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REHABILITATION TECHNOLOGY

Madhuri Pai



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REHABILITATION TECHNOLOGY - NEW HORIZONS IN RESEARCH

Madhuri Pai



INTRODUCTION

Basic research in physics and chemistry or even languages, applied research in earth sciences, social sciences, economics, mathematics or medicine action research in education, psychology and engineering or technology is well known and universally accepted, but research on rehabilitation, disability and vocational training is a new concept in our country. Unfortunately even the most enlightened look upon research in this field as only a fad. Vocational rehabilitation is not considered science. It is a province of voluntary organisations which provide social service.

With computerisation, improved medical facilities, better mobility aids, and availability of machine modifications, people with disabilities can now compete in diverse high-tech fields which would have been beyond their scope just a few years ago. Facilities available to the differently able are undergoing very rapid changes. Yes, rehabilitation technology is emerging as a new science and, most positively, a science implies scope for research.

At the National Job Development Centre, selective vocational training and placement is our objective and

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therefore, action research is our primary focus. Research forms an integrated part of the entire rehabilitation procedure from assessments through training and employment into the post placement follow-ups. To give an overview of our work, I will discuss the results of a few of the research projects we have completed.

SPECIAL EMPLOYMENT EXCHANGE

It is a well-known fact that the government has reserved three percent of jobs in government and public sector organisations for people with disabilities. Special employment exchanges (S.E.E.) at every district level are set up to facilitate employment in the 'C' and 'D' categories of jobs. These exchanges have been quite ineffective and to date, barely four percent of people registered there have found suitable employment.

After studying the functioning of these exchanges, we found that voluntary non-governmental organisations (NGO) who actually carry out the training would be more appropriate to function as special exchanges. They know their clients and can effectively match the job requirements and abilities. One major problem of the S.E.E. is the high drop-out rate. By careful, selective training and placements, this problem can be eased to a large extent.

Employers in the public sector are not aware of the potentials of the differently able group. They hesitate to notify vacancies. This leads to higher unemployment. This

chain can be abolished if mass awareness programmes are taken up. Since the S.E.E staff are over-burdened, NGOs can be involved for such programmes.

At present, the S.E.E only considers employment in the competitive market. Other models of employment, if explored would make a significant break-through. In fact, in Bangalore the S.E.E has very successfully experimented with the self-employment option. The employment rate in that exchange has gone upto fifteen percent.

Computerisation, augmentation of data-base and reduced compartmentalisation from one district to another would open up new avenues of employment. It is necessary for all of us who are working on training and placement to co-ordinate and network with one another and help in upgrading the existing facilities. At the National Job Development Centre, we have realised that educated, well-trained people with disabilities are qualified to do much higher level executive or managerial jobs. They want to be independent and actively participate in decision-making.

Co-operatives offer an excellent opportunity for mainstreaming in the community as well as being able to do multi-faceted managerial jobs. We researched into this thoroughly and found it to be an attractive option. The results of this study however, have not been very encouraging.

CO-OPERATIVES

We collected data from thirty existing co-operatives, to understand their day to day functioning, product identification and upgradation, marketing, personnel management etc. One co-operative - *Swayamsidha* in Bombay is a fully-fledged co-operative wholly owned and managed by a group of disabled girls. We wanted very much to simulate a file-making or catering co-operative. An appropriate complimentary group was identified, but our experiment failed to take off. The main problems were that of space, marketing, raw material purchase, harmony of the group and, most importantly, a total lack of family support especially from parents.

We then decided to try an integrated co-operative venture involving a few parents with the disabled people. We provided the infrastructure at our centre in Dharavi. To maintain the group, a social worker was available as a group leader-cum-manager. Therapists, teachers and supervisors provided the training and looked after marketing aspects. We are very proud that this model is quite successful.

TRANSPORT

During the course of our interaction with the differently able, we realised that transport is an obstacle that was very hard to overcome. In our country, where public transport is inadequate, road conditions poor, streets are overcrowded, pavements either non-existent or dug up, it is extremely

difficult for a person with mobility problems to keep a job, if he succeeds in finding one because of the problem of getting to his place of work. We have taken up several research projects to evaluate this primary need.

Crutches, rollators, walkers, wheelchairs and tricycles are the common mobility aids for a disabled person. In spite of advancements in this field in many of the developed countries, in India a wheelchair, even today, is looked upon as simply a chair with wheels. In an exploratory study we carried out, we visited one hundred and fifty wheelchair users from different walks of life. Manouverability, bulk, aesthetics, maintenance, postural support, therapeutic value etc. featured in the questionnaire. The results were tabulated and recommendation made. I am very proud to say that the Spastics Society of India's newest wheelchair - the *Triumph* has taken all these features into account and the result is a triumph of engineering and technology. Many of these chairs are already being used in India and several countries overseas. An evaluation of the functioning of *Triumph* is our on-going project.

Having a wheelchair does not give a person mobility. As mentioned before, our buses and trains have neither elevators, attendants nor even ramps which people with disabilities can use! In active collaboration with design engineers from the Indian Institute of Technology, Bombay, we are developing aids suitable for use on public transport. In addition, aids for feeding, writing and other necessary aids for the activities of daily living are also being developed.

It is obvious that, with such enormous problems of transportation, to achieve maximum efficiency and reduce fatigue, jobs should be found close to the person's home. This is one of the placement strategies we use. However, it is not always feasible, especially if one insists on using the reserve quotas from the government sector.

On the other hand, if the private sector takes a positive attitude towards employment of this group, many new, attractive and feasible opportunities would emerge. With this background, we visited fifteen corporate sector companies to study their reactions to employment of the target group.

THE ROLE OF PRIVATE SECTOR

Our study revealed that over seventy percent of decision-makers, personnel managers, shop-floor supervisors, workers and administrative staff assumed that a person with a disability could learn only a few traditional trades such as basket weaving, canework, sorting, stacking, assembly work etc. Mental retardation is unfortunately associated with every disability. Even the levels of retardation and commensurate abilities, concentration span and dedication to work were not appreciated. In a nutshell, a lack of awareness is the main reason why private sector has not played an active role in employment of the differently able.

Research also indicates that the corporate sector employers are willing to give financial assistance for manpower training.

One company even gave an assurance of giving continuous job orders to the co-operative run by the disabled.

From our studies on high drop-out rates, we know that familiarity with the work environment, interactions with able-bodied peers, work ethics, quality assurance, time management etc. can best be learnt through apprenticeship training or on-the-job training. Unfortunately, almost our entire sample cited trade union problems and refused to consider training. Unless a breakthrough is made in this area, it is very difficult for a differently able person to prove his capabilities.

Simple work-site modifications like the height of working area, position and types of switches, colour codes, simplified counting system and many other modifications can improve efficiency and employability. We work very closely with occupational and physio-therapists who design low-cost gadgets. If a suitable job opportunity is found, these economical, reversible, quick adaptations would enable a differently able person to secure and retain employment.

In the light of all these difficulties, a trained, frustrated disabled person at times takes up any type of employment given to him. We, as a community have developed a stereotype, that self-employment is a most suitable and attractive alternative. We give no thought to the abilities and potential of a person. We interviewed thirty-two differently able entrepreneurs all over the city. Their reflections are very interesting.

THE SELF-EMPLOYMENT OPTION

The most popular self-employment alternative appears to be operating a telephone booth. Many philanthropic organisations, like the Rotary and Lions Clubs, often donate such call offices to the blind. Unfortunately, a telephone connection and a place to keep the instrument are the only factors considered while selecting a site. A common problem is that there is a coin-operated machine in the immediate vicinity. The income from a PCO is negligible. There are more serious problems, too. Some of the operators felt hurt by the insensitivity of their customers. People shouted and abused them if wrong connections were made. They threw money in disgust at the telephone operators etc. These psychological problems apart, almost seventy percent of the operators reported uncertain & inadequate incomes, indefinite working hours, no peer-group interactions, isolation, no promotion and other socio-economic factors as the primary problems of this employment option. From analysis of the data, it appears that pre-placement assessment of an individual may be necessary for selective employment in this option.

Of course, there are several very successful businessmen among the differently able group. From vending stalls, newspaper stands, tea/coffee shops to desk-top publishing, the disabled have proved themselves in every field. One learns a lot from these success stories. We must update the information bank to increase productivity and job retention

For a business venture by a differently able individual to be successful, parental involvement is a must. Parents play a crucial role in selecting the type of training and in planning the future of their wards. We have carried out several projects very closely with the parents and would now discuss some significant findings.

PARENTS' INVOLVEMENT

In our experience, irrespective of professional guidance and intervention, parents, especially well-qualified ones, often have totally unrealistic job expectations for their wards. Not necessarily high, but unsuitable. Those who come from the upper socio-economic strata often feel that their child should be educated, but need not necessarily work. Economic independence is a secondary consideration and this we found was the primary reason for a high drop-out rate.

Another factor we found was that families feel that finding suitable employment is the job or even the duty of the vocational rehabilitator. From international experience, it is clear that active parental involvement is essential for successful placements. Parents must actively participate in job identification, machine modifications, carry out supervision and help in the financial management. They should participate in group activities,organise meetings to increase awareness about disabilities,lobby with the government for better facilities and lead the way to change society's faulty attitudes. We have conducted parents workshops hoping that their view-point will be expressed

THE ROLE OF MEDIA

It appears that the most important factor today is awareness about the potentials of differently able people in society. The media is instrumental in bringing about the attitudinal changes.

Over seventy percent of our population lives in the rural areas, where poverty, disability, unemployment and illiteracy are rampant. Superstitions, especially regarding polio and mental retardation are so common that often many families deny the patient proper medical treatment. So much so that preventive measures like immunisation also take a back seat. Therefore, the media can play an essential part.

Everyone realises that the electronic media, especially motion pictures, are the primary source of information in the rural areas. Unfortunately, the media has only looked upon disability as something to be ridiculed or not to be taken seriously. In developed countries, we found that a subtle reference to disability through advertisements, news-clips, popular serials, documentaries, etc. bring in the desired results rather than long, boring interviews which appear rehearsed and shallow. Popular writers have been successfully involved in the USA to write interesting stories to increase awareness.

There is no need to take a clinical approach to rehabilitation. Humour, especially through cartoon strips and positive imaging is a must. Newspapers can publish success stories

of achievers which will encourage everyone and naturally bring about desired changes in attitudes, over a period of time.

In conclusion, we must work very closely with social workers, therapists, ergonomists, rehabilitation engineers, computer professionals, policy makers, supervisors, instructors and special educationists to identify appropriate selective training and placement opportunities. New avenues of training can be opened up by learning from international experience. As mentioned before, an holistic, scientific and professional approach to research and development in rehabilitation technology is required.

We collaborate with all rehabilitation institutes and are open to suggestions and comments. In my opinion, policy decisions based on research, taking into consideration the available facts, information and sound judgement, would be more successful. Today then, research appears to be a prerequisite of developmental work in rehabilitation. Information dissemination through newsletters, seminars, workshops and published articles would help in collaboration and networking.

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