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## A STUDY ON POLICIES AND ISSUES RELATED TO ICT IN SCHOOL EDUCATION IN INDIA

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### Abstract

*Information and Communication Technology (ICT) has made quick strides in the past couple of decades. New technologies are now available for information dissemination, enhancement of skills of all sorts, not yet suitably adapted to the needs of the education sector. The immense potential for inducting ICT to come to the aid of Indian education in various innovative ways has not been harnessed. Many experiments have taken place in the country, and a large body of knowledge has accumulated in this regard. ICT now provides a new and potentially highly effective vehicle for advancing the quality of education at all levels; this issue needs to be seriously explored and implemented. The National Policy of ICT for School Education defines ICT Literacy in terms of levels of competence. Student or teacher may progress to different levels on the basis of their introductory level of ICT. National policies have greater implications for promotion of equity, access, and sustainability in the arena of education. The government of India formulated the first National Policy on Education (NPE) in 1968. The NPE, 1968 focused on promoting national progress, a sense of common citizenship and culture, and on strengthening national integration. It gave importance to a radical reconstruction of the education system, to improve its quality at all stages, and gave special attention to science and technology, the cultivation of moral values and a closer relation between education and the life of the people. This paper is focus on policies and issues on school education in India.*

**Keywords:** Information, Communication, Technology, National Policy, Education

### 1. Introduction

As each stage is defined by the competencies, the time duration needed for each stage is subjective to local situation and frequency of access to the ICT facilities and may be shorten. Different parts of each stage can also run

concurrently to make it ensure that every student completes to be achieved, the pace is the advanced stage before completing schooling. Thus, ICT Policy in School Education aims at preparing youth to participate creatively in the establishment, sustenance and growth of a knowledge

society leading to global competitiveness and all round socio-economic development of the nation. The ICT Policy in School Education will encourage universal, equitable, open and free access to a state of the art ICT and ICT enabled tools and resources to all students and teachers. It will promote development of local and localized quality content and to enable students and teachers to be partner in the development and critical use of shared digital resources. It will promote the development of professional networks of teachers, resource persons and schools to catalyse and support resource sharing, up gradation, and continuing education of teachers; guidance, counseling and academic support to students; and resource sharing, management and networking of school managers and administrators, resulting in improved efficiencies in the schooling process. Government and Government aided Secondary and Higher Secondary Schools has provision for instituting the National Award for innovative use of ICT to motivate the Teachers and Teacher Educators for innovative use of ICT in teaching-learning. Thus, an ICT literate community contributing to nation building can be developed by constructing an environment of collaboration, cooperation and sharing, creating a demand for optimal utilization and optimum returns on the potentials of ICT in education.

The ICT literacy programme was implemented in all secondary schools in the states including government and private schools during the period of Eleventh Five Year Plan period. Under the programme states were to develop the curriculum for ICT literacy only with course materials according to the stages discussed above in order to achieve uniformity. These were to be in the form of self-instructional materials so as to enable the teachers and students to process them by themselves. This programme was expected to provide a set of generic skills along with conceptual knowledge. The

boards of secondary education were to develop a scheme for evaluation. ICT was to be an additional subject, with separate listing of marks / grades with the award of a certificate of proficiency.

Fortunately, India is at the verge of major transformation. Due to steps taken over the last few decades, the disparities between urban and rural India in terms of infrastructure and facilities have reduced. Even more appreciably, Digital India is being rolled out, and could be soon a reality- every village panchayat will be digitally connected and the phenomenon of 'remote' schools will shrink rapidly. This is a supreme opportunity which needs to be fully harnessed. ICT field is to be explored seriously and rolled out, in an appropriate manner, synchronizing with the Digital India Programme. Such a judicious use of Information Communication Technology (ICT) will yield major dividends in a relatively short time and can greatly benefit the education sector, both school and higher education.<sup>1</sup>

#### **WHAT IS ICT?**

Information and Communication Technologies are defined as all devices, tools, content, resources, forums, and services, digital and those that can be converted into or delivered through digital forms, which can be deployed for realizing the goals of teaching learning, enhancing access to and reach of resources, building of capacities, as well as management of the educational system. These will not only include hardware devices connected to computers, and software applications, but also interactive digital content, internet and other satellite communication devices, radio and television services, web based content repositories, interactive forums, learning management systems, and management information systems. These will also include processes for digitization, deployment and management of content, development and deployment of platforms and processes for capacity development, and creation of forums for interaction and exchange.

## REVIEW OF LITERATURE

Review of literature is Policies and Issues Related to ICT in School Education in India as follows:

**Serhan. D. (2009)**, concluded that ICT fosters autonomy by allowing educators to create their own material, thus providing more control over course content than is possible in a traditional classroom setting. With regard to capability, once students are more confident in learning processes, they can develop the capability to apply and transfer knowledge while using new technology with efficiency and effectiveness. For example, in an ESL listening and speaking class, students may be asked to practice their pronunciation using an online audio dictionary. They are required not only to listen to the native pronunciation from the dictionary, but also to learn the definitions and examples of a new vocabulary item. They then have to make a recording of their own pronunciation and provide examples of how this new word is used in context. Before completing this task, they have to know which browser to use in order to search a suitable online audio dictionary. They will have to browse several online dictionaries, and select the one that best meets their learning needs. In addition, finding good software to record their voice is another prerequisite for these learners. Therefore, the whole learning process enriches students' learning skills and broadens their knowledge beyond what they already know. By using ICT, students' creativity can be optimized. They may discover new multimedia tools and create materials in the styles readily available to them through games (Gee 2007, 2011), CDs, and television. With a combination of students' autonomy, capability, and creativity, the use of ICT can improve both teaching and learning quality.<sup>2</sup>

**Ertmer, P. A. and Otterbreit-Leftwich, A. T., (2010)** reviewed the existing literature on the necessary elements to enable pre-service and in-service teachers

to apply ICT as a meaningful pedagogical tool. They recommended that schools provide teachers with solid evidence supporting the positive impact of technology-based and student-centered instruction on student learning and achievement on standardized tests. For instance, schools can provide opportunities for pre-service teachers to observe a variety of examples and models, which they can then apply with real learners. Schools need to help pre-service teachers understand difficulties they may face when they begin to use ICT in their classrooms, and present effective strategies for addressing them. In sum, school leaders should ensure that teachers understand that the ultimate objective of technology integration is to advance the teaching and learning process, not replace.<sup>3</sup>

## OBJECTIVES

The main objectives of this study as follows:

- Implementations of ICT Policies in School Education in India.
- Issues related to ICT in School Education in India.

## SOURCES OF DATA

The paper is based on secondary data only was Journals and websites of Policies and Issues related to Information Communication Technology (ICT) in School education.

## IMPLEMENTATIONS OF ICT POLICIES IN SCHOOL EDUCATION IN INDIA

India has an excellent opportunity to initiate its efforts in re-formulating an education policy in such a way that the following can be the key areas of focus:

- Creativity, cultural values, national need, critical thinking, Entrepreneurial Thinking and subject orientation formulate the content for students across school education.
- Education system is in continuous alignment to the economic-GDP 2020 vision of 44 per cent of national GDP from agricultural income, 21 per cent of GDP from manufacturing sector

and 35 per cent of GDP from the services sector.

- Develop knowledge resource not just to meet the national need but also the global need on knowledge human resources.

It is important that the existing economic and digital divide needs to be bridged. Implementation and integration of ICT into the education system should address the following points:

- Regardless of gender and financial status of students, education for every student should be the motto of ICT implementation.
- Provide cost-efficient delivery of education to build a strong equitable and economically strong knowledge society.
- Develop partnerships with government and private agencies for delivery of ICT education.
- Create inter-connected clusters of villages with a central hub. Each central hub connected to an urban city with basic health-care facility provided.
- Pilot test the hub-cluster model with three villages near an urban city.

ICT implementation has given an excellent opportunity for the Education Policy Implementation specialists to re-visit what we want our future leaders of India to be like. In this way, we get an idea of what needs to be taught, who is our target audience across India, and how to reach all corners of India.<sup>4</sup>

#### **VISION OF ICT POLICIES IN SCHOOL EDUCATION IN INDIA**

Working backwards from the national 2020 vision we can derive a vision for ICT in schools. The driving factors of the vision are:

- ✓ Ensure that when students leave school, they should be confident, creative and productive users of new technologies and more importantly understand the impact of those technologies on society.

- ✓ Prepare students for adult life when nearing the end of their compulsory schooling.
- ✓ Enable equitable and cost-efficient delivery of education to create a strong equitable, imaginative and economically strong knowledge society that which is globally integrated.
- ✓ Implement technology education – not as an end in itself – but as a means to promoting creativity, empowerment and equality, producing efficient learners, problem solvers, potential researchers and potential entrepreneurs.
- ✓ Support education and training workers to acquire and maintain the skills needed to take full advantage of the potential of ICT to transform learning.
- ✓ Partner across agencies at all levels of various ministries in the government to ensure the development of a policy and regulatory framework to enable acceptance of ICT in education and training.

#### **ISSUES RELATED TO ICT IN SCHOOL EDUCATION IN INDIA**

Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development. Providing universal access to quality education is the key to economic growth, social justice and equality, scientific advancement, national integration and cultural preservation; and for India's continued ascent, progress, and leadership on the global stage. India will have the highest youth population in the world over the next decade, and our ability to provide high-quality educational opportunities to them will shape the future of our country. The policies are implemented in India as follows:

1. Early Childhood Care and Education: The Foundation of Learning.

2. Foundational Literacy and Numeracy: An Urgent & Necessary Pre-requisite to Learning.
3. Curtailing Dropout Rates and Ensuring Universal Access to Education at All Levels.
4. Curriculum and Pedagogy in Schools: Learning Should be Holistic, Integrated, Inclusive, Enjoyable, and Engaging.
  - i. Restructuring school curriculum and pedagogy in a new design.
  - ii. Holistic development of learners.
  - iii. Multilingualism and the power of language.
  - iv. Curricular integration of essential subjects and skills.
  - v. National Curriculum Framework.
  - vi. National textbooks with local content and flavor.
  - vii. Support for gifted students / students with special talents
5. Equitable and Inclusive Education: Learning for All
6. Efficient Resourcing and Effective Governance through School Complexes/Cluster.
7. Standard-setting and Accreditation for School Education.
8. Quality Universities and Colleges: A New and Forward looking Vision for India's Higher Education System.
9. Institutional Restructuring and Consolidation.
10. Towards a More Holistic Education.
11. Motivated, Energized, and Capable Faculty.
12. Equity and Inclusion in Higher Education.
13. Reimagining Vocational Education.
14. Professional Education.
15. Promoting high-quality research: National Research Foundation.
16. Effective Governance and Leadership for Higher Education Institutions.
17. Transforming the Regulatory System of Higher Education.

18. Promotion of Indian Languages, Arts, and Culture.
19. Technology Use and Integration.
20. Establishing an Apex Advisory Body for Indian Education and an Indian Education Service (IES).
21. Financing: Affordable and Quality Education for All

Implementation will be guided by the following principles. First, implementation of the spirit and intent of the Policy will be the most critical matter. While the Policy provides much detail, the intent and the spirit of the Policy must serve as the most important consideration. Second, it is important to implement the policy initiatives in a phased manner, as each policy point has several steps, each of which requires the previous step to be implemented successfully. Third, prioritization will be important in ensuring optimal sequencing of policy points, and that the most critical and urgent actions are taken up first, thereby enabling a strong base. Fourth, comprehensiveness in implementation will be the key; as this Policy is interconnected and holistic, only a full-fledged implementation, and not a piecemeal one, will ensure that the desired objectives are achieved. Fifth, since education is a concurrent subject, it will need careful planning, joint monitoring, and collaborative implementation between the Centre and States. Sixth, timely infusion of requisite resources - human, infrastructural, and financial - at the Central and State levels will be key for the satisfactory execution of the Policy. Finally, careful analysis and review of the linkages between multiple parallel implementation steps will be necessary in order to ensure effective dovetailing of all initiatives. This will also include early investment in some of the specific actions (such as the setting up of early childhood education infrastructure) that will be imperative to ensuring a strong base and a smooth progression for all subsequent programmes and actions.<sup>5</sup>

## CONCLUSION

All schools in India to be a part of hub and spoke model – defined with-in the clusters of villages/locations within a year, a technology package and a computer lab and an electronic library system. At least 80 per cent of school teachers must be trained in computer skills and computer-aided instruction. All schools' collection and analysis of key performance measures of ICT-education impact should be automated in three years time. This National Education Policy is the first education policy of the 21st century, and aims to address the many growing developmental imperatives of this country. This Policy proposes the revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with the inspirational goals of 21st century education, while remaining consistent with India's traditions and value systems. The National Education Policy lays particular emphasis on the development of the creative potential of each individual, in all its richness and complexity. It is based on the principle that education must develop not only cognitive skills-both 'foundational skills' of literacy and numeracy and 'higher-order'

cognitive skills such as critical thinking and problem solving – but also social and emotional skills - also referred to as 'soft skills' - including cultural awareness and empathy, perseverance and grit, teamwork, leadership, communication, among others.

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