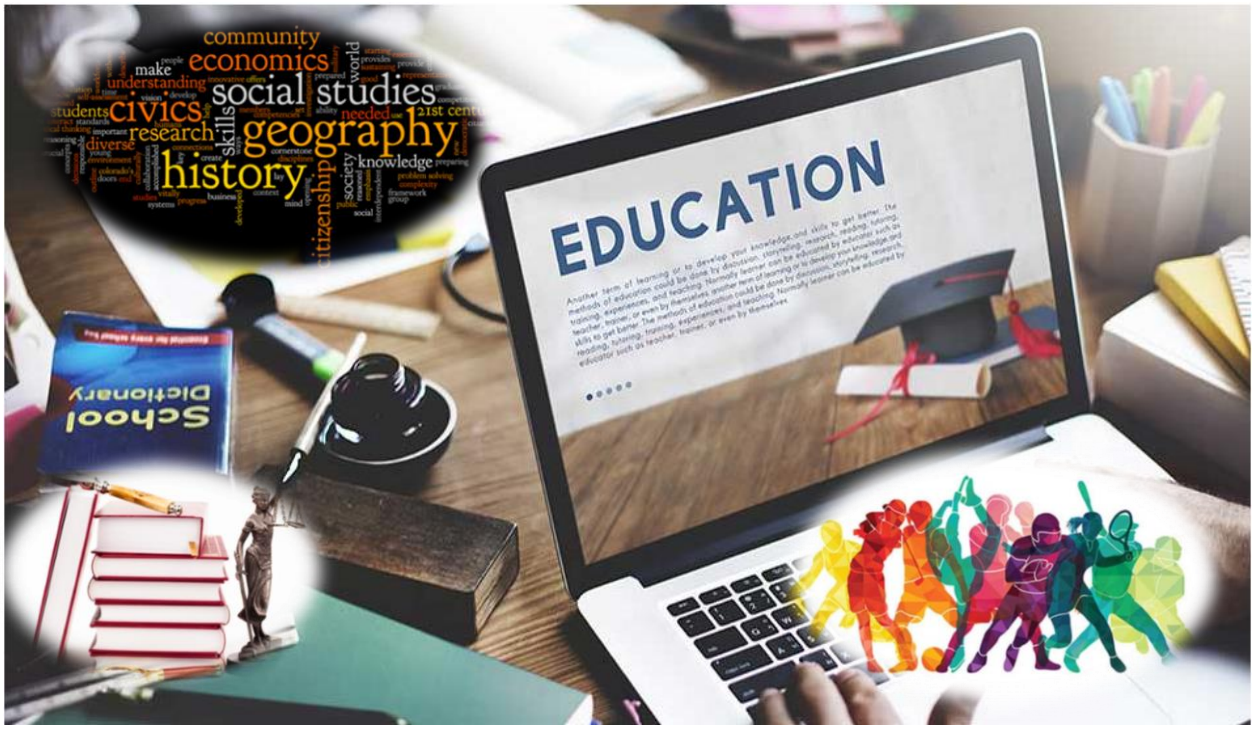

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Research Article

POLICY ASSESSMENT OF EDUCATIONAL AND ECONOMIC LIFE OF VISUALLY CHALLENGED PERSONS IN INDIA

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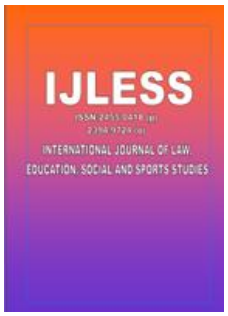

ABSTRACT
The article at length talks about the various policies and programmes made for the empowerment of persons with disabilities in general and persons with visual disability in particular. India has a well synthesised legislative mechanism to meet the educational and employment needs of visually challenged persons. However, despite the strong policy framework, the implementation is seriously marred by a lack of socio-economic and political will. The private sector needs to be sensitised to further include visually challenged persons in the mainstream. More and more technological research is desired to empower the visually challenged persons further.
Key Words: Persons with Disabilities, visually challenged persons, Rights of Persons with Disabilities Act 2016, Inclusive education, employment.

Introduction

The study of disability has initiated addressing new questions which have been put forth by the model of development affecting the lives of persons with disabilities. The new developments have witnessed changes in the definitional shift from a *medically* oriented approach to a social and *economical* approach are visible to carve a space for the persons with disabilities for a dignified life, but before going into the details of the paradigm shifts in approach towards disabled people, let have a look at the background reality of the issue.

The education scenario for persons with disabilities (PWDs) is not very bright in the case of India, which is much below the average enrolment in schools. Right from an early age, education facilities are not easily accessible to disabled children, wherein roughly only about 10% of disabled children are able to attend primary school. Even though the Government of India provides 5% reservation for the disabled students in higher education in colleges and universities, they face many hurdles in seeking access to good institutions right from the application process, to admission to attending classes. This results in this group lacking in necessary education and qualifications, making them lose out to the better qualified, non-disabled when competing for the jobs in the private sector. In India, majority of the disabled population in the working-age group is only educated till Class 10 or 12 (high school) and that too in the urban areas. In the rural areas, this is almost non-existent as the schools are at distant locations and are ill-equipped to educate the disabled. The higher education system in India, which is one of the largest systems in the world, could be utilized as a powerful tool to build a knowledge-based society.

Access to institutions of higher education is essential for disabled people since it can offer them opportunities for employment, social inclusion, and poverty alleviation. The Indian Parliament, for the first time, had legally endorsed the right of access for people with disability to education, vocational training and employment through the Persons with Disability (Equal Opportunity, Protection of Rights and Full Participation) Act, 1995. Subsequently, the National Policy for persons with disabilities was carved out in 2006 and recently the rights of Persons with Disabilities Act 2016 was passed to further strengthened the Persons with disabilities in their personal and public life, over riding the PWD Act, 1995.

The paper addresses the central question of the potential for the maximum employability of disabled students after getting appropriate aptitude education and focuses on some of the challenges faced by visually challenged persons and proposes some reforms for overcoming those challenges in synchronizing education and employment sectors for better results.

Since the scope of disabilities is too broad, given its varying needs, my focus is on the persons with disabilities suffering from visual impairment. Mainstreaming disability in education is essential for a visually challenged person to live an independent economic life. Education can increase chances of developing employable skills which further improves their living standard leading to an independent life

The paper seeks to answer the fundamental questions:

- What the State has done to enhance the capability of the persons with disabilities, especially visually challenged persons through their educational programs?
- What laws and policies have the State formulated to affirm their participation in the socio-economic life of the society at large?
- Despite, enabling laws and policies related to education and employment, why the persons with disabilities, especially visually challenged persons have not been able to get their due share in the economic life of the society at large?
- What steps could be taken to make the educational programs more conducive to suit the employment needs?

After getting requisite education and skill, employment is one of the essential aspirations for persons with disabilities as it is instrumental for self-esteem, economic and social integration within the family, the community, and the society. Disability-based discrimination in education and employment context makes up one of the most universal and insidious forms of discrimination faced by persons with disabilities in many societies. Persons with disabilities are often subjected to the unfriendly educational system of learning and poor working conditions resulting in disproportionately low pay.

According to the ILO, "As a group, persons with disabilities often face disproportionate poverty and unemployment."[1] Seventy - five per cent of the population of persons with disabilities lives in rural areas, 49 per cent of the disabled community is literate, and only 34 per cent is employed. Consequently, finding them employment becomes an uphill task for any given system.[2]

1 Retrieved On 10 March, 2017 From http://www.ilo.org/skills/areas/inclusion-of-persons-with-disabilities/lang--en/index.htm

2 Society for Disability and Rehabilitation Studies, "Employment of Persons with Disabilities in Public Sectors in India An Evaluation Study with Special Reference to Persons with Disabilities Act (1995)", New Delhi: Planning Commission, Government of India, 2008, retrieved on 10 February, 2017 http://planningcommission.nic.in/reports/sereport/ser/ser_pdp1206.pdf

There is widespread ignorance regarding the causes of disability and the potential of persons with disabilities to turn the self into productive and self-reliant members of society. Acceptability of disabled children, especially visually, speech and hearing impaired, motor disabled and mentally retarded in general schools, is extremely limited. Thus, creating a right-based society for them is an uphill task.

Barriers to the enjoyment of the right to employment after getting education by persons with disabilities include:

- Physical barriers
- Information barriers
- Communication barriers
- Attitudinal Barriers

Reasons for lower employment rates for persons with disabilities include:

- Lack of access to needed work accommodations;
- disincentives imposed by public disability benefits programs[3];
- And discrimination, coupled with low levels of education, render them doubly disadvantaged in getting poor job prospects.[4]

Disability is a global problem, but the proportion is very high in developing countries. The estimated prevalence of disability in India has been hampered by complicated and countless factors. The lack of suitable definitions of disability further compounds the task of accurately tracking the existence of a disability. There are two government sources of nationwide disability statistics in India: The Census and surveys of the National Sample Survey Organization (NSSO). The Census of 2001 did not adopt any precise definition of disability. Instead, it included a functional limitation question that asks respondents about their type of functional limitation (e.g., in seeing, hearing, movement), while the NSSO adopt the definition provided by the WHO in 1976.[5] However, the data provided by these agencies are much lower than the actual data provided by the world Report on disability 2011 prepared by WHO which is more than 10 per cent of the total population of the world. The proportion is more or less the same in India, whereby it is estimated that around 120 Million people are suffering due to one or the other kind of disability. Even if the government data on disability is believed, the situation is not very encouraging.

3 John Bound and Timothy Waidmann, "Accounting for Recent Declines in Employment Rates among Working-Aged Men and Women with Disabilities", The University of Wisconsin Press: Journal of Human Resources Vol. 37, No. 2 (Spring, 2002), pp. 231-250

4 Richard V. Burkhauser, Economics of Disability Research Report #6: April 2001, Retrieved on 15 February, 2017 from http://www.burkhauser%20et%20al.%2C%201993&source=web&cd=6&ved=0CFAQFjAF&url=http%3A%2F%2Fdigitalcommons.ilr.cornell.edu%2Fcgi%2Fviewcontent.cgi%3Ffilename%3D0%26article%3D1077%26context%3Dedicollect%26type%3Dadditional&ei=JxeVUaHvGsKPrQe32oHABA&usg=AFQjCNFmGw-ObXhGWk5ZYTRhTaqc4QKpWg&bvm=bv.46471029,d.bmk&kb=1&cad=rja

5 Hiranandani, V. and, Sonpal, D. (2010), "Disability, Economic Globalization and Privatization: A Case Study Of India", Disability Studies Quarterly, Vol.30, No. 3/4, retrieved on 15 March 2017 from http://www.dsq-sds.org/article/view/1272/1302

TABLE 1: ESTIMATES OF DISABILITY IN INDIA BY CENSUS AND NSSO

Types of Disabilities	***Census 2001***		***NSSO – 2002***	
	Number	% of Total Disabled	Number	% of Total Disabled
Seeing	10,634,881	48.55	2,826,700	15.29
Speech	1,640,868	7.49	2,154,500	11.65
Hearing	1,261,722	5.76	3,061,700	16.56
Movement	6,105,477	27.87	10,634,000	57.51 _
Mental	2,263,821	10.33	2,097,500	11.34
Total	21,906,769	100.00	18,491,000	100.00"

Source: Census of India 2001 & 58th round of NSSO 2002

According to the survey of NSSO 2002, the estimated numbers of disabled persons in the country was 18.49 million from July to December, 2002, and they formed about 1.8 per cent of the overall population. Censuses of India 2001 and 2011 have identified five types of disabilities and estimated that a total number of disabled in India was 21.9 million, which constitute about 2.13 per cent of the total population. Census data shows that nearly half of the total disabled are having seeing disabilities (48.55per cent) followed by movement disabilities (27.87 per cent), while NSSO data shows that more than half (57.51 per cent) of the total having movement disabilities. The data of Census and NSSO vary because they used different parameters in counting the disabled. Their definitions of disability are different. In the census of 2011, the data is more or less the same. There is 18.9 per cent population with a visual disability, and most of them belong to the age group of 4-29, which is our target group for discussion.

Participation of Disabled Students in Higher Education

Since independence, there has been an enormous increase in the number of higher educational institutions in India. The number of universities had increased from 20 in 1947 to about more than 800 in2019. As per UGC 12 December 2018 notification Now there are 49 Central Universities, 6 October 2017 UGC notification there are 367 State Universities, 123 Deemed Universities, 282 Private Universities. The number of colleges increased from 500 in 1947 to 37,204 colleges and 11,443 stand-alone institutions in 2017. With this progress, we expect improvement in the level of higher education, access to disadvantaged groups, and the quality of higher education.[6]

The rights of Persons with Disabilities Act, 2016 emphasized equal access for disabled people to all levels of education including higher and skilled based vocational education, and reservation of a minimum of 5% in admissions to all levels of public educational institutions.[7] Disabled children rarely

[6] Further details could be retrieved from the URL:
https://mhrd.gov.in/sites/upload_files/mhrd/files/statistics-new/AISHE2015-16.pdf

[7] **The Rights of Persons with Disabilities Act, 2016** makes the following provisions as regard to education, section 16-17 talks about inclusive barrier free environment having all kind of facilities at primary level.
Whereas, section 18. The appropriate Government and the local authorities shall take measures to promote, protect and ensure participation of persons with disabilities in adult education and continuing education programmes equally with others.
Section 31. (1) Notwithstanding anything contained in the Rights of Children to Free and 35 of 2009. Compulsory Education Act, 2009, every child with benchmark disability between the age of six to eighteen years shall have the right to free education in a neighbourhood school, or in a special school, of his choice.
(2) The appropriate Government and local authorities shall ensure that every child with benchmark disability has access to free education in an appropriate environment till he attains the age of eighteen years.

progress beyond primary school, and only 9% have completed higher secondary education.[8] *National Centre for Promotion of Employment for Disabled People (NCPEDP)* revealed important statistics about the plight of persons with disabilities' participation in higher education, 119 respondent universities out of 331 had just 1,635 disabled students registered. This figure is alarmingly low when compared to the University Grants Commission (UGC) standard of 3.6 lakhs disabled students for 119 varsities, which is only 6 per cent of the entire population of disabled people. Only the Banaras Hindu University and the Aligarh Muslim University had disabled students in double digits, with 202 and 280 respectively, while JNU ranked sixth in terms of the number of disabled enrolled. Among the 100 colleges out of 294, a mere 0.52 per cent of the students' population consisted of people with disabilities.[9] The 3 per cent quota reserved for persons with disability is ever filled in these institutions of higher learning. During the year 2013-14, only 623 persons with disabilities could get admission in a prestigious centre for learning like, Delhi University[10] and this year too it is likely that the number is not going to be more. Adding to this, the visually challenged persons are generally admitted in those courses which are not able to breed excellent employment opportunities.

Despite all these attempts to develop the condition of the disabled persons, their educational level is not satisfactory. Census of India 2001 provides data of literacy rate among disabled persons. Table 3 shows the literacy level by sex and residence.

The main aim of education for the disabled would be to make them literate and educated, and to employ them so that they can enjoy an independent life. Disabled students need special arrangements in the natural environment of educational institutions for their independent functioning. The National Policy on Education (NPE), 1986, and the Programme of Action (1992) give the basic policy framework for education, emphasising the correction of existing inequalities. It stresses on reducing dropout rates, improving learning achievements, and expanding access to students who have not had an easy opportunity to be a part of the mainstream system.

Despite all these attempts to develop the condition of the disabled persons, their educational level is not satisfactory. Census of India 2001 provides data of literacy rate among disabled persons.

The following table shows the literacy level by sex and residence.

TABLE 2: LITERACY RATE AMONG DISABLED (Percentage)

Residence	Persons	Male	Female
Total	49.31	58.15	37.32
Rural	44.40	54.11	31.31
Urban	63.87	70.05	55.36

Source: Census of India 2001

32. (1) All Government institutions of higher education and other higher education institutions receiving aid from the Government shall reserve not less than five per cent. seats for persons with benchmark disabilities. (2) The persons with benchmark disabilities shall be given an upper age relaxation of five years for admission in institutions of higher education. The RPWD Act 2016 could be retrieved from http://*www.disabilityaffairs.gov.in/upload/uploadfiles/files/RPWD%20ACT%202016.pdf*

[8] 'People with disabilities in India: from commitments to outcomes', The World Bank Report, Retrieved on 17 April, 2018 from http://documents.worldbank.org/curated/en/2007/05/8746167/people-disabilities-india-commitments-outcomes

[9] 'Education Scenario vis-a-vis Students with disabilities', Press Conference in Delhi on September 14, 2004. Retrieved on 17 April, 2018 from http://www.dnis.org/news.php?issue_id=18&volume_id=2&news_id=230&i=0&interview_id=31, *viewed on 18/09/2011*

[10] "Arts courses in DU popular with disabled students," The Times of India, 12th June 2017, Retrieved on 13 June 2014 from http://timesofindia.indiatimes.com/home/education/Arts-courses-in-DU-popular-with-disabled-students/articleshow/36392919.cms

Literacy level is higher in urban areas (63.87 per cent) as compared to rural areas (44.40 per cent) because most of the educational institutions, especially special schools for disabled, are located in urban centres. The above table also shows that the literacy level is low among disabled females as compared to male. The lowest literacy rate is observed among rural disabled female. This revealed that education among girls in rural areas is not given important, especially if she is disabled. The situation will be clear if we compare this literacy rate with a total number of the literate population. It is only 4.72 per cent. Among disabled male literacy rate is 5.66 per cent of total literate male and 1.37 per cent of total male. Among female, this is 3.49 per cent of total literate female and 0.70 per cent of the total female.

TABLE 3: LITERACY RATE AMONG DIFFERENT CATEGORIES OF DISABLED BY SEX (Percentage)

	Total	Male	Female
Seeing	49.85	59.56	38.50
Speech	36.23	41.91	28.57
Hearing	43.17	55.73	28.79
Movement	57.37	65.44	43.08
Mental	37.89	43.68	29.27

Source: Census of India 2001

The Table shows the literacy rate among different categories of disabled. This indicates that the literacy rate is highest among movement disabled.

TABLE 4: LITERACY RATE AMONG DIFFERENT CATEGORIES DISABLED BY RESIDENCE (Percentage)

	Total	Rural	Urban
Seeing	49.85	43.56	67.77 "
Speech	36.23	31.38	51.41
Hearing	43.17	39.31	59.72
Movement	57.37	53.74	69.04
Mental	37.89	34.72	45.44

Source: Census of India 2001

The table shows that the literacy rate is highest in urban areas, especially for movement disability. This indicates that movement disabled persons are enrolled in educational institutions in the highest number.

TABLE 5: EDUCATED DISABLED

	Literate	**Higher education**
Total	10801232	645118
Male	7330091	486373
Female	3471141	158745

Source: Census of India 2001

Table 5 shows the total number of literate disabled persons and enrolled in higher education. In higher education, their enrolment is very low, especially for female.

TABLE 6: NUMBER OF DISABLED PERSONS BY ATTENDANCE OF VOCATIONAL COURSE PER 1000 DISABLED PERSONS OF AGE 10 YEARS AND ABOVE FOR EACH SECTOR ALL-INDIA

Sector	**Not Attended any Vocational Course**	**Course Attended**		
		Engineering	**Non-engineering**	**Total**
Rural	984	3	12	15
Urban	963	9	26	35
Rural + Urban	979	4	15	19

Source: NSSO 2002

Table 6 shows the number of disabled in vocational courses. Vocational courses can be divided into two categories-engineering and non-engineering. In engineering courses, their number is very low. Out of 1000 disabled persons living in rural areas in rural India, only 15 completed any vocational course. In urban areas, a comparatively higher number of disabled persons (35) have done so.

As pointed out earlier, statistics as per the Census 2001 2011, reveal that the highest number of the disabled population is in the age group of 10-19 years, followed by 20-29 years and 30-39 years. Together these three age bands constitute almost 50% of the total disabled population with more than half of the disabled in the ages when employment is most important for their sustenance.

Educational Paraphernalia for Visually Challenged Persons

The chequered historiography of visually challenged being educated and employed is not too long. Getting education and employment was more or less a fictional proposition for visually challenged persons until the end of the 19th century. By the end of the 19th century due to missionary zeal, few residential schools were opened to impart education to visually challenged persons. In 1887 Miss Annie Sharp, a missionary, founded the first school for the visually Challenged in India at Amritsar. It was shifted to Dehradun during 1903, now called the Sharp Memorial School for the Blind. Subsequently, several residential schools were opened in different cities. As a result, there were about 50 such schools at the time of attaining independence. Till date, there are 300 schools for the visually impaired across the country covering 20,000 visually impaired children. This coverage is merely 3 per cent of the population of the school-age visually impaired children in the country. In higher and vocational education, the number is not much.

There were only 32 institutions for the Visually Challenged Persons in India before partition. It was, generally, believed that most Visually Challenged Persons were gifted with musical ability. Many of them learnt music and were career music teachers in the community. There were very few opportunities for vocational training or other forms of economic rehabilitation. A few traditional crafts such as re-caning, weaving, doormat making formed the subject matter of vocational services for the visually impaired. Today, a wide range of vocational courses are available for the Visually Challenged Persons, some striking examples being training in light engineering, providing computer-aided services, stenography, physiotherapy, acquiring middle-level managerial skills, along with training in a range of conventional occupations.

The state governments gave little to no financial assistance to schools for the Visually Challenged Persons. Consequently, these schools had to depend to a vast extent on voluntary contributions and charity. This was also, perhaps, the reason why the main impetus for work for the Visually Challenged Persons came from the voluntary sector rather than from the State which entered the fray only after Independence. In 1961, the Government of India initiated its Scheme of Assistance to Voluntary Organisations for the Persons with disabilities with the provision of rupees one lakh only. Other schemes followed: Scheme of Assistance for Integrated Education (1974), Scheme of

Assistance to Disabled Persons (1981), Special Employment Exchanges (1954), Vocational Rehabilitation Centres for the Handicapped (1964) and finally the Scheme for the establishment of Composite Regional Centres. The number of institutions for the Visually Challenged Persons in the country is now about 350.

According to "Disabled Deserve Different Deals," a report by Action Aid India (2001), 87% of the budget allocated for people with disabilities is spent on salaries for the staff in the Disability Welfare Department and other administrative costs. The other 13% is spent for the running of several special schools, hostels for people with disabilities, distribution of books for the students with disabilities, aids and appliances, health care and identification of Persons With Disabilities all of which has to be accomplished with this small amount of money.[11] Most Persons with Disabilities do not even have the basic information about how to access the most important things relating to themselves like health, education, and livelihoods.

Till date, three broad models of education for visually challenged have been conceived; **Segregated, Integrated, and Inclusive.**

Segregated education occurs when students with disabilities learn distinctly from their peers. Often, especially in "developing" countries, segregated education takes place in the form of special schools created explicitly for the education of students with disabilities, or in completely separate classrooms for students with disabilities. Segregated education pinpoints the child as the problem in the system, the impediment to learning, and as a result, these students will often receive a completely different curriculum and different methods of testing, rather than being taught the same curriculum as their peers. This separation in school often creates separation within other areas of life as well.

Integrated education is similar to inclusive education, but without any ideological commitment to equity. Integration places students in a mainstream classroom with "some adaptations and resources" However, students are expected to "fit in with pre-existing structures, attitudes, and an unaltered environment."[12] Integration is often mistaken for inclusion because students are placed in a mainstream classroom, which is a step towards inclusion. However, if there has not been a paradigm shift within the school and these students are not perceived as equals, if the curriculum is not taught for the understanding of all instead of some, then the students are integrated, but not included in the school.

Inclusive education "is a process of strengthening the capacity of the education system to reach out to all learners." It involves reorganisation of the culture, policies, and practices in schools so that they can respond to the diversity of students in their locality. For a school to be inclusive, the attitudes of everyone in the school, including administrators, teachers, and other students, are positive towards students with disabilities. Inclusive education means that all children, regardless of their ability level, are included in a mainstream classroom, or in the most appropriate or least restrictive environment (LRE), that students of all ability levels are taught as equals, and that teachers must adjust their curriculum and teaching methodologies so that all students benefit. This also avoids wasting resources, and shattered hopes," which often occurs in classrooms that are one size fits all. Studies have shown that truly inclusive systems reduce drop-out rates and repetition of grades, and have higher average levels of achievement, compared to systems that are not inclusive. People who believe in inclusive education believe that the education system is the impediment to learning for a child, and that every child is capable of learning![12]

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[11] According to "Disabled Deserve Different Deals", a Report by Action Aid India (2001) Disability Rights Promotion International, retrieved on 17 March 2017 from http://drpi.research.yorku.ca/AsiaPacific/resources/IndiaMonitoringRep/intro

[12] A Pre-Post Study: Attitude of Teachers' Towadrs Inclusive Education." Indian Journal of Health and Wellbeing, vol. 7, no. 1, Indian Association of Health, Research and Welfare, Jan. 2016, p. 161.

It is important to note that within government documents and scholarly publications in India, the three different terms-segregation, integration and inclusion-are often used interchangeably, or with different definitions than those attached to the three words in the United States. This could stem from a variety of reasons, although a lack of education on the original meanings connected to the words seems to be the most logical explanation.

Education means removing the barriers in the classroom and school so that students of all ability levels are included in the same lesson. Equal access to education empowers people with disabilities to be independent and contributive, helpful members of an inclusive, barrier-free society despite adopting a scientific approach in disseminating knowledge to the visually challenged persons. Employment opportunities could not be increased.

Significant landmarks in the history of the education of the visually impaired in India have been:

- 1923: State level decision to establish a Braille press to produce books in Braille. This could not be implemented due to the non-existence of a uniform Braille code for Indian languages.
- 1941: Setting up of a Committee by the British Govt. of India to develop a uniform Braille code for Indian languages.
- 1944: Submission of the Report on Blindness in India, which is the basis of most of the services for the Visually Challenged Persons today.
- 1946: Setting up of a Cell in the Ministry of Education to promote education, training, and rehabilitation of the Visually Challenged Persons.
- 1950: Development and acceptance of *Bharati Braille*, a standard Braille code for Indian languages finalized, replacing the earlier codes in the light of certain recommendations made by UNESCO.
- 1951: Setting up of the first Braille press at Dehradun.
- 1952: Establishment of National Association for the Blind, marking the beginning of concerted voluntary action in the field.
- 1957: Establishment of first Vocational Training Centre for the Adult Blind Women at Dehradun.
- 1959: Establishment of the first School for the Visually Challenged Persons by the Central Government at Raipur, Dehradun (now located in the campus of NIVH, Dehradun).
- 1961: Establishment of Institution of the first Light Engineering course at Dehradun.
- 1962: Establishment of the first National Library for the Blind by the Central Government.
- 1967: Govt. of India brought all its activities for the education, training, and rehabilitation of the Visually challenged Persons under one umbrella for better coordination, Known as National Centre for the Blind, Dehradun.
- Between 1973-76: Review of the Government initiative to discern the effect of its schemes for the welfare of the Visually Challenged Persons led to the verdict of setting up one apex level Institute in each disability area by the then Ministry of Social Welfare, (now the Ministry of Social Justice & Empowerment).
- 1979: Establishment of the National Institute for the Visually Handicapped (NIVH) on 2nd July 1979.
- 1981: A large number of schools for the visually impaired established across the country as a part of the observation of the International Year of Disabled Persons.

- 1996: The Persons with Disabilities Act, 1995 enunciated comprehensive legislation for the prevention, rehabilitation, education, and employment for persons with disabilities which included visually challenged persons.
- 1998: The Scheme of Assistance for the Promotion of Voluntary Education also supported the establishment of special schools for visually impaired children with multiple disabilities.
- 2003: *Ministry of Social Justice and Empowerment* has introduced a scheme of providing scholarships for people with disabilities to pursue higher education.

In spite of these efforts by the government and NGO Sector, the educational status of the visually impaired people has not improved much. These programmes and initiatives have yielded little and could not translate the educational skills of the visually challenged into their full employment potentials.

Employment Scenario of Visually Challenged Persons

As time and again spelt, the plight of visually challenged in India is not good as far as the employment prospects are concerned. The stereotype educational system has not been able to enhance their capability to an extent where they could seek employment at par with other people. The legal regime to protect the rights of persons with disabilities was carved out after so many years of independence, and that too could not achieve its goals. Their implementation is further rendered to vulnerability and ineffectiveness as Persons with severe disabilities have to depend on others to exercise their rights.

Moreover, exercising of the rights of persons with disabilities requires extra economic burden on the state. The disability laws are not effective in dealing with the neo-LPG regime. Infect, there is hardly any law which takes into ambit the private sector, whether it is the education system or the private enterprises.

According to UN Fact Sheet, almost 80-90% of persons with disability in the working-age are unemployed across the globe (2009). Apart from those, others are either unemployed or do not have information about any employment opportunities.

Majority of persons with disabilities are unable to earn a livelihood for varied reasons, as per UNESCO data. These include:

- Lack of adequate education
- Poor vocational training
- Employers, as well as families of persons with disabilities, often limit opportunities for their employment because of accessibility issues, their competence, etc.
- For women with disabilities, unemployment is higher because of social discrimination and lesser opportunities for work
- Social and psychological barriers including overprotective families
- Poorer infrastructure facilities due to Economic independence

The fundamental requirement of any individual – when fulfilled leads to higher levels of self-esteem and self-worth; and this applies to everyone, including the Visually Challenged Persons. National Association for the Blind (NAB) India realised this fact and started the first of its kind in the country employment and placement service for the Visually Challenged Persons, almost immediately after its establishment in 1952. It was only after NAB (India) initiated this vital service did the Government of India set up special employment exchanges in various states.

Initially, visually challenged persons were mainly involved in skilled and unskilled blue-collared jobs in industries – mainly in factories, and textile and sugar mills. This continued for a fairly long time. The educated Visually Challenged Persons were employed as telephone operators and other such jobs. Later, to enhance their employment prospects, NAB (India) started the Vending Stand Programme and the Bureau of Self-employment.[13]

NGOs working in the visual impairment sector in India have struggled to get adequate and appropriate employment for the blind and the low vision persons. As a consequence of intense struggle, a full chapter on skill development and employment was included in the rights of Persons with Disabilities Act passed in 2016.[14] However, the provisions of this Act have been mostly beneficial to the educated visually impaired wishing to take up employment in the government establishments and/or in other establishments of the public sector. The less educated and those residing in the rural areas have remained mainly unaffected

Convention on the rights of persons with disabilities (CRPD) to which India is a signatory and ratified, Article 27 has particular relevance for the employment opportunities for persons with

[13] Retrieved from https://www.nabindia.org/employment/

[14] The RPWDs Act mentions in the chapter 4 on skill development and employment 19. (1) The appropriate Government shall formulate schemes and programmes including provision of loans at concessional rates to facilitate and support employment of persons with disabilities especially for their vocational training and self-employment.
(2) The schemes and programmes referred to in sub-section (1) shall provide for—
(a) inclusion of person with disability in all mainstream formal and non-formal vocational and skill training schemes and programmes;
(b) to ensure that a person with disability has adequate support and facilities to avail specific training;
(c) exclusive skill training programmes for persons with disabilities with active links with the market, for those with developmental, intellectual, multiple disabilities and autism;
20. (1) No Government establishment shall discriminate against any person with disability in any matter relating to employment:
Provided that the appropriate Government may, having regard to the type of work carried on in any establishment, by notification and subject to such conditions, if any, exempt any establishment from the provisions of this section.
(2) Every Government establishment shall provide reasonable accommodation and appropriate barrier free and conducive environment to employees with disability.
(3) No promotion shall be denied to a person merely on the ground of disability.
(4) No Government establishment shall dispense with or reduce in rank, an employee who acquires a disability during his or her service:
Provided that, if an employee after acquiring disability is not suitable for the post he was holding, shall be shifted to some other post with the same pay scale and service benefits:
Provided further that if it is not possible to adjust the employee against any post, he may be kept on a supernumerary post until a suitable post is available or he attains the age of superannuation, whichever is earlier.
(5) The appropriate Government may frame policies for posting and transfer of employees with disabilities.
21. (1) Every establishment shall notify equal opportunity policy detailing measures proposed to be taken by it in pursuance of the provisions of this Chapter in the manner as may be prescribed by the Central Government.
23. (1) Every Government establishment shall appoint a Grievance Redressal Officer for the purpose of section 19 and shall inform the Chief Commissioner or the State Commissioner, as the case may be, about the appointment of such officer.
(2) Any person aggrieved with the non-compliance of the provisions of section 20, may file a complaint with the Grievance Redressal Officer, who shall investigate it and shall take up the matter with the establishment for corrective action.
(3) The Grievance Redressal Officer shall maintain a register of complaints in the manner as may be prescribed by the Central Government, and every complaint shall be inquired within two weeks of its registration.
(4) If the aggrieved person is not satisfied with the action taken on his or her complaint, he or she may approach the District-Level Committee on disability.

disabilities. It has widened the scope of employment opportunities for PWDs in public and private sectors, organised and disorganised sectors.

Article 27 recognises the right of persons with disabilities to work, on an equal basis with others, and prohibits discrimination based on disability in all matters of employment, including the conditions of recruitment, hiring and employment, the continuance of employment, career advancement, and safe and healthy working conditions.

Infrastructure under the Ministry of Labour and Employment

Since, most of the efforts have been to tap the public sector employment, the Government of India has created reasonable paraphernalia to provide employment opportunities for visually challenged persons. There is a total of 947 Employment Exchanges, including 43 Special Employment Exchanges for disabled people.

38 Special Cells for disabled persons are functioning in regular Employment Exchanges in various States. There are 20 Vocational Rehabilitation Centres for persons with disabilities, out of which one centre at Vadodara has been set up exclusively for women with disability.

The Ministry of Social Justice & Empowerment, Government of India, in pursuance of the provisions of Section 32 of the Persons with Disabilities Act, 1995 constituted an Expert Committee for identifying the jobs for persons with disabilities in both government offices and public sector undertakings. The notification was issued on May 2001 where jobs for the persons with orthopaedic, hearing and visual impairment were listed for A, B, C, and D Group employees. For visually handicapped, there were 216 types of jobs identified for A and B Groups, 179 for Group C and 22 for Group D levels. This exercise was undertaken to fill up 3 per cent reserved posts for persons with disabilities in the government and the public sector undertakings. Such exercise keeps changing on by the Ministry at a periodic level.[15]

With the development in science and technology, avenues of employment are continually increasing for the visually challenged persons.

Enabling Technology for the Visually Challenged

Though visual impairment is painful to be compensated fully till now with the help of newly scientifically developed electronic aids and equipment. However, given the opportunity, a visually challenged can do most of the things that a sighted person can if given a chance.

India being a developing country, has not been able to produce the necessary technology and tools for the visually challenged persons. Mostly, the essential tools and equipment have to be imported. And could not reach the needy persons at appropriate time/place. Some reasons for this are given below:

Availability: Right kind of tools, especially those that are meant for persons with disability is not available in the general market. Lack of proper distribution system is also to be blamed for the lack of availability.

Affordability: Cost of technology or tools are often prohibitive. For example, the screen reading software is the primary technology to be used by persons with blindness or low vision to work on the computer. This software costs more than the computer hardware. However, Saksham and Daisy Consortium are developing low-cost solutions for the visually challenged persons recently, with the help of the students of IITs. They have been able to produce Smart canes and refreshable Braille displays which are very cheap in comparison to their imported counterparts.

[15] Visual Impairment - Rehabilitation Council of India, http://rehabcouncil.nic.in/writereaddata/vi.pdf (accessed July 29, 2019).

Awareness: The potential beneficiaries often are not even aware of what is available for their benefit.

Language: Currently, the latest technology is available in Indian languages. For example, a scanner can be used by blind persons to read printed books. This technology, which is in use for the English language for the past 20 years, is now available for any Indian language. For this reason, most of these tools are now getting useful to large percentage of Visually challenged Persons in India.

In the past decade, the introduction of technology such as Screen Reading Software, Text Reading Machines, Talking Mobile Phone, Drawing Boards, Geometric Kit, Cassette Recorder or a Digital Recorder, etc., have played a significant role in changing the meaning of blindness or low vision. Steps are also being taken to overcome related challenges. Many efforts are being made to introduce Indian language screen reading applications to most of the visually challenged persons at school and higher education level. The information society, in general, is making efforts to bridge the digital divide. It is possible for a person with blindness or low vision to be independent for all their reading and writing needs to a considerable extent.

Some of the revolutionary technologies that have made big differences in the lives of persons with blindness are as follows:

1. **Access to a computer and digital devices**--Computer-related technologies have affected the lives of one and all, they are being used in every walk of life. One of the unique features of the PC is that it stores information in digital format. This information can be converted in many different ways. The same piece of information can be viewed on-screen in different sizes or could be spoken out by the PC itself. One who cannot see, can hear a piece of information and the same information could be seen on the screen by a person who cannot hear. Therefore, information technology has come up as an uprising for providing functional capabilities for persons with sensory impairment.

Appropriate speech output from a computer enables persons with blindness to use a computer. This speech output comprises of two components:

(a) Screen Reading Software: The screen reading software is a computer programme that picks up the relevant information from the screen and sends the data to text-to-speech engine or speech synthesiser or a Refreshable Braille Display. This software determines what would be spoken by the computer.

A text-to-speech engine is a software which converts any text string into spoken words. A screen-reading software determines what will be spoken, and the text-to-speech engine determines how that text would be pronounced. The quality of speech output and the various voices depend entirely on the text-to-speech engine.

(b) Text-to Speech-Engine: Apart from being used as a speaking device for the screen reading software, the TTS is used in various other applications such as computerised telephonic inquiry systems, computerised announcement systems, and ATMs for Independent financial transaction. To be able to design a speech output system for any particular language, it is essential to have a text-to-speech engine for that specific language. Screen reading software can then be designed or adapted to give suitable speech output to blind persons in that particular language. Screen reading software and a text-to-speech engine are entirely two different application programs, which, working in tandem, provide accessibility to computers for persons with blindness. Jaws for Windows from Freedom Scientific USA, Window-Eyes from GW-Micro USA, Hal from Dolphin UK, Look Out by Premier Programming USA, etc., are all examples of screen reading software's that use text-to-speech engines such as Eloquence by Eloquent Technology, Microsoft speech from Microsoft, Flex Talk from ATNT,

Deck Talk Access from Digital Equipment's, etc., to provide speech output. The cost of screen reading software's ranges from 150 US dollars to 1,200 US dollars.

To elaborate further, the capabilities that this tool offers to persons with blindness are as follows:

- Read and write in the commonly used formats in the computer, which could lead to have access to a vast pool of e-text resources available without any further modification and to establish written communication independently.
- Use voice and text communication tools such as e-mail, web chat, internet telephony, and instant chatting.
- Use the Internet for all the purposes that it offers such as reading newspapers and magazines, Internet banking, online shopping, etc.
- Gain access to dictionaries, encyclopaedia, telephone directories, etc.

There are other technologies which could be used by visually challenged persons according to their needs:

2. *Sc*reen Magnification Software---This software is designed to enable persons with low vision who can read large print to operate a computer. The condition of low vision varies widely. Therefore, the screen magnification software offers magnification from 2 to 20 times and comes in varying styles such as full-screen magnification, magnifying lens simulation, vertical or horizontal split window magnification, etc. This magnification is different from increasing the font size. Increasing the font size would change the formatting of a document and would not provide magnification for items such as menus, etc. Screen magnification software, on the other hand, magnifies only the display of the document on the monitor and the original formatting of the document is preserved. Magnification soft wares provide magnification to any and every part of the screen and not just to the text of the document. This software has enhanced capabilities for using different colour contrast. A few of the screen magnification software also use speech output to help a person with low vision to lessen the strain. With the use of the screen magnification software, persons with low vision use the same devices of the input such as the mouse and a keyboard used by a sighted person which allows the smooth integration of the persons with low vision in the mainstream computer education or work environment.

3. OCR and Scanners---An OCR and a Scanner turns a computer into a reading machine for those with low vision and the blind. These equipment help them to gain access to the hard copy of the text. The scanner sends the image of the printed-paper to the computer where the OCR software processes the image and converts it into a digital version which can be read using the text-to-speech engine or through a Refreshable Braille Display. Within a few seconds of starting to scan a paper, the computer starts reading it. This system can read only the print, but not the handwritten text. The OCR software also has a limitation of not being able to recognise the text correctly if the printing is not of excellent quality. There are a few OCR software designed especially for the blind. These are user-friendly in processing tables, images, columns, etc. They are supplied with built-in text-to-speech engines, thereby eliminating the use of screen- reading software for reading purposes. These special OCRs are much more expensive than general-purpose OCRs. Kurzweil 1000 by Kurzweil Education Systems USA, Open Book by Freedom Scientific USA, Complete Reading System by Premier Programming USA are a few examples of special OCR software made for the Visually challenged Persons. Omni Page Professional, Text Bridge, and Fine Reader are the examples of general-purpose OCR software which can be used by Visually challenged Persons with the help of screen reading software. The cost of OCRs ranges from 150 to 1000 US dollars.

4. Refreshable Braille Display--A Refreshable Braille Display is a hardware device, an alternate output device for a text-to-speech engine. The Refreshable Braille Display gives one line of Braille information which is sent out by the screen reading software. This line of Braille keeps changing as new information is sent by the screen reader to the Braille display. There are various models of Braille display which can provide 20, 40 or 80 cells of Braille at a time. There is a greater chance of adaptability of Braille output for different languages since the basic Braille cells remain the same for every language. The very high cost of Braille display comes in the way of its use in developing countries. Orbit by APH and Braille Me developed with the help of IIT students by are a few examples of Refreshable Braille Displays. The various models of Braille display of40/80 cells cost between 500 and 11,000 US dollars.

5. Note-takers--Braille note-takers are primarily hand-held devices that use either a Braille or QWERTY keyboard for input and voice and/or refreshable Braille for output. These devices have built-in packages for word-processing, spreadsheets, address book, clock, calendar, e-mail, internet browsing, etc. These devices have long battery backups that enable its use without power input for a whole day. Lightweight and highly portable, they can be connected to desktop or laptop computers so that files may be backed up. Some note-takers can be connected to external disk drives (for an additional cost) to permit storing data on SD Cards and pen drives. Many of these note-takers can be attached to a modem for handling e-mails and web browsing. They can also be attached to Braille embossers/printers. Note-takers are handy devices for students of integrated education and in work environment. Aria by Robotron Australia, Braille Desk 2000 by Artic Technologies; Braille Lite Millennium, PACmate, Type n' Speak, Type Lite, Braille n' Speak by Freedom Scientific; Braille Note & Voice Note by Pulse Data HumanWare; Braille Elba by Papenmejer Germany; TransType 2000 by Artic Technologies are a few examples. Cost of this note-takers range between 1,200 and 5,000 US dollars.

6. Daisy Book (Digital accessible Information System) Player and Recorder--*This is* a small handheld device which has multiple applications: Books reading, appointments, calendar, clock, calculator, address book and note-taker. Data in a daisy player/recorder is stored in the form of recorded audio or text files. This device uses text to speech for reading the books. This kind of devices costs around 75 to 300 US dollars.

However, in spite of the immense potential of above-mentioned technologies, for a visually challenged person. It is not available to most of the needy persons as the equipment and software are too costly to be within the range of any individual. Here, mention should be made of the encouraging efforts of University of Delhi's Equal Opportunity Cell which has provided laptops and daisy players to its visually challenged students.

Most of the equipment are kept in the Braille library for the use of students who could come and use these expensive devices. Apart from Delhi University, Jawaharlal Nehru University has also opened up a special unit in its central library known as Helen Keller Centre for the Blind.

Several NGOs in Delhi and other Metropolitan cities have provided such facilities to the visually challenged to make them independent in reading and writing skill.[16]

The outcome in the Public and Private Sector

In spite of the positive developments in all spheres, which include robust legal framework government institutionalised support for education and employment coupled with available enabling technology, the desired fruit has not been able to change the life of millions of visually challenged persons.

[16] Visual Impairment - Rehabilitation Council of India. (n.d.). Retrieved from http://rehabcouncil.nic.in/writereaddata/vi.pdf

A. Public Sector

A report was prepared by the World Bank, entitled 'People with Disabilities in India: From Commitments to Outcomes' on the request of Government of India in the year 2006-2007. Their observations are quite startling. Some of the major points related to Government employment given in the Report are:

Only 27% of people with disabilities are registered with special exchanges, or the special cells of regular exchanges. Among the total, 661,000 people with disabilities are registered for all exchanges, 109,929 were registered as part of special exchanges for physically handicapped, and 66,612 were registered as part of special cells for physically handicapped of regular exchanges.

Total funding for special exchanges and cells between 1998 and 2003 was just over Rs. 5 crores. Employment exchanges - both special and regular - play a negligible role in promoting employment among disabled people. The cost-effectiveness of many special exchanges is open to question. Even at an average level, the approximate per unit cost of a placement by the special exchanges in 1998-2003 appears to be over Rs. 7,500/-.

It is clear that the placement ratio was very low for special exchanges and other exchanges, 0.9 % and 0.7% respectively in 2003. The placement ratio has roughly halved over the past decade in both cases, from close to 2% and 1.2% in 1994 for special and other exchanges respectively.

Only 10.2 % of all posts in Ministries/Departments and Public Sector had been identified as suitable for disabled people:

Ministries and Departments

Total number of Posts: 2698762

Identified posts for disabled people: 281398

Employed people with disabilities: 9975

% of identified posts filled by disabled people: 3.54%

% of all posts filled by disabled people: 0.37%

Public Sector:

Total number of Posts: 4,527,293.

Identified posts for disabled people: 460,396

Employed people with disabilities: 20,053

% of identified posts filled by disabled people: 4.46%;

% of all posts filled by disabled people: 0.44%.

"At present, the identification of jobs appropriate for them is done in an ad hoc and arbitrary manner. There is a need to have this task performed by a professional group with the involvement of Disabled Peoples' Organizations regular basis. The backlog of vacancies for persons with disability continues to be large, both at the Centre and in the States. This backlog should be cleared in a time-bound manner and in a campaign mode. Similarly, a suitable scheme to provide incentives to promote employment for disabled people in the private sector should be put in place as enjoined in of The Rights of Persons with Disabilities Act, 2016 which is the major employer player in the market.

B. Private Sector

Various legislative arrangements are there for the employment of persons with disabilities in the government domain, but there are very few countries which have given such protection to

persons with disabilities in the private sector of employment, which is the main source of employment for anybody in the prevailing LPG paradigm.

In India, the picture is particularly further dismal when things come to the private sector. More than 25 years after the reforms, disabled people have about 60 per cent lower employment rates than the general population, a gap that has been increasing over the past 15 years (World Bank, 2007).

The gap in employment between disabled and non-disabled people has increased in recent times,[17] which is a major cause of concern. The economic boom has not had any impact on the employment of PWDs. There is also wage discrimination against the PWDs. Many people with disabilities can and want to work, yet they are frequently excluded. Unemployment among the world's 386 million disabled people of working age is far higher than for other working-age individuals, with rates of up to 80 per cent reported in some countries. As a result, many disabled people live in poverty, and their potential contribution is lost - to their families, to employers and to society as a whole.[18]

The private sector is growing in our country. In the Eleventh Plan, it was stated that, "Total employment in public sector establishments has increased by 12.2% in the period 1999-2000 to 2004-05. Total employment in private sector establishments hiring less than ten workers has increased by 18.6% in the same period. Total employment in private sector establishments hiring more than ten workers has increased by as much as 45.8%! If we limit our focus on regular employees in the larger private sector units, this category shows growth of 39.42%. However, the growth of casual employees in the larger private sector units was even faster at 58.9%." (Source: XI Five Year Plan, Chapter 4, Employment Perspective and Labour Policy).

There is not any data available on people with disabilities in the organised and unorganised sectors. In a Survey conducted by NCPEDP on 'top 100 companies' in 1999, the rate of employment of disabled people in private sector was found to be 0.28%, and in Multi-National Companies, it was 0.05%. In 2001, NCPEDP surveyed on 'top 100 IT companies', the rate of employment of disabled people was 0.58%. In 2007, TCS-CII conducted a Study regarding the employment of disabled people in IT (Information Technology) and ITES (IT Enabled Services) companies. About 73% of the companies from whom the responses were gathered did not have a policy on Corporate Social Responsibility (CSR) or any other guidelines in place for employing disabled people. (http://infotech.indiatimes.com/ articleshow/2060452.cms).

To understand the issue, detailed study of the latest Annual Reports of the Ministries that are responsible for promoting employment in the private sector can be taken up, like - Ministry of Labour & Employment, Ministry of Housing & Urban Poverty Alleviation, Ministry of Medium & Small Scale Industry and Ministry of Industry; Websites of Apex Industrial Bodies, like CII, FICCI and NASSCOM and the initiatives of the NGO sector. Also, the relevant chapters of the XI & XII Plan could be taken up.

As a part of government initiative in giving special incentives to Private enterprises, a Central Sector Scheme of providing one lakh jobs per annum to the persons with disabilities, with a proposed outlay of Rs.1800 crore, during the Eleventh Plan was announced in the Union Budget 2006-07. Under the Scheme, the Government would make payment of the employer's contribution to the Employees

17 Suguru Mizunoya & Sophie Mitra, 'Is there a Disability Gap in Employment Rates in Developing Countries?', Fordham Economics Discussion Paper Series dp2012-03, Fordham University, Department of Economics, 2012, Retrieved on 13 March 2018 from http://www.fordham.edu%2Fimages%2Facademics%2Fgraduate_schools%2Fgsas%2Feconomics%2FDP2012_03_Mizonoya_Mitra.pdf

18 Sophie Mitra, "The Recent Decline in The Employment of Persons with Disabilities in South Africa, 1998-2006," South African Journal of Economics, Economic Society of South Africa, vol. 76(3), 2008, pp.480-492.

Provident Fund and Employees State Insurance for the first three years, as an incentive, in return of employment of persons with disabilities with monthly wage up to Rs. 25,000/- per month. A provision of Rs.16 crore for four years for making adequate publicity of the scheme was also approved.

However, on 18th October 2008, to the dismay of the government of India, P. Chidambaram while speaking at a FICCI gathering said "not a single recruitment had been made six months after the scheme was announced. It is six months and 17 days and not one employer has made a single claim under EPFO and ESIC. I apologise for the failure of the scheme," he said, resolving to achieve the target in the next six months. "I have set a review meeting for December 31 and again on January 31 by which time we will reach our target,"

He added, "When I say 8.6 per cent, I think I was wrong if you count the pension also to that part it works out to roughly 12 per cent of the salaries being picked up under the scheme. If the employees come to know of the scheme and if they are employing disabled people, they will surely claim under the scheme. The fact that not a single claim has come is a measure of our failure, so we will do our very best to make this a success in the remaining five-and-a-half months."[19]

The incentive scheme requires to be reviewed to see why employers are not being encouraged by this scheme, or they are unaware of it.

This shows the apathy of the private sector towards persons with disabilities in giving employment opportunities, despite strong government incentives. This situation continues till date.

Various governmental, as well as non-governmental initiatives in India, demonstrate the challenges faced in the area of creating livelihood opportunities for persons with disabilities. Ensuring appropriate policy changes, peer training, public-private partnerships, creating a barrier-free environment, providing adaptations of technology in rural areas; to name a few are ways of beating the existing challenges regarding the PWDs.

Appraisal and Recommendations

The international community has well recognised that the visually challenged deserve a respectable status in society on the same terms as the other persons. The visually challenged are viewed as individuals with wide-ranging abilities having the potential of being equal partners in the project of social, economic, political and cultural development if given ample opportunity but these nice words are of little help if they are not translated into action. Here, one is bound to get suspicious when State, which acknowledges the equal worth of every human being starts lamenting about the non-implementation of its own legal and ethical policies and programs.

There is substantial empirical evidence to support that the basic cause of visually challenged persons' under-performance is a social, economic, and political exclusion. Limited educational opportunities have not been able to meet the requirements set by the fast-changing and expending employment sector. As per the World Bank reports, more than 20 years after the economic reforms, disabled persons, in general, have about 60% lower employment rates than the general population, a gap that has been increasing, which is a cause of major concern. In order to ensure that visually challenged are able to earn a livelihood and lead a life of dignity, contribute to the economy of the country and become respected citizens, it is imperative that a right-based approach with full participation be adopted while framing policies and developing programmes in letter and spirit.

19 "Chidambaram asks industry to be disabled-friendly in job recruitment", *Khaber Express,* 18 October, 2008, Retrieve on 10 April, 2018 from http://www.khabarexpress.com/news/National/Chidambaram-asks-industry-to-be-disabled-friendly-in-job-recruitment/48835.htm

Though the country can satisfy itself having carved out many programs aimed at strengthening the capacity of visually challenged persons but even after more than 100 years, the number of these persons benefiting from the services being provided by both Governmental and non-Governmental organizations is very small. Many need-based educational and job oriented vocational training has been initiated with good intention. The number of special schools has increased substantially. The number of Braille presses has also increased from one in 1951 to 17 in 2006 with smaller Braille production units in 75 Governmental and non-Governmental organizations. More than ten audiobook production centres are producing audiobooks on cassettes and CDs in Digitalized Access Information System (Daisy) format.

Twenty-three Special Employment Exchanges, 55 Special Cells in general employment exchanges have been set up to assist these persons in finding suitable job placements after getting requisite education. Many innovations in designing newer technologies to facilitate the lives of persons with blindness and visual impairment have been made. These persons are now being trained to make use of computers to access information. Schemes to provide required equipment free of cost to the economically weaker sections among visually challenged persons have been formulated and initiated.

The country has a date, 2020 as the target year by which we plan to become not only economic superpower, but also desire to achieve total literacy. This cannot be done unless children and youth afflicted with blindness in particular and other disabilities, in general, are afforded quality education, vocational training and enough job opportunities commensurate with their abilities and qualifications leading to the inculcation of a sense of responsibility and participation. They will become contributing members of society.

Based on the current scenario, the following needs to be considered as genuine and desired targets, which will have to be visualised, planned, and implemented to achieve this goal:

1. Complementary Roles of Special Schools and Inclusive Education Programmes

Salamanca Declaration and Framework for Action (2002) on the education of children with special needs has very rightly said "Regular schools with an inclusive orientation are the most effective means of combating discriminatory attitudes creating welcoming communities, building an inclusive society and achieving education for all. Moreover, they provide effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system"[20].

Different models of inclusive education for children with visual disability have been initiated in line with this thinking, but the results have not been encouraging. The reason perhaps is the lack of required preparation before the launch of these much-needed programs in terms of needed trained human resource, need-based learning material, necessary infrastructural facilities, etc.

It is, therefore, essential that urgent measures are initiated to augment the training facilities on a large scale encompassing the skills of preparing the teaching-learning material, etc., so that inclusion of children with visual impairment in mainstream education could become a reality. It is further required that the special schools, which are available in a large number of districts are converted into resource centres to provide necessary support services for preparing Visually challenged children for mainstreaming whenever necessary. These resource centres can also provide support to regular school, and university teachers whenever required. Stress should not only be on primary education, but reasonable attention should also be given to higher education.

[20] Retrieved on 19 May 2017 from http://*www.unesco.org/education/pdf/SALAMA_E.PDF Retrieved on 10 May 2014.*

2. More and more Stress on Professional and Vocational Training for the Visually Impaired

One of the principal aims of education is to prepare a child to engage himself/herself in gainful employment when s/he grows up. Vocational training of the Visually Challenged Person is provided by the special schools and organisations of and for the blind. The training imparted is largely traditional, which has poor earning potential due to the availability of newer technologies. Research shows that with the adaptation of certain machines and tools, the visually impaired youth can learn to work as machinists, plastic moulders, computer operators, software engineers, human resource managers, etc. They can also be self-employed in managing small scale industry, cyber cafes, E-commerce, etc. Jobs have been identified which computer literate Visually challenged Persons can perform successfully. But these efforts have not helped to enrich the vocational skills of the Visually challenged Persons because the curriculum in vocational training has not been updated keeping with the requirement of jobs identified. It is, therefore, imperative that the defined jobs are studied in terms of the skills and competencies that one needs to be able to work effectively and prepare the curriculum and manuals for training. Only if the curriculums are transacted, the educated, visually challenged youth can get gainful employment, which is the ultimate aim of all efforts of the Government and the non-Governmental organizations.[21]

3. Facilitating Admissions in Professional Courses in Colleges and Universities

Most of the visually challenged students seek admission in the Non-professional courses which have low employment output. The students are generally enrolled in humanities, even though some students have a good aptitude in science and other professional courses since, the higher education system does not provide adequate support for the visually challenged students to seek admission in such courses they have to seek admission in these courses against their will. Consequently, they are not able to excel in their subject of study to which they are forced into.

In the University of Delhi, there is hardly any visually challenged student enrolled in any other course accept Hindi, English, Sanskrit, History Political Science, Sociology. There are so many vocational courses run by the Delhi University Colleges but due to unsupportive educational system no visually challenged person adventures in seeking admission to these courses.

It is imperative under the given circumstances that if visually challenged students have to be made employable, they should be encouraged to take admission in such courses which are in demand by the industry.

4. Promoting Voluntary Programmes of Action

Apart from government support, there is a constant need for community support for the capacity building of visually challenged persons. Services for the visually challenged by voluntary organizations and groups need to be continued even today. Given the statistics showing the graveness of the problem, the whole rehabilitation programme cannot be left on government.

Leadership training courses are to be organized for the manpower in these organisations to engage themselves in constructive activities and pressure groups which could constantly build pressure on the government and private sector to create an inclusive environment for the visually challenged persons. Furthermore, a scheme of social audit needs to be developed and implemented to scrutinize their programs in terms of achieving their goals— that of providing need-based training and rehabilitation services to visually impaired children and youth.

[21] Visual Impairment - Rehabilitation Council of India. (n.d.). Retrieved from http://rehabcouncil.nic.in/writereaddata/vi.pdf

5. Encouraging Production and Distribution of Equipment and Material in Accessible Format

The challenge for educators of Visually Challenged children, including those with other disabilities, is how to teach skills that sighted children typically acquire through vision. Blind and visually impaired students have used a variety of methods to learn to read, write, and acquire other skills, both academic and non-academic. For example, for reading purposes, some students use Braille exclusively; others use large print or regular print with or without low vision aids. Still, others use a combination of methods, including Braille, large print, low vision aids, and devices with computer-generated speech, while others have sufficient functional vision to use regular print, although with difficulty.

Intellectual property rights and copyright owners, have largely barred the visually challenged persons from acquiring knowledge through books in an accessible format. The gravity of the issue can be captured from the shocking figure shared by the World Blind Union, which states, "95% of books published in rich countries and 99% in poorer countries are never converted into accessible formats."

When disability activists representing different disability, organisations apprised the Indian government about the scarcity of published books for blind people, it realised an urgent necessity and amended India's existing 1957copyright act in May 2012 to facilitate the conversion of books in accessible formats for print disabled people in the country. Section 52(1) of the Indian Copyright Act categorically states, the following act shall not be an infringement of copyright, namely:

"The adaptation, reproduction, issue of copies or communication to the public of any work in any accessible format, by any person to facilitate persons with disability to access to works including sharing with any person with disability of such accessible format for private or personal use educational purpose or research."

Undoubtedly, India's amended Copyright Act has been hailed by disability activists' the world over as a landmark development towards facilitating the availability of books to print disabled people. But given the lack of interest for translation business in regional languages, Central government, in collaboration with state governments will have to own the responsibility to publish and convert books in regional languages for print disabled citizens.

On 30 April 2014, India, along with 63 other countries including European Union, became a signatory to the UN-affiliated World Intellectual Property Organization's (WIPO) June 2013 international treaty on copyright exception for print disabled. This treaty, which, came into being in the Moroccan city of Marrakesh, commits to facilitating the cross-border exchange of books in accessible formats. As the Economist reported: "A Braille book made in America, for example, cannot legally be sold in Britain. Argentina has over 50,000 works available for visually impaired readers, but they cannot be distributed in neighbouring Uruguay, which has a paltry 4,000." It is widely known that the western countries such as the United States of America and its close allies are sceptical of WIPO Copyright treaty and they fear that in the advanced age of technology such exception in copyright law will be misused in the ordinary situation by others who are not print disabled.

The WIPO treaty on Copyright exception for print disabled has not yet been ratified by 20 member states, which is the minimum numbers to bring this treaty into reality. One can hope developing countries, where a majority of persons with disabilities reside, will take an urgent call to ratify this historic treaty which aims to minimise the gap between haves or have nots.

India has shown its commitment to remove the barriers which restrict the conversion of books in friendly formats. India has not only amended its copyright act with major exceptions for print disabled people, but it also strongly advocates at international fora to make cross-border

export/import of books in accessible formats possible.[22] India has a huge population who are unable to read and write only due to the lack of accessible reading materials. Therefore, the government is duty-bound to either providing incentives to NGOs working in the field to take up the translation/conversion of books in accessible formats, or the Centre can establish publishing centres to convert books in digital/Braille/audio formats. Reading is a fundamental right of all citizens in the country.

The manufacture and production of Braille books and audiobooks, appliances and other devices have increased substantially in the last fifty years, but a large number of visually impaired children still go without the needed equipment and material. It is, therefore, necessary that the production of books, in Braille and on cassettes, is augmented by installing fast speed Braille Embossers and by establishing more talking book studios.

Apart from this, special equipment should be provided to the stakeholders on a subsidised basis. This would not only lea to the efficiency of the visually challenged persons but would also enhance the scope for more and more indigenous research and production of such equipment. Most of the persons can buy the necessary equipment due to lack of purchasing power. Because, imported equipment is costly, and the visually challenged persons are not financially sound.

6. Linking Research with Practical Usage

Undertaking research aimed at qualitative improvement and quantitative increase of rehabilitation services is the need of the hour to attain the goal of education and employment for all visually impaired children and youth. Some of the key research areas in which attention needs to be focused may include:

- Prevention and treatment of blindness.
- Early detection and Intervention.
- Vital support and services.
- Indigenous Design and development of assistive devices for independent functioning
- Psycho-educational and productive work assessment.
- Community-Based Rehabilitation.
- Apprising the employers of the utility and potentials of visually challenged persons as productive workers
- Identification of appropriate skills and jobs
- Publicity of fruitful research and its application for practical usage by the visually challenged

7. Bringing Desired Changes in the Societal Attitudes towards Persons with Visual Impairment

Lastly, visual impairment in itself is not a barrier to mainstreaming. It is the attitude that makes the difference. Experience shows that on being accepted as equal partners, the stakeholders are capable of making a significant contribution to their community. The visually impaired persons have proved that blindness is merely a limitation which could be overcome with certain modifications and enabling technology.

[22] World Intellectual Property Organisation, Historic Treaty Adopted, Boosts Access to Books for Visually Impaired Persons Worldwide, Retrieved on 19 April 2017 from http://www.wipo.int/pressroom/en/articles/2013/article_0017.html

A perceptible change can be found in the attitudes towards the visually impaired in our country though confined to bigger cities amongst the educated community. Media, both print and electronic, has played a vital role in bringing about desired global changes. It is the need of the hour to make the best use of available media network in reaching the unreached to demystify blindness and remove the prejudices. The media should be the means for more widespread awareness about the facilities currently available at Governmental and non-Governmental levels for the benefit of the visually impaired.

Concluding Remarks

In the given scenario, the situation is still grave and merely lovely words, and just policy formation would not breed desired results till they coincide with a solid action plan. A public-private partnership, along with the participation of the stakeholder, is desired. Knowledge is power, and this power should be translated for the economic independence of visually challenged persons by synchronising education with the needs of various employment sectors so that there is no sense of burden to the employer, while employing a visually challenged person.

The half battle is already won by the visually challenged persons by compelling the policymakers to pass such laws and policies which could provide a favourable environment. The much-desired rights have been legally created. However, this should be remembered that the recognition of rights alone is not enough to improve the living conditions of people with disabilities. A rights-based approach to disability and development is about levelling the playfield so that people with disabilities can access education, jobs, health, and other services. A rights-based approach would be about the removal of physical and social barriers; it is about attitude adjustments for policymakers, employers, teachers, health care professionals, and even family members. A rights-based approach is about ensuring universal design, accessible technology, and coordinated public programmes and services. The approach requires governments to provide the resources necessary to implement these goals and to enforce penalties for those who refuse to cooperate.

As per the World Bank reports, more than 18 years after the reforms, disabled people have about 60% lower employment rates than the general population, a gap that has been increasing, which is a cause of significant concern. To ensure that Persons with Disabilities can earn a livelihood and lead a life of dignity, contribute to the economy of the country and become respected citizens, it is imperious that a right-based approach with full participation is adopted while framing policies and developing programmes in letter and spirit.