


Era of Digitalization in Education & Business The Road Ahead

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UNIQUE PUBLICATIONS

Delhi Office : Plot No. 795, Paper Market, Ghazipur,
Near Fruit and Vegetable Market, Delhi-91

Ph. : (M) 98968-65777, 97290-83112, 90342-62133, 99917-90999

ISBN No.: 978-93-83861-80-4

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Role of ICT in Transforming the Current Education Scenario

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ABSTRACT

ICT enables self-paced learning through various tools such as assignments, computers, etc as a result of this the teaching-learning enterprise has become more productive and meaningful. ICT helps facilitate the transaction between producers and users by keeping the students updated and enhancing teachers' capacity and ability to foster a live contact between the teacher and the student through e-mail, chalk session, e-learning, web-based learning including internet, intranet, extranet, CD-ROM, TV audio-video tape. Edusat technology has become a very powerful medium for the interactive participation of experts and learners and it reaches the unreachable. Emerging learning Technology (ELT) of blogging, integrated learning modules, a podcast, Wikis, enhancement of browsers, e-learning, M-learning, U-learning have made rapid strides in teaching-learning processes. Communication is one of the most important levers of management that a company can implement for the formation of teams and achieving valuable performance. The use of ICT has not only become indispensable for the education sector but it's also equally important that how to use various tools effectively to gain a competitive advantage in the marketplace for the organization. We should use ICT ethically too to make us more productive, enhance and enrich learning and improve the learning outcomes.

Key Words :

Web Browsers, Technology-enhanced learning, Self-paced learning, Instructional software, Interactive learning, Integrated Learning Module, U-learning, E-learning, M-learning, business communication, organizational communication, work productivity.

INTRODUCTION

The present-day world is definitely in a huge flux and it increasingly counts on the enormous drift in the way technology will be used by mankind now and in times to come. Covid-19 has brought about the biggest ever structural and qualitative change in the perusal of knowledge and its dissemination. This will prove to be one of the biggest game-changer ever especially for the large and bright Indian youth population. Other countries are also pursuing the ICT for effective e-learning in the current time and making learning more cost-effective and efficient than ever before. Renowned Indian scientist Dr. Kastusiranjan marked that the recent technological development

ISBN No.: 978-93-83861-80-4

and their applications across the globe have revolutionized all social, economic, and cultural undertakings in a big way. The use of technology supports Bloom's taxonomy so it proves to be highly useful. The paper attempts to discuss the role of ICT to meet the challenges of the knowledge economy and to explain the development of a new methodology of learning and teaching aptitude in the changing context. There may be multiple reasons why we are incorporating ICT. It may be as a compulsion or need of the hour. Its use shows you are up and steady; sharing of documents becomes way easier, conducting various quizzes becomes time effective, promotes digital education which is much supported by our government too. Also, some courses are designed in such a way for example as basics of accounting, laws of physics, etc where the content remains the same, but not in courses like cybersecurity or digital marketing where it's so difficult to find an updated book on it as its contents are constantly evolving so with the use of ICT only the latest information can be effectively disseminated. ICT also comes to us as an aid for instance a projector, digital library, online databases, etc. not only enhances the education sector but also supplements the teaching-learning process in a big way. Technology enabling tools are disrupting the present education system. For instance, Coursera is like a new university reaching out to the learners globally in a very cost-effective manner, where the learners can also keep a track of the progress of the course. Khan academy is a revolution that is mostly free of cost and an extremely wonderful way of imparting knowledge from skilled resources. Even in NIT's, there is a shortage of 35% staff, so these sites are filling up for this gap. Naptel by the Government of India is also an initiative that acts as a bridge between people skills and the requirements of the industry. If we look at the statistics, we come to know that not more than 10% of people enroll in these free courses due to a lack of knowledge and motivation. They do not go beyond one week and drop outpost that. ICT can be used as a platform for teachers to give their courses. Some modules in the syllabus can be outsourced to be completed with the help of such tools to update the students with the latest updates in the respective field.

ICT: A STUDY OF CHANGE

The study of ICT is the study of change. The paper brings an overview of ICT and the way it has transformed education. The incorporation of ICT has helped grow and innovate the education sector to another level and has emerged as a major factor to gain a competitive advantage over others, else it would become very difficult to keep pace with the times. We are living in revolutionary times, a revolution in the education sector brought on by dramatic advances in ICT. ICT-enabled organizations are moving towards automation and electronic information handling to minimize the use of paper and rely extensively on optical data storage. ICT provides access to the vast amount of reference material; facilitates collaborative projects independent of time zones and distance. It also aids small firms with an international presence and facilitates commerce very easily. ICT has made organizations flexible, which helps them adapt to change and respond quickly to the demands of the current day market and uncertainty in the environment. The pace of learning has also fastened significantly now.

Figure 1: Objectives of ICT in Education

Competitive Advantage of using ICT

The Competitive landscape of education is more intense than ever which impacts our personal lives as well. Many of us are taking the help of ICT to revolutionize education so that students may get a better education, to better compete in the job market. But at the same time, many knowledge workers are finding out that an undergraduate degree is just not enough to compete better in the corporate world outside and so they wish to acquire more education online and enhance their

skills. The market for the best corporate positions is very competitive, with hiring firms looking out for individuals who can speak multiple languages, have adequate work experience, and have polished their educational endeavors much beyond just getting a degree. Throughout this year of too, with the changed circumstances, we have explored the concept of round-the-clock connectivity through information technology for the betterment of education and to take education to all more simply and effectively. Using ICT, organizations today are sending out their content of the faculties and new teaching practices are being established. Online education which by various names such as, e-learning, e-education, distributed learning enables us to get an education without going to that institute. Quite literally one can enroll in a course from IIT or Harvard and live in Jaipur, ensuring their good health safety in these turbulent times. Using various online platforms like video conferencing, e-mails, Google class, Google meeting, Microsoft teams, Webex, meet, Moodle, one can take courses from around the world so easily. Some educational institutes even offer complete degree programs via online platforms. These institutes include graduate programs in business. For example, the Massachusetts Institute of Technology and Duke University have programs that combine traditional classroom instruction courses and computer-delivered courses.

Figure 2: Importance of ICT in Education

The knowledge workers are well versed in the use of ICT know-how and when to apply which tool. A technology-literate knowledge worker also knows when to apply technology. Unfortunately, in various cases, people and organizations have blindly decided to use technology to help solve some sort of business problem. So, we need to understand that technology is not a panacea. We can't simply apply any technology to any given process and then just expect to process instantly to become more efficient and more effective. If we apply technology to a process that doesn't work correctly, then we will only be doing wrong things a million times faster. There are umpteen cases when technology is not the right solution. Being a technology-literate worker will help us determine when and when not to apply any technology. So, the key to success is its people or knowledge workers. The knowledge workers must be both information literate and technology literate.

- **Advantages of using ICT**

Technology helps us quickly create high-quality data and process it in no time. ICT can help us to be more efficient and can aid us to dissect and better understand problems and opportunities prevalent in the education sector. The cost involved is very less as compared to doing it physically.

- **Disadvantages of using ICT**

Education is not solely about technology; it is about using technology to improve learning and outcomes. Many knowledge workers simply do not understand this. They often look down upon simple solutions and thus engage in complicated processes that towards the end do not deliver anything of value. There are other related issues too, that bring about certain complications like the lack of adequate training to effectively use ICT to the advantage of learners.

- **Emerging Trends in ICT**

We have seen the rapid adoption of many innovations in ICT in 2020. It has allowed the use of new organizational structures. The use of ICT as a part of a corporate strategy where many educational organizations are implementing ICT. Firms that prosper in the coming years will be the ones that are generously using ICT and making the organization more creative and innovative. It enables tremendous efficiencies in delivering through electronic

media and facilitates the learners as per the need of the hour. It makes it possible for the organization to capture the knowledge of its employees and provide access throughout the organization. ICT contributes to increasing the productivity and flexibility of the knowledge workers. It has provided all the knowledge workers with an electronic alternative to face-to-face communication and supervision in pandemic times.

The role of ICT in e-learning has emerged as a refined human experience for the learners. Technology has been affecting every part of human endeavor. ICT helps facilitate the transaction between producers and users by keeping the students updated and enhancing the teacher's capacity and ability to foster a live contact between the teacher and the student through e-mail, chat sessions, etc. This promotes active learning, sharing of ideas, discussion and also provides immediate feedback. India can benefit from demographic dividends. This requires high-quality meaningful digital content to be made available to teachers and students. Teachers particularly should possess updated knowledge and skills to use the new digital tools and resources to help students achieve high academic standards. We need the vision to equip our students to meet the emerging trends. The present high-tech and competitive society will sustain only through the knowledge of ICT. According to UNESCO: ICT is a scientific-technological and engineering discipline and management technique used in handling information in application and association with social, economic, and cultural aspects. Appropriate use of ICT can transform the whole teaching-learning process leading to a paradigm shift in both content and teaching methodology. The increasing role of ICT will make education more democratic that is improving the quality of education services available to even students sitting in far-flung remotest corners of the country.

The new environment of the interactive learner-centered approach of ICT has completely metamorphosed the process of education i.e. delivery and dissemination. We must not allow the ICT-related opportunities to slip out of our hands. We must empower our youth with the latest technology to tap the latest skills and hidden potential of our youth population. There is considerable hope that technology can expand and improve education at all levels with special reference to the design and content of instructional materials, delivery, and assessment and feedback. In technology-enhanced learning (TEL) teacher's role will be more challenging and different from what is presently the traditional classroom teaching. In the new role, he will be more a director/coach or a facilitator because the ET enhances the quality of teaching and learning by arousing inquiry, curiosity, and exploration. ICT will allow the individual for self-paced learning, which caters to learner's abilities and aptitude. One of the major advantages of using ICTs in the classroom has been to prepare. The present and next generation of students for a workplace where ICT's particularly computers internet and others related technologies are becoming more and more important. This computer savvy and technologically literate students possess the desired competencies to use ICT's effectively. These knowledgeable persons possess the competitive edge in an increasingly uncertain globalizing job market. Along with the technology literacy development of specificity, skills are also required. For well-paying jobs specifically of skill is of the primary importance. ICT which includes radio and television as well as other high technology newer digital devices such as computers and Internet have been treated as generally powerful enabling tools for educational change and reform. The modern concepts of ICT have helped professionals to cope with the challenges of digital information and technology through the development of digital literacy resources. This can be built by (a) Acquiring Digital Media (b) Buying Access etc.

The role of computers in education is generally helpful for educational activity which requires significant interaction for that instructional software should be highly interactive. Interactive

learning environments are called intelligent testing systems. Because of their interactive capability computers provide individualized and self-paced learning. Electronic journals, Webzine, newsletters are also available over the internet and can be assessed using different technologies.

Use of Emerging Learning Technologies (ELT) we may have heard the names of the following terms without understanding. Few ELT is in use such as blogs usually maintained by an individual with, descriptions of events, graphics, or video. Most blogs are primarily textual, although some focus on art photographs, videos, music, and audio.

Integrated Learning Modules - Availability of open-source software has enabled the development of content management systems and learning management systems such as a Module. Integrated Learning Module (ILM) is a thematically focused class, delivered primarily over the internet. The course content is integrated and comprehensive creating a unique perspective on course themes without the potentially repetitive requirements of separate stand-alone courses. Content and language integrated learning is an approach for learning content through an additional language.

A podcast - A podcast (or non-streamed webcast) is a series of media files (either audio or video) that are released episodically and often downloaded through web syndication. The mode of delivery differentiates, such as direct download, or streamed webcasting.

CONCLUSIONS

ICT is important for us to learn how to use the technology available as an effective toolset. And it's equally important to understand where and why we wish to apply these tools. Education must drive the right use of ICT and not the reverse. ICT is a set of tools that can be an important and integral enabler of delivering knowledge efficiently, with effectiveness, and with superb outcomes. But this can be successful only if your choices and their uses are driven by the right intentions and great outcomes. Our role as a knowledge worker extends far and beyond using technology to gain a competitive advantage in the marketplace for our organization. We should use ICT ethically too. Being socially and ethically responsible in this information age involves not only the actions initiated by ourselves but also what we do to protect ourselves and our organizations against the action of others like protecting ourselves against cybercrimes like identity theft etc. Like it or not, ICT is a necessity today. It's hard to imagine a world without it post 2020 now. Of course, this does not mean we must adopt it just for the sake of keeping with the pace and the trends of the current times. Rather, we need to carefully evaluate each option and determine if it will make us more productive, enhance and enrich learning and improve the outcomes. ICT if used wisely will help us and our organization become more efficient, effective, and innovative. ICT has and will continue to revolutionize the education industry in the coming times.

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