

# Utilization of Information and Communication Technology for Secondary Students

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**Abstract** - For a variety of factors, secondary education is becoming more relevant in developed countries. The speed at which developed countries reach compulsory primary enrollment would create immediate demand for secondary education. Nobody today debates the critical importance of Information and Communication Technologies (ICT) in our society; in reality, Use Information Technology is one of the key skills of today's students. For educational theory and reality, the usage of ICT in education is becoming increasingly important. The introduction of emerging technology into our daily lives has allowed for a significant growth in the usage of ICT in education in recent years. ICTs have been increasingly important in our society, with a diverse range of uses in industries as diverse as film, management, robotics, schooling, and all types of businesses. Information and communication technology (ICT) has been increasingly relevant to schools and colleges over the last few decades. There has been a lot of studies done to look at and review the usage of ICT in high school learning and teaching. The usage of ICT by secondary school students is examined in this article.

**Index Terms** – Information and Communication Technologies, Secondary School Students, etc.

## I. INTRODUCTION

The advancement of ICT will increase education efficiency, which would have a beneficial effect on young students' preparation. There are many ways to improve the educational advantages of incorporating ICT. The advancement of ICT will increase education efficiency, which would have a beneficial effect on young students' preparation. There are many ways to improve the educational advantages of incorporating ICT. According to previous research, the educational potential of ICT is being underutilized since many teachers are unfamiliar with it and do not use it in their classrooms. According to

some sources, the issue is that teachers do not believe that using ICT has obvious advantages for students. According to some sources, one of the potential barriers to wider usage of ICT in the classroom is the need for better technological assistance and infrastructure maintenance.

The significant growth in social usage of ICTs, as well as their immense effects, is an element of education that cannot be overlooked. For new teachers and students in the school, ICT is now becoming a necessary method.

The most used technologies in the classroom are:

- Planning through tools: calendars and task managers are very useful to schedule exams, deliveries, create workflows, etc.
- Blogs and social networks: it give us the possibility of creating work groups where students expose or discuss different topics, publish content related to the subjects, etc.
- Digital whiteboards and interactive tables: Whiteboards enable you to project and manipulate photos from a tablet, take notes and remarks, and save and/or email the screen. The interactive tables enable students to communicate directly with the surface of the display.
- Data storage in the cloud: It gives us the ability to collaborate when operating from any computer and from any place. Office packages, packaging, and other tools are examples of tools that utilize this technology.

## II. SECONDARY EDUCATION

Secondary education is the conventional second level of formal education. Secondary school acts as a transition between primary and secondary education,

preparing young people aged 14 to 18 for higher education. The distinction between elementary and secondary education has steadily faded, not just in terms of curricula but also in terms of organisation. Because of the abundance of middle schools, junior high schools, and other divisions, programs of more than two levels have emerged.

Every nation strives to have basic education, but each country's structures and terminology are distinct. Secondary schooling is usually supplemented by further school, technical education, or jobs following six years of primary education. "Secondary education, including primary education, is compulsory in most nations, at least until the age of 16." About the age of 11, children reach the lower secondary process. Compulsory schooling will last up to 19 years.

Secondary education is described as the transfer for minors from primary school to tertiary, post-secondary, or higher education. High schools, primary schools, gymnasia, lyceums, middle schools, sixth-form, sixth-form colleges, vocational schools, and preparatory schools can be renamed secondary schools, high schools, gymnasia, lyceums, middle schools, sixth-form colleges, vocational schools, and preparatory schools, depending on the structure, and the precise definition of each of these differs between the systems.

In 1950-51, there were 7,416 secondary schools in India, compared to 1,16,820 in 1999-2000. However, this figure is insufficient to accommodate the increasing number of out-of-school children and upper primary school dropouts. Since the inception of the National Policy on Education (NPE) in 1986, there has been no structural reform in the configuration and organization of the secondary and higher secondary education system during the Ninth Plan era. Several centrally sponsored schemes were initiated as a result of the Policy, and national level institutions for school education were established/strengthened. In the secondary education market, ten nationally funded programs are in place. The need to adjust and improve these systems has been reinforced by the experience of implementing the programs, as well as numerous evaluations and assessment reports.

Secondary education is becoming particularly important in developed countries, which have

previously focused on pursuing universal primary education. Secondary education plays a critical role in the educational landscape of the region. It is the nexus of primary and secondary education. Primary education is designed to meet the bare minimums for survival, while secondary education prepares an individual to participate fully in a complex society. Government schools continue to provide free education, though private schooling is becoming increasingly popular at the secondary level.

Secondary education services have vastly changed over time. The bulk of high schools have their own structures (69 per cent). At the intermediate and upper primary stages of schooling, significant change has been achieved. Despite all of these notable accomplishments, the target of compulsory elementary enrollment remains a long way off. Universal secondary education would not be possible until universal primary enrollment is completed first.

### III. INFORMATION AND COMMUNICATION TECHNOLOGY

The use of computers to store, retrieve, transfer, and manipulate data, or records, is known as information technology (IT). IT is often used in the sense of a company or other organization. An information system, a messaging system, or, more simply, a computer system – containing all infrastructure, applications, and auxiliary devices – run by a small number of users is referred to as an IT system. The concept is sometimes used interchangeably with computers and data networks, but it often refers to other forms of knowledge processing such as television and telephones. IT is a branch of ICT (information and communication technology) (ICT). Information and Communication Technologies (ICTs) is a broad term for Information Technology (IT), which encompasses all communication technologies such as the internet, wireless networks, cell phones, computers, software, middleware, video conferencing, social networking, and other media applications and services that enable users to access, retrieve, store, transmit, and manipulate data.

ICT refers to both the internet-connected world and the mobile world fueled by cellular networks. It also incorporates antiquated technology like landlines, radio, and tv broadcasting, which are still commonly

employed today alongside cutting-edge ICT parts like artificial intelligence and robotics. ICT, on the other hand, usually refers to more than a list of elements. Which also includes the implementation of all of those different modules. It is here that ICT's true ability, force, and danger can be discovered.

ICTs include far more than just information control or computer technologies, as suggested by traditional discussions of the information haves and have-nots. ICTs influence how a person, a family, a business, or a country accesses knowledge, people, resources, and technology. Tele-access is a term that describes how information and communication technologies (ICTs) influence access to a broad range of social and economic services, both electronically controlled and unmediated.

ICTs transform ways of engagement between individuals, knowledge, cultures, and organisations. They not only have access to more knowledge and more entities, many of which an individual may not normally be in contact with. It is the most rapidly rising research sector and a sustainable source of income. It is the unification of telephone and computer networking in a single cabling device that allows for easy data collection, exploitation, control, and retrieval. Database administration, computer engineering, and app creation are all topics included. Information and Communication Technology (ICT) is a broad subject with many applications. It covers a wide range of topics related to information technologies and how it affects other areas of human endeavor. It is the most rapidly rising research sector and a sustainable source of income.

#### IV. USE OF ICT IN EDUCATION SECTOR

The incorporation of information technology into most high school curricula is relatively recent. It has gained popularity, however, as some organizations have made it a required topic. This is due to the fact that it is recognized as cutting through all aspects of human enterprise, including education. It is also the fastest-growing sector in the twenty-first century.

ICT promotes computer learning or eLearning by combining database technologies with communications and collaborative programming techniques. Students from all walks of life will benefit from a self-paced experience in topic areas

only constrained by the course designers' imaginations. Textbooks are anticipated to be phased out of classrooms in the not-too-distant future, with a soft copy available internationally to supplement them. The industrialized world is now well ahead of the curve, but this is not surprising to them. As a result, under this dispensation, being ICT compliant is a required tool for any practical learning. E-learning, e-commerce, and e-banking are also terms that are often used. As a result, it is incumbent on education curriculum creators to place ICT as a portal in which other disciplines revolve, if only because it is a forum for modern learning. Needless to mention, there has been a cultural change in public perception of how information is gained and disseminated.

Information and communication technology (ICT) in schools and colleges provides students with stimulating, immersive, and self-paced learning strategies that improve their flexibility and participation in the learning process whilst also increasing their technical maturity and machine literacy. Teachers and educators should apply their own ideas to ICT-powered learning programs while actively reviewing and tracking their students' development.

Courses should draw on experience and input from the highest levels of education and business since there is practically a world of learning to select from. And, with internet connectivity becoming accessible in any way to people all over the world, ideas like the Massive Open Online Course, or MOOC, are introducing educational resources to people who would previously be unable to access them. Many of the classes on display come from several of the world's most renowned educational establishments.

ICT-based school management systems allow administrators to automate a variety of activities, such as analysis, library management, and general reporting, by using software and digital resources. The use of information and communication technology removes the need for paper records, as well as the duplication and bureaucracy that they generate.

#### V. USE OF ICT FOR SECONDARY STUDENTS

The bulk of teachers do use ICT as an instructional tool on occasion, although almost never for tutorial

sessions. However, it is widely used in instructional practices such as class preparation and documentation. This shows that the majority of teachers utilize ICT as a technique outside of the school, indicating that the aim of integrating ICT into the classroom with students is still a long way off. In recent years, technology and information and communication technologies (ICT) have become key factors in re-engineering our culture and commerce. Some may argue that they have presented prospects for improvement that have resulted in one-of-a-kind advantages. We've seen leaders and early adopters, as well as schools who are sluggish and hesitant to embrace transition, much as we've seen in every industry.

It is important for secondary students to engage with ICT so that:

- Improves their attainment levels.
- Learn 21<sup>st</sup>-century skills and develop their ICT capability and ICT literacy.
- So that they learn the notion of using ICT as a tool for lifelong learning.
- Prepares them for an integrated society dominated by ICT developments.

Furthermore, ICTs are of great help in developing discernment. Being able to search for various sources and contrast them, as well as to structure information are some of the most notable skills that secondary students develop thanks to the use of ICT. But there are more advantages:

- Interactivity: The usage of ICT in the classroom encourages students to take a constructive and participatory role in their learning and to be the protagonist.
- Their interest in learning grows: Traditional topics are made more fascinating by the use of media such as photographs, websites, animations, and games. Multimedia material is an excellent medium for bringing various topics to students in a comprehensive and engaging manner.
- They enhance creativity: ICT tools stimulate the development of the imagination, as well as the initiative of all class members.
- Collaboration between students: Collaboration between students is clearly enhanced thanks to various digital tools. It is much easier for them to

create team projects, cooperate and learn from each other.

- Personalization and content up to date: digital environments allow real-time updating of all information and resources. In addition, it is possible to adjust the tools and content to local and nearby realities.
- Increased communication: close communication between students and teachers is encouraged through various channels, in a more spontaneous and less formal way.

This are all capabilities synonymous with proactive growth and transformation, and they have direct ties to how industry and culture have evolved in recent years as ICT has been more integrated into their activities. ICT is much more important to education as a whole than it is to ICT as a separate knowledge-based matter, and it should be treated as such.

## VI. CONCLUSION

ICT (Information and Communication Technology) is a broad concept that refers to all systems and facilities related to computers, data storage, telecommunications, and the internet. In view of the above, the world of Information and Communication Technology is a difficult one to research. Contrary to popular belief, without adequate preparation and retraining, it is not an all-comers matter. Secondary education in India developed independently of the primary education framework. "As a result, the creation of secondary schools became essential. Furthermore, the education provided in these institutions serves as a passport to government jobs." It was mostly intended for upper-class students and used as a college preparatory course. Students are interested in emerging technologies and the tools it provides. They are forming their own partnerships outside of the classroom, something educators must not overlook. While the demand for specialists in this field is the, the importance of establishing a career in it by adequate preparation in a well-defined program to be completed in educational institutions cannot be overstated. Many countries around the world are following our example and implementing similar changes. However, we do have a long way to go to get the whole industry up to the same high standards of profit and result. There is also a shift mentality to

fix, as well as a workforce that wants to be supported. We must be mindful not to throw away our legacy, but we must forge on, incorporating fresh challenges into the framework of previous achievements.

#### REFERENCE

- [1] Cox, M., Webb, M., Abbott, C., Blakeley, B., Beauchamp, T., & Rhodes, V.: Research report: ICT and pedagogy - a review of the research literature. Evaluation. (2003). <http://doi.org/10.1177/8756479302238393>
- [2] Georgescu, Elena Corina: Grade 9 Teachers Use of Technology in Linear Relations. Doctoral dissertation, Department of Curriculum, Teaching and Learning, Ontario Institute for Studies in Education of the University of Toronto. (p 23-23) (2013).
- [3] Harbi, H. E. Al.: Towards Successful Implementation of ICT In Education. The 2014 WEI International Academic Conference Proceedings, 33–45. Mathematics literacy is essential for every child’s future (2014).
- [4] Hogenbirk P (2016) ICT in Education: literacy, enhancement and personalization, [www.odino.nl/publicaties/](http://www.odino.nl/publicaties/)
- [5] Hogenbirk PG, van de Braak P (2008) ICT action school development on the basis of an inspectorates assessment. LYICT, Malaysia. <https://link.springer.com/article/10.1007/s10639-012-9224-x>
- [6] Hogenbirk PG, van de Braak P (2009) ICT action school development on the basis of an inspectorates assessment Part II, WCCE2009. Bento Conçalvez, Brasil. [https://link.springer.com/content/pdf/10.1007%2F978-3-642-03115-1\\_13.pdf](https://link.springer.com/content/pdf/10.1007%2F978-3-642-03115-1_13.pdf)
- [7] Karami, M., Karami, Z., & Attaran, M.: Integrating problem-based learning with ICT for developing trainee teachers’ content knowledge and teaching skill. International Journal of Education and Development uses Information and Communication Technology (IJEDICT), 9 (1), 36-49. (2013).
- [8] Moss S (2014, January) Making the most of ICT – what the research tells us. <http://www.ictineducation.org/home-page/2014/1/29/making-the-most-of-ict-what-the-research-tells-us.html>
- [9] Ojugo, A. A., Osika, Iyawa, I.J.B., and Yeroken, R. O.: Information and Communication Technology (ICT) Integration into Science, Technology, Engineering and Mathematic (Stem) in Nigeria. Retrieved on November 24, 2015 from <http://www.ajol.info/index.php/wajiar/article/viewFile/86904/76697>
- [10] oogt J, Pareja Roblin N (2010) 21st century skills, discussion paper. <http://opite.pbworks.com/w/file/fetch/61995295/White%20Paper>
- [11] Tilak, J.B.G. (2006), Education: A Saga of Spectacular Achievements and Conspicuous Failures in India Social Development Report, Oxford University Press, Council for Social Development, New Delhi.
- [12] World Bank (2013) Secondary Education in India, Report No.2, Discussion Paper, South Asia Human Development Sector, Washington, DC.