CHAPTER I

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Mentally retarded individuals in India constitute 2-3 percent of the population. Of this, nearly 50 percent are capable of receiving vocational training and another 50 percent are moving towards achieving this goal. The country at present has more than 485 institutions striving to serve the rehabilitation needs of the mentally retarded individuals. However, only a few of these institutions have been able to provide the required facilities and infrastructure for imparting training in vocational areas.

Historical Overview of the Concept of Mental Retardation and Related Services

While references to the attitudes toward the mentally retarded persons and their treatment can actually be traced back to some of the ancient civilizations (including Egypt, Sparta, Rome and China), the documented evidence spanned over approximately the last 200 years.

Before the eleventh century, the term mental retardation regardless of the manner used to describe it, was enigmatic to a world which did not have any sophisticated knowledge base to understand it. People held a wide variety of perceptions and attitudes toward the mentally retarded. Different societies
with their cultural and religious background treated the mentally retarded individuals differently and with disdain, as buffoons and court jesters or as morons, feeble minded and imbecile, or perceived them as demons, or venerated them as individuals capable of divine revelations. Different patterns were found in treatment reflecting an overall confusion.

In terms of the services prior to 1700, the only 'service' provided to handicapped individuals, was of housing and sustenance, usually in monasteries. Although, changes in life styles were occurring in the world, not much was changing for the mentally retarded individual of the seventeenth century. During this period the individuals, who were referred to as having mental limitations, were the relatively severely handicapped individuals. 'Mild' retardation as identified today had neither been defined, nor recognised in the true sense of the term. As Hewitt and Forness (1977) indicated 'the borderline retarded individual' was not noticeably backward in a day when few could read and write' (p.30). Most mildly retarded individuals blended into the mainstream of the society without too much difficulty. It was not until the twentieth century, that mild retardation came to be recognised as a describable condition.

By the eighteenth century, two very significant developments occurred: the advent of 'sensationalism' and the
consequent revolutionary changes in Europe and America. Various philosophers, most notably Locke and Rousseau, propounded new ideas that stressed the development of senses and the identification of new ways of perceiving the human mind. These ideas had two major implications for the mentally retarded individuals. First, a new social attitude was established, which held that all 'men', even those who were disabled, had rights. This social attitude generated a climate that supported the efforts to help these individuals. Second, the time was right for many of the idealistic young people to put into practice the philosophy of humanism and the ideas of Locke and Rousseau.

The first part of the nineteenth century was characterised as a time of enthusiasm toward working with handicapped individuals. The 'pioneers' were willing to try to do something that was never tried before. They attempted to help the less fortunate people through bonafide services. The work of Jean Marc Itard, Edouard Seguin, Johann Guggenbuhl, Samuel Howe and Dorothea Dix proved that an atmosphere of optimism prevailed in which many of the mentally retarded individuals could be trained, 'cured' and reintegrated into the community as productive citizens. The recognised birth of special education and the organization of systematic services for the disabled individuals occurred in Europe in the early 1900s.
Another major landmark, contributing to this trend, was the introduction of the mental tests. In 1905, Alfred Binet and Theodore Simon developed tests for use in the French Schools to screen those students who were not benefitting from regular classroom instruction. These mental tests had a lasting effect in the field of special education. Binet and Simon tests were soon introduced in the United States. In 1911, Henry Goddard translated the Binet-Simon scales into English; and in 1916 Lewis Terman of Stanford University refined these scales further, which came to be known now as the Stanford-Binet Test of Intelligence. Terman also introduced the concept of I.Q. (Intelligence Quotient). Now significantly more individuals could be tested and the mentally retarded clearly identified. The special classes and the other services for the mentally retarded individuals developed and grew in number.

Between 1930 to 1950, some relevant developments occurred in social and biological sciences, which had an impact on the attitudes and services for the mentally retarded. Slowly though reluctantly, the medical profession started evincing interest in the field of mental retardation. The assessments were now deemed necessary for the development of the appropriate service delivery systems.

Two more assessment tests of major importance developed during the period. In 1935, Edgar Doll published the Vineland
Social Maturity Scale (VSMS). This scale allowed the professionals to obtain additional information about the mentally retarded persons' behaviour and their level of functioning. In 1949, David Wechsler standardized the intelligence scale entitled the Wechsler Intelligence Scale for Children (WISC). Like the VSMS, the WISC also proved very useful for assessment. These instruments came to be used for the identification and classification of the retarded individuals in a regular fashion.

Another important influence of this period was found in the number of studies that stressed the importance of environment as a potential cause of mental retardation, which changed the societal perceptions of the mentally retarded. These studies proved that the environment in which an individual was placed owing to one's social and economic background were equally responsible for the development of one's cognitive abilities as the genetic factors. As the "nature-nurture" controversy was raging, certain studies, most notably those performed by Skeels and colleagues, questioned the notion of I.Q. as a fixed or constant entity. Skeels and Dye (1939) inferred that the environmental factors had a critical effect on the I.Q.; or, on one's being classified as mentally retarded.

The decade of the 50s witnessed significant changes in the field of special education and this trend continued
progressively through the following years. Foremost among these changes was the public policy concerned with the problems of special groups, as a result of which the social attitudes toward the retarded changed from fear and repulsion to tolerance and compassion.

The early part of 1960 was characterised by a new enthusiasm, particularly in the field of special education. As President Kennedy assumed office in 1961, he symbolised the enthusiasm, concern and awareness of his country-men at that time. Kennedy, who had a retarded sister, got the national attention focussed on the needs of the mentally retarded individuals. He established the President's Panel on Mental Retardation (PPMR, 1961) which was to serve as a guide and source for the future national policy. This panel published 'A proposed programme for National Action' to deal effectively with mental retardation, and this set the tone of the policy decisions for the next decade.

In the history of services for the mentally retarded, most demonstrable gains occurred in the early 1970s. "Most notably, the early 1970s were litigious times indeed. A new forum for ensuring services to the handicapped was beginning to emerge. Two pieces of legislation stand unparalleled in history for what they mandated. In 1973, amendments to the Vocational Rehabilitation Act (P.L.93-112) were passed. Serving as a 'Bill of Rights' for exceptional people, Section 504
of this Act, ensured that 'the handicapped of America' should have access to education and jobs, and should not be denied anything that any other citizen is entitled to or already receives" (La Vor, 1977:249). Two years later, the landmark Act 'Education for All Handicapped children Act' (P.L.94-142) was signed into a law.

Thus in most of the developed and developing countries mental retardation came to be recognized as a problem of tremendous magnitude, which needed to be addressed in terms of the multi-dimensional effects on human life and the associated challenges. The severity of the socio-psychological sufferings varied by the epidemiological and demographic features of the population and other prevailing socio-economic conditions.

In India the problems of mental retardation assumed enormity due to very different factors than in the West, such as poverty, illiteracy, social norms, religious beliefs etc., which needed to be understood and analysed in depth. These interacted and determined the attitudes towards the mentally retarded and the provision of services for them. For many at the individual level the term "mental retardation" remained shrouded in mystery. The low levels of literacy, ignorance and indifference coloured the perceptions of people, with few having positive view of the problems of the mentally retarded individuals.
The situation at the institutional level was not better either. The Government of India and its judicial system did little over the years to improve the existing laws and conditions of the mentally retarded, in terms of safeguarding their interests and instituting the need-based educational programmes and vocational training programmes to improve the overall quality of life of these individuals. Goel and Sen (1984) observed that "The Indian Lunacy Act of 1912 still governs the mental retardates. This Act does not make any difference between lunacy and mental retardation and this lacuna has been accepted by legal luminaries including judges". With regard to the educational policy and planning by the Government, the authors observed that "several conferences, meetings and seminars have been held, many commissions have been appointed, many recommendations have been made and 'white papers' have been issued... after Independence, compulsory education has been introduced though not implemented vigorously, it has brought a very large number of students under the educational system. Thus, larger number of mentally retarded students are entering the normal schools. The education department has come to realise the different needs of the mentally retarded students from the normal students but has not yet been able to formulate the intensive plans to deal with the problem... the education of mentally retarded has to have overtones of vocational training
with ultimate rehabilitation as the goal. It has to be an integrated education-rehabilitation programme in continuum" (Goel and Sen, 1984: 44).

A manual brought out by the Government of India, Ministry of Law and Justice, listed the different Acts of Parliament including "The mental health act, 1987", which indicates in clause 98(i) "The Indian Lunacy Act 1912 and the Lunacy Act 1977, are hereby repealed" and in a separate section dealing with services and concessions under the Mental Health Act, it is pointed out that the 'mentally ill person' means "a person who is in need of treatment by reason of any mental disorder other than mental retardation". Therefore while on the one hand the Acts stand repealed, on the other, a clear distinction is drawn between the mentally ill and the mentally retarded with regard to services, precluding the mentally retarded from access to such services. The mentally retarded do not seem to be seen as deserving of special services under the country's judicial system.

Mental Retardation: Operationalization of the Term

'Mental Retardation' is a term used to describe the condition of mental development.

The socio-economic definition prepared by Heber (1961) for the AAMR described mental retardation as "(1) sub average general intellectual functioning, (2) which originates during the developmental period and, (3) is
associated with impairment in adaptive behaviour" [p. 499].

In accordance with this definition, some researchers preferred to use the term "developmentally disabled" to describe individuals with mental retardation. According to this term, mental retardation originated during the developmental period which was approximately through the first 16 years of age, and therefore individuals who scored low on IQ tests due to other physiological or mental problems during their adulthood were not considered as mentally retarded.

The 1961 AAMD definition of mental handicap was viewed by many professionals as an improvement over the previous definitions. However, it was not received without criticism. Clausen (1972a) argued that the procedures for evaluating adaptive behaviour were not adequate for diagnosis. He contended that the diagnosis of mental retardation should be based solely upon the data from psychometric evaluations. On the basis of an earlier investigation, he revealed that, in spite of the AAMD's inclusion of the concept of adaptive behaviour in the definition, the diagnosis of mental retardation was frequently made solely on the basis of intelligence test data (Clausen, 1967).

The mental retardation came to be viewed thus from two distinct perspectives: the clinical perspective and the social systems perspective.
Clinical perspective

Intelligence is an entity that exists independent of the cultural setting.

If one is retarded according to standard statistical or medical tools, one is retarded.

A clinician can detect abnormalities not apparent to layman. These unseen abnormalities can be the proof of retardation.

The real number of retarded people in an area can be scientifically determined without considering the social structure.

Social Systems perspective

"Intelligence" is relative to the requirements of the particular social system.

One can be "retarded" for some systems (e.g., school) and be "normal" for others (e.g., family life).

Retardation cannot remain "undetected", since an individual is retarded only by virtue of being labelled as such in a particular setting.

The number of people labelled retarded in an area is determined by the social structure of that area (i.e., what is expected of persons, how much, or how well, is the difference tolerated?)


Dunn (1973) observed that, "The condition known as mental retardation is so complicated with so many different causes and levels of manifestation that it is virtually impossible to include such diversity under one rubric".

The Committee headed by Grossman (1973) stated that "mental retardation refers to significantly sub-average general intellectual functioning existing concurrently with deficits in adaptive behaviour and manifested during the developmental period".
General intellectual functioning is operationalized on the basis of the results obtained by assessment with one or more of the individually administered standardised general intelligence tests developed for the purpose.

Significantly sub-average is defined as I.Q. of 70 and below on standardised measures of intelligence tests. This upper limit is intended as a guideline; it could be extended upward through I.Q. of 75 or more, depending on the reliability of the intelligence test used.

Impairments in adaptive behaviour are defined as significant limitations in individual's effectiveness in meeting the standards of maturation, learning, personal independence, and/or social responsibility that are expected for his/her age-level and cultural group, as determined by the clinical assessment and standardised scales.

Developmental period is defined as the time between conception and the eighteenth birthday. Developmental deficits may be manifested in slow, arrested, or incomplete development resulting from brain damage, degenerative process in the central nervous system or regression from previously normal states due to psycho-social factors (Drew, Hardman, Logan, 1973). Grossman also stated that the adaptive behaviour deficits and sub-average intellectual functioning should exist concurrently.
Mittler (1979) indicated that "Neither intellectual impairment nor adaptive behaviour alone constitute evidence of mental handicap. The group of people whom we call mentally handicapped is therefore very broad: At one extreme, it includes a very small number who are profoundly and multiply handicapped and who can do very little for themselves... at the other end of the ability scale are substantial numbers of people who have acquired considerable degrees of social competence, who are largely independent in self care and can communicate adequately".

In the diagnostic and statistical manual - DSM III (American Psychiatric Association 1980), the following diagnostic criteria have been listed.

a) Significantly sub-average general intellectual functioning; an IQ of 70 or below on an individually administered IQ test (for infants, a clinical judgement of significant sub-average intellectual functioning).

b) Concurrent deficits or impairments in adaptive behaviour taking the person's age into consideration.

c) Onset of the intellectual impairment before the age of 18 years.

The AAMD Committee (1983) which published a subsequent manual on classification and terminology recognized that, with more data being collected and times
changing the definition of mental retardation will inevitably change.

It was seen that the growing awareness of the rights of mentally handicapped people to exercise choice and the need of community agencies to provide a more flexible range of options led to a shift in the focus of the debate from definitions of handicap to the identification of the needs - both ordinary and special - of mentally handicapped people.

In identifying the needs of the mentally handicapped people Firth and Firth (1983b) observed that:

1) Mentally handicapped people, however, profoundly handicapped have the same human values as anyone else and therefore, the same human rights as all of us.

2) Services for the mentally handicapped people must recognise the individuality of the handicapped people.

3) For people who have some special need for services, living like others within the community is something they have a right to choose to do.

Mittler (1984) also noted that "The same wide range of characteristics, personalities and temperament is seen within a group of individuals with mental retardation as in any other group of individuals. Each is linked and therefore, has unique needs which need to be assessed and met".

In Goel and Sen (1984), mental retardation has been characterized by "limited intelligence combined with
difficulty in adaptation". It is an impairment of mental ability, where the development of the mind does not occur in accordance with age, and therefore the mental age of an individual with mental retardation does not correspond with the chronological age. The individual, as such is unable to conform to social rules and norms and is unable to deal effectively with his environment. The level of intellectual functioning of an individual with mental retardation continued to be determined by responses to the intelligence tests, such as the Stanford-Binet Intelligence scale or the Wechsler Adult Intelligence Scale (WAIS). The American Association of Mental Deficiency-Adaptive Behaviour Scale (AAMD-ABS) and the Leiter International Performance Scale are sometimes used to measure adaptive behaviour, and the acceptable levels of performance in areas of daily activities.

In recent years, however, the researchers and practitioners have increasingly indicated that "intelligence" as measured by standardized tests is a "variable product" and not a "constant". They have viewed, mental retardation as a social phenomenon: a social failure or incompetence whereby the affected individual is made incapable of assuming those responsibilities expected of the socially adequate persons, such as self-direction, self-support and social participation (Goel and Sen, 1984).
The World Health Organisation report (1984) suggested that in any classification of mental handicap two preconditions should be satisfied: (1) the evidence of intellectual impairment resulting in intellectual functioning, which is significantly below the average as seen in marked difficulty in learning, thinking and problem solving, (2) the evidence of marked impairment in adaptive behaviour causing inability to adapt to the demands of society.

Russell (1985) observed that the teachers, doctors, psychologists and lawyers tend to adopt different criteria for the definition of mental handicap to suit their professional interest. Teachers are concerned with educational needs and a wish to select appropriate methods of teaching, doctors with diagnosis and treatment, psychologists with the acquisition of skills and lawyers with questions of legal responsibility.

The DSM III definition allowed for four categories of mental handicap, reflecting different degrees of intellectual impairments, namely:

<table>
<thead>
<tr>
<th>Category</th>
<th>Range</th>
</tr>
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<tbody>
<tr>
<td>Mild</td>
<td>50 - 70</td>
</tr>
<tr>
<td>Moderate</td>
<td>35 - 49</td>
</tr>
<tr>
<td>Severe</td>
<td>20 - 34</td>
</tr>
<tr>
<td>Profound</td>
<td>Below 20</td>
</tr>
</tbody>
</table>

(Russell, 1985)

This classification has been adopted now by most researchers and practitioners.
The Individual with Mental Retardation and Family

The impact of mental retardation is not restricted to the individual who has this condition: members of the immediate and extended families are also affected to varying degrees. A mentally retarded child brings in a number of immediate and difficult problems for the parents, siblings and other caregivers.

Researches have listed reciprocal relationships and influences between a retarded child and the family, as the family is affected by the presence of the retarded child, so is the child affected by the family's responses. Indeed, satisfactory emotional development of the retarded child may be dependent more upon the family's responses to him/her than the extent of the handicap itself (Bentovim, 1972). The overprotective attitude of parents of a retarded child appears to have significant implications for the child's skill development. Landman (1979) found a significant negative relationship between overprotectiveness and developmental skill as measured by an applied performance test. Nihira, Meyers and Mink (1980) found that the overprotective and less positive attitudes of parents towards their retarded children result in lower expectations, and have apparent negative impact on the children's development and account for the lack of adaptive competency. Strom, Rees, Slauter and Wurster
(1981) divided the parents of retarded children, into groups as having high or low expectations for their children and found that those with higher expectations complied more fully with home-based programmes aimed at helping them, and to teach their retarded children.

The parent-child relationship was affected by the balance of control within the child's environment. The child who was completely dependent on the family members may develop a habit of helplessness and loss of self-identity. The parents may find it easier to dress a retarded child, than to teach the process of dressing, which may be a long and painful experience. The other extreme is equally insidious. The child with an overwhelmed or overly patronising family may learn to take advantage of situations and develop obsessive-compulsive behaviours. Every retarded child, no matter how severe the handicap, learns to interact and participate within the family and their learned experiences, whether positive or negative are transferred into the educational setting, peer group relationships and other social contacts. As Moore, a parent of a retarded child described her feelings "I don't need to characterize for you the searing pain, the depression that leaves one limp and stretched beyond comfort. At the same time, the grief, the bitter questioning, the mourning. You know the feeling of isolation, of emptiness, the sense of loss, the sense of failure" (Moore, 1986: 2), the parental
guilt about a retarded child, the accompanying fears and the methods used to deal with their sense of loss and guilt have a profound effect on the child's early development. This necessitated that both the parents and the professionals work to provide the required structure and a conducive environment for the positive optimal growth and potential of the retarded child.

The Individual with Mental Retardation and Community

The successful community integration required that the mentally retarded individual displayed a variety of valued behaviours, for example, appropriate social skills, domestic skills, self-care, money management, etc. Equally important was the need to overcome gross behavioural deficits or excesses.

In the past, people with mental handicaps were isolated from the rest of the society. Families felt the stigma of having an imperfect child and cut themselves off from their neighbours as their way of hiding their shame, or the child was put away into institutional care, in settings, which were geographically isolated and self-contained. Even when attitudes changed and services shifted from custodial care to providing training to the mentally handicapped in special schools and centres, the isolation continued. They rarely had the opportunity to share in the working or leisure life of
their community, and often encountered hostility and rejection.

Gold (1975) argued that what distinguished the mentally handicapped was their level of functioning in the community which required significantly above average training in adaptive behaviour, that would manifest throughout life. He, therefore, maintained that the emphasis should be on effective services for the mentally handicapped which would facilitate one's integration in the community. Mansell observed that the "effectiveness of services can be measured by the kind of lifestyle they enable people to have. Good services enable people whatever their disabilities to participate in a full range of household and community activities, to continue to develop their expertise and confidence... and to build up and maintain a network of supportive friendships and relationships" (Mansell, 1988: 129).

It appeared that undoubtedly a sustained effort to train the mentally retarded into vocational and other skills useful to the community was very much needed, but it was still a formidable challenge to the organisers of services, trainers and researchers. The research on mentally retarded lacked a clear cut theoretical perspective so far. It could however draw on the psychological principles of learning of Thorndike, as these seem to offer substantial promise at this juncture.
Thorndike's Theoretical Framework

Thorndike experimented with the animals first by using a number of learning strategies to get the desired responses, and then to build through active and vigorous exercise the correct responses. Thorndike's experiments led to the deducing of two laws of learning namely, the law of exercise and the law of effect. These laws were based on the traditional law of association, which attempted to explain how one idea or thought grew out of or was connected with, or substituted for another (Garrett 1969). "The law of exercise, often called the law of habit formation has two parts, one of which is the complement of the other. The first part, the law of use, may be stated as follows: when a given situation is frequently followed by a certain response or group of responses, the bond or linkage between stimulus and response becomes stronger through the exercise so obtained.... The opposite of the law of use is the law of disuse: when a given situation is rarely followed by a certain response, the association between the stimulus and this response is weakened, its degree of weakness depending upon the amount of neglect" (Garrett 1969:56).

The law of exercise included three sub-laws, namely, the principles of frequency, recency and vividness which were in a way descriptions of the conditions required for effective
learning. Frequency required repeated attempts on a given task. Improvement on the task was the cumulative effect of repeated attempts. Recency implied that tasks recently learned or practised could be performed more smoothly with less number of errors than the tasks having intervals of time or not being practised. Vividness was inferred from the presentation of the task in a manner that it would enthuse the person to learn the task.

However as a result of research which Thorndike conducted later in the early 1930s he modified his earlier position. He placed greater emphasis on the law of effect than on the law of exercise. He indicated that when the stimulus and response are connected, such a connection needs to be satisfying and when eliciting a response the right response must be rewarded and practice under conditions of appropriate reward results in learning. "Practice or drill is not a law of learning unless there is also reinforcing progress in approaching a goal. A goal or motive, a result or success, and repetition or exercise - all three in combination result in efficient learning... first motivate, then reward and then drill; these together are the laws of learning".

To Hilgard "The Thorndike doctrine, reducing to the principle that we learn only the particular things, which we practise, had important effects on the schools. It had the
distinctly beneficial effect of encouraging significant and meaningful activities" (Hilgard, in Coladarci 1955:21).

McKeachie (1990) in support of Thorndike's laws of learning indicated that "Students ability to remember and use what they have been taught depends on how they have learned it". Analysing "deep versus surface processing" of information he observed "Those who deeply process information think about the organisation and purpose of educational materials... they actively seek meaning. Such an emphasis on active learning is in the spirit of Thorndike, whose studies of trial and error learning contrasted with the passive role of the learner in classical conditioning" (p.129).

Naqvi (1989) quoted Gardner, who believed "that human beings can and do learn in many ways, i.e., by emulating, by using five senses, by memorising, by experiencing or by combining experiencing with immediate evaluation or feedback, and learning can be attributed to both conscious (for example action research) or unconscious (example a child touching a hot bottle) effort in a human being. Learning is also considered to be a continuous process and it is an established fact that people learn what they do" (p.84).

This study proposed to use the above principles of learning in formulating the necessary teaching strategies for individuals with severe mental retardation. It is proposed to use (1) the visual mode, (2) the auditory mode, and, (3) a
combination of visual and auditory modes of presentation of task materials in order to help the acquisition of a vocational task, and then assess the differential effectiveness of the three mode based learning strategies.

The goal of any vocational training programme is to prepare the mentally retarded individual to enter the world of work (Bachute, 1991), not only the competitive employment, but also in effective community participation and social adjustment. It is hoped that a successful use of such learning strategies may enable the individuals with severe and profound mental retardation to function more independently and positively in their homes, day care centres, group homes, employment settings and the community.