

## **LET'S NOT HARM - GIVE AN ARM**

By,  
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“Disability” and “Persons with Disabilities” or differently abled persons for this statement are as defined in the “Person with disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995” and any other statute enacted for the welfare of Persons with Disabilities.

**The advancement in technology and computer aided work atmosphere has really turned to be a boon for the Differently-Abled persons. The work environs, internet based jobs and also the idea of SOHO (small office home office) works has a wonder to make everyone employable and productive in the economy.**

A computer literate person has just lost the hand function after meeting with an accident. There seems to be no future for this person, temporarily at least. But hope comes in the form of Access to Communication and Technology (ACT) — a sub-branch of biomedical engineering that holds a promise to breathe new life into the physically disabled persons. ACT deals with alternative methods of communication through the use of electronic equipment and can help the disabled people to do certain functions independently without assistance from another person. Through ACT, this computer literate but disabled person can be provided with alternative devices to allow him or her to access their computer.

For example, a biomedical engineer can design an electronic tool like a Head mouse system, which can be appropriate for someone with good head control. This usually involves placing an infrared reflective dot on the forehead. An IR detector detects movement of this dot (head movement) and moves the cursor on screen.

This is just a small example and there are many other methods by which ACT can improve the quality of life of the disabled.

ACT comes under a branch of biomedical engineering known as Electronic Assistive technology. Biomedical engineering itself is a broad field covering subjects ranging from medical electronics, medical equipment management to implant design and technology. Biomedical engineering integrates physical, chemical, mathematical, and computational sciences and engineering principles to study biology, medicine, behavior, and health for the prevention, diagnosis, and treatment of disease, for patient rehabilitation, and for improving health.

ACT electronic equipment include Electronic communication aids; ‘Low-tech’ communication systems for people of all ages who cannot use speech to communicate; alternative methods of access (eg switch use) for people with limited physical function; computer access; and equipment to control electrical appliances at home. Take for example someone who is paralyzed from head injury with no control over any part of the body but has retained very limited thumb movement. Such a person can be provided with a low pressure switch that allows him to operate a device which in turn allows him/her

to choose functions such as: Use the nurse call system, television control, radio and telephone.

Such devices are called Environmental Control Systems. The same principle can be applied for someone who has no control over any body movement other than eye blinking. Such a person could be provided with an eye blinking sensor switch to operate an environmental control device.

Another aspect in ACT is communication, which a lot of us take for granted. People who have none/ limited/ dysarthric speech are assessed and can be provided with a suitable communication aid. Yet another area is called Computer Access as mentioned above.

Each device has to be customized according to a patient's needs. A biomedical engineer's job is to assess people with disabilities and prescribe suitable devices appropriate for them. The challenge is to find suitable access methods that would allow the patients to actually use the device.

It has been realized that majority of **Differently abled Persons** can lead a normal life if they have effective access to rehabilitation services, which would include early identification, intervention, education, vocational training, employment opportunities and the availability of Aids and Appliances.

### **Assistive Devices and Personal Mobility.**

Personal mobility will be enhanced through aids and appliances which will be continuously upgraded.

Communication needs of the Differently abled Persons will be addressed through making information services and public documents accessible. Braille, tape – service, large print and other appropriate technologies will be used to provide information for persons with visual impairment. While appropriate technologies would be provided to persons with hearing impairment. Use of sign language in all public functions will be encouraged.

A comprehensive public information programme about the needs, abilities, rights and concern of differently abled persons would be put in the public domain

### **Law**

In 1995, the **Persons with Disabilities (Equal Opportunity, Protection of Rights and Full Participation) Act** was promulgated. The State has framed its Rules in the year 1997.

The Government of India enacted the **National Trust for Welfare of Person with Autism, Cerebral Palsy, Mental Retardation and Multiple Disability Act, 1999**. The objectives of the Act is to provide support to the creation of enabling climate for an independence as is possible and to provide for assistive decision making wherever essential. A Board has been constituted by Government of India to discharge the function as enshrined in the Act.

The State policy recognizes that “**Differently abled Persons**” are an important resource for the state and seeks to create an environment that provides those equal opportunities,

protection of rights and full participation in society. The policy shall specifically focus on the following.

Since disability in large number of cases, is preventable there will be strong emphasis on prevention of disabilities. Early detection of disability and early intervention helps in minimization of impact of Disability. Therefore, there will be emphasis on early detection and intervention. Necessary, facilities including dissemination of information shall be ensured to enable such detection and necessary intervention.

### **Rehabilitation Services.**

Rehabilitation services including counseling, strengthening capacities of persons with disabilities and their families, physiotherapy, occupational therapy, surgical correction and intervention shall be extended to cover all the talukas in the State by action involvement and participation of Local Level Institution, N.G.O.s including associates of Parents of Differently abled Persons.

### **Education.**

There is a need for mainstreaming of the persons with disabilities in the general education system through inclusive education. Sarva Shiksha Abhiyan (SSA) launched by the Government of India has the goal of eight years of elementary schooling for all the children including children with disabilities in the age group of 6-14 years by 2010. This has brought in tremendous improvement in the lives of these people today. The State has joined the SSA in the year 2005.

Under the scheme a shelf of education options learning aids and tools, mobility assistance, support services, etc. are available for children with disabilities. This include education through an open learning system and open Educational Institutions, alternatives schooling, distance education, home bases education, remedial teaching, part time classes, community bases rehabilitation (CBR) and vocational education and cooperative programmes. The programme also envisages augmentation of teaching skill and capabilities of teachers.

Differently abled Person shall be provided equal opportunities for production and gainful employment.

Employment in private sector shall be encouraged for Differently abled persons by development of appropriate skill for their employability opportunities for self-employment **and by developing a package of incentives that would help in creating opportunities for them in this sector.**

### **Plan of Action**

Differently abled persons should be helped in procuring durable and scientifically manufactured modern standard aids and appliances that can promote their physical social and psychological rehabilitation by reducing the effects of disabilities.

Every year the Differently abled Persons will be provided with devices such as prosthesis and orthoses, mobility aids, such as tricycles, wheel chairs, surgical footwear and devices for activities of daily living, learning materials, low vision aids, special mobility aids, various

types of hearing aids, educational kits and other assistive devices suitable for the Differently abled persons including persons with mental disabilities. The availability of devices will be accelerated to uncovered and un-serviced areas.

### **Social Security for Persons with Disabilities**

Differently abled persons, their families and care givers incur substantial additional expenditure for facilitating activities of daily living, medical care, transportation assistive devices, etc. Therefore, there is a need to provide them social security by various means. The State Government is providing *disability pension to the differently abled persons for their life time irrespective of their age under Dayanand Social Security Scheme.*

### **Sports and Recreation**

Differently abled Persons have the right to access sports and recreation facilities

### **Media**

The use of media will be intensified to spread knowledge and awareness about the facilities available as well as about groups and individuals working in the area of disabilities so as to encourage inter personal exchange and formation of support groups.

### **Prevention and Early detection.**

In order to ensure prevention and early detection of disabilities the following action will be taken with the assistance of health, education, Panchayat, Rural Development Organization both in Government and Non Government Sectors.

As per the rules, all educational efforts will be child centric and will be designed for the enhancement of natural powers and formation of productivity oriented skill. It will be ensured that every child with disabilities have access to appropriate preschool, primary and secondary school level education. Special care will be taken to.

- **Pre-school should be taken as a part of Education Policy.**
- Make school (building approaches, toilets, play grounds, laboratory, library, etc) barrier free and accessible for all types of disabilities.
- Medium and method of teaching will be suitably adapted to the equipment of most disability candidates.
- Teaching / hearing tools and aids such as educational toys Braille / talking books appropriate will be given to expand facilities available. Incentives will be given to expand facilities for setting up of general libraries, e-libraries, Braille – libraries, talking libraries, resource rooms, etc.
- Curriculum designs will be suitably amended to cater to flexible system of education and examination.
- National open school and distance learning programme will be popularized.
- Sign language, alternative and augmentative communication (AAC) modes as a viable medium in inter personal communication will be recognized.

- Educational Institutions will be located within the easy traveling distances. Alternatively, viable travel arrangement will be made.
- Parents – teachers counseling and grievances redressal system will be formalized within the school setting.
- There will be separate mechanism to review annually the intake and retention of girl child with disability at primary and secondary level of education.
- Many children with disability may not be in a position to join inclusive education system due to the nature and degree of disabilities. These children would continue to get educational services through special Educational Institutions. Special Educational Institutions shall be appropriately re-modeled and re-oriented based on technological development so that they may act as agents for change in all Educational Institutions.
- Adult learning / leisure centers for adults with sever disabilities will be promoted.
- Facilities for technical educations designed to inculcate and bolster skill development suited to various types of productive activities by suitable adaptation of the existing institutes or accelerated setting up of institution in un-served / underserved arrears will be encouraged.

### **Employment**

- Considering small population of differently abled persons existing Employment Exchange maintain separate record of differently abled persons.
- Special recruitment drive
- A policy and supporting structure of services to ensure that differently abled persons in both Urban and Rural arrears have equal opportunities for productive and gainful employment will be adopted. Rural employment of appropriate tools and equipments in agro based activities.
- Vocational training and on the job training consistent with the differently abled persons abilities and the demands of the job market will be provided in an ordinary or specialized institutional set up by the state or voluntary organization and in industry in
- The integration of differently abled persons into open employment will be ensured through a variety of measures such as in center – oriented quota system, reservation is designated employment, formalism of cooperatives with exclusive or priority production items, provision of sheltered industries etc.

### **Barrier Free Environments.**

Public building (functional or recreational) transport amenities including roads, subways, pavements, railway, platform, bus stops, modes of transport (bus, train, planes), playgrounds, open spaces, etc. should be made accessible through design changes, use of appropriate material in their construction and strict adherence to their maintenance standards. Architects construction engineers who are professionally involved in the design and construction of physical environment will be sensitized to the needs of persons with Disabilities through in-service training as well as suitable modification to the curriculum in technological institute as part of their professional studies. New devices, app developments should be user friendly so that it helps the differently abled persons to work smoothly

The Government should ensure by appropriate measures that Industrial establishment, offices, public utilities both in public and private sector shall be provided differently abled friendly work place for their employees.

Pro-active steps should be taken to ensure differently abled friendly IT environment.

**Since every human being with or without disabilities is a performer, it is very essential to improve their performing skills, to make them a better performer.**

From,

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References:

Internet and other published sources.