



DIGITIZATION AND ITS IMPACT ON ECONOMY

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Abstract

The waves of adoption and usage of ICTs (Information and Communication Technologies) have revolutionized our world by introducing distinct technology– enabled services in every sphere of our lives. There are various applications of ICT, digitization is one of them. Digitization is a process of converting the diverse forms of information, such as text, sound, image or voice into digitalized format. The digitization has a proven impact on economy and society by reducing unemployment, improving quality of life, and boosting access to knowledge and other public services. The process of digitization is marked by cost effectiveness to cut the cost that incurred in various knowledge practices related to the production, organization and communication of information that makes long-term economic growth. The process of digitization facilitates to preserve, access, and share an original document to the people worldwide that may only be available earlier to those who visit its physical location. A number of measures are taking in the field all over the world and in India, to conserve and preserve the knowledge of the past and present for the upcoming generations. This paper highlights the concept of digitization along with the social economic and ecological benefits of digitization of knowledge and information.

Keyword: Digitization, Economical Impact, Ecological Benefits, Societal Impact, Cultural Heritage,

Introduction

Right information to the right user at the right time has been the aim of information professionals. Recent developments in the information and communication technologies, especially the Internet and the Web based technologies have brought significant changes in the ways the information generate, distribute, access and use. These technologies play an important role to minimize the problems in using information at its earliest. For a long time, we have been using printed information sources which are made available to us by the efficient efforts of publishers, booksellers, librarians and information scientists. But, with the introduction of information technology so many steps have been taken to reduce the efforts in accessing the information in a short span of time. One of the significant application of IT is the digitization of knowledge i.e., to convert the printed information in the digital form and made available for use with the help of computer networks. This has changed the whole scenario of information world.

Review literature

According to **Pearce-Moses (2019)** Digitization is the process of transforming analog material into binary electronic (digital) form, especially for storage and use in a computer . Digitization converts materials from analog formats that can be read by people to a digital format that can be read only by machines. The devices like scanner, cameras, and a number of other devices can be used to digitize knowledge contents. These technologies allow the digitization of almost all types of materials, including paper documents, rare documents, photographs, sound recordings, and motion pictures.

Witten and **David (2018)** define Digitization as, the process of taking traditional library materials that are in form of books and papers and converting them to the electronic form where they can be stored and manipulated by a computer .

The US Institute of Museum and Library Services (IMLS) defines digitization as the process of converting, creating, and maintaining books, art works, historical documents, photos, journal, etc. in electronic representation so they can be viewed via computers and other devices .



Objectives

- ❖ To know how the technologies and connectivity will come together to make an impact on all aspects of governance and improve the quality of life of citizens.
- ❖ To find out how the government services can work effectively with practical solutions and innovative ideas to accomplish the vision of a digital India-a reality.

Digitization

In, today's digital society, all knowledge is divided into two binary strings, 0s and 1s that codified the data, which allow people to create, control, and share data in ways that to be revolutionary. Information is created in various formats at an accelerating rate through various media and it is become increasingly complicated to remain abreast in this overflow of literature without the help of information technology. Digitization improves access to information resources. Digital projects allow users to search for collections rapidly and comprehensively from anywhere at any time. The process of digitization makes the invisible to be visible. A number of users can access the same document at the same time without hindrance. It also removes the trouble of distance, as users do not have to travel to locations that possess the hard copies of materials. Although, digitization is a time consuming and very expensive venture, but, it is a powerful way to cope up with the problems of persistent shortage of periodicals and other technical literature in institutions, universities and technological schools in the developing world. Numerous organizations and institutions are taking initiatives in digitizing their documents, archives of newspapers, artifacts, theses and dissertations and other historical documents and International Journal of Digital Library Services | Digitization defines by many scholars in a variety of ways. Some of them are as follows

Need for Digitization

The basic idea of digitization is to make full use of ICT facilities for accessing worldwide resources and beneficial for society at the same time. As going digital is the need of the hour, to remain environment healthy and safe. Various organizations are involved in digitizing their material because they remain influenced of the enduring value of such resources for learning. Digitization also raises the reputation of the institutions as global users can know the institutional collection and utilize these resources from distant locations. The main reasons to digitize are to enhance access and improve preservation. By digitizing their collection, institutions can make information accessible that was previously only available to a select group of users. Digitization can also help preserve materials making high-quality digital images available electronically and may reduce wear and tear on brittle and fragile documents.

Benefits of Digitization

Developing a digital substitute of rare, brittle or fragile original documents can provide access to users while preventing the original from damage by handling or display. This is the motivation behind the digitization of many artifacts. Following are the certain benefits of digitization.

- ❖ The documents can be viewed from anywhere, at any time of the day
- ❖ The documents can be printed directly from the web
- ❖ Users can find what they are looking for promptly and independently
- ❖ It can save staff reference time by answering frequently asked questions on the web
- ❖ It can enhance images electronically so that they can be viewed with greater legibility
- ❖ It increases use of collections and facilitates learning and scholarship
- ❖ The documents do not have to be re-shelved or located by staff
- ❖ The documents are not handled frequently which lessen wear and tear

Apart from the general benefits that are discussed above, there are certain specific benefits of digitization that may help in making the society economically and ecologically sustained.

Economic Impacts of Digitization

The consequences of the developments in the technicalities of Information and Communication Technology introduce the concept of digitization. The transformation from print to digital media for communication of



information to the larger community is resulted from the growth of the Internet and now enables the tremendous amount of information accessible to everyone. By the process of digitization, knowledge to an ever greater amount is being produced, processed, communicated and preserved digitally. The economics related to the concept of digitization is two-fold. The first one, how economic is the economy of the countries

Impact on Economy

In any geography, the factors related to adoption and usage of digital technology, such as pricing, reliability, speed, and ease of use determine the level of digitization, which in turn has a proven impact on reducing unemployment, improving quality of life, and boosting citizens, access to public services. Digitization allows governments to operate with greater International Journal of Digital Library) transparency and efficiency, and it has a dramatic effect on economic growth, but not all at once. In the current sluggish worldwide economy, the use of digital technologies is served as a means of boosting economic activities. Constrained economies (those with a digitization score below 25) have barely begun to develop affordable Internet connections. Internet services remain expensive and limited in reach.

- i) Emerging economies (those with a score between 25 and 29.9) have achieved significant progress in providing affordable and widespread access.
- ii) Transitional economies (those with a digitization score between 30 and 39.9) provide citizens with ubiquitous, affordable, and reasonably reliable services, and usage is expanding at a relatively rapid pace.
- iii) Advanced economies (those with a score of 40 and higher) are in the most mature stage of digitization. These countries have a talent base that can take advantage of digital services.
- iv) The calculation of the Digitization Index for 150 countries in 2010 reveals that countries tend to follow four clearly development stages.

Social Impacts of Digitization

One of the most interesting and important factors related to digitization is the link to overall societal welfare. Digitization, as a social process, enables the institutions to generate, cooperate and create larger for the benefits and progress of the society through digital communications and applications. The process of digitization involves the mass digitization of books and older and rare materials. For the purpose of preserving the knowledge contents for future generations or making them available to a much wider community than could ever access the physical objects, many of the institutions (libraries and cultural archives) have started digitization initiatives to provide access to the history of societies, countries, cultures and languages. According to Hughes (2003), more than a last three decades, cultural heritage institutions (libraries, archives and museums) have incorporated technology into all aspects of their mission and services.

Ecological Impacts of Digitization

During the last few decades, healthy living has become the major concern of society. There has been an increased focus on health related matters. This has led to more people exercising, eating right and using things like cars and power strips less and other techniques to benefit the environment. The initiative has resulted in individuals taking a closer look at the environment and examining their part in making the Earth more sustainable for years to come. As this trend spreads, the sentiment is now being felt at organizations and institutions. Some innovative employees have spearheaded campaigns for workers to use less power by shutting down machines at night, paying more attention to reusing coffee and water cups and numerous other things such as going paperless i.e., digitization is also one of the way to protect and save environment. Little-by-little, these factors can help the Earth to become ecologically sustained. The Idatix (n.d.) in its White Paper illustrates some data about the adverse effects of using paper. There are many other ecological benefits of digitization:

- ❖ Cutting tie with paper will permit an organization to transition to make their operations more environmental friendly.
- ❖ Saving paper equates to saving trees and using less overall supplies, which could position an organization ahead of its competitors in terms of positive user sentiment.



- ❖ With digital documents and a document solutions program, organization will no longer have to worry about using hours or even days of time looking for lost documents. Instead, everything will be available instantly via a computer search.
- ❖ Digitization can help organizations' to take advantage of new technologies and allow staff to access records in any location it turns help in making ecological sustainable society as the person does not use vehicle to go here and there and it controls pollution

Conclusion

Digital conversion of print sources has improved rapidly in the past few years. Digitization is the social transformation started by the massive adoption of digital technologies to generate process, share and manage digital information. Digitization is an inclusive technique of preservation and access by which all the institution's assets are transformed into digital and creating high-quality copies in digital format. It provides advanced opportunities for preservation and access to knowledge contents, also it changes the ways in which collections are used and accessed. Emerging digitization initiatives and ways in which institutions are becoming digital are causing various effects on economy, society and academics as well. These radical and rapid changes make the information presentation and distribution more rapid, open, and global access to the information than has been available in the past. In addition, converting material from analog to digital format reduces some of the costs included in digitization operations for providing access to print sources.

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