Article

Knowledge Society and Information Technologies in the 21st Century

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Jogen Sharma[1] and Dayawanti Tarmali[1]

Abstract

The prosperity that gives greater credit to society, in terms of quality of life, is that which is based on knowledge. Information technologies (IT), particularly those applied in the field of education, play a crucial role in shaping innovative, creative and competitive actors in the contemporary global world. 'The utilization of information and data, as well as the knowledge, skills, and talents present within communities, as well as their views, commitments, and motives for making wise judgments, are among the fundamental components of knowledge management' (Stevenson-Perez, 2009, *U.S. Patent Application No. 11/904,120*). It has been argued by several eminent social scientists on this subject that organizational knowledge ought to be viewed as a strategic advantage. To solve issues and take advantage of opportunities, communities are being pushed to create effective and efficient means of assembling, identifying, capturing and distributing their collective knowledge and expertise. This understanding of the significance of doing so is developing. People all around the world are interested in putting knowledge management practices and technology into practice, and many of them have made knowledge management an essential component of their overall growth plans. Management of knowledge is becoming more and more crucial to the growth of the world economy. Organizations should not neglect knowledge management and developing technologies if they want to stay relevant in the current world.

Keywords

society, knowledge, information technology

[1] Management Development Institute Murshidabad, Murshidabad, West Bengal, India

Corresponding author:
Jogen Sharma, Management Development Institute Murshidabad, Murshidabad, West Bengal 742235, India.
E-mails: jogen@mdim.ac.in; jogen.sharma2@gmail.com

Introduction

Knowledge is traditionally deemed to be independent of information and facts. New options are becoming possible as technology develops. Successful performance and progress in knowledge-intensive societies need the integration and exchange of highly dispersed information. Knowledge management has emerged as one of the most crucial elements in enabling society and businesses to raise productivity and competitiveness at the same level regardless of market conditions during recent decades as society has expanded and changed in rhythm with increasing technology. Many individuals are asking for a fundamental shift in the way we think and act about how we operate our businesses because powerful forces have powerful consequences that are influencing the global business and economic climate.

Knowledge management is also seen as an important component when taking into consideration the advantages of developing technology, including the development of reusable services that enable businesses to use these services independently.

Literature Review

The business globalization environment has seen a substantial upheaval over the past two decades as a result of shifting customer needs, advancing technology and the marketing environment. To survive in this hostile climate, commercial firms have started to reposition their competencies through the application of a variety of strategies. 'Lean manufacturing is a form of productivity improvement that focuses on restructuring the manufacturing system in terms of processes, minimizing waste, eliminating differences, and lowering costs' (Kërçi et al., 2022). Information technologies (IT) usage is positively and significantly impacted by government policies and technological proficiency.

To support the government, technology experts should create strategies to support and promote businesses that use it. These strategies should include raising money for technology-adopting businesses, promoting online tax payment and information systems, maintaining regulations or laws that can affect IT usage and the security of businesses that use it, and creating IT software standards for SMEs and globalization (Sila, 2022).

For Lueny Morell (n.d.), one of the main challenges of professional teaching in the 21st century lies in understanding the contemporary student: creative, mobile, multi-tasking, collaborative and producing. Hence, within five proposals for higher education (in his case, for engineering) is to establish an emphasis on learning, rather than on teaching. One key is collaborative learning through the use of information and communications technology (ICT).

According to Davidson and Goldberg (2009), the digital era has made previously unimaginable opportunities for self-learning, the development of horizontal constructions subvert conventional authoritarian systems, communal

credibility, decentralized learning and online learning possible aspects. The foundation of ICT is the connection, which creates interaction.

For a country in the state of development of India, the appropriation of ICTs in non-formal and formal, face-to-face and virtual learning processes, in horizontal collaborative environments is one of the keys to acquiring competitive advantages based on knowledge, which allows for raising the standard of living and productivity of their regions and cities. The actors in education, including students, teachers, parents and institutional authorities, have the opportunity to embark on rewarding learning paths that can shape the immense capacities for creativity and innovation of children, youth and adults.

Objective

Objectives of this study are as follows:

- Understand knowledge societies, produce, process, communicate and apply information in order to develop and apply knowledge for human progress.
- Knowledge society's mission is to help institutions increase the use of IT based on knowledge society.
- Rapid adoption of innovative technologies.
- IT can give idea of legal standing to transactions carried out through electronic data transfer and other electronic communication methods.

The Greatest Prosperity Comes from Knowledge

A society with high-quality education among its citizens, especially children and young people who are respectful, critical, creative, productive, collaborative, democratic, and environmentally friendly, is more likely to prosper, suggesting that knowledge is the main factor influencing a large community's wealth.

In the world concert, nations, their regions and their cities relate to each other based on various types of competitive advantages that characterize them. The structure of the labour market, the composition of exports, the coverage and quality of the educational system, the capacity for innovation and the type of foreign investment are closely related to the competitive advantages on which a country (or region) bets.

In some cases, it may be the abundance of cheap, low-skilled labour that characterizes a country's economic relations with the environment. In others, it could be the endowment of natural resources, whether mining, energy or agriculture, as a source of competition.

However, the economies with the highest levels of quality of life find their source in knowledge the main source of wealth generation. Thus, in the 'club' of societies with high income per capita in the world, the Organization for Economic Cooperation and Development (OECD), with 34 members (including India, Chile

and Mexico), has conceptualized, since the 1990s, about the so-called knowledge economies.

The knowledge-based economy with the highest levels of quality of life finds its source in knowledge. Within the distribution of the gross domestic product, a concept being used highlights how advanced economies are more dependent on knowledge and information, and how businesses and the public sector need access to these resources more and more frequently.

The OECD recognizes that the main engine of productivity and economic growth is knowledge, a factor that, unlike others (mining resources and land, for example), is not 'used up' with its use. It is highly renewable to the extent that the members involved in the age, use and dissemination of knowledge have platforms to share it.

Ian Brinkley (2008) defines the knowledge economy as follows:

> One in which the generation and exploitation of knowledge come to play a predominant role in the creation of wealth. It is not simply about crossing the frontiers of knowledge; it is also about the most effective use and exploitation of all types of knowledge in all areas of economic activity.

The knowledge economy is not limited to the productive sectors of high-technology goods and services; it refers to new sources of competitive advantage, applicable in any productive sector, in any company, in the countryside or the city, based on knowledge.

The Appropriation of ICT is Crucial for Knowledge Societies

Multiple factors converge so that a given society can move towards the generation of wealth based on knowledge. The quality and relevance of the educational system, as well as its coverage at all stages of training, society's interest in scientific and technological activities, particularly research and development and the construction of innovation capacity, the articulation of the productive sector of goods and services with universities and research centres. The capacity of society to have long-term strategies and carry them out in an articulated manner and investment in infrastructure (roads, ports, telecommunications), among several determinants.

An essential element on the path towards the creation of wealth based on knowledge is the degree of appropriation of ICTs. Hence, investment, public and private, in all elements that make up the ICT ecosystem, is the object of primary interest in the field of public, academic and productive policies.

Infrastructure (the basis for connectivity), applications, users and services must converge form a virtuous circle that allows multiple social and economic processes to coincide to create competitive advantages based on knowledge.

The appropriation of ICTs is transversal and applicable in the most diverse sectors (health, companies, government and justice, among others). The emphasis of this article is on the appropriation of ICT in the field of education.

The Use of ICT in Education is Decisive, Collaborative Learning

The way individuals learn has been fundamentally altered by the internet, the ease of access to information sources and the methods by which we send all kinds of data. With the massive advancements in technology, traditional pedagogical frameworks for college and university instruction that are logical and rely on face-to-face interaction and information that is recognized by academic authorities are no longer relevant. In general, official educational institutions do not make use of the virtual spaces for non-formal learning that are being created by tools such as blogs, social networks and wikis.

Learning today is about collaboration, participation and creativity, if it can be put that way, to the flattening of the hierarchies of knowledge. More than an interest in the product of knowledge, the current emphasis is on learning processes. Wikipedia is a good example of how, through the participation of millions of individuals and good structuring, 27 million pages can be created through an open generation and validation system that has left behind the traditional masterpieces of the type 'Encyclopaedia Britannica' as a reference source.

Science Knowledge Management Platform for Quick Learning and Assessment

The most important innovation is scientific knowledge management, a learning portal system and method that offers the right levels of programming and feedback to let end-users accept a new science in its most advantageous and fundamental aspects, specifically mastery of the instruments for evaluating, measuring and improving scientific value. The system and method of the invention also teach the proper use of scientific knowledge management tools to anyone who is suitably and prepared to use such a scientifically value-oriented learning system, without the said person being required to have prior knowledge of the physical sciences in a great deal less time than that required to achieve comparable rates of scientific skill mastery using the fastest available conventional methods.

Content Management

It describes a content management strategy. The technique entails recognizing the digital sending apparatus. The procedure includes creating a design for an automated business process. Furthermore, the method entails converting the automated business process design into information technology templates for setting up each of the cited digital sending devices to implement the automated business process.

The Model of a Learning Organization

Better and quicker learning is crucial for businesses that want to survive and develop. Many businesses use fast and simple remedies that are frequently influenced by technology. Most are fruitless efforts to bring about organizational transformation. However, without knowing what motivates it, an organization is neither feasible nor sustainable. The organization, people, knowledge and technology subsystems of learning or an organization are depended on each other. Each subsystem helps the others by enhancing learning as it spreads across the entire system.

Organization

Organizations are realizing the importance of learning and how it can increase their effectiveness. This is shown by the fact that it has an inspiring educational goal and an instructional strategy that will aid the institute in achieving its educational mission.

> It is not the strongest of the species who survive, nor the most intelligent; rather it is those most responsive to change. —Charles Darwin

Technology

ICTs may be used successfully by learning companies without stifling knowledge management and learning. In learning organizations, ICTs are used, among other things, to foster organizational identity, build and maintain learning communities, inform staff, clients and others about economic vitality, forge unforeseen, fruitful connections between people and grant access to their knowledge and ideas, foster innovation and creativity, share and learn from successful practises and unintended results, and ability to participate.

What is Knowledge Harvesting?

An integrated set of procedures that make it possible to record the frequently unnoticed wisdom of human knowledge. The knowledge is then transformed into a specific application that can be shared with others. Depending on the knowledge of each employee, data and information from the acknowledgement system are used. The process is referred to as knowledge harvesting. Addressing business issues through open innovation initiatives has additional information.

Conclusion

The function of knowledge management in the context of developing technologies is to increase responsiveness to partners and customers. Incorporating a knowledge management system with developing technologies into a company provides insight into potential possibilities, prompting answers to specific concerns and services. Within a few years, new technology and electronic systems will most certainly provide the majority of information. The influence of information technology on company growth and globalization is enormous. Unfortunately, more study has not been undertaken until now owing to a range of variables such as security concerns for commercial organizations or the important link of the specific sector to their interests. Organizations have developed initiatives to provide business solutions using information technology platforms.

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References

Davidson, C. N., & Goldberg, D. T. (2009). *The future of learning institutions in a digital age*. MIT Press. https://doi.org/10.7551/mitpress/8517.001.0001

Ian, B. (2008). *The knowledge economy: How knowledge is reshaping the economic life of nations*. Work Foundation. https://www.researchgate.net/publication/263518303_The_Knowledge_Economy_How_Knowledge_is_Reshaping_the_Economic_Life_of_Nations

Kërçi, T., Tzounas, G., & Milano, F. (2022). A dynamic behavioral model of the long-term development of solar photovoltaic generation driven by feed-in tariffs. *Energy*, *256*, 124506. https://doi.org/10.1016/j.energy.2022.124506

Morell, L. (n.d.). *Engineering education in the 21st century: Roles, opportunities and challenges.* https://luenymorell.files.wordpress.com/2010/12/morell-eng-edu-in-21st-cent-roles-opport-and-challenges.pdf

Sila, N. A. (2022). The significant impact of information technology in business and globalization. *Journal of Positive School Psychology*, *6*(2), 4690–4695. https://journalppw.com/index.php/jpsp/article/view/2923

Stevenson-Perez, H. C. (2009 April 2). Knowledge management portal for rapid learning and assessment of science. *U.S. Patent Application No. 11/904,120*. https://patents.google.com/patent/US20090089238