



TECHNOLOGY ENABLED SOCIAL INCLUSION FOR CHILDREN WITH SPECIAL NEEDS IN SCHOOLS

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Abstract

The EFA Global Monitoring Report (2008, 2009) indicates that not all of the goals associated with EFA will be reached by 2015. The report sends a warning to governments that they must tackle the problem of inequality in education, as education leads to an empowered and fulfilled life. One such group which faces the inequality is children with special needs and there is a need for social inclusion. As highlighted in the EFA and MDG action frameworks, inclusive education could act as both access and quality means for achieving these fundamental aspirations. But, it is also important to note here that Inclusive education policies can be facilitated when cohesive support for inclusive practice is demonstrated. Complimentary commitment to inclusive practice in school management decisions, curriculum planning and resource provision assists this process. However, in order to address these various controversies and assumptions about access and means to the social inclusion of children with disabilities, technology could be potent medium. Technology is already acting as a key enabler for many activities, such as in working environments, daily communications and handling of administrative affairs, etc. However, it is still necessary to encourage the use of technology in order to enhance social inclusion, which will increase the participation of these children in building the knowledge society. According to Warschauer (2000) "Technology for social inclusion deemphasizes the notion of bridging divides and instead looks at the broader goal – achieving social inclusion for all - and then considers the role that technology can play within that". Technology which incorporates universal design principles can be useful to all. More teachers can gain computer literacy and plan these multi-level universal designs into pedagogies and hence can increase the learning opportunities for students with disabilities. This paper is an attempt to discuss about importance of technology as the means of social inclusion of children with special needs and also the challenges for the implementing the technology as a tool for social inclusion of children with disabilities.



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Introduction

For having an equal participation in building the knowledge society, first step is building an inclusive society. This will provide an opportunity to all individuals who have been socially excluded from various parts of society because of the limited access to key parts of social life such as the labour market, culture, leisure activities, social relations and education. In the process of exclusion these individuals gradually attach themselves to several other subsequent problems. It is thus a social phenomenon which is more complex and dynamic than that covered by the term social problem.

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Education is potential enabler for the social participation of all individuals in the society; hence it must reach to all without exception. But there are certain groups (such as children with special needs) which just get neglected in the process; here technology could be great help.

Inclusive Education as a Human Right

In India, despite having considerable achievements in the past 60 years in the education system, still have shortcomings, both at the elementary and higher levels, which hinder our country from becoming an active member in the knowledge society. Converting India into a knowledge society shall require, inter alia, addressing the issue of expansion, excellence and inclusion in education while formulating policies for achieving the same. (Knowledge Commission, 2006)

The Universal Declaration of Human Rights (1949), the United Nations General Assembly Charter (1959) and the United Nations Convention on the Rights of the Child (1989) all acknowledged education as a human right. As the commitment to achieve the goals of Education for All (EFA) by the year 2015, there has been a significant increase in the school attendance at primary-school level and a decrease in gender discrimination level. However, the EFA Global Monitoring Report (2008, 2009) indicates that not all of the goals associated with EFA will be reached by 2015. The report sends a warning to governments that they must tackle the problem of inequality in education, which exists due to not being able to provide equal opportunities to the children with special needs. It is important to say that this situation is sad when education is seen as process for an empowered and fulfilled life.

The World Conference on Education for All (1990) and the United Standard Rules on the Equalization of Opportunities for Persons with Disabilities (1993) also re-stated that education is a basic right for *all* people and recognized that some groups were excluded. It was also pointed out that there was no specific mention of disabled children although the term “inclusive” does appear in the various frameworks for action proposed by various governments and other agencies. Therefore, the Salamanca Statement and Framework for Action on Special Needs Education (1994) questioned, where special education should be placed in relation to Education for All (EFA)? And it has called for “inclusion” in mainstream education to be the norm so that all children have the opportunity to learn - together.

Also, the Millennium Development Goals (2000) which targets towards the eradication of extreme poverty and hunger and the achievement of universal primary education as its first two goals. It would be possible only when Inclusive Education (IE) as a strategy for reaching disabled children and adults and other marginalized or at risk groups. Hence, IE can be seen as both getting children *into* and *through* school by developing schools that are responsive to the actual, diverse needs of children and communities. IE is therefore about both access and quality and is a means for achieving these fundamental aspirations as highlighted in the EFA and MDG action frameworks.

When one talks about the inclusion, it is seen as a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education (Booth, 1996). The emphasis is on a process view of inclusion which facilitates flexibility of response with a priority which is in the best interest of the child/ young person involved. These changes which are made involve various changes and modifications in content, approaches, structures and strategies.

Thus, Inclusive Education is concerned with providing appropriate responses to the broad spectrum of learning needs in formal and non formal educational settings. Rather than being a marginal theme on how some learners can be integrated in the mainstream education, inclusive education is an approach that looks into how to transform education systems in order to respond to the diversity of learners. It aims to enable both teachers and learners to feel comfortable with diversity and to see it as a challenge and enrichment in the learning environment, rather than a problem.

Role of Technology in Social Inclusion

We can observe a growing presence of information and communication technologies in different spheres of our lives but there is also a concern about the social impact of technology on the societal structures. On the one hand, the use of technology is considered as a prerequisite for participation in the information society and on the other hand, it is perceived to create new forms of exclusion from different social processes. The main reason for the social exclusion of various members is due to the digital divide which has been created between “information rich “and “information-poor”. As a result it has hindered the participation of citizens in the formation of new economy and society. One such group which is experiencing this social exclusion is children with the special needs.

If inclusion is understood as the process for increasing the participation of children with special needs, then technology can be used as an effective tool for both in accessing information and knowledge and encouraging the equal participation of children with special needs in the society. The use of technology can increase independence by providing an opportunity for flexible learning, for sharing information and for networking with experts working in this area in other countries and also facilitates the employment and most importantly self-sufficiency.

Technology combined with proper methodologies - can offer individuals the ability to compensate for physical or functional limitations, thus allowing them to enhance their social and economic integration in communities by enlarging the scope of activities available to them.

Warschauer (2003) pointed out that the most significant use of technology is for social transformation. In his view, social inclusion refers to “the extent that individuals, families, and communities are able to fully participate in society and control their own destinies, taking into account a variety of factors related to economic resources, employment, health, education, housing, recreation, culture, and civic engagement”. Inclusion is therefore not just about resources, but also about control over life circumstances. Social inclusion is a basic principle of human rights and is closely linked to concepts of social justice. When inclusion was first discussed within educational settings from the point of view of disability, initially it was linked to the needs of those with physical disabilities only. It is for this reason that inclusion often came to be seen as being linked to putting ramps at building entrances and installing lifts, so that wheelchair users could access upper floors. More recently, there has been a talk about inclusion in a much wider sense to cover what is sometimes described as social inclusion.

Further Warschauer says “*Technology for social inclusion deemphasizes the notion of bridging divides and instead looks at the broader goal – achieving social inclusion for all - and then considers the role that technology can play within that*”. Through technology, the learners can actively themselves in a self-directed ways, either through independent study or collaborative learning experiences (Kirschner & Erkens, 2006). Jonassen (2000) describes technology as a functioning intellectual partner that can act as a mind tool, which facilitates critical thinking and learning. Hence, technology can act as a scaffolding device to augment the learners' performance beyond what would be traditionally possible. Lajoie (1993) have

defined technology as cognitive tools to (a) support cognitive and metacognitive processes, (b) share cognitive load by providing information as needed, thus allowing the user to concentrate on higher order thinking processes, (c) allow users to conduct activities that would not be possible in traditional classroom environments, and (d) allow users to solve problems by generating hypotheses, collecting data, and interpreting results in a simulated environment.

In educational contexts, technology allows individuals to complete every-day tasks more efficiently and helps in synthesizing and communicating information in new ways. Drawing on the discussion above, it is evident that technology can play an important role in the social inclusion of children with disabilities.

Use of Technology for Social Inclusion

As it is understood now that technology holds the potential to maximize educational opportunities for children with special needs by promoting access, participation, and learning outcomes. Through, the use of technology, one can address the issue of quality with equity. In report on e-inclusion: Learning Difficulties, the use of technology has been categorized in three ways, which has been discussed as follows:

(a) Technology to train or rehearse: Technology can be used as a tool to rehearse has been associated with a behaviorist model of learning. But, if it is used only as a training device then it seldom takes centre stage in learning.

(b) Technology to assist learning: Here, the use of technology can be seen to promote greater independence by enabling people to perform tasks that they were formerly unable to accomplish, or had great difficulty accomplishing, by providing enhancements to or changed methods of interacting with the technology. For example, person with mobility impairment can have difficulty using calculators. Speech recognition software recognizes short commands and makes use of calculators easier. This device is therefore assisting the learning to take place but is not a catalyst for the learning itself. Here, also the use of technology is only seen as an agency through which the learning takes place.

(c) Technology to enable learning: Here, the technology is used for helping the learner to learn in a situation where it was not possible before. In this case, the technology takes an active role in the learning process. This can be done using technology to facilitate the creation of collaborations and communities where learners work together, for example by presenting interactive scenarios or simulations. This use of technology has been derived from the social-

constructivist models of learning, according to which learning takes place in social contexts and learning through collaboration and interaction with other people.

There is a significant difference between this approach and the other two from the point of view of the use of technology; here it is for modifying the learning context rather than just supporting the learner. Arguably, when we talk about the social inclusion of the children at any level, then we would like to prioritize learning over technology and hence the third approach towards use of technology would be more useful. Because this approach uses technology as a tool for learning and enablers of learning, it is only learners who learn; and learning happens in a rich social and cultural context in which teachers, more expert others and peers play an important role. McKeown (1992) said that Technology will not provide all the answers to the problems of specific learning difficulties but it can be effective in reducing the number of hurdles that children have to cross at any one time. Thus, technology as an enabler would create a link between an individual and environment, in order to improve the quality of life and increase the range of life opportunities for the children with special needs. In whichever the technology is used, as enabler, for rehearsal and training, it has to respond to the rich social settings in which learners are placed.

Requirements for Effective Implementation of Technology

The effective integration of technology with curricula is influenced by a number of factors including the ethos of school management in areas of equity and technology, funding, support and training. Challenges in any of these areas can impede the successful use of technology within the inclusive settings. Therefore, it is important to identify and discuss priority issues, which are as follows:

i) Vision and Resource Facilitation.

For the successful implementation of the technology, the most important role is played by supportive leadership and administration within the school setting. If any change depends has to be introduced, then it is important that first it must become a part of leadership's vision, commitment, knowledge and resources. Strongly articulated ethos of equity, tolerance and acceptance must be inbuilt in the vision.

Also, it is important to provide the administrative support for encouraging teachers to develop new skills and implement new strategies related to technology. Proper financial planning must be the part of the vision, which will facilitate the technology acquisition, ongoing training for teachers and other staff with students using technology. There must be a

collaborative working vision between state agencies, districts and across education sectors to facilitate access to complimentary resources and avoid unnecessary duplication of resources.

ii) Development of Inclusive Curriculum Framework

Any kind of technology is a failure if it is not properly integrated with the curriculum. While developing the inclusive curriculum, principle of equity must be kept in mind. It is only possible when the technology integration in the curriculum is judicious mix of the universal features of technology and also takes care of the individualized needs. It can be achieved by providing the range of instructional approaches which utilizes flexible curricular materials and activities that can be accessed by students with special needs coupled with incorporating technology with an emphasis placed on learning objectives preferably in the context of individual education plans (negotiated curriculum plans). This will help the students to understand universal design features of generic software and operating systems (this should be a feature of basic computer training courses for all staff) as well as developing skills in using software especially designed for them.

Also, while designing the curriculum, suggestion for developing appropriate support structures to assist staff working with students with special needs.

iii) Strong Technology Infrastructure

A strong, well developed technology infrastructure clearly expressed in a technology plan and often it has to be stated curriculum policy. The infrastructure has to be both for the students as well for the teachers to incorporate technology within their learning plans, so that both the groups can use it effectively. In addition to this, there should be provision for the maintenance of school computers and networks by technicians and technology teachers for the implementation of learning programs.

iv) Continuous Professional Development for Teachers and Staff Members

Continuing Professional Development is pivotal to develop and enhance the understandings of incorporating and using the technology by the teachers and staff members of the schools. Such professional development programmes will help teachers to create new blend of computer based skills and appropriate teaching methodology within curriculum requirements essential for facilitating student learning. For facilitating the learning, it is essential that the technology is incorporated within curriculum effectively. For this to materialise, teachers require training of generic skills in computer technology (if not trained) prior to training in

using technology for special needs. Such training would not only increase their technological confidence but also help in better inclusion of students with special needs.

There are few suggestions may be considered while providing training to the teachers:

1. Develop base level (generic) computer skills if teachers and other staff do not already have these. These sessions need to incorporate awareness of universal design features within operating systems.
2. Initial technology specific training needs to be followed by ongoing training to maintain and further develop skills and ensure technology continues to be used.
3. Linking staff within a district who are using specific technology via regular meetings or a list serve to share ideas, solve problems etc.
4. 'Train the trainer' sessions with experienced teachers in the use of a particular assistive technology can be very effective in increasing the number of teachers being able to use the technology.
5. Web based resources can be maintained centrally and accessed by district and school support staff working with assistive technology
6. Collaboration of school principals/organisations working in the area of special needs/NGO's with schools and relevant educational sectors to keep them informed about the progress as it happens.

v) Effective collaborative Research

It is important to research on finding out the more effective and need based technology usage model, which could be particularly helpful in specific school situation.

Conclusion.

Inclusive education policies are facilitated when cohesive support for inclusive practice is demonstrated by technology budgets incorporating consideration of all students needs and from which assistive technology support can be obtained. Complimentary commitment to inclusive practice in school management decisions, curriculum planning and resource provision assists this process. Collaborative cross-discipline communication is an important facilitator of successful technology use and enables pooling of available resources. Resources can be effectively shared and training more widely spread through assistive technology network groups developing skills in delivering "train the trainer" professional development sessions. Assistive technology is a powerful learning tool. As more generic technology incorporates universal design principles and more teachers gain computer literacy

and plan using multi-level universal design pedagogies, learning opportunities for students with disabilities will be enhanced.

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