

# 'ICT in Education' in the Government Institutions in India: Acceptability Issues Associated with the Technology Shift

<sup>1,2,4</sup>Amit Kumar, <sup>2,3</sup>Tanvir Singh, <sup>2,5</sup>Dr Sawtantar Singh Khurmi

<sup>1</sup>JNV Theog, Shimla, HP, India

<sup>2</sup>Green ThinkerZ Society, Mohali, Punjab, India

<sup>3</sup>Centre for Development of Advanced Computing, Mohali, Punjab, India

<sup>4</sup>College of Information Science and Technology, Nanjing Forestry University, Nanjing, China

<sup>5</sup>Dept. of Computer Science, Bhai Maha Singh College of Engineering, Muktsar, Punjab, India

## Abstract

ICT (Information and Communication Technology) has become a buzzword while talking about technology and its applications in the Education Sector in India. The credit goes to the paradigm shift in curriculum where teacher acts as a facilitator in a student centered learning and various ICT tools are supplemented to make the teaching-learning process effective. The government has been introducing some of its pilot projects in the public sector schools and colleges where it can exercise its power freely. The projects involve a lot of public money and documentation but we are yet to see any real implementation of the same. There is a huge difference in drafting a policy on paper and actually implementing it in the practical field. CIET (Central Institute of Educational Technology), NCERT (National Centre for Education, Research and Training), New Delhi has introduced 'ICT in Education Curriculum' in 2014 as a pilot project through NVS (Navodaya Vidyalaya Samiti), Noida and IIT Bombay has also been working for last few years on bridging the digital divide in Indian Schools, Colleges and Universities through 'Spoken Tutorial' project. Both the projects are funded by MHRD (Ministry of Human Resource Development), Government of India. Both the projects are based upon technology shift paradigm i.e. FOSS (Free and Open Source Software). The idea is really good and has a positive thought process behind it to educate the next generation about the alternate technology which is free and not virus prone. We have been educating our students on software platforms offered by proprietors for a long time now, even when a free and open source platform co-exists. In fact, the current generation does not know about such alternate technology. It's not a rebellion or an offensive attitude but it is just ignorance about a parallel technology. If it is the case with the common people then how can we ignore the educators or teachers who are going to disseminate the knowledge pertaining to FOSS to the next generation? Therefore, the Educators are needed to be properly re-educated about the FOSS at national level before expecting an implementation of the technology shift. This is not only about learning and teaching a new technology but it is more about changing the thought process of the current and the next generation. Hence, the issue of acceptability of the technology shifts from proprietary software to FOSS is very critical and should be handled in a sensitive manner rather than dictating the terms to the educators. But we have been observing that the documentation regarding implementation of 'ICT in Education' is a long way away from the facts. As per ongoing research, it has been observed that there is a big gap between the theoretical and practical situation. The national level government institutions like NCERT should ponder upon the situation again to restructure the process of extending the technology shift project to the masses. This paradigm shift should not be looked as just a change in curriculum but a change in the thought process of the educators as well as the learners.

## Keywords

ICT, Education, FOSS, Government Institutions, India, Technology Shift



Tanvir Singh is pursuing his Master's degree in "Embedded Systems" from Centre for Development of Advanced Computing, Mohali, Punjab. He received his bachelor's Degree (Electronics and Communication Engineering) from IET Bhaddal Technical Campus, Punjab. His area of interest includes Environmental Sustainability in Wireless Communication Networks and Electromagnetic Radiations with a dream to create a

Technical Advanced and eco-friendly world. He has published 50+ review/research papers in International Journals/Conferences. Currently, He is President of GreenThinkerz Society with an aim to promote Environmental Sustainability ([greenthinkerz.org](http://greenthinkerz.org)).



Amit Kumar is associated as a Researcher with the Department of Computer Science, College of Information Science and Technology, Nanjing Forestry University, Nanjing, China. He is working as a Faculty of Computer Science with NVS, MHRD, Department of Sec. & Hr. Education, Govt. of India. He is working as a Mentor for implementation of ICT in Education Curriculum in JNVs

with CIET, NCERT, Govt. of India and he is coordinating the workshops of Spoken-tutorial in association with IIT Bombay in the state of HP, India. He has many publications in National / International Conference proceedings and International Journals. He is a reviewer for many International Journals. His research domain is Green Wireless Technologies and their Sustainable development.



Dr. Sawtantar Singh Khurmi received his MCA from IGNOU , New Delhi, India, and M.Phil. in Computer Science from Alagappa University, Kraikudi, India. He received his P.hD. from Guru Jambeshwar University, Hisar, India. He has more than 25 years of experience in teaching and research. He has published many books, book chapters. He has published, reviewed and presented many research papers in national and international conferences

and journals. He is Ex. Professor & Head, Department of Computer Science & Engineering, Bhai Maha Singh College of Engineering, Muktsar, Punjab, India.