Akpan, 2019)



Figure 1: ICT Components used in Business (Sam O'Brien, 2020)

Customer Relationship Management

Companies and organizations are using IT to improve the way of designing and managing customer relationship. A CRM system will capture all the relations a company has with a customer for a better gain in

experience. For example, let's say a customer calls and files a complaint about a product he/she purchased, then the customer relationship officer can see the items the customer has purchased, shipping information, previous responses to the issue if any and so on. (Dr. Nazrul Islam, 2018)(Syed Shah, 2019)

Business Decision Making

Business Decision making is facilitated using tools such as Enterprise Resource Planning (ERP) software and other such decision systems that will help the managers see the performance of the company in real time. Such platforms will create an online dashboard with all the information regarding the company's finances, customer details, sales, and marketing trends. Managers will then use this data to decide on product promotions, expense cutting, customer support and order placing. (Kruma Nikoloski, 2020)

Cloud Computing

Cloud Computing allows for quick data access and data storage from across the world. There is easy data backup and recovery which will help the users to store the data securely. This technology is cost efficient. The use of cloud services can help to create a workspace which will help in innovation. The cloud helps in consistent innovation efforts thereby offering a strategic advantage in today's competitive world. (Taylor P, 2020)

Reduced costs and eliminate waste

The initial introduction of ICT is costly. But that must be considered as a one-time cost only. In the long term, ICT becomes cost effective when considering how well it can streamline all the processes and other management operations. The human labor can be replaced with efficient and centralized systems that will give more productive output. The streamlining of management tasks will help in reducing unnecessary costs dues to mismanagement of operations. (Modimogale L,2019)

Communications

In the business world, effective communication plays a very important role to maintain connections between all the stakeholders involved. Hence, the efficient utilization of ICT tools will enable the effective communication within the organization or to outside including e-mails, social networking websites, video conferencing applications, digital workspaces, cloud-based apps, robust mobile devices and so on. (Shahram,2020) (Garter, 2021)

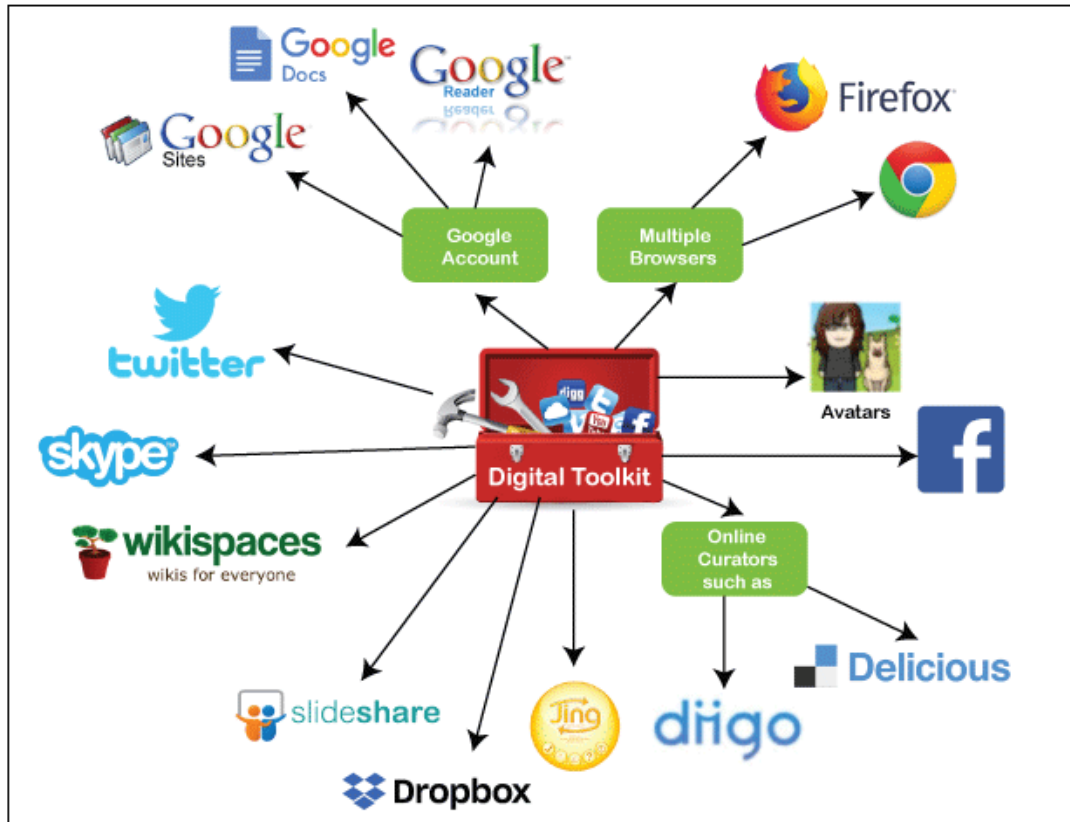


Figure 2: Communication Tools used in Business (Clare Novake, 2019)

Tools To Solve The Business Problems

Information Technology has given business some effective tools to solve complex problems. Improved hardware with more memory, faster processors, sharper visual displays along with smarter applications have made it very easy to research data, analyze and evaluate scalability. There are many tools available to solve complex problems like task management tools, calendar scheduling tools, content management systems, Accounting softwares, social media management and so on. (O’Brien S,2019)

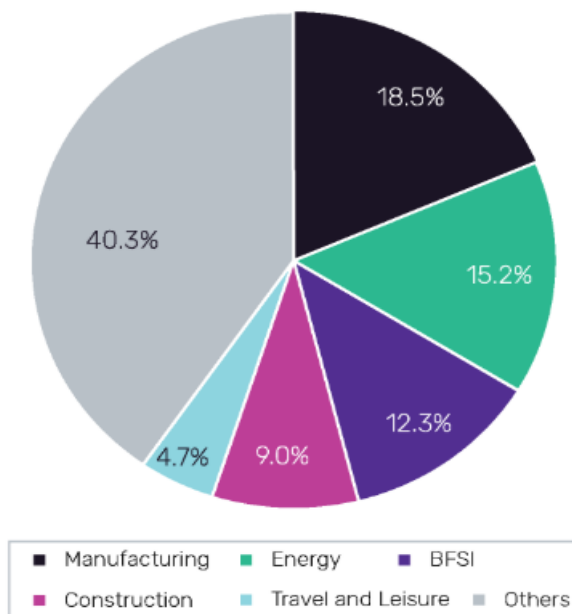
Results

The innovations in business and use of ICT tools have resulted in improvement in the market and in business like smarter apps, improved data storage, enhanced quality, and better productivity.

The various innovations through the ICT tools have created a radical change in the market like:

- a. The higher dependence on online shopping by customers which is considered to be more efficient than in store shopping
- b. The use of digital marketing tools which is more efficient than the high-cost papers, television, or radio advertising.
- c. Social networking and other networking apps are more enjoyable and efficient.
- d. VoIP communication has proved to be better than using telephones and other devices.
- e. Cloud Computing is better and efficient for data storage and retrieval than any private computer network. (Krume N, 2020)

ICT Revenue Market Share (in%) by Leading Verticals: 2023



Market Growth rate (CAGR) of leading 5 IT Solution area: 2018-2023

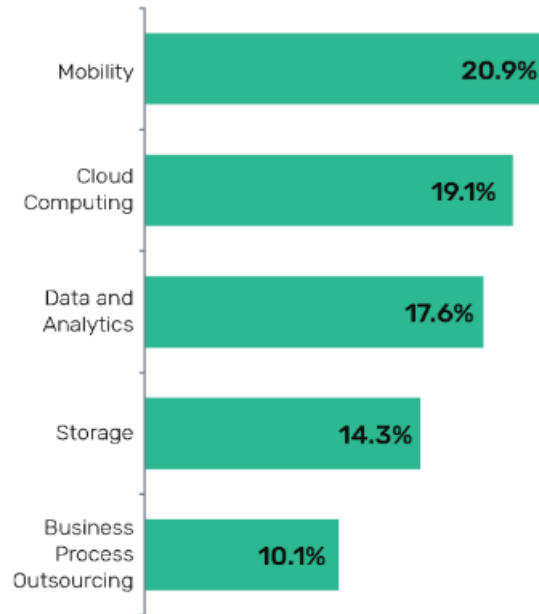


Figure 3: Global Data Market Opportunity Forecast (ITA,2021)

The businesses that have adopted using ICT tools in business tend to have these characteristics in the business:

- a. More accurate business planning.
- b. Marketing has become more effective.
- c. The sales have increased.
- d. The management of activities have become more systematic.
- e. They can use real time monitoring.
- f. Customer support can be better delivered by offering instant customer service.
- g. Ease of solving complex problems.
- h. Marketing has improved.
- i. Better resource management. (Akpan, 2021)

Conclusion

Information Technology can very well change the way a business operates and competes. The information systems must be viewed strategically, and necessary investments must be made in technologies to help the organization achieve their objectives. The evidence also suggests that use of ICT for higher productivity entirely depends on the tools used and how effectively the tools are being used. Moreover, the ICT related changes are search and experimentation model where in some firms can succeed and grow while others fail and disappear. Small organizations tend to invest in information and communication technologies to support their business strategies thereby establishing a competitive advantage in the market.

The study conducted here is a literature review study. The impact of ICT varies from trade to trade. The role of ICT in organizations is not limited to managing the business but also storing and handling the data. Everything is now networked with the help of internet and web applications which makes it easy to monitor the different management operations, ICT is therefore an integral part of trendy life.

Scope for Further Research

Technology is a field that is growing on a daily basis. Keeping up to date with the new trends in technology is always a challenging one. Some areas that have to be evaluated to get a better understanding of the implementation of ICT tools in business includes areas like Virtual and Augmented Reality. The use of virtual environment can create a virtual environment for the service representatives to interact with the customers in real time as well as give the customer a real life like experience and interaction with the different products and services of the particular company. The use of cryptocurrency in business will give them advantages like more freedom, ease of transaction, and better security. Cybersecurity is also an area to be given utmost importance due to the increase in cyber attacks day by day. Some effective measures have to be implemented in order to counterattack cybercrimes. These are some areas that has to be evaluated in the future.

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