



Demythologizing the Epistemology of Disability Or, Disability Through the Ages and Formal Education

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Abstract: The article begins with the basic understanding of disability as mentioned and discussed in different scriptures at different times through the ages and finds it difficult to say that the earlier times were more difficult for the disabled against the falsely perceived notion that our culture and heritage treated disabled in a biased manner. The article also deals with the changing perception of the issue in modern times particularly with the development of modern science and medicine with its pedagogy and assistive technology but raises question on the validity and feasibility in singularity of the technological or medical model and suggests social model for a coherent and harmonious development and well being of the disabled persons.

Keywords: Disability, mythology, scripture, society, change, formal education, employment, assistive technology

Introduction

Disability must be as old as mankind but there have been variations in different time and space on the way of its treatment. There is a perception that Hindu mythology and, epics like the Mahabhrata, Ramayana, and scriptures like Satapata, Charak Samhita, Arthashastra, Gautama and Boudhyana etc does not treat persons with disabilities with dignity and respect. 'Scriptures, folktales and mythologies of ancient India does include divine world in discourse of disability. The deities of lord Jagannath in Puri is worshipped, without limbs, neck and eye lids which strengthens the notion that disability is an occasional but all binding phenomena in human civilization'. (Kumari, N, P.42) 'We have historical evidences to show that some societies before coming into contact with religious teachings and humanitarian values were practicing physical elimination of the crippled as they were not thought fit to survive as members of human society. This inhuman attitude towards the handicapped and disabled gradually changed due to the growing impact of the great religions of the world, which required their followers to be considerate and sympathetic towards them.' (Mohsini.S.R & Gandhi, P.K, 1982:1-2) Historical introspection is always needed if our tradition and culture treats persons with disabilities in a biased manner. 'A physically handicapped was, therefore, allowed to live but he was, even then, considered an object of divine punishment or person possessed by an evil spirit. The attitude of cruelty gave way to that of superstition and suspicion'. (Mohsini.S.R & Gandhi, P.K, 1982:2) The present era of rationality has changed the mindsets of individuals. 'Programmes and practices for the education and rehabilitation of people with disabilities have at different times reflected the prevailing social climate. Of

particular relevance have been people's attitudes. For Example, when it was believed that mental retardation was a genetic disorder, a large number of mentally retarded people were sterilised'. (Pandey & Advani, 1995:69) 'This new approach was indeed the result of changing cultural and social values and economic and technical advancement which consequently modified the communities' attitude towards disability.' (Mohsini.S.R & Gandhi, P.K, 1982:1)Scientific advancements in fact made it possible. 'People were scared of interfering with the divine plan or of confronting the evil spirit and therefore did not dare attempt betterment of the afflicted persons. They, however, began to look upon them with sympathy and pity and to satisfy the minimum needs necessary for their survival.' (Mohsini.S.R & Gandhi, P.K, 1982:2) The development of devices made their employability possible. 'The physically handicapped persons were considered till recently to be incapable of leading fuller, free, and independent lives and they were to depend on their relations, neighbours and fellow human beings for food, clothing, shelter and other amenities.' (Mohsini.S.R & Gandhi, P.K, 1982:2)

Now, philanthropic efforts are getting replaced by a life of independence and dignity for disabled. 'Their protection and care was regarded as an act of religious merit, a means of spiritual redemption and as a pious deed inspired by human sympathy and philanthropic zeal. The values underlying this approach were not at all compatible with the democratic spirit of the age, as he was taken as an object of pity and charity and was deprived of human dignity and self-respect.' (Mohsini.S.R & Gandhi, P.K, 1982:2) Individual charities have taken a collective colour. 'Charity organization societies started with private initiative, first in England and later on established in other parts of the world, served this purpose. They started aid to families in distress on individualized basis. This paved the way for private agencies and philanthropic trusts and associations to organize specialized services to different types of physically handicapped.' (Mohsini.S.R & Gandhi, P.K, 1982:3) In tune with the types of disability, the different types of welfare organizations also came into existence. 'The advancement made in medical science, pedagogy and social sciences helped the physicians, educationists and social workers to be optimistic about the possibility of curing mental and physical disabilities and of educating and rehabilitating them.' (Mohsini.S.R & Gandhi, P.K, 1982:3)Fading away occult sciences was replaced by modern medicine and pedagogy. 'It was only after the first world war that attitudes towards the physically handicapped, and the concept of their welfare and rehabilitation were altogether changed and revolutionized.' (Mohsini.S.R & Gandhi, P.K, 1982:3)

Mythology

'A deformed or weakling child, an incapacitated elder or any person becomes disabled by accident or illness was condemned to physical extinction. In still later times, a physically handicapped person instilled fear, suspicion and superstitious awe in the non-disabled members of his community, who regard him as an 'incarnation of the devil.' (Mani, D.R:1988:1)It is interesting to note that there has always been a difference between the perception on disabled in the east and the west. 'In the middle ages, myths and legends grew around these fears and fancies of the primitive man. For many centuries, the belief persisted that the decrepit and the maimed were in some way connected with sin and evil; that they were supernatural beings-monstrous creatures-(e.g., hunchmen and lepers) of an unknown infernal region- and that they were to be dreaded and avoided by normal human beings.' (Mani, D.R:1988:1)We shall deal with this later. 'Later on, in history, there was a slight change in the attitude, but still the disabled were regarded as a sub-species of the human race-mere objects of pity and charity-and were abandoned to beggary and ridicule.' (Mani, D.R:1988:1) Many scholars attribute the softening of attitude towards the disabled as a legacy of world wars.

Ancient Period

'In Greek and Spartan times, blind, orthopaedically disabled and mentally retarded children were drowned or exposed to the elements to die. The right to live was denied to them. Even Aristotle is said to have advocated extermination of imperfect children. The 'Body Perfect' image held sway at that time, because fighting was main occupation of the people. Another ostensible reason was to preserve purity of the race.' (Pandey & Advani, 1995:69) Against the popularly perceived notion that ancient India treated disabled badly, there are analysis and interpretation of the stories which defies it. 'It has been a part of India's cultural heritage to help the poor and the needy even at a great personal sacrifice. The responsibility of assessing the individual in need was shared by the community and the rulers.' (Mani, D.R:1988:2) In fact, it largely depends on the interpretation. 'Devotion and service towards one's fellowmen, love for charity and brotherhood existed even in the feudal times. In keeping with this tradition, every possible protection was given to the physically handicapped by the society.' (Mani, D.R:1988:2) Every individual in one sense wants to help others. 'According to Bhagwat Gita, charity is valid only if it takes into account *Desha* (place), *Kala* (time), *Vidya* (education) and *Abhaya* (courage). Religious institutions like temples, dharmashalas, maths became the centres of social service. They provided shelter and free kitchens to the poor. Thus religion emphasized the values of charity, philanthropy and mutual help.' (Chowdhary, D.Paul, 1976, p.1) 'In ancient India the physically deformed children were cast into the Ganges.' (Hortwitz, H, 1923:512) These are occidental interpretations of ancient India. 'The god of dawn Aruna described in Rigveda has deformed lower half. Without legs and genitals the gender of Aruna is unspecified. Sometimes he is called as Usha'. (Kumari, N, P.42) 'Nowhere in the recorded history of India do we find any evidence to prove that this was a general practice. On the contrary, a reference to *Mahabharata* (an Indian epic) shows that the handicapped were then treated with sympathy.' (Mani, D.R:1988:2) The Narsimha incarnation of Lord Vishnu and Goddess Durga are naturally deviant from normal human form in their physical description. Narsimha combines of half man and half lion; while Goddess Durga has eight hands'. (Kumari, N, P.42)

'For, Narada (a sage in Hindu mythology) interrogates Yudhishtira (a principal character in the epic, *Mahabharata*): "Do you treat as father, your subjects who are afflicted with blindness, dumbness, lameness, deformity, friendlessness and those who have renounced the world?" (Mahabharata, II, 5, P.125) It is quite interesting to see the collection of variables for disabled. 'The kings were expected to provide for the war disabled and their dependent, for Narada again puts a question to the eldest of the five Pandavas (five brave brothers of the epic *Mahabharata*): "Do you maintain the women of those who died for you on the battle field? And do you also maintain those who are wounded on the battlefield while fighting for you?" (Mahabharata, II, 5, P.54) We are reminded of the fact that modern approach to disabled arose mainly from the war disabled after world wars. 'Likewise the laws of Baudhayana (an author of Hindu scriptures) enjoined: "Granting food, clothing and shelter, they (kings) shall support those who are incapable of transacting legal business viz., the blind, idiots, those immersed in vice, the incurably diseased, those who neglect their duties and occupations, and so on." (Baudhyana, P.37-39) The modern types of disability had been assembled in ancient India. 'The eminence of Ashtavakra (literally meaning a man with eight physical deformities who was first jeered at by the Pandits at the court of king Janaka (philosopher King of ancient India), because of the crookedness of his body, but whose learning ultimately drew their plaudits; the status of Manthara as the favourite maid-servant of the royal queen Kaikeyee (consort of King Dasaratha), though hunch backed, and the acclamation of Vamana (a dwarf) as an incarnation of God Vishnu (one of the ancient Hindu law-givers) unmistakably shows that even in early times the Hindu society did not hesitate to recognize the individual merits of handicapped people.' (Mani, D.R:1988:3) 'Manthara and Ashtavakra are two characters who find their crippled yet potent existence in the world of Ramayana.' (Kumari, N, P.41)

'One of the daily duties of the house-holder, that Manu(a pioneer Hindu law-giver) lays down is: "Let him gently place on the ground(some food) for dogs, outcastes, chandals (awapak) those afflicted with diseases that are punishments of former sins, crows and insects... Without hesitation he may give food, even before his guests, to the following persons, (viz.) to newly married women, to infants, to the sick and to pregnant women."(Manu, pp92 and 114) However attached with the sin, they are given spaces. 'These rules show the amount of consideration shown to the afflicted by way of protection and care. While laying down the duties of the King, Manu says: "The King should always give gifts and do other kinds of charities to a learned Brahmin to one who is affected by disease or affliction, to one who is young (an orphan) to him who is very old and also to him who is born in a noble family."(Manu, VIII, P.395) Learned Brahmins, diseased, orphans, and old are clubbed together. Manu further recommends: "A blind man, an idiot, (a cripple) who moves with the help of a board, a man full seventy years old, and he who confers benefits on Shrotriyas (Brahmins, the highest class of Hindus), shall not be compelled by any (king) to pay a tax."(Manu, VIII, P.394; Cf. Apastamba, II, 26, pp.16-17; Vasistha,XIX, pp. 23-24) An objective clustering is obvious. Nevertheless, Manu does not show any inclination to give the physically handicapped an equal status in society as is evinced from the following excerpts: "Let him (the householder) wed a female free from bodily defects, who has an agreeable name, the (grateful) gait of a hamsa (swan) or an elephant, a moderate (quantity of) hair on the body and on the head, small teeth and soft limbs."(Manu, III, p.10)Manu forbids defect bodies to be married. "Let him (the householder) not entertain at a Shraddha (anniversary of the dead) he who does not follow the rule of conduct, a man destitute of energy like(a) enunch, one who constantly asks (for favours) he who lives by agriculture, a club-footed man, a one-eyed man, one deficient in a limb, or one with a redundant limb, be even the servant of the performer(of the Shraddha) he also must be removed from that place(where the Shraddha is held)."(Manu, III, pp.165 and 242; Cf. Yajnavalkya,I, 223; Vishnu,LXXXI,pp.15-16) It is clear that there is a functional understanding of the problem. In his civil and criminal codes, Manu lays down: " He should not make witnesses the following, nor one wholly dependent, nor one of bad fame, nor a Dasyu (slave), nor one who follows forbidden occupations, an aged (man), nor an infant, nor one (man alone), nor a man of the lowest castes, nor one deficient in organs of sense." (Ibid., VIII,p.66)This clubbing may not be biased. "With whatever limb a thief in any way commits (an offence) against men, even of that (the king) shall deprive him in order to prevent (a repetition of the crime)." (Manu, VIII, p.334; Cf. Vishnu,V, 19;Yajnavalkya,II,215; Gautama, XII,I)This can be applicable to anybody. About inheritance Manu says: "Eunuchs and outcastes, person born blind or deaf, the insane, idiots and the dumb, as well as those deficient in any organ (of action or sensation) receive no share."(Manu,IX,p.201;Cf. Yajnavalkya,II,140;Apastamba,II,14,;Gautama,XXVIII, 43; Vasistha,XVII,52-53; Baudhayana, II,3,37-40; Vishnu,XV,32) Manu has always clubbed both physically and mentally deformed together. Satatapa asserts that men guilty of grave sins that have not undergone Prayaschitta (Penance for sin)are, after undergoing the torments of Hell, born with bodies marked with certain condemned signs. One guilty of grave sins bears such signs for 7 births, one guilty of upapataka (comparatively greater sin) for 5 births and one guilty of papa(sin) for 3 births. (Satatapa, I, pp.1-5) The construction of mythological duration is meant to inject fear in wrong doers. Even medical works like Charaka Samhita (an authoritative book on Indian system of medicine) held the belief that diseases were the consequences of actions done in past lives. (Sutrasthana, I, p.116)Charaka holds individuals responsible for their disease.

'In ancient India, when the State and the joint family, and to a certain extent, the caste took care of the individuals who needed shelter and protection against the rigours of life, the physically handicapped did not present a problem. In the compact rural community, the headman was entrusted with the task of looking after the welfare of its distressed and disabled members.' (Mani, D.R:1988:6)This has been the main attitude for disabled since time immemorial. The theory of Karma was instrumental in depriving the disabled of their inherent right to lead an independent life. It was believed that the disabled were reaping that they had sowed in lives bygone and any attempt to ameliorate their lot would, therefore, interfere with this divine justice. (Mani, D.R:1988:6) The theory of Karma may not be applicable with the development of pedagogy and medical sciences. During the period intervening *Smritis* (Hindu law books) and the Guptas (a powerful dynasty of ancient India) the position of handicapped persons became more tolerant due to Buddhist influence. Buddhism emphasized the virtues of mercy,

charity, truth, purity, kindness, goodness and above all, non-violence. The followers of the Great Buddha practiced the preaching of their master and showed great compassion and regard for the decrepit, the maimed and the disabled. At the same time somewhere in the middle of sixth century B.C., another faith, Jainism, was born. Jainism also followed the same fundamental doctrines of non-violence and selfless service to all living beings, including the physically handicapped. (Mani, D.R:1988:6)The birth of justice to everybody. Vocational rehabilitation pre-supposes a more humane approach to the handicapped. This foundation was already supplied by Buddhism and Jainism. (Mani, D.R:1988:6)Every age is becoming more sympathetic towards disabled.

The golden age of the Mauryas (a famous dynasty of ancient India), especially during the reign of Chandragupta (an illustrious emperor of ancient India) stands out unique in establishing workshops for the vocational rehabilitation of the physically handicapped members of the kingdom. Kautilya (a great Indian law giver, diplomat and administrator) lays down: "The king shall provide the orphans, the aged, the infirm, the afflicted and the helpless with maintenance." (Kautilya; Arthashastra Book II,Chapter 1) Within his theoretical and practical framework of individual self, Kautilya was sympathetic towards disabled. Kautilya, one of the greatest politicians of his time, made it a special point to employ dwarfs, the hunchbacked and otherwise deformed people as political spies as well as secrets in the royal palaces. (Mani, D.R:1988:7)Glimpse of a utilitarian approach. After Chandragupta, during the reign of his grandson, Ashoka, philanthropic work on behalf of the decrepit and the down-trodden expanded greatly. A staunch believer in Buddhism, he took special measures to provide medical relief. The coins of the days of Samudra Gupta have a figure of a dwarf near the king. The dwarf seems to have occupied an exalted position in the kingdom. (Mani, D.R:1988:7) This could be a real approach to disabled. We get another insight into the social history of ancient India through the writings of Fa Hien, who came to India from China in 400 A.D. He writes: "The nobles and householders of this country have founded hospitals within the city (Pataliputra) to which the poor of all countries, the destitute, cripple and the diseased may repair. They receive every kind of requisite help gratuitously. Physicians inspect their diseases and according to their cases order them food and drink, medicine or decoctions, everything in fact that may contribute to their case. When cured, they depart at their convenience." (Fa Hien, quoted in Duraiswami,P.K)

Other Societies

Every society was working for disabled. 'With the advent of great religions, however, asylums began to be provided. Hospitals began to provide treatment free of cost to people with disability. But it was not until the Sixteenth Hundreds that exploration began to be undertaken regarding the education of handicapped children. (Pandey & Advani, 1995:69-70)Evolving institutions and organizations have changed the perspective on disability. 'During the period of renaissance and the ferment of the French Revolution, definite steps were taken to devise systems of educating handicapped children. In many countries, special education has been a product of the concept of equality of opportunity strongly advocated by social thinkers.' (Pandey & Advani, 1995:70) The underpinnings of Renaissance also influenced the way out. 'Some years prior to the French Revolution, Father D'lepee developed the manual alphabet for the deaf. At about the same time, an oral method of instruction for the deaf was being developed in Germany by Samuel Heinicke. Thus, in the late 18th century, two parallel systems for educating the deaf children began to be developed'. (Pandey & Advani, 1995:70) Individual efforts have been equally significant in the domain. 'At the Gallaudet College in Washington, total communication emerged which was a mix of three methods- manual alphabet, signs and speech.' (Pandey & Advani, 1995:70) The efforts were harmonized at the level of institutions. 'Education began to be imparted to handicapped children towards the end of the 18th century. The first school for the blind in the world was set up in Paris in 1784. Special education travelled to India about a hundred years later. The first school for the deaf was set up in Bombay in 1885 and the first school for the blind was set up in Amritsar in 1887.' (Pandey & Advani, 1995:70) India never lagged behind. 'Traditionally, special schools for various categories of handicapped children have provided instruction in regular subjects as well as in special subjects of particular importance to a given category of handicapped children, through special systems, methods and equipment.' (Pandey & Advani, 1995:71)

Mediaeval Era

In mediaeval India, the Muslim rulers followed the example of their Hindu predecessors in looking after the needs of the aged and the infirm, the destitute and the crippled. One of the five Rukans (duties) of Islam, Zakat (charity), was strictly adhered to by the Muslim rulers. The forms that this charity took were: alms to the poor and the infirm: construction of mosques, rest -houses, erection of ponds, hospitals and orphanages. The Mughals had a special department with a head (sadr) to supervise charities and endowments. During the reign of Emperor Akbar, the benefits of such charitable institutions were extended to include even the non-Muslims. During mediaeval period, local Rajput chieftains looked after all their distressed subjects. (Mani, D.R:1988:8) 'The first written reference to handicapped people was found in 1552 BC in a 'Therapeutic Papyrus of Thebes'. Didymus was known to be the most well-known scholar of Arabic in Egypt. He was totally blind and had built up a large library of books carved in wood.' (Pandey & Advani, 1995:69)

Modern Period

The inroads of western civilization in the eighteenth century gave a death-blow to many of the old institutions. "The old order changed. The social institutions and the individuals lagged behind. The safeguards which were there in the old order ceased to be effective. The new ways of life made unknown and heavy demand on individuals. Both these situations gave rise to a series of complicated problems. The dumb, the deaf, the blind and the mentally ill, who were formerly cared for in the family were being exposed to new changes. The State did very little directly for children. Thus, before the State effort had become sizeable and effective the family was incapacitated to take care of the problematic persons. This led to destitution, beggary, delinquency, crime and immoral traffic to a considerable degree. The crumbling of the old order, absence of new healthy substitutes and confusion in transition made the situation extremely complicated." (Kulkarni,V.M, 1955:32-33) Sporadic efforts to set up hospitals and charitable homes for destitute were made in our country by individual philanthropists. A good deal of spade work in this field was done by foreign missionaries. In spite of these efforts the problems of the handicapped persons remained unsolved until after World War II, when the attention of the government and the public was drawn to the necessity of establishing centres for the rehabilitation and resettlement of the disable veterans of war. Only after Independence, did the problem of the civilian handicapped come into the limelight. (Mani, D.R:1988:8) War disabled gave a momentum in the domain. This 'beggar producing' philanthropy must be changed into something constructive and desirable, socially as well as economically. (Mani, D.R:1988:9)The world of philanthropy always faced the dilemma of formal and substantive contribution to the field. The problem is no longer confined to mere maintenance by the join family or the caste council. It has become a national problem demanding rehabilitation from a welfare State. If our social philosophy is not channelized properly so as to absorb the physically handicapped in gainful employment, our already subsistence economy would be heavily burdened and our already large army of beggars would multiply. (Mani, D.R:1988:9) Government and civil societies are doing its best to improve the situation.

This philosophy plays an important role in the lifting of a human mind out of despair. The new science of rehabilitation which implies "the restoration of the handicapped to the fullest physical, mental, social, vocational and economic usefulness of which they are capable." (Mani, D.R:1988:10)Now, a gainful employment is targeted for disabled. Many of these nations struggling to develop programmes that will convert as many as possible of their disabled into relatively active, self-dependent, productive members of their country. (Mani, D.R:1988:10)

Formal Education for Disabled

Formal education has been considered a means of mobility for all. 'A physically handicapped was, therefore, allowed to live but he was, even then, considered an object of divine punishment or person possessed by an evil spirit. The attitude of cruelty gave way to that of superstition and suspicion'. (Mohsini.S.R & Gandhi, P.K, 1982:2)The root of superstitions lied in beliefs. 'People were scared of interfering with the divine plan or of

confronting the evil spirit and therefore did not dare attempt betterment of the afflicted persons. They, however, began to look upon them with sympathy and pity and to satisfy the minimum needs necessary for their survival.' (Mohsini.S.R & Gandhi, P.K, 1982:2) These paved the way for education and employment for disabled. 'The physically handicapped persons were considered till recently to be incapable of leading fuller, free, and independent lives and they were to depend on their relations, neighbours and fellow human beings for food, clothing, shelter and other amenities.' (Mohsini.S.R & Gandhi, P.K, 1982:2) Habits die hard. 'Their protection and care was regarded as an act of religious merit, a means of spiritual redemption and as a pious deed inspired by human sympathy and philanthropic zeal. The values underlying this approach were not at all compatible with the democratic spirit of the age, as he was taken as an object of pity and charity and was deprived of human dignity and self-respect.' (Mohsini.S.R & Gandhi, P.K, 1982:2) In the recent discourse on disability, self-respect is at the centre. 'Charity organization societies started with private initiative, first in England and later on established in other parts of the world, served this purpose. They started aid to families in distress on individualized basis. This paved the way for private agencies and philanthropic trusts and associations to organize specialized services to different types of physically handicapped.' (Mohsini.S.R & Gandhi, P.K, 1982:3) This has gained ground even in assistive technology. 'The advancement made in medical science, pedagogy and social sciences helped the physicians, educationists and social workers to be optimistic about the possibility of curing mental and physical disabilities and of educating and rehabilitating them.' (Mohsini.S.R & Gandhi, P.K, 1982:3) Modern medicine has still to face the challenges. 'The preventive services, and the programme for the treatment and rehabilitation of the physically handicapped is now seen as part of the total programme of a democratic and welfare state for providing equal opportunities to all its citizens.' (Mohsini.S.R & Gandhi, P.K, 1982:4)

'Except for some well-known blind scholars like Homer in Greece, most handicapped people did not receive a position of respect in the community. Some handicapped people were employed as jesters to amuse the elite.' (Pandey & Advani, 1995:69) 'Human history is full of evidence to prove that given proper opportunity, a physically handicapped person can shape his own destiny and can make significant contribution to human civilization.' (Mohsini.S.R & Gandhi, P.K, 1982:4-5) Lord Byron swam across the Hellespont with a congenial club foot, and became one of the greatest poets. President Franklin D. Roosevelt a victim of poliomyelitis steered the destinies of his people during the most crucial period of the world war. Miss Hellen Keller had been instrumental in initiating effective measures for the welfare of the handicapped throughout the world with her multiple handicaps. Steinmetz, the hunch-back made possible the use of electricity. In Indian context we have a number of physically handicapped persons who have distinguished themselves in one field of service or another. The late K.C.Dey turned into a great singer. Who does not know the dancer Sudha Chandran? Mr. Chandrashekhar was a remarkable googly bowler and Mr. Lal Advani was an able social welfare administrator who then a Braille instructor, evolved standard Indian braille. 'A wide variety of factors determines the status, in a given society, of persons with malformation, deformities and other physical defects that interfere with functions of the body.' (Mohsini.S.R & Gandhi, P.K, 1982:1)

'The United Kingdom made education compulsory for the blind and the deaf children in 1793. The British Education Act, 1981, makes education free and compulsory for all handicapped children between 3-18 years of age.' (Pandey & Advani, 1995:93) 'People possessing physical defects of one kind or another were described for centuries as cripples. It was only during the last hundred years or so that they gradually came to be known with more accepted terms such as 'physically handicapped' or 'disabled'. The new terminology was quite significant as it indicated the new approach to the problems of the physically handicapped.' (Mohsini.S.R & Gandhi, P.K, 1982:1) 'In the United States, however, it was found in 1974 that out of about 8 million handicapped children, one million were not receiving any educational services. The Education for All Handicapped Children Act, 1975 made it incumbent on the states to provide free education to all handicapped children between 3 and 21 years of age.' (Pandey & Advani, 1995:93) 'This new approach was indeed the result of changing cultural and social values and economic and technical advancement which consequently modified the communities' attitude towards disability.' (Mohsini.S.R &

Gandhi, P.K, 1982:1) 'In Holland, by law, handicapped children are placed in segregated schools. Even in Finland and the Russian federation, special schools are favoured. In Ethiopia, all handicapped children are placed in special schools at the primary stage.' (Pandey & Advani, 1995:93) 'We have historical evidences to show that some societies before coming into contact with religious teachings and humanitarian values were practicing physical elimination of the crippled as they were not thought fit to survive as members of human society. This inhuman attitude towards the handicapped and disabled gradually changed due to the growing impact of the great religions of the world, which required their followers to be considerate and sympathetic towards them.' (Mohsini.S.R & Gandhi, P.K, 1982:1-2)

Role of Assistive Technology

The role of assistive technology is considered supreme. 'Children with multiple disabilities often face barriers to accessing and participating in self-care, play, leisure and education. (Cavet, 1995)(Copley and Ziviani, 2004:229) 'Assistive technology (AT) has been employed as one strategy, particularly in educational settings, to enable these children to participate more fully in various activities.' (Copley and Ziviani, 2004:229) 'During the education process, the needs of persons receiving special education show variance. Technologies such as voice recognition applications, mobile devices, symbol-based interaction and virtual reality may be used to support persons with different educational needs during their education process. (Mc Knight and Davis, 2013) (Erdem, Raziye, 2017:128) 'For most people, technology makes things easier. For people with disabilities, technology makes things possible- Mary Pat Radabaugh. (WHO, 2015:9) 'The education of children with disabilities and special needs in India was initiated in the late 1800s, with the establishment of special schools for the Deaf in Bombay in 1883, and for the Blind in Amritsar in 1887. By 1900 numerous special schools for the visually and hearing impaired children were set up across the country.' (The World Bank, 2009:57-58)

'This initiated the tradition of special schools in the country and till the 1970s, this was the dominant mode of service delivery for children with special needs (CSN).' (The World Bank, 2009:58) Soon, it gained the ground. 'It was only in 1974 that the scheme on Integrated Education of Disabled Children (IEDC) broke new ground by stressing the need for educating children with mild to moderate disabilities in regular school settings. However, the tension between the role of special and general schools for CSN continues today, even after the widespread recognition that inclusion is seen as a more effective educational and social strategy in most cases.' (The World Bank, 2009:58) Policy on education then brought a fundamental change. 'The National Policy on Education (1986) brought the fundamental issue of equality for CSN to the forefront. It stated that the "objective should be to integrate physically and mentally disabled people with the general community as equal partners, to prepare them for normal growth and to enable them to face life with courage and confidence". (The World Bank, 2009:58)

The integration model emerged from here. 'While the NPE helped set the stage for further integration and inclusion, only in 1990 did the government provide teeth to the policy through the adoption of the Plan of Action (POA).' (The World Bank, 2009:58) It percolated down to district level planning. 'By the mid-1990s, GoI initiated the District Primary Education Programme (DPEP) and its subcomponent known as the Integrated Education of the Disabled (IED).' (The World Bank, 2009:58) Cash grant was introduced. 'The framers of SSA came to an early realization that their objectives could only be met if the education of CSN was an important part of the program. The key provisions under the SSA for integrating and including children with special needs is through: (i) a cash grant of up to 1200 Rupees per CSN per year; (ii) district plans for CSN that will be formulated within the above prescribed norm, and (iii) the involvement of key resource institutions to be encouraged.' (The World Bank, 2009:58) 'A specific feature of SSA is a zero-rejection policy. This suggests that no child having special needs can be neglected nor denied enrolment on the basis of such concerns. The PWD Act provides, however, a loophole in how this is defined in practical terms. It states that children will be educated in an "environment, which is best suited to his or her learning needs" and that it is possible that the special needs of a child compel him or her to be educated in special schools.' (The World Bank, 2009:58-59) A zero-rejection policy was an attempt at wholism. 'The year 2005 saw the

most recent and comprehensive policy push from GoI on education of both children and adults with disabilities, in the form of the Minister of HRD'S Policy Statement in March 2005, followed by a year long development of a national Action Plan for inclusion in education of Children and Youth with disabilities.' (The World Bank, 2009:59) It was at this point where education became central for disabled.

'It is clear that education policy in India has gradually increased the focus on children and adults with special needs, and that inclusive education in regular schools has become a primary policy objective.' (The World Bank, 2009:60) And, then came the special needs question. 'As for any other group, education is critical to expanding the life prospects of people with disabilities. In addition, the socialization of children with disabilities (CWD) through education assumes an unusually important role in societies such as India where social exclusion of PWD is significant.' (The World Bank, 2009:57) Education was treated critical for the well being of disabled. 'Equally, it raises difficult trade-offs for those responsible for allocation of public resources for education. While Indian law and policy are clear in the commitment to the right of all children to basic education, in practice difficult issues arise.' (The World Bank, 2009:57) The resources for education have always been there. 'While more evidence from developing countries is needed, evidence from Canada and the USA at both pre-school and basic education levels found improved outcomes for non-disabled students from integrated learning.' (The World Bank, 2009:57) The difference exists between countries.

'The first split in the delivery system for special needs education is between the MHRD-which is responsible for the general education system-and the Ministry of Social Justice and empowerment, which remains institutionally responsible for special schools. This division of labour seems philosophically a remnant of the earlier approaches where CWD were viewed as welfare cases and not like other children.' (The World Bank, 2009:65) Institutional overlapping creates confusion. 'Although a key feature of SSA, the provision of aids and appliances is achieved through convergence with other existing programs such as ADIP, a scheme aimed at helping disabled persons by providing suitable, durable, scientifically manufactured, modern, standard aids and appliances. While assistive technologies are a right under SSA, they are in practice rationed, making them instead a privilege.' (The World Bank, 2009:72) Assistive technology is considered a right and not a privilege. 'For stipends, almost half the PWD households were not aware that education stipends were available and only 4 percent had received them. A major problem appears to be lack of awareness of the existence of CWD stipends and possibilities for receiving aids and appliances.' (The World Bank, 2009:74) An awareness campaign has to be launched and assistive technologies be distributed.

'These were distributed by different agencies in various states, including ALIMCO, NGOs and voluntary organizations, and National Institutes and other government bodies.' (The World Bank, 2009:74) On the top of everything, a solidified policy framework is also required. 'More than most areas of policy with regard to people with disabilities, the education sector has been relatively progressive in policy terms. It has also in principle committed to a progressive menu of options for delivering education to children with special needs.' (The World Bank, 2009:74) Scholarship Schemes for the students of any or all layers is a central question of the implications of education system on the well being of the disabled children and persons. Thus, scholarship should be considered an added impetus to the development of education amongst the disabled enabling them for better quality of life and employability for livelihood. Educational backwardness is one of the primary reasons for continued low status of all kinds of disabilities. Consequently, enhancement of opportunities for education is a fundamental step in the direction of improving the educational level and employability and thereby status of disabled. The necessary and essential way of ensuring access to education in schools for disabled children is to support them with the scholarship.

Models: Medical or Social

'The measurement of disability has important implications for law and policy. There is no universally accepted definition for disability. There are, however, a number of conceptual models which guide measurement. No model can encompass all the dimensions of disability, but different models serve different purposes and provide useful perspectives on disability in a given context.' (Palmer & Harley, 2011:357) A difference between developing and developed countries also exists. 'Various conceptual models of disability have been developed. At the extremes these can be characterized as the 'medical' and the 'social' model, although a number of hybrid models also exist.' (Palmer & Harley, 2011:358) 'The historical tendency has been to explain disabled peoples' experience in relation to impairment. The ontology has become known as the medical model. Disability is perceived to be caused by physical impairments resulting from disease, injury or health conditions.' (Barnes & Mercer, 2003) 'Impairment leads directly to the loss of bodily and social functioning. Hence interventions are primarily medical, including rehabilitation and institutional care, as well as special education, vocational training and social welfare.' (Palmer & Harley, 2011:358) The notion of social welfare will subsume other aspects.

Disability is viewed as a social construct rather than an individual in the realm of the social model. 'Impairment itself is not important, but rather accommodations made for persons to function in society determine, and therefore are able to ameliorate, disability (e.g. change in attitudes, physical accessibility).' (Palmer & Harley, 2011:358) Subjectively, it is social construct but objectively it is not. The proponent of social model, Michael Oliver says that disablement has nothing to do with the body and impairment is in fact nothing less than a description of the physical body. There are critiques of social model for failing to address impairment which is an integral to the experience of disability. 'Other theorists reject the critique of the one-dimensional social model as dismissive of impairment: the potential for impairment to limit activities is not denied, but such restrictions do not constitute disability'. (Thomas 2002:43) 'Technological developments have led to important transformations in many aspects of life, not least of all education. The technologies used in special education have significantly changed over the course time (Edyburn, 2001). Assistive technologies in particular have helped to facilitate the skills that persons with special educational needs struggle to utilize in daily life.' (Gierrach and Stindt, 2009) in (Erdem.R, 2017:128) The role of assistive technology could be a breakthrough.

'In the education process, assistive technologies offer various solutions in providing students with support that meets their needs. (McKnight and Davies, 2012). These assistive technologies significantly contribute to aiding persons with special educational needs in learning, building self-confidence, being independent, and achieving a high quality of life.' (Reed, 2007) in (Erdem.R, 2017:128) Along with all these self-confidence has to be built. 'Assistive technologies are defined in various ways in the literature. Hersh and Johnson define assistive technologies as the equipment, devices, apparatus, services, systems, processes and modifications made to the environment for use by disabled and /or elderly people to secure their full, active, and easy participation in society.' (Erdem.R, 2017:128) It cannot be simple device. 'According to Lancioni, assistive technologies are various devices whose aim is to help the disabled and persons with special educational/rehabilitation needs to better function in daily life and attain a higher quality of life.' (Erdem.R, 2017:128) It is a device which unburdens disabled. 'During the education process, the needs of persons receiving special education show variance. Technologies such as voice recognition applications, mobile devices, symbol-based interaction and virtual reality may be used to support persons with different educational needs during their education process (McKnight and Davies, 2013) (Erdem.R, 2017:128)

There are many models of assistive technologies associated with different names. Joy Zabala' The SETT Framework Model, Gayl Bowser and Penny Reed' Education Tech Points Model, Albert M. Cook and Suzan M. Hussey' The Human Activity Assistive Technology (HAAT) Model, David Wile' Wile' Model of Human Performance Technology, Anotnette C. Chambers' Has Technology Been Considered, Haines, Gladene Robertson, Robert Sanche' The AT Co Planner Model, Roger, O. Smith, Todd, D. Schwanke and Dave L. Edyburn' The A3 Model, Rena Lewis' the ABC Model, Thomas W. King' King's Adaptation of Baker's Basic Ergonomic Equation (BBEE), Madalaine K. Pugliese' Stages, Dave

L. Edyburn' Edyburn's Model of the Technology Integration Process, and, The QIAT Consortium' The Quality Indicators for Assistive Technology are the main models on assistive technologies. 'Students with unique characteristics and needs should be provided with equal learning opportunities in the education process. Providing access to the appropriate assistive technologies and supporting their education are among the fundamental factors in creating equal education opportunities for persons with special educational needs.' (Erdem.R, 2017:137) Appropriate technologies for special needs are really at issue. 'Special educational needs of the individuals show difference in the education process. Professionals and researchers working in the area of special education should understand the needs and capacities of the students to provide them with the most appropriate support.(McKnight and Davies,2012)in (Erdem.R, 2017:137)Innovators have to know the disabled.

'Making assistive technology available, accessible, affordable, adaptable, acceptable, and of appropriate quality requires efficient use of often limited resources. The resources are interrelated and include people, materials, manufacturing methods and service delivery system.' (WHO, 2015:24) Finally, it could be a systemic and institutional question. 'Too often, assistive technology has been a missing link in the chain of pre-requisites that enable children with disabilities to lead a life where they enjoy and exercise their rights rather than being deprived of them. While national governments have primary responsibility to ensure that persons with disabilities can access assistive products, international cooperation in the area of assistive technology can also be a critical catalyst. (WHO, 2015:25) 'Disability is no longer perceived as purely a medical phenomenon. The influence of the social model has been significant and far-reaching. The social model has influenced the current World Health Organization Classification of disability (ICF), the international Convention on the Rights of Persons with Disabilities, and recent efforts to develop an internationally comparable measure of disability.' (Palmer &Harley, 2011:362)

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