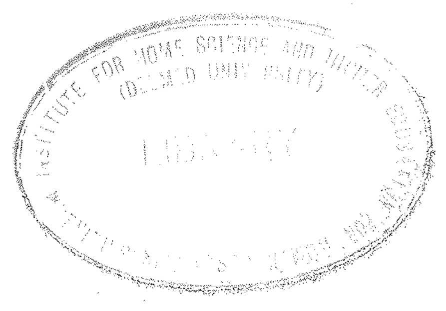
CAPACITY BUILDING OF THE TEACHERS IN EDUCATING THE MILDLY MENTALLY RETARDED PRIMARY SCHOOL CHILDREN

By

Sr. MARIA KAMALAM



A THESIS SUBMITTED TO THE AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER EDUCATION FOR WOMEN (DEEMED UNIVERSITY) COIMBATORE - 641 043
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CERTIFICATE

This is to certify that this thesis entitled **"Capacity Building of the Teachers in Educating the Mildly Mentally Retarded Primary School Children"** submitted to the Avinashilingam Institute for Home Science and Higher Education for Women (Deemed University), Coimbatore, for the award of the Degree of **Doctor of Philosophy in Human Development** is a record of original research work done by **Sr.MARIAKAMALAM,** during the period of her study in the Department of Human Development, Avinashilingam Institute for Home Science and Higher Education for Women (Deemed University), Coimbatore, under my supervision and guidance and the thesis has not formed the award of any Degree/ Diploma/Associateship/Fellowship or similar title to any candidate of any university.

10.6.96.

Signature of the Guide

DECLARATION

I hereby declare that the matter embodied in this thesis is the result of investigation carried out by me in the Department of Human Development, Avinashilingam Institute for Home Science and Higher Education for Women (Deemed University), Coimbatore, under the supervision of **Dr. (Mrs.) N.JAYA, M.Sc. (Madras), Ph.D. (Madras)**, Professor and Head, Department of Human Development and it has not been submitted for the award of any Degree/Diploma/ Associateship/Fellowship of any other University or Institute.

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Introduction

I. INTRODUCTION

"A child is a butterfly in the wind
Some can fly higher than others,
But each flies the best way it can".

Education is now being regarded as a fundamental right of every disabled child the world over. Envisaging the bright future Education holds, the Government of India advocates "Education for All" by the year 2000 A.D. No doubt that this ideology holds good even for persons with disabilities.

In India, Education has gained remarkable importance through the National Policy of Education (1986), which gives special emphasis for integrating disabled children in the regular educational programmes. The scheme for integrated education for disabled children was started by the Ministry of Human Resources Development, Government of India in the year 1988-89. As of 1990, this scheme has been in operation in 22 States and Union Territories, the number of beneficiaries being 25,000 children with mild disabilities. Mentally disabled children in the educable group (I.Q. 50-70) and children with learning disabilities are also covered under this.

The education of the disabled requires special approach as it has to cater to the special needs of this group of

children. One definite approach is integrated education which refers to the practice of providing disabled children an education with their non-disabled peers to the greatest extent possible (Gearheart et al., 1980). Integrated educational programmes provide equal opportunity and full participation, facilitating the disabled children to grow as full citizens of the country.

It seems possible and feasible to integrate the visually and orthopaedically disabled children through the Integrated Education Scheme which serves as the provision of appropriate appliances to compensate for their sensory or motor loss. Minimal adaptation in curriculum would help these children learn with their peers. However, such a provision may work successfully with regard to the mentally retarded children only with dedicated individuals committed to individualized instruction. The nature of support is not materialistic, but more child-oriented and humanistic in nature. Love, compassion and competence shown early and individually to the mentally retarded would help them blossom into useful citizens.

It is vital to ascertain the magnitude of any social problem for planning remedial programmes. This is particularly true in the field of mental retardation. Studies in India on the problem of mental retardation have been fragmentary, incomplete and usually done with little

co-ordination between different centres and workers. It is necessary to estimate the distribution and nature of the problems, etiological factors and availability of manpower and services so as to plan effective strategies for prevention, control and rehabilitation of persons with mental retardation. Currently, different studies indicate the widely varying figures of 0.07 to 5.2 per cent of the population as mentally retarded (Prabhu and Verma, 1985).

India is a country made up of nearly 60,000 villages with nearly 75 per cent of the country's illiterate population dwelling there. In this developing country with a stupendous population, approximately 40 per cent of the population is made up of children below the age of 15 years. The condition of mental retardation is all the more alarming in the rural sectors of India which comprise predominantly a population of 860 million. The magnitude of the problem of mentally disabled, the socio-demographic characteristics of individuals so affected, implications of mentally disabled to the family and society, the plans of action of the society for the challenge it has to face, are alarming (Sen, 1992).

Understanding mental retardation is rather complex because of the divergent and newer perspectives that have arisen and still continue to emerge. Definition of Mental Retardation has varied considerably over the years and

between disciplines. American Association of Mental Deficiency offers definition which involves two main dimensions, namely, adaptive behaviour and measured intelligence. The definition relates mental retardation to the significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behaviour and manifested during the developmental period (Grossman, 1983). However, the current definition of mental retardation as proposed by the American Association of Mental Deficiency (1992) refers to significantly subaverage intellectual functioning resulting in concurrent existence of related limitation in two or more of the applicable adaptive skill areas, namely communication, self care, home living, social skills, community use, self direction, health and safety, functional academics, leisure and work.

From the definition, it is obvious that the extent of their coping or adaptive behaviour is primarily related to the degree of intellectual backwardness though it is also affected by society's general attitude towards individuals with limited intelligence. For children with relatively mild deficits, the impact may be largely confined to poor academic achievement during schooling and to lower levels of job aspirations in adulthood as reported by Sen (1988).

However, among all categories of retardation relatively very few primary investigations have been done on the mildly

retarded (Kohli, 1981), who comprise a large, but vaguely ill-defined segment of our society. The total number of disabled persons who are mildly retarded is probably eight to ten times greater than the other categories. These prevalent figures are even more among the rural population (Menon, 1988).

The characteristics of mildly mentally retarded (M.M.R.) reveal to that these persons fail miserably in school, adjust poorly to complex society and are labeled delinquent, lazy and good for nothing. They do not form a clear-cut group as do the severely retarded, who so frequently come to medical attention. A large number of the M.M.R., persons appearing no different from the normal population, can be made to lead an encouraging life, if diagnosed early enough and guided properly (Puri and Sen, 1989). The school is the appropriate place where identification of mildly retarded becomes easy. As seen in most cases, mildly retarded children are usually not identified before reaching school age. Though, a mildly retarded child may have problems in communication, physical development and socialization during pre-school years, they may not cause undue concern until the children begin formal education.

It is in this regard that the concept of integrated education for the mentally retarded is gaining momentum and

is indeed a positive trend in their rehabilitation. The policy on integration emphasises that the mentally retarded should neither be segregated unnecessarily from other persons of similar age nor from the general life of the local community. Each disabled person should live with his/her own family as long as this does not impose an undue burden on them, family and community and thereby receive necessary support for integration (Apte, 1989).

Over the last three decades, there has been an increasing stress on reducing the number of individuals from the institutions where they were provided residential care. Corresponding with the increasing emphasis on community care, there has been an acceptance that problems of the mentally retarded persons are predominantly social and educational in nature. However, of late, there has been considerable evidence to show that mildly retarded children develop, learn and acquire skills faster and are less subjected to pressures if brought up in an integrated setting rather than in special education classes, since a stimulating social environment encourages the abilities of the mildly retarded (Carr and Yule, 1982). This view has also been retracted by the policy 'Education for All' and the Handicapped Children Act of 1975 which asserts that students with mental disabilities must be educated together with their peers (Bellamy and Butters, 1975).

The situational analysis of integrated educational scheme for special children in India reveals that during the last 40 years or so, a great deal has been talked about integration but only limited programmes have been made and nothing much concrete has emerged.

According to the Ministry of Human Resources Development only a few 1000 disabled children belonging to the different categories have been integrated so far and the mentally retarded are no exception to this. While, there are several hurdles to this process, one major reason that could be attributed is that the mentally retarded are made to live behind a thick veil of mystification. People think that the mentally retarded persons are different. A close interaction between the mentally retarded and normal persons helps in demystification (Madhahavan, 1990). This is certainly what integrated education aims at and if it is to be achieved, the M.M.R. must be admitted in regular schools.

Despite the constitutional provision for Universalisation of Education for the age group of 6-14 years, the coverage of disabled children during the last four decades has been extremely limited. It is far more disturbing with respect to mentally retarded children (Menon, 1980). Out of the 16 million mentally retarded persons in the country, it is estimated that 9.6 million children require educational services out of whom 7.2

million have only mild disabilities (NSSO, 1991). The remaining 2.4 million children with severe forms of retardation need services of special schools. In actuality, there are only 18,289 children (2.5%) on rolls in the 512 special schools for mentally retarded available in the country (Reddy, 1995). According to the National Commission on Teachers, not more than one per cent of mentally retarded children are in schools (Ministry of Human Resource Development Report, 1992).

It has been projected that by the turn of the century there will be about seven hundred special schools for these children (Jayanthi, 1990). At present, average enrolment per special school is around 40 children. Even with improved rate only about 30 to 35 thousand mentally retarded children will be served by special schools by the turn of century leaving out a large number uncovered by educational services. There is need for serious thinking on education for these mentally retarded children (Jangira, 1990).

Integrated education is certainly the best answer to this serious thinking on educating the mentally retarded and for normalising their relations in society. In the absence of a comprehensive screening and detection programme for the M.M.R., integrated education for them is desirable and is the best trial because a sizeable number of M.M.R., children can be easily recognised in general schools. UNESCO (1987)

comments that the mentally retarded children feel frustrated on account of lack of sensitivity in the general school system, fail academically and drop out. If this failure and drop out are to be averted and the goal of universalisation of primary education envisioned in the National Policy of Education is to be achieved, then integrated education is a must (Bhattacharya, 1986).

Opportunities for social interaction and consequent integration seem to be better in integrated setting than in segregated setting, so is the opportunity to learn through peer interaction and peer help. Integration also proves helpful in non-academic activities (Wange et al., 1987). The education of disabled children including those with mental retardation should be provided without children being taken away from parents. With the geoscatter of these children, particularly high in rural areas, it does not seem feasible to provide segregated institution and thus integrating them with the already existing primary schools proves beneficial (Jangira, 1989). Reddy and Rani (1995) also suggests that integrated education would be a cheaper and viable alternative to educate the M.M.R.

There is no doubt that at least for a sizeable number of the M.M.R. integrated education is to be made a must. In this context one would agree with Hearty (1984), who asserts that the issue today is not whether integration is

desirable; but the issue is how this integration should be achieved.

A critical analysis of the magnitude and complexity of the problem reveals that diagnosis, identification and intervention at an early age especially at primary school level is surely the best solution to brighten the lives of the M.M.R., through education. To aid in this type of intervention, the regular teachers at the grass root level have to be equipped with adequate knowledge for easy identification of mildly retarded and adaptation of instructional materials and methods to meet the varied educational needs of the M.M.R., children in general classrooms. Successful integration of the M.M.R., in regular schools depend upon the training of regular teachers in techniques of teaching the mentally retarded, applied behaviour analysis and educational technology (Nelson, 1989).

However, the present situation of the Indian integrated education scenario is rather very gloomy. There is a dearth of organised services in the screening, identification, training, education and referral procedures for the M.M.R. and there is no comprehensive education strategy for them. Lack of concrete policy orientation; lack of capacity building efforts; ignorance on the part of caretakers coupled together with myths and superstitious beliefs of the

society has cast a shadow over integration of M.M.R., in rural areas.

The rural backdrop of Tiruverumbur block chosen for this study, presented no different picture. The plight of integrated education of mentally retarded in this block was synonymous with the other backward areas.

The scheme of integrated education for the disabled specially for the visually impaired and hearing impaired was launched in 1991 quite convincingly in eleven government schools and four private schools by the Directorate of Social Welfare Government of Tamil Nadu and a few Non-Governmental Organisations. Tiruverumbur Block had integrated education for the visually impaired and hearing impaired coupled with one month orientation for the regular primary school teachers under the auspices of the State Council of Educational Research and Training (SCERT). The investigator had the privilege of associating herself with the baseline survey organised under the scheme in the capacity of a professionalist. The investigator thus had an opportunity to adjudge the impact of the scheme and came to know that the mentally retarded children in these primary schools did not receive the right type integrated education services.

Statistical evidences of District Educational Office, Trichy also indicated a high percentage of mentally retarded

children below 12 years who were not covered with appropriate educational and supportive services. The teachers in particular were reported to have not been equipped to deal with education of the M.M.R. There were only three itinerant resource teachers for the visually impaired, two for the hearing impaired who visited the fifteen schools where there was integrated education. There was no training centre or follow-up services to train the regular primary school teachers in educating especially the M.M.R. This sad plight of the mentally retarded in the rural schools of Tiruverumbur Block of Trichy motivated the researcher to design a study to screen and identify the M.M.R. at primary school level and train their teachers as it has been proved that early identification and educational services of the M.M.R. could lead to productive rehabilitation and integration into the society.

Against this backdrop, sensitising the teachers to become aware of the concept of integrated education for the M.M.R. in Tiruverumbur block was very vital and imperative. The researcher felt that it was necessary to channelise the efforts of regular teachers in this area of teaching and handling the M.M.R. in integrated settings. Hence, this study aimed to train primary school teachers and build their capabilities to prepare educational environment best suited to the M.M.R. children. It is hoped that it would facilitate

appropriate educational opportunities for the M.M.R., reduce the percentage of school drop-outs especially in rural primary schools and enhance awareness among the teachers that all the M.M.R. should be educated adequately and appropriately by 2000 A.D.

The major objectives of this study were to:

1. identify the various categories of disabled children in selected primary schools, of Tiruverumbur block with special focus to M.M.R.,
2. orient the rural primary school teachers on the nature, needs and potentials of M.M.R. and build their capacities to educate the M.M.R. through focussed training,
3. prepare related supplementary aids and materials to train the primary school teachers to handle the M.M.R. children in the classroom situation effectively,
4. find out the knowledge and skills gained by the teachers before and after the training programme. and
5. evaluate the effectiveness of the training programme in terms of academic performance and improvements in behaviour of M.M.R. children.

Hypothesis

1. There is no significant difference in the knowledge scores of teachers on mental retardation before and after the training programme.

2. There is no significant difference in the reading, writing and arithmetic performance of M.M.R. before and after the training given to their teachers.

Operational Definitions

1. Mildly Mentally Retarded

In the context of the present study, a mildly mentally retarded is regarded as an individual with an I.Q. ranging from 50-75 and who can be effectively trained to develop basic academic skills and adaptive behaviour through multisensory approaches/techniques.

2. Knowledge

In this present study, knowledge refers to awareness and ideas of primary school teachers towards the M.M.R. children, their education and related issues.

3. Practice

In the context of this study, practice means the methods followed and adopted by primary school teachers including teaching, coaching, training, supervising and preparing materials for effective teaching of the M.M.R.

Review of Literature

II. REVIEW OF LITERATURE

In this Chapter, the investigator has endeavoured to present the literature related to educating the mentally retarded under the following heads:

A. Mental Retardation - Concepts and Definitions

B. Attitudinal Influences on Educating the Mentally Retarded

C. Integrated Education for the Disabled - Expanding Horizon

D. Educational Provisions for the M.M.R. and

E. Strategies for Successful Implementation of Integrated Education.

A. Mental Retardation - Concepts and Definitions

There is a plethora of definitions explaining mental retardation. Though the perspectives on the nature of mental retardation are many and varied, yet the common element underlying the various view points is that persons who are labelled Mentally retarded vary from one another in different aspects.

An interactional concept of intelligence increases the importance of situational factors in the definition of mental retardation. Mental retardation has often been viewed as a social phenomenon (Polloway and Payne, 1975), as a failure in social adaptability, which is the result of an attempt to provide symptomatic description rather than

provide etiological explanations or to suggest therapeutic prescriptions.

The focus of many investigators on the physiological aspects of mental retardation has great relevance to the issue of etiology. According to this perspective, mental retardation is an organic failure, the most common manifestation of retardation being physical appearance. Usually in low grade defectives, it exists as physiological failure in the form of injury, disease etc. The narrowly conceived human biology has to be considered along with interpersonal and cultural processes in the complex issue of mental disabilities.

On the one hand, mental retardation as a cultural concept has been defined in terms of a set of diverse behaviour to social norms, philosophy and attitude. On the other hand the problem of mental handicap is also viewed as an exclusively inherited defect (Sen, 1988). The genetic determination of retardation has been conclusively proved for certain categories which account for relatively small proportion of cases.

Thus, by and large, the definition and terminology of mental retardation have changed over the years with the accumulation of new data.

As early as 1921, the British Mental Deficiency Act defined Mental Retardation as a condition of arrested or incomplete development of mind existing before the age of eighteen years, whether arising from inherent causes or induced by diseases or injury. According to this enactment, persons were classified into four categories of mental defectives.

a. Idiot

b. Imbecile

c. Feeble minded and

d. Moral defectives.

The American Association of Mental Deficiency has been a primary definer of mental retardation for over one hundred years. The first definition formulated and endorsed by the association appeared in 1877. It stated that idiocy and imbecility were conditions in which there was a need for natural or harmonious development of the mental and moral powers of the individual, usually associated with some visible defect, expressed in various forms and degrees of disordered vital action. Quite a few definitions exist in terms of adaptive behaviour criterion. Rejecting the educational and intellectual criteria, Tredgold (1937) regarded mental retardation as a state of incomplete mental development of such a kind and degree that the individual is incapable of adapting himself to the normal environment of

his fellows. He advocated the use of biological and social criteria.

Doll (1941) enumerated features such as social incompetence, mental sub normality and developmental arrest to explain mental retardation.

Benda (1954) stated that a mentally retarded person is one who is incapable of managing himself and his affairs or incapable of being taught to do so and who requires supervision, control and care for his welfare. Corbett (1977) defined mental retardation as a condition where intellectual deficit is associated with social, physical or psychiatric handicap and requires special treatment.

Bijou (1963) a behaviourist, expressed concern about the commonly perceived internality of the mental condition. He explained that defective intellect or mentality is a hypothetical construct assumed to cause the behavioural phenomenon, which is referred to as mental retardation. He suggested that the retardation be conceptualized in observable functionally defined relationship. In other words, "A retarded individual is one who has a limited repertoire of behaviour evolving from interactions of the individuals with environmental contacts which constitute his history. Dunn (1968) and Mercer (1973) expressed concern about the number of minority individuals placed in special classes. While they recognised the need for special classes

in educating many of these children, they also believed that the label 'mental retardation' carried an unwarranted stigma. Instead, they suggested the use of the term "mild general learning disability".

In contrast to Bijou (1963) and Kolstoe (1972), asserted retardation to be an arrested state of cognitive development which is concomittantly rooted in inadequate neurophysiological development. Kolstoe's concept was based on a combination of Jean Piaget's theory of qualitative changes in cognitive process and Hebb's (1949) theory of neurological organisation. Kolstoe felt that mental ability could be explained by linking neuro-cellular activity to cognitive processes and hence Kolstoe defined mental retardation to be a condition of intellectual arrest at some level below Piagets' level of formal thoughts. From a neuro-physiological viewpoint, he wrote that mental retardation is a diminished efficiency of the Central Nervous System, which results in a limited capacity for the formation of cell assemblies, intercellular and superordinate associations and a consequent reduced ability for perceptual and conceptual integration.

The Sociological Perspective of Mercer (1973) states that mental retardation is a socially assigned condition. The status of mental retardation is associated with a role which persons occupying that status are expected to play.

Apart from the definitions based on the adaptive behaviour criterion, I.Q criterion have also been proposed by psychologists. In 1916, Terman outlined a scheme to group individuals on the basis of the I.Q scores obtained on the 1916 Stanford Binet Test. Weschler (1972) also suggested a similar categorisation.

According to Wallin (1958), "A mentally retarded individual is one, who on standardised tests fail to attain an I.Q., or mental age of a particular level. Mental retardation is a condition of retarded mental development as determined by a standardized individual intelligence test (Wallin, 1966).

The WHO Expert Committee (1988) reported different grades of retardation in conjugation with social factors and has provided a classification scheme of mental retardation in terms of I.Q range -- mild (50-70), moderate (35-49), severe (20-34) and profound (below 20) categories of retardation.

Clarke and Clarke (1974) have presented a schematic chart which identifies subnormality in relation to the level of ability and in terms of its causes. This implies that as one descends on I.Q. scale, the greater is the probability that a given condition is pathological in nature.

The Commission of Inquiry on Mental handicap (1965), defines the mentally handicapped as, "those who by reason of arrested or incomplete development of the mind have a marked lack of intelligence and either have temporarily or permanently inadequate adaptation to their environment".

According to International Classification of diseases, (ICD - 8 1974) mental retardation is a condition of arrested or incomplete development of the mind, which is especially characterised by subnormal intelligence.

However, the most widely accepted definition is the one proposed by the American Association of Mental Deficiency (A.A.M.D) in its 1983 revision that "Mental retardation is significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behaviour and manifested during the developmental period". This definition incorporates two perspectives - Medical and Behavioural and emphasizes three vital elements namely diminished intellectual functioning and deficits in adaptive behaviour that originate anytime between 0-18 years of age. The A.A.M.D. definition of 1992 relates Mental retardation to substantial limitations in present functioning. It is characterized by significantly subaverage intellectual functioning existing concurrently with related limitations in two or more of the following applicable adaptive skill areas -- communication, self-care, home-living, social

skills, community use, self direction, health and safety, functional academics, leisure and work. Mental retardation manifests before age eighteen.

To sum up, it may be said that almost all definitions of mental retardation refer to subnormal intelligence and the current predominant concept of mental retardation does not depict a homogenous group of individuals. In fact the population of retarded persons is extremely heterogenous. There is more diversity among them than in the non-retarded population.

B. Attitudinal Influences on Educating the Mentally Retarded

The most fundamental issue confronting those who have responsibility for working in the area of mental retardation is the manner in which the mentally retarded are perceived. What one does for them or advocates to be done on their behalf, what future one foresees as being possible and the kind of resources available to support programmes are all inextricably related to one's personal attitudes towards the perception of mentally retarded. The following paragraphs trace the historical background of attitudes towards the disabled.

Exposure and destruction of the disabled was common in the primitive societies according to the concept of the "Survival of the fittest". The Eskimos and the Dene tribes

of North America used to kill the disabled and old people because they were not fit for the struggle of existence. Many tribes of Australia, Hawai and Africa used to abandon the disabled and maimed. The Babylonians did not admit any person with physical blemishes to the court. Among the early Romans the father had the right to destroy the deformed child if he first exhibited the child to five neighbours who agreed with him. Early Greeks destroyed disabled members because of their idea of body perfection. Euthanians allowed their disabled children to die of cold and neglect. Spartans took the disabled children to hill tops and killed them. Even great thinkers like Aristotle and Plato approved of the practice of the disposal of the disabled.

Care and Protection of the Disabled started after the spread of Christianity in the West and Buddhism in the east as both religions emphasised the need to protect all types and classes of people. There was emphasis on brotherhood of man and responsibility of the strong to protect the weak. The most prominent brotherhood institution was set up by St. Basil in 360 A.D at Caesaria in Cappadocea. The first attempt to bring down the misfortune of the disabled came from Charitable Society of Religious nature, when Pope Gregory included the crippled in his classification of the destitute who were to be supported with the help of public funds. From 1573 to 1601, in England, specific Poor Relief

Acts were passed authorizing imposition of the rate for the purpose of supporting those who could not work. Some attempts were also made to cure various disabilities but the method of treatment was very primitive and indigenous. So, the stage of cutting off and casting off came to an end in Western Civilization - an era in which Renaissance brought great intellectual, social and spiritual awakening.

Training and education of the handicapped was seen from the beginning of the 18th century. Ideas of liberty, equality and fraternity became important. The rights of the disabled gained importance over the interests of the State. Individualised care improved the conditions of the disabled and a number of institutes were started for the blind, the deaf, the severely crippled and for mentally retarded.

Towards the end of the 19th century, the vocational problems of the handicapped started to draw public attention. So before the beginning of the twentieth century a number of acts were passed in some progressive countries to safeguard the interests of the disabled. Pioneering efforts to find a constructive solution to the problem of disabled were made by the individuals with great enthusiasm and in 1817, a young industrialist of U.S.A., Jeremiah Mill Bank started Red Cross for the disabled men.

Before World War I, the welfare activities of the disabled were concerned only with day to day activities like

giving them food, clothes and shelter. After World War I, society made attempts to integrate the handicapped into its fold attributing new meaning to the term rehabilitation. Rehabilitation was given importance in many countries both in the East and West. Publicity drives were conducted to enlighten people especially employees on the abilities of a person. The disabled were included in the United Nations Social Welfare Programmes and this gave the disabled a desirable place in the Society.

In Ancient India, the family, the state and to a certain extent the people of the same caste/community took care of the handicapped. In a compact rural society, the headman was given the job of looking after the welfare of the disabled members.

During the period of Guptas, social attitude towards disabled became more tolerant due to Buddhist influence. In the middle of the 6th century, Jainism emerged and emphasised non-violence and selfless service to all living beings including the handicapped. The Golden Age of Chandra Gupta Maurya had an unique way in establishing workshops for vocational rehabilitation for the physically handicapped and socially and economically handicapped members of his kingdom.

Kautilya was one of the greatest statesmen of ancient India. He made a special point to employ dwarfs and other deformed people as political spies and secret agents. As Ashoka was a strong believer of Buddhism, he had charitable institutions for the care of the handicapped. During the period of Samudra Gupta Maurya, the coins had a figure of dwarf near the king depicting that the dwarf too had a position in the kingdom. Harsha gave away everything to the needy and affected people. He also employed deformed persons as spies in his harem.

In Medieval India, Muslim rulers followed the example of the Hindu predecessors in looking after the needs of the destitute and the handicapped. Zakat, one of the five Rukans of Islam which was strictly followed by Muslim rulers, to do charitable services for the disabled. The Western Civilization came to India and hence most of the old institutions stopped functioning. The state had very little interest for the disabled people and the family could not take care of the disabled. This led to beggary, crime and prostitution to a considerable degree. Few efforts were made by individuals to set up hospitals and charitable homes. Initially a good deal of this work was done by foreign missionaries. By the end of the 19th century, schools for the disabled were started and after World War II centres were started for the rehabilitation and resettlement of the war disabled.

However, Tardocide or Banishment of mentally retarded was the law of the land during the early historic ages. Ancient Greek literature depicts that mentally retarded during 1552 B.C. were referred to as monsters. Irrespective of the practice of tardocide, disabled were used as Objects of Display. Wealthy Romans like Seneca often kept the retarded and Insane at home just for amusement. Monarch Philips IV of Spain maintained a clan of mentally retarded and physically handicapped and treated them as court fools but with compassion. Furthermore the retarded were chained or caged at city gates and fairs as display objects and as animals in zoo. The mobility of defectives was facilitated on ships to carry them from port to port and exhibit them. This was seen in Rhineland and Flemish Canals.

A caring approach towards the protection of the retarded came in through the establishment of asylums for them. The first asylum "Hospital Defolps" was established in Valencia by Bernado Andrews (15th Century). Later Vincent DePaul (17th Century) established centres which became world famous. Initially deviants and the poor were pushed into these asylums and hence they became worse than prisons.

The emergence of Special Education was the result of impetus and untiring efforts of many significant contributors. John Locke (1632-1704) was the first person to distinguish between mental retardation and mental illness.

He said that the mind is like a blank sheet on which experience writes, but since the retarded have very few experiences, only limited matter is written.

Jean Itard (1779) was influenced by Locke's philosophy. He took great interest in educating Victor, the wild boy of Averyon. He emphasized the role of environment in shaping the individual's behaviour and formulated an educational strategy to teach the retarded incorporating modeling, reinforcement procedures and sensory stimulation. Though his attempts to teach Victor failed, his experiment drew wide attention.

Edward Seguin (1812-1880) was a French physician and a student of Itard. He emphasised in his book "Idiocy and its Treatment", that a full diagnosis and clear understanding of individual differences is very vital for treating the retarded. He observed that sensory motor co-ordination of the retarded plays an essential role in learning.

Alfred Binet (1857-1911) was the first to develop the intelligence test and hence is called "Father of Intelligence Testing". He evolved a new subject "learning orthopedices" and used inkblots as projective techniques with the retarded.

Maria Montessori (1852), a student of Itard and Seguin an Italian Physician developed special educational programme

and concrete instructional materials for the retarded. Her "Didactic Approach" is renowned even today.

Thus the historical perspective influenced not only the attitudes of educationists and other professionals but also parents towards their retarded child. However, parent's attitudes towards their retarded children is often a paradoxical mixture of sympathy and indifference.

Gilda _et al_. (1961) conducted a study on parental overprotection of the mentally retarded children and concluded that over protection was the result of real love and concern for the child. Wolfensberger (1967) took a novel approach to stress the role of guilt, in motivating a parent to provide the extra attention, effort and show the love a retarded child may need.

In a study by Gumex _et al_. (1972) on parental perception of the mentally retarded, parents of 50 mentally retarded were assessed. The results showed that the father, rather than the mother, perceived the child negatively. The mothers' perceptions were more positive.

Wolfensberger _et al_. (1972) conducted a study of the parents of the retarded children. Checklists containing 57 items were used to describe mentally retarded children. Results revealed that parents had considerable difficulty in

accepting any label for their own children, even if the terms were relatively free of negative imagery.

Ingalls (1978) described various crisis experienced by parents of retarded children. The first is novelty crisis, wherein retardation is unacceptable in one's life and parents experience a sense of shock. The other type of crisis is 'reality crisis' which is related to financial worries and continuous care depending upon the degree of retardation, and other related problems.

Drew (1984) stated that denial, projection of blame, guilt, grief, rejection or acceptance are common reactions of parents of the disabled. Religion also plays a role in determining parental reactions. Rangaswami (1985) has observed that Hindus have mixed feelings such as sin, curse or punishment of God for having a retarded child.

Barsch (1987) comments that parents are unduly stigmatised. They love the child because the child is their's but they reject the child because of retardation. Narayanan (1989) studied the various aspects of problems faced by the family that has a retarded child at home. Some mothers expressed shock, denial blaming self, sadness and hostility. They felt that it is a burden and a special responsibility.

Rastogi (1989) has reported about parental approach towards retarded child. It was found that mothers had negative attitudes compared with the fathers. Mothers were hostile and aggressive. Prabhu (1990) made a survey of mental handicap research in India. In 1990 he carried out a study of parents' need for institutional facilities, for the retarded. Parents of 320 mentally retarded children were interviewed and were asked whether they would like to keep the child at home and train him or send him to a special school or would prefer to institutionalize him. The results showed that the parents preferred to institutionalize severely retarded and keep the mildly retarded, subnormal child within the family.

Rangaswami (1988) constructed a scale to measure parental attitude towards children in terms of over protection, acceptance and rejection, permissiveness, future, home management and hostility. Using this he compared mothers of retarded children with and without behaviour problems and concluded that both the groups had negative attitude towards the mentally retarded. The mothers of retarded children with behaviour problems had a higher negative attitude than mothers of retarded children without behaviour problems. Further families having mentally retarded child experience multiple problems and tend to withdraw from social activities.

A study conducted by Kumar (1993) in India and Philippines on people's attitudes towards the mentally retarded revealed that in all areas, the mentally retarded were frequently identified as more negative and pessimistic in India than in other countries.

The legislations enforced since 1971, reflect significant changes in the attitudes of policy makers, planners, educationists, lawyers and social workers. A few significant landmark legislations are listed as under:

1971 - Declaration on Rights of persons with Mental Retardation

1975 - Declaration on Rights of Disabled Persons

1981-1982 International Year of Disabled Persons

1983 - Convention of Vocational Rehabilitation

1986 - Priority Services to Disabled in the Age of 3 to 6 years.

1989 - Convention on Rights of the Child

1993 - World Programme of Action Concerning Disabled Persons

1993 - Standard Rules on Equalisation of Opportunities

1995 - Persons with Disabilities (Equal Opportunities, Protection of Rights and full participation) Act

1996 - National Trust for Welfare of the Mentally Handicapped Bill.

Thus, all these studies on attitudinal influences towards the mentally retarded reveal changes inflicted upon the mentally retarded population. From a paradoxical mixture of cruelty, indifference, pity and negligence, an era of portraying and reflecting a more positive outlook towards the mentally retarded ushered in. The current scenario of society's attitude towards the retarded shows an encouraging trend with provisions for proper care, education and rehabilitation of the mentally retarded. This has become evident in the history of evolution of legislative provisions and special education programmes for the retarded.

History reveals that the attitudes towards mental retardation have gone through a series of catastrophic changes throughout the ages, though gradual. A paradoxical mixture of cruelty and indifference along with patches of humane treatment has been seen.

C. Integrated Education for the Disabled - Expanding Horizon

During the last two decades the terms "mainstreaming" and "integration" are often used synonymously. The concept of mainstreaming/integrated education has been traced below as perceived by distinguished educationists.

Mainstreaming is a movement bringing forth profound changes to long established practices in special education.

As an educational philosophy, mainstreaming advocates acceptance of the M.M.R., within normal school programmes. Schools are not responsible for adapting their programmes to meet the unique needs of the child rather than requiring the child to adapt itself to the established school programmes. In mainstreaming, the focus is on the learning needs of the child and how they are best met in the existing programmes of regular education and support services.

Birch (1971) has defined mainstreaming as a unification of special and regular education which provides a range of services for all children on the basis of their learning needs. Hart (1986) stated that in mainstreaming, all special children are taught in the same environment as the other children wherever possible.

Berry (1976) delineated three components which define mainstreaming as

1) a range of program for students having problems
2) a decrease in programs which pull students out of regular classes and
3) a specialist to work within regular class room to the greatest degree possible.

However, the most comprehensive and often quoted definition of mainstreaming is proposed by Kauffman et al. (1981) in that he refers it to the temporal, instructional

and social integration of eligible exceptional children with normal peers based on an on-going individuality, determined educational planning and programming process that requires classification of responsibility among regular and special education, administration, institutional and supportive personnel. According to Smith *et al*. (1983) mainstreaming means helping people with handicaps live, learn and work in everyday situations where they will have the greatest opportunity to become as independent as possible.

Kirk (1989) defines mainstreaming as the process of bringing exceptional children to daily contact with non exceptional children in educational setting. To Johnson (1989) mainstreaming is the provision of an appropriate educational opportunity for all handicapped students in the least restrictive environment, based on individualized education programs with procedural safeguards and parental involvement aimed at providing disabled students access to constructive interaction with non-disabled peers.

Since the beginning of the decade, the term integration has been widely used in India. Deiner (1993) has distinguished 'integration' from 'mainstreaming'. To him 'mainstreaming' implies that children with the special needs have not previously been part of the mainstream of society and integration means children must meet certain criteria for enrolment in a class. He suggests that "inclusion" is a

better term which implies a sense of "belonging" rather than simply "placement".

Revathy (1990) points out that Integration implies social, psychological, cultural, academic and physical interaction with the normal population. Thus, this is comprehensively total integration.

The National Advisory council on Education (1979) emphasizes that integration is the conscientious effort to place the disabled children in the least restrictive educational setting that is appropriate to their needs.

Prasad (1994) outlines comprehensively and convincingly the advantages of integrated education to children with mental handicap. He emphasizes that children with handicap when integrated with normal children will be stimulated and learn many skills effectively through peers serving as models to them.

In a nutshell, integration fosters friendship between non-disabled children and children with disability. It helps the mentally retarded to benefit in many ways in the development of daily living skills, in learning to communicate better, in developing adequate emotional and social behaviour and in developing self confidence and self respect.

The attitudes of teachers and administrators are more important to successful mainstreaming than physical facilities and organisational structure within the school (Deno, 1984). In the past, school principals and administrators as a group tended to be somewhat skeptical about mainstreaming (Murray, 1978). However, the results of recent studies indicate that their attitudes towards mainstreaming are becoming more positive (Sharma, 1983).

1. Role of Administrators in Integrated Education

Among the individual traits of Principals and Administrators that seem to affect their attitudes toward mainstreaming, the most important are number of years in the position, educational degree or qualification and degree of administrative or teaching experience with special students.

Persons who had served more than seven years in teaching positions and who have a special class at their school or have been actively involved with a special class tend to be most resistant to mainstreaming (Centre, 1985). These persons feel that special classes serve best the needs of special students in that only special education teachers possess the required expertise to support the special students. They also believe that regular teachers lack the knowledge and ability to mainstream special students successfully. However, persons who have some formal training in special education are less resistant to mainstreaming

efforts. They had positive attitudes towards mainstreaming as reported by Walberg (1988).

2. Teachers' role towards Integrated Education

Research indicates that teachers' attitudes towards integrated education are becoming more positive. Initially teachers were adverse to mainstreaming and considered that integration of retarded into regular classrooms would be a burden on them and also felt they lacked adequate pre-service training to work with special students (Plumber, 1980).

William and Algoz (1979) found that Teachers who participated in mainstreaming efforts had a major concern. First they felt that they did not have the technical abilities necessary to work with students who were handicapped. Second they were concerned that these students would deprive educational services to the students who were not handicapped. Teachers were also worried about matters such as increased paper work, accountability and possible conflict with special education teachers and they wanted to be assured that if special students were placed inappropriately there would be an appeal procedure to correct the errors (Morgan, 1986).

Studies have also revealed that in general regular classroom teachers tend to underestimate the abilities of

special children (Meyers, 1988) and be less tolerant to maladaptive class room behaviour (Brown, 1988).

In the above studies, it has been documented repeatedly that teachers' attitudes towards students are a major force in determining the nature of interaction and the successful integration of handicapped with non-handicapped in mainstreamed settings. Not only do teachers' attitude set the tone for student-teacher relationship, but they also influence the attitudes of others towards children with special needs.

D. Educational Provisions for the M.M.R.

The programming for education of the M.M.R. children is a process that needs objective planning. It entails the ordering of the teachers and content analysis into a priority of goals and objectives for implementation. If the assessment stage has been thoughtfully executed, programming can produce positive results for the M.M.R. More concerted efforts are needed to achieve the goal of Education, for all through integrated education by the end of the century as resolved in the revised policy formulation in 1992. The following paragraphs describe the educational provisions made for the M.M.R.

Public Law 94-142 mandates that the child should be educated in the "least restrictive environment". It has generally been interpreted to mean that the regular class

room is less restrictive than a special education class room. The principle of least restrictive environment, infact is a critical part of integration.

To ensure that the academic and social needs of the educable mentally retarded are served in the least restrictive environment, a comprehensive continuum of services must be available. A continuum of services represents several service delivery plans that schools should make to meet the assessed needs of children who are integrated in schools.

Based upon current practice, the following four major service delivery plans are most appropriate for meeting the individual academic and social needs of the M.M.R. pupils.

i. Consultant teacher model

This model does not require M.M.R. pupils to be removed from the regular classroom. Instead, classroom teachers are trained in assessment and management techniques to be used in their programmes. Regular classroom materials are used when appropriate and others are suggested by the consultant teacher. Instructional objectives developed from pupil's progress records are analyzed to evaluate teaching strategies (Fox et al., 1972).

ii. Diagnostic-prescriptive teacher model

In this model, the student is removed from the regular classroom for about two months. The diagnostic-prescriptive teacher (DPT) assesses the student's learning needs and skills and determines which instructional techniques and materials will fit those needs. Afterwards, the DPT writes an individualized prescription for the student. This prescription is received by the classroom teacher and the DPT helps the teacher implement the plan. Periodic checks are made by the diagnostic-prescriptive teacher until no longer needed.

iii. Resource-teacher model

In this model, the mildly retarded pupil maintains continuing enrolment in the regular classroom but spends some portion of the day in a resource room. Unlike the DPT model, many pupils attend resource programmes for several months or even years. Grouping takes place according to the educational needs rather than classification. A resource reading group consists of the mildly mentally retarded, learning disabled, emotionally handicapped and communication-disordered pupils. Resource teachers generally teach basic skills such as reading and mathematics and are responsible for assessment, developing objectives, instruction methods and curriculum that fit pupils' needs. The resource teacher may also adapt materials and recommend strategies to be used for a regular classroom teacher.

iv. Special class teacher model

This model is divided into two programmes namely full day self-contained and Co-operative programme.

Regardless of the programme used, the classroom is located in a regular school and the special class teacher has the primary responsibility for the students.

In the full-day self contained programme, the special class teacher plans for and instructs pupils in all basic skills as well as less academic subjects such as art, music and physical education. No integration takes place between pupils in self-contained programmes and regular class programmes. Therefore, careful consideration must be given to the reasons that the child would not benefit from regular class exposure before this programme is chosen.

The Cooperative Program might be called a self-contained resource room. The special class teacher is involved in teaching the basic subjects. The pupils, however, are integrated into as many regular education activities as possible (Chinn _et al_., 1979). If the special class and regular class teachers carefully monitor the pupil's progress in integrated activities, a change upward to a less restrictive environment may be facilitated.

Whichever plan is chosen, careful deliberation must be made to match the individual needs of the students with an

environment to serve those needs. The measure of program effectiveness is determined by the children accomplishing the goals and objectives set for them. That is why criteria and schedules for evaluation must be set. Constant feedback for the teacher can result in reversing patterns of failure and frustration in educating mildly mentally retarded children.

E. Strategies for Successful Implementation of Integrated Education

The key factor in integration is that it should ensure successful implementation of the programme. Several steps of pre-service training of teachers, appraising the needs of special children and equipping them to educate and handle them are essential.

Harri (1983) suggests that administrators responsible for designing and implementing an integrated program need to recognize that regular teachers may be uncertain about teaching special students. Hence, they should develop strategies to help teachers feel more confident about functioning in their newly established roles. By participating in-service training activities with teachers, administrators could help immensely in making the integrated program successful.

Goel and Sen (1985) emphasise the importance of pre-service training of teachers in the principles and practices of integrated education. Langone (1986) suggests that in addition to pre-service training, provisions for a consultant teacher in institutions would make the integrated program successful.

Dardig (1988) has offered several suggestions for making the integration program a more beneficial educational setting for the disabled. Handicapped children should learn how to follow the orders and written directions, different from those that they are accustomed to. Further, regular class teachers can encourage them to be positive to their normal peers and when situation demands teach them how to react to teasing if necessary.

Establishments of a warm and acceptable class room atmosphere is the first of ten steps identified by Judy (1989) in ensuring successful integration. Goel (1989) points out that success of an integrated program for retarded learners depends largely on the dedicated service of teachers. This calls for pre-service training of teachers in handling retarded learners with ease. Training needs careful preparation and implementation with precision. The words of Prasad (1994) bear the right context to teachers emphasizing that "For integration you need not reach out but you need to recreate your environment so that children with retardation

and normal children learn and live together". Give them an opportunity to be one amongst peers and that's how the best integration model works.

There is marked proof that integration of the mentally retarded provides a natural social and ecological environment in which all kinds of support networks are available. It promotes the idea of normalization that each person has the right to experience a style of life that is normal within his or her own culture. Thus, the integration of mentally retarded can be made a reality, by adequate training of personnel to work towards the integration of mentally retarded in the society. Training inputs and manpower development and strategies are the most crucial exercise to ensure the success of the Integration Program. Accordingly, some of the effective strategies ensuring successful implementation of integration programs are enlisted below:

1. Meeting individual needs

The integration model will serve best, as it recognizes the unique characteristics and learning styles of each child. Information about the individual child's strengths and weaknesses can be collected during play and learning activities of the child. Besides these, the family is a valuable source of information, providing rich information about the child as well as family structure.

2. Appropriate learning

All young children including children with special challenges share a common need to learn through active "hands-on" discovery with concrete materials. Therefore a teacher, must be a creative thinker and discover innovative activities for the child, that match with his abilities. The activities should be feasible as it would enhance appropriate learning.

3. Creating an acceptable atmosphere

Acceptance is an important aspect of Integrated programs. A personalized classroom can be created to meet the special needs of disabled children. Such a classroom will make the children more accepted, when they see that the physical space of the classroom has been adjusted to allow them a choice of learning experiences with their peers.

4. Diverse perspective

Children in integrated programs need to be given opportunities to become familiar with a broad range of ideas and perspectives. Rather than structuring or stereotyping them with a rigid curriculum, encourage them by maximising their opportunities to learn many new things.

5. Address personal biases

Teachers should honestly evaluate their feelings, to ensure that personal biases do not jeopardize their

relationships with each child. Teachers must introspect and strive to understand the source of biased attitudes and work to develop greater acceptance. A teacher support group is one way to learn greater acceptance.

6. Accepting views of others

As a teacher of special children, the instructor should talk with other professionals working with special people, discuss special challenges with them and learn to gain holistic views from them.

7. Fostering social integration

Creating programs for all children depends on helping children develop accepting attitudes. Well organised, co-operative learning activities can increase positive social interaction. Group games and other co-curricular group activities will serve best. Fostering social interactions and friendship among children is a good way to accomplish goals.

8. Encouraging open communication

Open communication is an essential ingredient of successful integrated programs. Teachers should offer honest and well-informed explanations and be ever willing to address sensitive issues without bias. Candid explanations and overt discussions will help remove misconceptions, confusion or fears which children may have regarding class-mates with special challenges.

9. Enhancing child's self esteem

Teachers should seize every opportunity to build the competence of challenged children and plan ways for children to achieve success. Teachers should repose realistic expectations on the child and be sure to appreciate him/her for success. This will certainly enhance the child's self-esteem.

10. Using effective guidance techniques

Consistent implementation of effective guidance techniques will prepare children to live more peacefully in a world of diversity. Teachers will need to play a substantial role in guiding the conflicts to resolution. Counselling should also form an esteemed part of the teachers' role. Frequent suggestions and support will help children achieve their goals.

11. Incorporating instructional technology

The value of instructional technology should not be ignored. Teachers must creatively incorporate instructional methodologies and adapt new teaching aids and styles to help special children learn better. Teachers should also explore new avenues to make teaching of special children effective. Besides using modern and specialized gadgets, teachers should make maximum utilization of low cost effective aids to make the teaching-learning process highly informative and effective.

Implementing programs for all children requires teachers to evaluate both their attitudes towards diversity and the instructional strategies they choose to employ in the classroom. The above detailed frame work of practical strategies might serve as both a guide for implementation and a tool for monitoring progress in integrated educational settings.

The literature reviewed in the foregoing pages reveal that Integrated Education brings forth profound changes among the M.M.R. in terms of acceptance, social relationships, behavioural characteristics and academic performance. In the society, people's attitudes are changing fast with a demand thrust on educationists, administrators and teachers to cater to the educational needs of the M.M.R. The Government and NGOs are taking efforts to emphasize the input of integrated education from pre-school level onwards. Successful integrated education is possible only through capacity building of teachers. Certainly teachers trained to handle the M.M.R. would contribute favourably to their development to the extent possible and feasible.

Methodology

III. METHODOLOGY

This research on 'Capacity Building of the Teachers in Educating the M.M.R. Primary School Children' was accomplished in three phases and the methodology is presented under the following heads:

A. Phase I: Identification and Assessment

B. Phase II: Preparation of Training Package

C. Phase III: Implementation and Evaluation of the Training Programme.

Figure I reflects the research design in a nutshell.

A. Phase I: Identification and Assessment

The major tasks included in Phase I were

1. Location of the Area
2. Selection of Primary Schools, Children and Teachers
3. Screening and Identification of M.M.R. Children
4. Pilot Study and
5. Assessment of M.M.R.

1. Location of the Area

The Directorate of Social Welfare, Government of Tamil Nadu and the Department of Rehabilitation Science, Holycross College, Trichy had made a survey of the disabled in Tiruverumbur block of Trichy District in 1991 and pinpointed a high incidence of mentally retarded cases in the Panchayat Union primary schools of the block. Parental unawareness of

FIGURE I
RESEARCH DESIGN AT A GLANCE

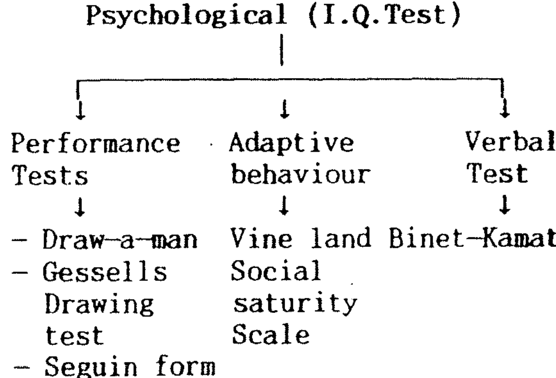
PHASE I

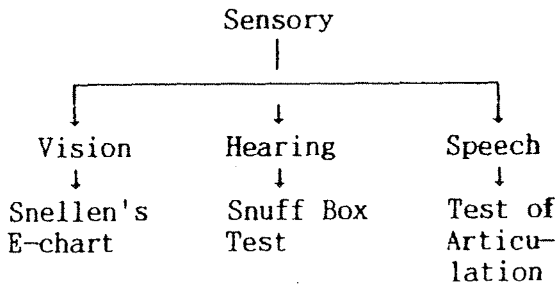
IDENTIFICATION & ASSESSMENT

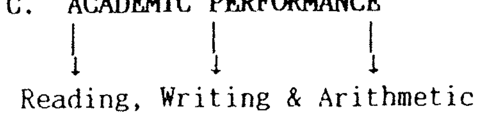
A. SURVEY & IDENTIFICATION

1. Area: Rural
2. Sample: 33 M.M.R. Children
   30 Panchayat union Primary schools
   20 Primary School Teachers
3. Tools and Techniques
   a. Interview Schedule
   b. Observation
   c. Checklist
   d. Questionnaire

B. ASSESSMENTS







PHASE II

TRAINING PACKAGE COMPONENTS

1. Ready Reckoner
2. Manual for Teaching
3. Story: "Mouna Erul" (Silence in darkness)
4. Song:"Vindhai Chaium Vithakar" (wonder workers)
5. Profile of a M.M.R. child
6. Game: Magic Ladders

PHASE III

IMPLEMENTATION OF TEACHERS TRAINING AND EVALUATION

1. Preparation of training modules
2. Conducting Training Programme
3. Assessment of the training
   a. Teacher's knowledge and practice
   b. Academic performance of M.M.R. children Reading, Writing & Arithmetic
   c. Teachers views on training and training package

the need to send the mentally retarded to school, poor social environment, a high percentage of adult illiteracy filled with myths and misconceptions towards the mentally retarded and non-availability of adequate educational supportive services for the M.M.R. in particular were the highlights of the study that offered a basis for the researcher to select Tiruverumbur block for this study.

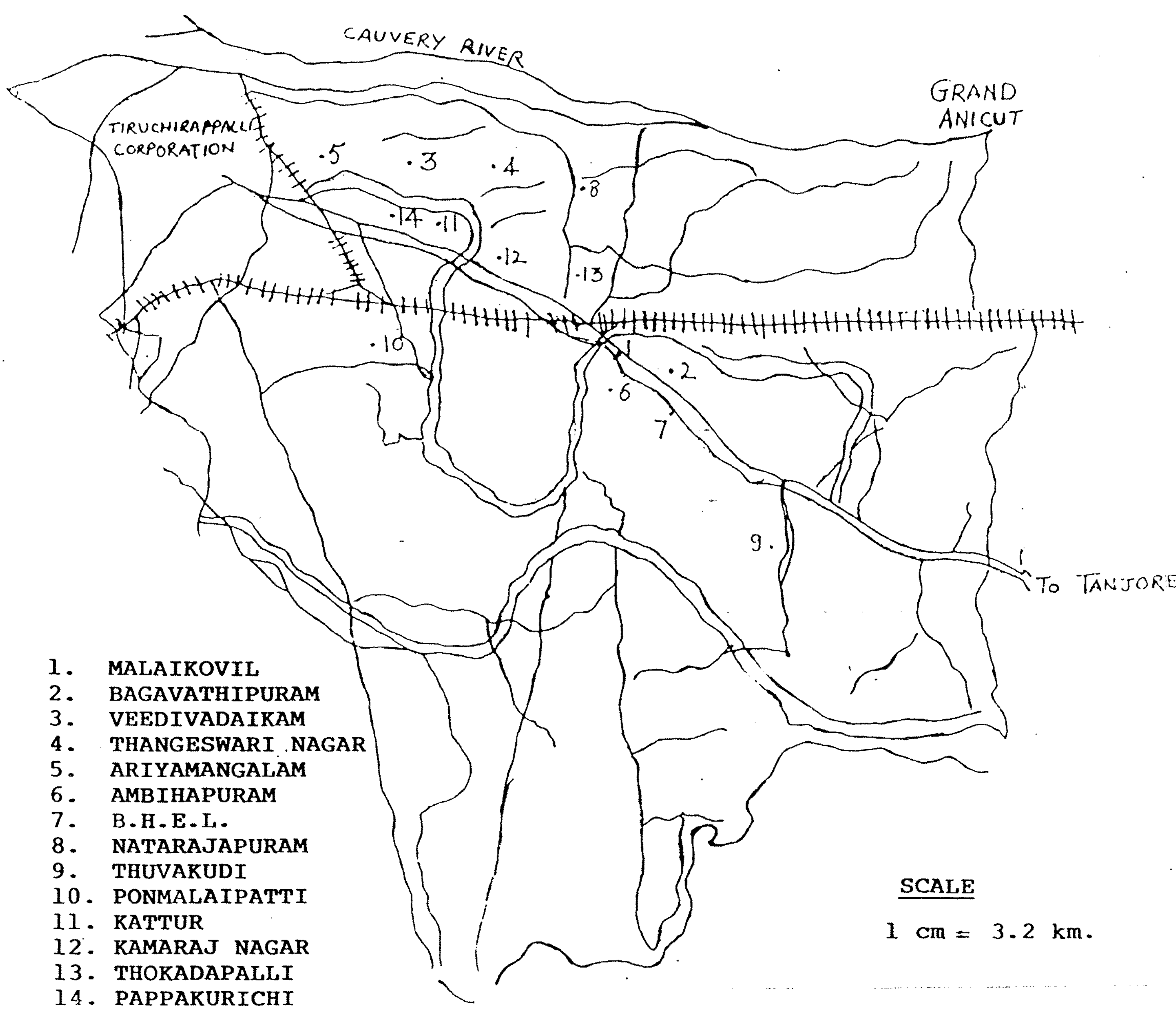
2. Selection of Primary Schools, Children and Teachers

To start with, the investigator contacted the Chief Educational Officer and obtained permission to choose the Panchayat Union Primary Schools of Tiruverumbur block, Trichy District, Tamil Nadu for this study. From the District Educational Office, the investigator collected the addresses of all the Panchayat Union Primary Schools in Tiruverumbur block. Totally there were 60 primary schools in the block. Including all the schools was not possible due to distance and operational difficulties. As simple, random sampling - lottery method is a very popular method of taking a random sample (Gupta, 1987), the investigator employed this method to enlist 30 schools from the list. Of the 30 primary schools, only 14 schools that reported cases of M.M.R. children were selected. The location of the 14 schools selected in Tiruverumbur block is shown in Figure 2.

Initial visits to schools in Tiruverumbur block was undertaken to establish rapport and understand the extent of

FIGURE 2.

SCHOOLS SELECTED IN TIRUVERUMBUR BLOCK



integration of the M.M.R., in the Primary Schools. In the selected schools, totally 33 M.M.R. cases were screened. They hailed from 20 classes from I to V standards handled by 20 different primary school teachers. The lists of schools, names of the teachers and M.M.R. children screened in the schools are presented in Appendix I.

The 20 teachers who had M.M.R. children in their classes from the 14 schools were the core group purposefully selected for capacity building in this study. All these teachers were in the age range of 35-45 years; had completed secondary grade teacher training except one who had B.A. degree. All of them had more than fifteen years of experience. These teachers had received orientation training organised in 1991, by the State Council of Educational Research and Training, Madras on integration of the disabled, specially the visually impaired and hearing impaired.

3. Screening and identification of M.M.R. children

A simple proforma given in Appendix II was used with the primary school teachers to screen the disabled children of all categories in Panchayat Union Primary schools of Tiruverumbur block. Observation method being advantageous in eliminating subjective bias was found to be ideal for this study, as it deals with children who are not capable of giving verbal reports for one reason or the other. Hence,

those who were reported to be M.M.R. in screening by the teachers were further observed by the investigator using a checklist (Appendix III) to have a further check in terms of their individual characteristics and behaviour in the class room environment in particular.

Parents of these children were also interviewed to collect further information on their family type, type of marriage, family income, their education and occupation using an interview schedule shown in Appendix IV.

4. Pilot study

Pilot study is often conducted to determine the feasibility of the major study. It is the preliminary or exploratory attempt which is a try out of the tools and procedures on a small scale in order to determine whether or not a purpose of the research would be fulfilled. Hence, the investigator, in order to finalise the tools for the present study undertook a pilot study with M.M.R. children belonging to I to V standard in a rural primary school at Vadgarpet. Psychological assessment, assessment of sensory functions and also assessment of academic performance in reading, writing and arithmetic were tried out and the pros and cons of test tools were observed carefully. Their reliability was ascertained and the tools were finalised for use in the study.

5. Assessment of M.M.R.

Assessment is a multifaceted process which gives clean cut information on the extent of disability/retardation and insights on the strength and weaknesses of a child. The most crucial exercise in Phase I of this study included assessment of I.Q. level and sensory problems if any, along with the academic performance of the identified children.

a. Assessment of Intelligence Quotient (I.Q.)

It has been demonstrated that the standardised intelligence test is a moderately reliable technique to measure intellectual aspects of human behaviour. Intelligence testing is a basic measure to adjudge the degree of retardation in an individual and hence a series of performance tests, a verbal test and an adaptive behaviour scale were used to assess I.Q., of the children who underwent screening, to confirm the degree of retardation. The rationale behind choosing these three groups of tests was that Intelligent Quotient or adaptive behaviour capabilities by itself is not sufficient to confirm the extent a child is mentally retarded.

The A.A.M.D. (1983) in it's definition of mental retardation has notified the importance of social adaptation as well as general intelligence, as a determiner of mental retardation and the need for assessing I.Q., and adaptive behaviour, to get a wholistic picture of the intellectual

functioning of a child. Hence in this study, three non-verbal tests, namely Seguin Form Board test, Draw a man test and Gesell's Drawing Test warranting performance, Binet Kamat test to assess verbal performance and Vineland Social Maturity scale to judge adaptive behaviour.

The tests were conducted with the help of a psychologist, to ensure accuracy and objectivity. Figure 3 illustrates administration of these tests and Appendix V details the psychological tests administered to the identified children. The I.Q. of these children assessed fell within the range of 50-75 and hence they were confirmed to be in the category of the M.M.R.

b. Assessment of sensory functions

Mental retardation is a condition with the possibility of associated problems in sensory functions. Hence, after the psychological assessment a series of tests on vision, hearing and speech (Appendix VI) were done to find out if the identified M.M.R. had specific visual, hearing or speech problem. Visual functioning was tested using the Snellen's E-chart (Figure 4) speech was tested with the test of Articulation (Figure 5) and hearing was tested with an indigenous test (Figure 6) evolved by the Department of Rehabilitation Science, Trichy (1989).

Figure 3

ADMINISTRATION OF PSYCHOLOGICAL TESTS

Draw-a-man

Binet-Kamat

Seguin form board

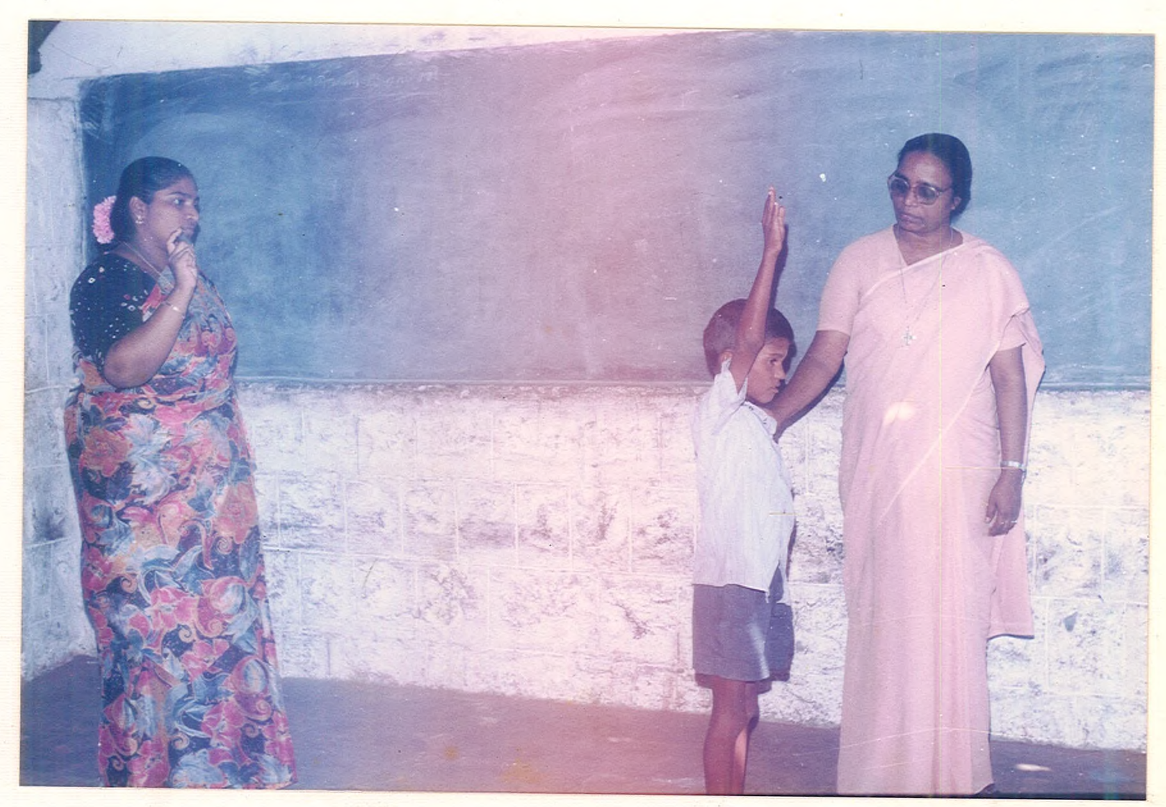
Figure 4
TESTING VISION

Figure 5

TESTING SPEECH

Figure 6

HEARING BEING TESTED



c. **Assessment of Academic Performance of the M.M.R.**

At the pre and post-training level of the teachers of the M.M.R. an assessment was done to know the level of the M.M.R. in reading, writing and arithmetic through a test conducted based on the content of the test book of the respective classes. The details of the test given are in Appendix VII.

B. **Phase II: Preparation of Training Package**

Preparation of training package for teachers, revision and finalisation were the predominant tasks of Phase II.

The investigator prior to designing the materials for the training programme held discussions with experts in the field of mental retardation, undertook visits to different institutions and training centres for mentally retarded and also attended seminars, workshops and short term courses on material preparation, training the teachers and other care takers of the mentally retarded. The useful insights gained thereby helped the researcher to develop a comprehensive package of interesting materials.

The training package (Figure 7) included:

1. Ready Reckoner
2. Manual for Teachers
3. The story 'Mawna Erul' (Audio cassette)
4. Songs (Audio cassette)
5. Case profile and
6. Game 'Magic Ladders'.

Figure 7

TRAINING PACKAGE

The materials were prepared in English and later translated into Tamil to cater to the needs of primary school teachers except the story "Mawna Erul" and the song which were prepared only in Tamil to make it appealing to a large section of teachers who knew Tamil better.

1. Ready Reckoner

Understanding mental retardation does not stop with creating an awareness. Identification, education and referral are the most important activities which teachers have to be made familiar with. Hence, a Ready Reckoner, which is a brief calendar like schedule, was prepared by the researcher to provide simple and comprehensive information on the classification, causes of mental retardation, methods of detection of different types of the retarded, educational consideration and referral services for the M.M.R. This Ready Reckoner (Appendix XIII) is envisaged to be an adequate guide in helping teachers in the process of screening, identification and referral of the M.M.R. in primary schools.

2. Manual for teachers

In order to furnish the regular teachers with adequate information on the teaching approaches for the M.M.R. a manual was included in the material package. The "manual for teachers" to educate the M.M.R. (Appendix IX) is a comprehensive presentation of facts on the need for

educating the M.M.R. basic educational approaches supplemented with model lessons. It is hoped that this manual would be a handy tool not only for teachers to learn the concepts of educating the M.M.R. but also for the grass root level workers.

3. The story "Mawna Erul"

Any information in the form of story is an effective means of communication as it easily captures the mind and registers the information. An informative story "Mawna Erul" (Appendix X) was written and recorded on an audio cassette. The story portrays the plight of a young M.M.R. boy "Vasanth" placed in a normal school, the hardship and problems he encounters and finally his relief recovery due to the effort of a regular teacher. This story in particular drives home the problems faced by the M.M.R. children in the society, if they do not receive timely attention and educational support. The story also highlights ways and means of handling and teaching them, their behavioural characteristics which have to be considered and the methods of referrals to help them receive supportive services. In short, this story was prepared with the primary objective of motivating the teachers to accept and help the M.M.R. children in schools and educate them with compassion and love.

4. **Songs (Wonder workers)**

The first song composed, focussed on the special qualities of M.M.R. children and calls for universal acceptance and love towards them. The cassette exclusively portrays the desire of the child to be a part of the educational stream.

In response to the demanding needs of the children, the second song promises the teachers' commitment and dedication towards the M.M.R. to help them become productive citizens. These two songs (Appendix XI) composed in Tamil were recorded on an audio cassette.

5. **Case profile 'Being Born Different'**

To help primary school teachers to be aware of strengths and weaknesses of the M.M.R. children and guide them in the right perspective, a different innovative short styled descriptive approach was followed, in which an interesting case profile titled 'Being Born Different' (Appendix XII) was designed. This totally different approach was followed to instill in the minds of the teachers, a more positive way in treating and understanding the mentally retarded than the other methods.

6. **Game-Magic Ladders**

Recreational pursuits, especially games are effective tools in bringing about the desired change. This motivated the investigator to develop " Magic Ladders",

MAGIC LADDERS

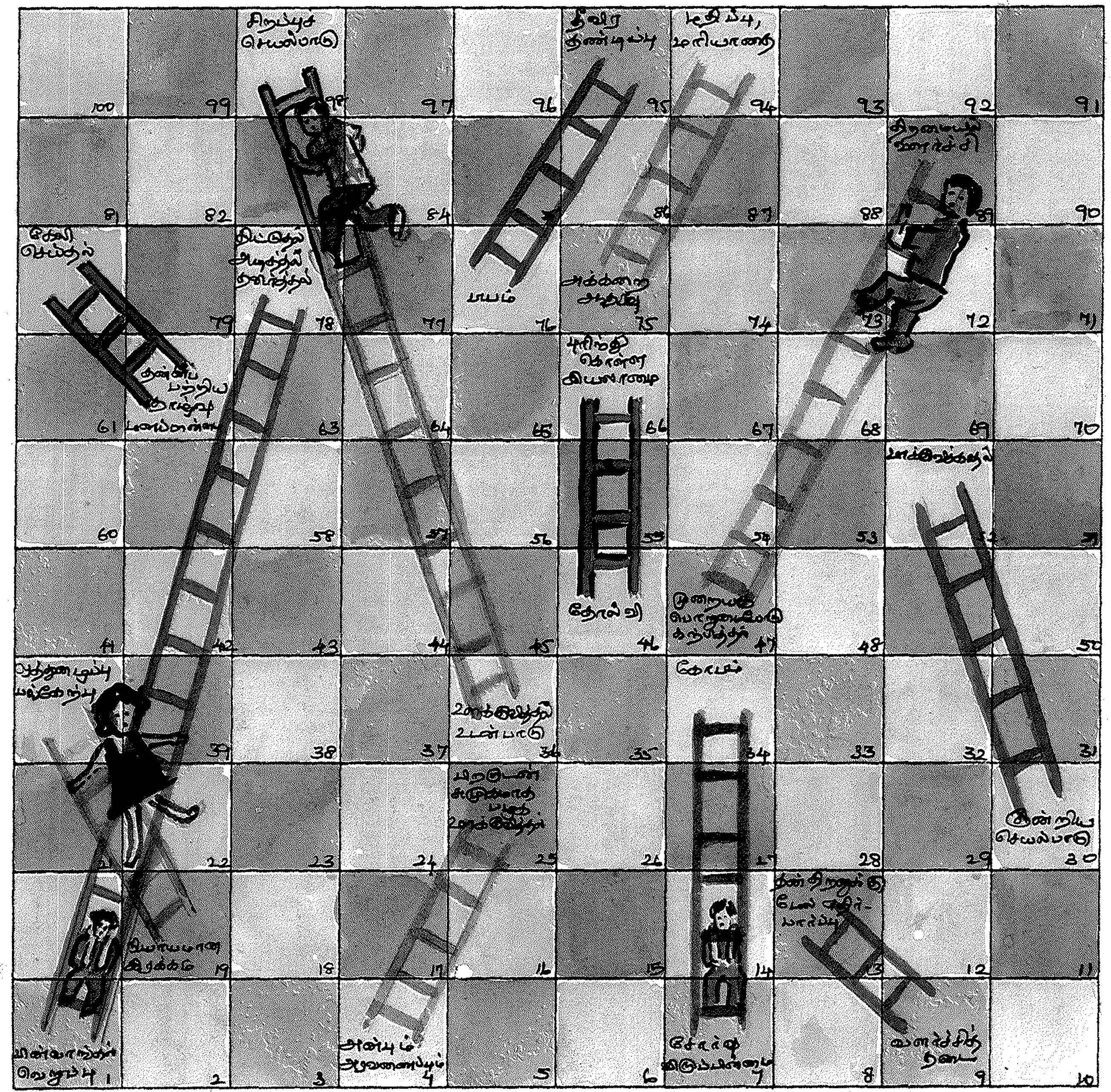


Figure 8

game as shown in Figure 8. The traditional game depicts the importance of motivating and encouraging the teachers to aspire for positive ways and means of handling the M.M.R. resulting in better behaviour and development. The procedural details of the game are given in Appendix XIII.

C. Phase III: Implementation and Evaluation of the Training Programme

Implementation and evaluation were the salient features of Phase III. The tasks of this phase entailed.

1. Preparation of training modules
2. Conducting training programme
3. Impact of the training programme on teachers and children and
4. Analysis of data.

1. Preparation of training modules

Well prepared modules would ensure desired goal. The researcher enlisted topics in terms of modules (Table I) and scheduled talks and demonstrations taking into account the needs of the teachers and the frame of each activity. The modes and techniques of conveying the information and also supplementary resources and supportive aids available were stated clearly.

TABLE I

TRAINING MODULE

Sessions/ No. of days	First	Second	Session Third	Fourth	Fifth
I	*Objectives of training *Concepts of Mental retardation	*Mental retardation *Causes *Characteristic	*M.R. classification *Prevalence and associated problems	*Concept of Integrated Education Programme (I.E.P.) for the Disabled *Role of regular teachers in I.E.P.	Integrating M.M.R. - in schools - in family and - in the community
Training Methodology/ Aids	Slides	*Photographs and real cases	*Ready Reckoner	*Song - Audio cassette	Video cassette
II	*Need to change attitudes of parents and teachers. *Role of N.G.O's and Government organisation	*Cognitive development among the M.M.R.	*Types of assessment *Procedure for identification *How to identify M.M.R.	*Teaching strategies for M.M.R. *Motivation and effective use of resources	*Behaviour problems among the M.M.R. children and behaviour modification
Training Methodology/ Aids	*Story *Audio casette	*Video cassette	*Participatory discussion	*Brain storming *Game: Magic Ladders	*Participatory group work
III	*Educational models of Integrated education *Role of inter-disciplinary team in integrated education	*Techniques for teaching Reading, Writing and Arithmetic for M.M.R.	*Individualising education *How to prepare I.E.P. *Group learning	*Group instruction	*Preparation of lesson plan

Training Methodology/ Aids	*Participatory discussion	*Teachers manual	*Participatory discussion	*Video cassette	*Participatory discussion
IV	*Preparation of lesson plan for Reading	*Preparation of lesson for writing	*Preparation of lesson plan for Arithmetic	*Material preparation and creative art	*Techniques for repetition and over learning
Training Methodology/ Aids	Practicals with presentation and discussion			*Demonstration and discussion	*Problem solving
V	Observation on teaching the M.M.R. - Case studies and experience			*Motivational methods in educating the M.M.R.	*How to identify and develop talents among the M.M.R.
Training Methodology/ Aids	Observation and 'hands on' experiences			*Participatory discussion	*Photographs
VI	Review of what to do and what not to do with the M.M.R.	*Evaluation of materials prepared - Songs - Stories and - Games for the M.M.R.	*Involvement of parents and peers in training the M.M.R.	*Self evaluation *Assessing the knowledge of teachers	*Evaluation of training programme
Training Methodology/ Aids	Review Discussion	'Do and learn' method	Participatory discussion	Questionnaire	Brain storming

2. **Conducting training programme**

Organisational planning for training ensures successful outcomes. Carefully enough, prior to the training, the investigator formally obtained the permission from the District Educational Officer to invite the selected primary school teachers (20) for the training. The training was conducted for a period of one week. The researcher pre-planned the activities for 30 hours to create an awareness among teachers regarding integrated education and also train them to help the M.M.R. in school. Experts in Special and Integrated Education delivered talks in Tamil on topics suggested in the training module. The talks were supplemented with case presentations, audio and video cassettes, sharing of experiences, group discussions and visit to institutes for the mentally retarded. Figure 9 illustrates the training events in action.

3. **Impact of the training programme on teachers and children**

Training in educating the M.M.R. primary school children was organised in order to build capabilities of the primary school teachers. The first part of the evaluation comprised of adjudging teachers' knowledge before and after training using a questionnaire given in Appendix XIV.

After training the teachers and allowing a gap of one year duration for implementation, the methods and practices

Figure 9

TEACHER TRAINING IN ACTION

handled by the teachers to educate the M.M.R. was elicited through a questionnaire shown in Appendix XV.

The academic performance of the M.M.R. was adjudged in three areas using reading, writing and arithmetic tests developed by the researcher, for each of the three areas, as mentioned earlier. The performance in each of the tests was evaluated by attributing scores.

Besides this, the marks scored by M.M.R. child in the quarterly, half-yearly and annual examination conducted by the teachers were also recorded to know their level of improvement over a period of one year after the teacher training.

Teachers' views on training package designed to educate and effectively handle the M.M.R. were gathered to know the efficacy of the materials prepared.

4. Analysis of data

Percentages are commonly used to represent data quantitatively as they provide a uniform basis for comparison. Percentage was applied to this study to discuss data collected on the handicapped age wise, class wise and sex wise, and also to represent teachers' knowledge of the mentally retarded and their practice of educational approaches.

The paired 't' test is considered appropriate in a before and after treatment study and hence was applied to test the effectiveness of the training programme on scores gained by the teachers for their knowledge, reading, writing and arithmetic scores of the children before and after their teachers training. The detail of the paired 't' test is given in Appendix XVI.

Limitations of the study

1. The M.M.R. could not be drawn from a particular class/ school/background and this study could be done only with 20 rural primary school teachers who were handling the M.M.R. in the selected schools.
2. In view of the limited period available to the researcher, the outcomes of teachers' training could be adjudged over a period of one year only.

Results and Discussion

IV. RESULTS AND DISCUSSION

The study on "Capacity Building of the Teachers in Educating the Mildly Mentally Retarded Primary School Children" was accomplished in three phases. The first stemmed with screening, identification and assessment followed by development of material package to educate and equip the primary school teachers in the second phase.

Implementation and evaluation of the training programme characterised the third phase of the study. The effectiveness of the training programme was studied through an evaluation of teacher's knowledge and practice of educational approaches with the M.M.R. children. While, evaluation of teachers' knowledge was done subsequent to the training programme, evaluation on their educational practices with the M.M.R. was undertaken a year after the training programme. The academic performance and social responses of the M.M.R. were also adjudged before and after their teachers' training.

The findings of the study are presented and discussed under the following headings:

A. Profile of Disabled Children in Selected Schools

B. Impact of the Training Offered to the Teachers and

C. Teacher's Views on Training and Training Package.

A. Profile of Disabled Children in Selected Schools

Prevalence of disabled children was surveyed in 1991 under the auspices of Government of Tamil Nadu and Department of Rehabilitation Science, Holy Cross College, Trichy. This data was perused to compare the same with that of 1993 survey undertaken by the researcher.

1. Disabled children in Tiruverumbur Block

Table II presents sex wise distribution of the disabled children in the primary schools of Tiruverumbur block according to 1991 and 1993 survey.

TABLE II

DISABLED CHILDREN IN TIRUVERUMBUR BLOCK - SEX WISE

S. No.	Category	Sex					
		Male		Female		Total	
		1991 N=6184	1993 N=6385	1991 N=6190	1993 N=6328	1991 N=12374	1993 N=12713
1.	Orthopaedically handicapped	84(1.36)	58(0.9)	53(0.85)	27(0.42)	137(1.11)	85(0.67)
2.	Mildly mentally retarded	33(0.53)	18(0.28)	17(0.27)	15(0.23)	50(0.40)	33(0.26)
3.	Visually impaired	26(0.42)	17(0.26)	16(0.25)	15(0.23)	42(0.34)	32(0.25)
4.	Hearing impaired	16(0.25)	5(0.08)	15(0.24)	8(0.12)	31(0.25)	13(0.10)
	Total percentage	2.55	1.52	1.0	1.0	260(2.10)	163(1.28)

Note: Number in parenthesis denotes percentage to total

The prevalence rate of the major categories of disabled in the selected thirty schools of Tiruverumbur block in the year 1991 and 1993 shows that the number of disabled in all the major categories have decreased over the years.

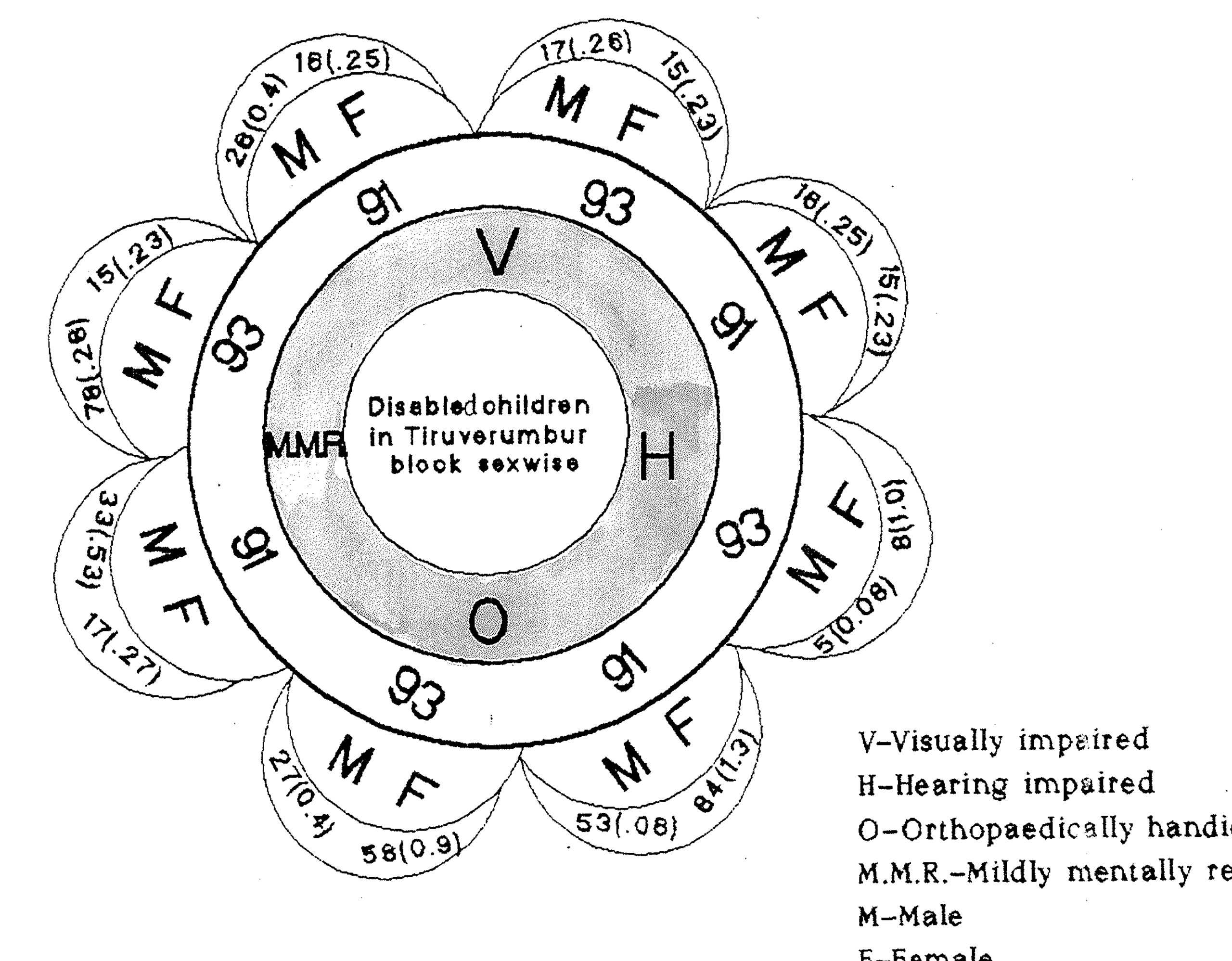
The number of orthopaedically disabled was high both in 1991 and 1993 than the other categories (Figure 10). There were eighty four boys and 53 girls in 1991 and 58 boys and 27 girls in 1993. Mentally retarded were the second largest group, the number being 50 in 1991 and 33 in 1993. Visually impaired stood third with a total of 43 in 1991 and 32 in 1993. Hearing impaired were however, the least both in the year 1991 and 1993.

Both in 1991 and 1993, lesser number of female children were orthopaedically handicapped than male children. Perhaps the efforts taken to protect children through immunisation has resulted in such a positive outcome.

According to Daniel (1991), a number of studies carried out in the developed countries put the incidence of mental retardation at 2 to 4 per cent of the school going population. The Lucknow study which was based on the administration of psychological tests, disclosed a prevalence of 2.25 per cent. On the other hand the Agra and Calcutta study showed a prevalence rate of 0.37 per cent. The prevalence rate in the present study is 1.28 per cent against 2.1 per cent in the survey done in 1991. However,

FIGURE - 10

Disabled children in Tiruverumbur block - Sexwise



V-Visually impaired
H-Hearing impaired
O-Orthopaedically handicapped
M.M.R.-Mildly mentally retarded
M-Male
F-Female

much more drastic reduction and alleviation of handicapping conditions need to be brought through early intervention programme, of which education is a significant dimension.

2. Disabled children - Class wise

The number of disabled children class wise and age wise was not available in 1991 survey. Table III shows the number and category of the disabled children class wise from I to V std, according to 1993 data obtained by the researcher.

TABLE III

DISABLED CHILDREN IN TIRUVERUMBUR BLOCK - CLASS WISE

S. No.	Class	Total strength of classes (1993)	Number of Visually impaired	Hearing impaired	Orthopaedic handicapped	Mentally retarded	Total	Total%
1.	I Standard	2641	7(0.3)	2(0.07)	7(0.3)	10(0.4)	26	0.98
2.	II Standard	2347	4(0.2)	3(0.1)	13(0.5)	9(0.4)	29	1.23
3.	III Standard	2542	9(0.4)	3(0.1)	11(0.4)	5(0.2)	28	1.10
4.	IV Standard	2472	5(0.2)	2(0.07)	30(1.2)	3(0.1)	40	1.61
5.	V Standard	2711	7(0.3)	3(0.1)	24(0.8)	6(0.2)	40	1.47
	Total	12713	32	13	85	33	163	1.28

Note: Number in parenthesis denotes percentage to total

A total of 12,713 primary school children studying in classes of I to V standard were screened to identify the various disabilities, of which a total of 163 children were found out amounting to 1.28 cases for every 100 primary school population.

Overall picture reveals that in IV and V standards each, there were 40 disabled children which was more by 13 than in the case of I, II and III standards. The number of orthopaedically disabled were about two and a half times more than the M.M.R. and visually impaired and six and a half times more than the hearing impaired. Perhaps more of the orthopaedically disabled are sent to schools while the mentally retarded children are not sent to school by the parents.

The class wise distribution of the disabilities in all the 14 schools revealed that mentally retarded were ten in class I followed by seven cases of visually impairment and orthopaedical disabilities each and two cases of hearing impairment. In class II, III, IV and V, orthopaedically handicapped numbered 13, 11, 30 and 24 respectively. Mentally retarded and visually impaired formed the second largest number in each class, averaging between 5 and 10 in classes II, III, IV and V. Hearing impaired were the least in all the primary classes the number being 2 to 3. The trend shows that in I and II standards there were more

mentally retarded. The reason for this may be attributed to the fact that the M.M.R. not being able to cope up with studies and due to repeated failures dropout before reaching IV or V Standard. Guha (1995) views that with early identification and appropriate education during the early years, most children with M.M.R. can learn to function at higher levels. The finding of this study also reflects the same trend.

3. Disabled children - Age wise

Table IV presents the number of various handicapped in the age range of 5 to 15 years, according to the data collected in 1993.

TABLE IV

DISABLED CHILDREN IN TIRUVERUMBUR BLOCK - AGE WISE

		Number of disabled children - Age wise				
S. No.	Age group	Visually impaired	Hearing impaired	Orthopaed-ically disabled	Mentally retarded	Total
1.	5-7	7	6	10	16	44
2.	8-10	13	4	38	10	62
3.	11-15	12	3	37	7	57
	Total	32	13	85	33	163

Out of 163 disabled children identified in primary school population, incidence of M.M.R. was high among 5 to 7

years (16) and 8 to 10 years (10) than in the age group of 11 to 15 years (7).

The number of orthopaedically handicapped was 38 and 37 in the age group of 8-10 and 11-15 years respectively. The number of hearing impaired ranged 6 to 3 in the various age groups. As in the case of orthopaedically disabled, the visually impaired were more in the age group of 8-15 years. The number of orthopaedically disabled was two and a half times more than the hearing impaired. The number of children with hearing impairment was much lower (13) than all the other categories.

4. Profile of M.M.R. children - physical features and behavioural characteristics

Table V presents the physical features and behavioural characteristics among the M.M.R. identified in primary schools.

TABLE V

PROFILE OF M.M.R. CHILDREN-PHYSICAL FEATURES AND BEHAVIOURAL CHARACTERISTICS

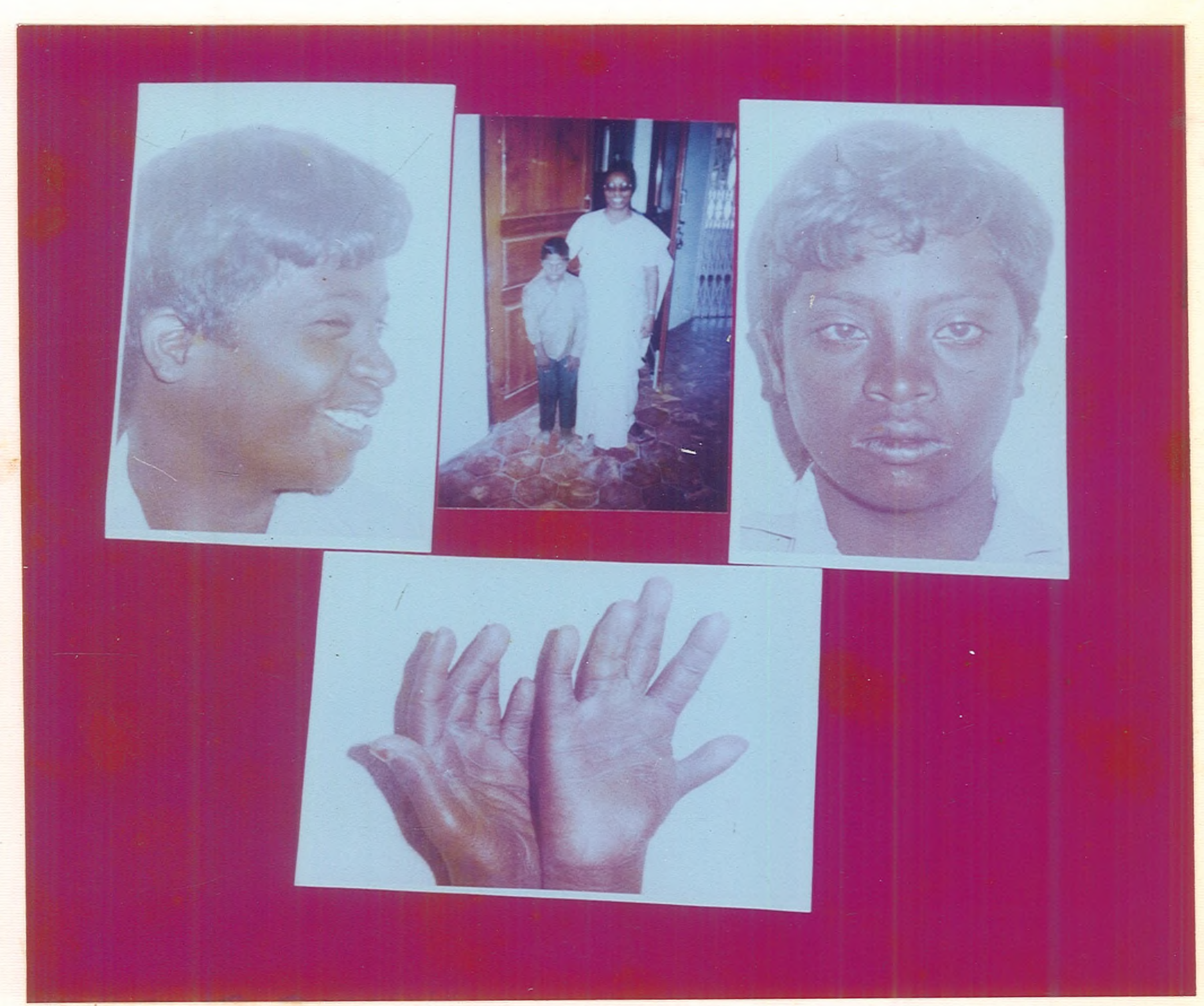
S.No.	Observed traits	Percentage (N=33)
I.	**Physical features** (Figure 11)	
	High cheek bones	45
	Large head	30
	Slanting eyes	27
	Protruding tongue	21
	Low set ears	15
	Small head	15
	Flat nose	12
	Open mouth	9
	Drooling	9
	Few fissures in the palm	6
II.	**Behavioural characteristics**	
	Poor attention span	100
	Social isolation, shy and withdrawn	72
	Language and speech problems	60
	Temper tantrums	27
	Hyperactive	27
	Self injurious behaviour	18

The obvious facial features and physical signs observed among the 33 identified M.M.R. children varied considerably. While some children had two or more features reported in the table, few had no obvious facial features.

In 45 per cent of the cases, high cheek bones were noted. Large head was noticed in 30 per cent and slanting eyes were seen in 27 per cent of the cases. Twenty one of them had protruding tongue, 15 per cent had low set ears and small head and 12 per cent had flat nose. The mouth was

Figure 11

PHYSICAL FEATURES OF THE M.M.R.



constantly kept open with drooling in the case of nine per cent of the children. Few fissures in the palm were noticed in six per cent of the mentally retarded.

As for behavioural characteristics, observations brought forth the fact that all the M.M.R. children had limited attention span in the learning tasks due to lack of concentration. Social isolation, shyness and withdrawal tendencies were noticed in 72 per cent of the M.M.R. cases. Language and speech problems like substitution, addition, distortion and omission of words were seen in 60 per cent of the M.M.R. Hyperactive tendencies and temper tantrums were observed in 27 per cent of the children. Eighteen per cent of them exhibited self injurious behaviour.

5. Family background of M.M.R. children

Family background has a vital role in the educational training of M.M.R. The parents of M.M.R. children were interviewed to know their details. Table VI shows the family details of M.M.R. children.

TABLE VI

FAMILY PROFILE OF THE M.M.R. CHILDREN

S. No.	Particulars		Details	Families (N=33)	Percentage
1.	Education	- Fathers	Illiterates	18	55
			Upto 5 Std	15	45
		- Mothers	Illiterates	19	58
			upto 5 Std	14	42
2.	Occupation	- Fathers	Farming	7	21
			Wage earners	17	51
			Small vendors	9	28
		- Mothers	Wage earners	21	64
			Petty business	12	36
3.	Annual income of family		Rs. 5000 and below	8	24
			Rs. 5001-10000	18	55
			Rs. 10001-15000	5	15
			Rs. 15001-20000	2	6
4.	Type of family		Nuclear	28	85
			Joint	5	15
5.	Type of marriage		Consanguineous	18	55
			Non-consanguineous	15	45

Eighty five per cent of M.M.R. children were from nuclear families, while the rest belonged to joint families. With regard to annual income, majority of the families (55%) had an annual income of five to ten thousands. Twenty one per cent of the families had a slightly better income that ranged from Rs. 10001/- to Rs. 20000/-. The remaining 24 per cent had an annual income of Rs. 5000/- and less being below poverty line.

The question on type of marriage elicited that 55 per cent of the M.M.R. were born to parents who had consanguineous marriages. A study by Kumar (1991) in Kerala attribute 20.3 per cent cases of consanguineous marriages among the parents of M.M.R. children, while this study revealed 55 per cent of cases of M.M.R. with the presence of parental consanguinity.

The high percentage of M.M.R. children being born to the parents with consanguineous marriage pindown the need to educate people especially in rural areas to avoid it in order to curtail the chances of mental retardation in their off springs.

The family background of the identified M.M.R. children enabled the investigator to understand them better. The teachers of these M.M.R. children were trained by the investigator and other experts for a period of one week on educating the M.M.R. in integrated settings.

B. Impact of the Training Offered to the Teachers

The impact of the training offered to the teachers was judged in terms of knowledge and practices of the teachers and improvements in academic performance of the M.M.R., by comparing them at pre and post training level. The knowledge gained by the teachers was assessed immediately after the training, while the practice of the teachers and the academic performance of the M.M.R. was assessed over a period of one year.

1. Knowledge of the teachers - pre and post training level

Knowledge of teachers was adjudged through a questionnaire that elicited responses on components such as identification of M.M.R. children and teachers role and potentials of the M.M.R. presented as under.

a. Parameters for identification of the M.M.R. children

Table VII depicts the teachers' responses on the parameters by which the M.M.R. children can be identified.

TABLE VII

PARAMETERS FOR IDENTIFICATION OF THE M.M.R. CHILDREN

S. No.	Parameters	Number in percentage Before training (N=20)	After training (N=20)
1.	Difficulty in comprehending	30	90
2.	Limited attention	15	90
3.	Disinterested in normal activities	15	80
4.	Peculiar physical features	15	60
5.	Difficulty in responding	10	90
6.	Slow and inactive	10	60
7.	Difficulties in learning	10	96
8.	Poor self help skills	5	55
9.	Poor memory	5	70
10.	Isolated and withdrawn	5	50
11.	Need frequent repetition	5	80
12.	Restlessness	-	45

From the above table,it is clear that only very few teachers (15-30%) had identified the M.M.R. in the primary classes before they participated in the training programme. Thirty per cent of the teachers had identified M.M.R. based on their difficulties in comprehension, 15 per cent of the teachers identified them by peculiar physical features, limited attention span and lack of interest to get involved in activities. Five to ten per cent of the teachers mentioned that they identified the M.M.R. by their nature of getting isolated and withdrawn, difficulties in the learning process and poor memory.

However after training, the number of teachers responding were as high as 90 per cent mentioning difficulties in comprehending and limited attention. Less interest in normal activities was stated as a parameter by 80 per cent of the teachers. Fifty to 70 per cent of the teachers reported tendencies of isolation and withdrawal, poor memory, peculiar physical features and poor self help skills. After the training, 45 per cent of the teachers were aware of restlessness as a mark of mental retardation. Through the training the teachers appeared to have imbibed information on basic symptomatic features of the M.M.R. children.

b. Causes of mental retardation known to the teachers

Table VIII reveals the major causes of mental retardation known to the primary school teachers before and after the training of teachers.

TABLE VIII

MAJOR CAUSES OF MENTAL RETARDATION

S. No.	Causes	Number in percentage Before training (N=20)	After training (N=20)
1.	Cause not known	30	-
2.	Deprivation and poor home environment	20	80
3.	Attempted abortion	15	25
4.	Intake of drugs	10	50
5.	Brain fever	10	25
6.	Consanguineous marriages	5	75
7.	Failure to immunise	-	90
8.	Maternal infections	-	90
9.	Birth defect	-	55
10.	Malnutrition of the mother	-	50

Mental retardation is a condition resulting due to a magnitude of varying factors. A knowledge of predominant causes are essential in order to serve the mentally retarded better. The selected teachers of this study responded on causes of mental retardation before and after their participation in the training.

MAJOR CAUSES OF MENTAL RETARDATION KNOWN TO TEACHERS

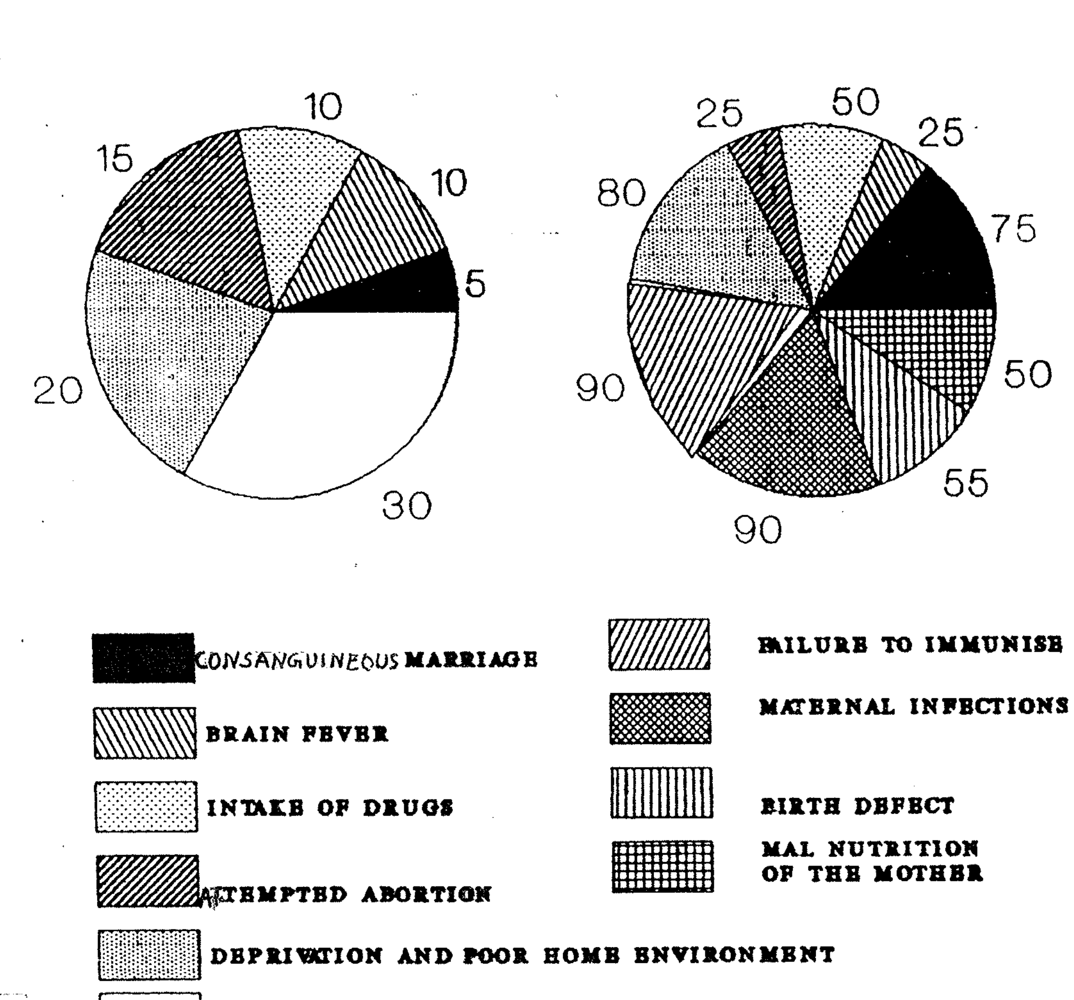


FIGURE 12.

Prior to training nearly 30 per cent of the teachers did not specify any cause due to lack of awareness (Figure 12). On the other hand, after training they showed increased awareness in that, 75 to 90 per cent knew that elements of consanguinity, deprivation and poor home environment, maternal infections, failure of immunisation are factors that might lead to mental retardation. Those who attributed mental retardation to be due to brain fever, attempted abortions, intake of drugs, malnutrition in the mother and birth defects ranged 25 to 50 percentage.

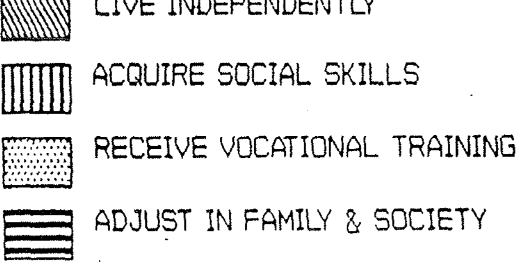
Obviously the training programme had broadened the perspective of the teachers on the etiological factors and had helped them to be more specific on the causes of mental retardation.

c. Education of the M.M.R.

Education of the retarded in integration is an inevitable necessity. All the teachers (100%) agreed that the M.M.R. must receive education. Table IX and Figure 13 highlight the teachers' views on the need for educating the M.M.R.

FIGURE - 13
TEACHERS VIEWS ON EDUCATING THE M.M.R.

100
90
80
70
60
50
40
30
20
10
0



SOLVE PERSONAL PROBLEMS
LEARN BASIC ACADEMIC SKILLS
ACCEPT THE DISABILITY
KNOW THEIR RIGHTS

TABLE IX

TEACHERS' VIEWS ON EDUCATING THE M.M.R.

S. No.	Views	Number in percentage Before training (N=20)	After training (N=20)
	Education of the M.M.R. is necessary:		
1.	Live independently	100	100
2.	Acquire social skills	30	85
3.	Receive vocational training	20	60
4.	Adjust in family and society	20	60
5.	Solve personal problem	10	20
6.	Learn basic academic skills	-	80
7.	Accept the disability	-	60
8.	Know their rights	-	50

All the teachers (100%) responded that education was essential to help the M.M.R., live independently and 85 percent acclaimed that it is a must to aid them acquire social skills. Enabling the M.M.R. to acquire vocational training and adjustment in family and society were stated by 60 percent of the teachers as against 20 per cent prior to the teacher training.

Helping the M.M.R. acquire basic academic skills, know their rights and accept their disability were additional dimensions perceived by 80, 60 and 50 per cent of the teachers respectively as an outcome of the training. There seems to be positive change in the teacher's mind as to why education is necessary in regular schools for the M.M.R.

d. Educational rights of the M.M.R.

Equalisation of opportunities and the principles of equal rights of education to all is the earnest hope of social welfare activists and programmes throughout the world. Figure 14 reveals teacher's views on the educational rights of M.M.R.

Education as a right for M.M.R. was conceded by only 45 per cent of the teachers prior to training against 80 per cent of the teachers who became sure of the educational rights of the M.M.R. The fact that they are part of the society was felt by 15 per cent of the selected teachers initially as against 85 per cent in the post training level. The number of teachers who considered the M.M.R. as fullfledged members of the society and require an effective learning environment was highly striking after the training, with the number increasing eight fold and six fold respectively.

Probably the teacher's views in this study aligns with that of Damodar (1992) who exhorted that the most outstanding achievement of any training must lead to the acceptance of universal, compulsory, secular and free education for all children irrespective of caste, creed, sex or ability and especially for the M.M.R. children to whom it is the fundamental right and a basic necessity.

FIGURE 14

THE EDUCATIONAL RIGHTS OF THE M.M.R. CHILDREN

BEFORE TRAINING	THE M.M.R.	AFTER TRAINING
(45%)	1) HAVE EQUAL RIGHTS TO GET EDUCATED AS OTHER NON-DISABLED PERSONS	(80%)
(15%)	2) IS PART OF THE SOCIETY	(85%)
(15%)	3) HAVE LESS PROBLEMS IN THE COMMUNITY IF EDUCATED	(80%)
(10%)	4) SHOULD BE SEEN AS FULLFLEDGED MEMBERS OF THE SOCIETY	(80%)
(10%)	5) NEED EFFECTIVE LEARNING ENVIRONMENT AS THAT OF NON-DISABLED CHILDREN	(80%)

e. Integrated education for the M.M.R.

Education of persons with disabilities in the normal set up forms an integral part of rehabilitation. Table X and Figure 15 represent teachers' perceptions on integration of the M.M.R. in normal schools.

TABLE X

INTEGRATION OF THE M.M.R.

S. No.	Views on integration	Number in percentage Before training (N=20)	After training (N=20)
Positive Views:			
Integration:			
1.	Prevents inferiority complex	40	80
2.	Is necessary to progress in life	35	80
3.	Enables them to compete with normal peers	35	75
4.	Prepares them to be a part of the society	30	80
5.	Promotes social interaction	20	60
6.	Enhances learning	15	45
7.	Is a service for the mentally retarded	15	25
Negative Views:			
8.	Demands constant attention, supervision and hence cumbersome	15	-
9.	Requires a lot of time for repetition	15	-

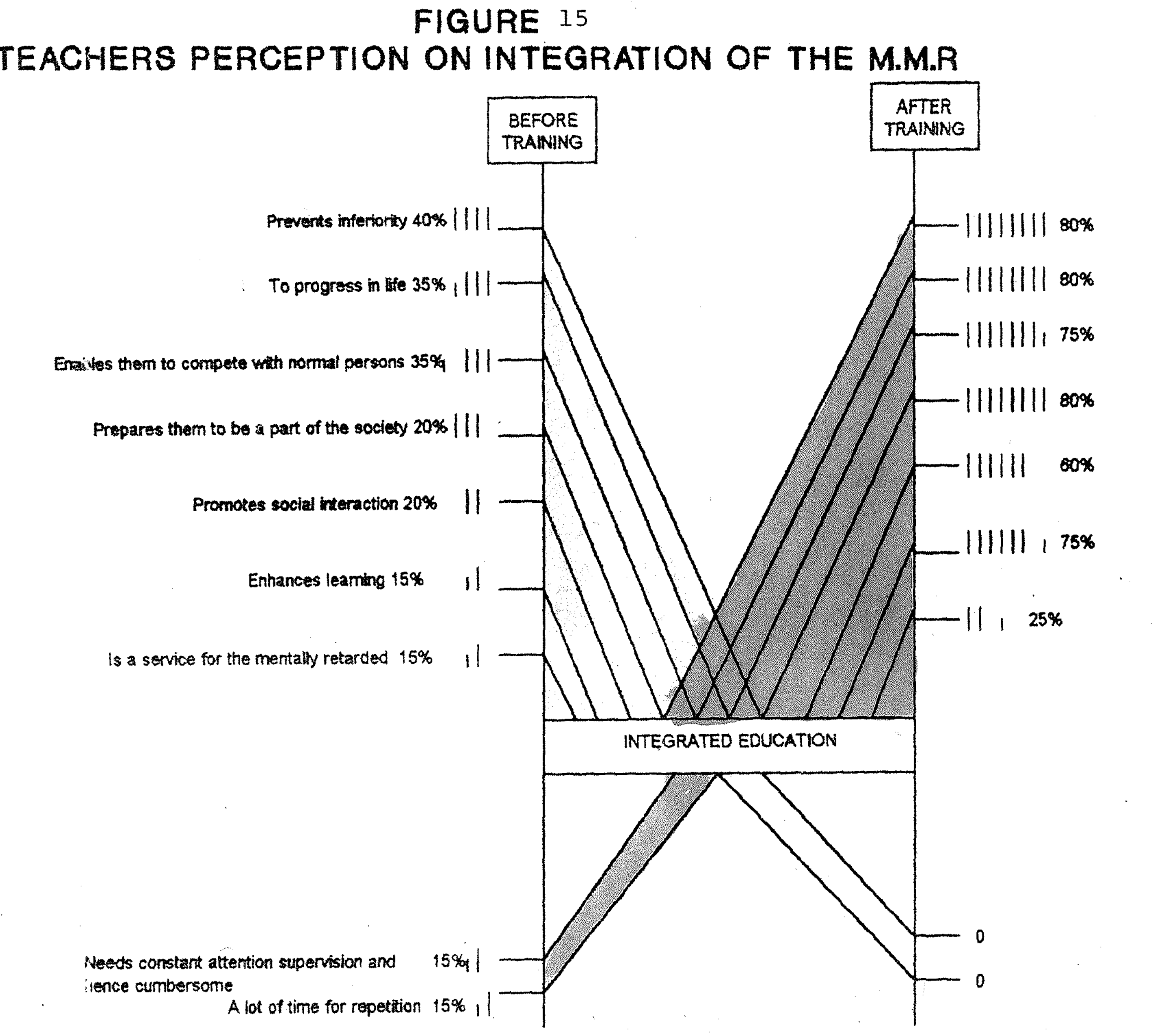


FIGURE 15
TEACHERS PERCEPTION ON INTEGRATION OF THE M.M.R

It is remarkable that the teachers selected for the study viewed Integrated Education for the Disabled (I.E.D.) more positively. The seven positive views held by the teachers even before they participated in the training reflect that there is considerable awareness on the scope of I.E.D. among a few teachers. It is appreciable that the positive views were imbibed after their training by more than twice the number of the teachers at the initial stage.

The two negative views put forth by 15 per cent of the teachers initially were that integrated education for the M.M.R. is a cumbersome task as the M.M.R. need constant supervision and attention and they require a lot of time for repetition individually in the class room context. However, after training, the teachers seem to have accepted these issues as part of educational process overlooking energy and time crisis. Malka (1993) has reported that initially regular teachers were adverse to integrated education but after in-service training, they developed competency and expertise to handle the M.M.R. children. In tune with Malka's finding this study also reflects that the teachers' views gain favourable concepts towards integrated education after undergoing specific training which is an encouraging trend that needs augmentation and replication.

f. Perception of teachers' role towards the M.M.R.

Teachers have definite roles to play in teaching M.M.R. children. Table XI represents teacher's role in teaching the M.M.R. as specified by the selected teachers of this study.

TABLE XI

ROLE OF A TEACHER IN EDUCATING M.M.R.

S. No.	Views	Number in percentage Before training (N=20)	After training (N=20)
Teachers need to:			
1.	Prepare more teaching aids	45	60
2.	Spend extra time for planning	40	65
3.	Take special efforts	30	40
4.	Prepare step by step tasks	25	70
5.	Know how to assess M.M.R.	-	70
6.	Prepare curriculum based on individual child	-	75
7.	Counsel and guide parents of M.M.R.	-	75

After training, 60 per cent of the teachers were of the view that the preparation of the descriptive teaching aids for M.M.R. is an important responsibility of the teacher as against 45 per cent of them saying so initially. Prior to the training 45 per cent of teachers viewed that the M.M.R. demand a lot of time and effort from the teachers and the number increased to 65 per cent after training. As against

30 per cent before training, 40 per cent realised the need for giving special attention and effort to teach them after the training. The need for preparing tasks in a step by step method (Task analysis) was clearly viewed as an effective teaching methodology by 70 per cent of the teachers after the completion of training, while only 25 per cent said so prior to the training.

The teachers were not aware of the importance of assessing the M.M.R. and planning the curriculum based on individual needs of M.M.R. children, the necessity of counselling and guiding the parents of these children before they underwent the training. After the training 70 to 75 per cent of the teachers perceived that these roles were essential. Probably the training programme had instilled positive changes in the knowledge of teachers and motivated them to educate the M.M.R. The same view is supported by Vedeller (1992) emphasising that teachers should explore new avenues and use materials and effective low cost aids to the maximum to make the teaching-learning situation effective for children.

g. Teacher's knowledge scores

In order to arrive at quantitative assessment of teachers' knowledge, as part of qualitative assessment, the teachers were also given ten objective type of questions relating to each of the areas such as identification,

specific aspects of mental retardation, adapting materials and methodologies, planning and mobilizing resources and role of teachers/professionals. The total scores attributed were 50. The mean scores derived from the answers were tabulated and statistically treated by paired 't' test as shown in Table XII.

TABLE XII
KNOWLEDGE SCORES OF TEACHERS

S. No.	Areas tested	Maximum marks	N=20 teachers score obtained		S.D.		't' value
			Before training	After training	Before training	After training	
1.	Identification	10	4.3	8.5	0.78	0.73	17.576*
2.	Specific aspects about mental retardation	10	5.0	8.75	0.67	0.55	28.137*
3.	Adopting materials and methodologies	10	4.5	9.0	0.87	0.58	17.544*
4.	Planning and mobilizing the available resources	10	5.5	9.5	0.49	0.36	28.472*
5.	Role of teachers/ professionals	10	4.55	9.5	0.69	0.43	27.347*
	Total	50	23.85	45.25	-	-	-

* Significant at 5 per cent level

The calculated 't' value between the pre and post level knowledge scores of the teachers was significant at five per cent level. The findings revealed a significant gain in the knowledge of teachers towards M.M.R. after they had undergone the training.

Donaldson's study (1980) on the varied components in the in service training and preparation of regular teachers for implementing integrated education of the M.M.R. pinpoint clearly, areas such as getting to know the handicapped in general, specific knowledge about the mentally retarded, planning the available resources, identifying the roles of professionals and adapting materials and resources for I.E.D. In accordance with components suggested by Donaldson, in this study too, the researcher offered the training programme in the essential areas which has probably substantiated teacher's knowledge towards educating the M.M.R. and its related issues as proved statistically.

2. Educational practices of teachers pre and post training level

In order to study the outcomes of the training, the teachers were approached after a gap of one year with intermittent interaction and guidance. The Individualized Educational Programme (I.E.P.) planned and executed for the M.M.R. and motivational methods followed were elicited from the teachers. The supplementary aids/materials prepared and used by them for class room teaching were noted.

a. I.E.P. Implementation by Teachers

I.E.P is instrumental in effectively planning and teaching M.M.R. Table XIII represents I.E.P. implemented by the teachers for the M.M.R.

TABLE XIII

DETAILS OF I.E.P IMPLEMENTED

S. No.	Details	Concepts	Number in percentage (N=20)
1.	Arithmetic	**Teaching**	
		- Number concept	65
		- Addition of numbers	60
		- Subtraction numbers	60
		- Money concept	45
		- Division	45
		- Length, height and weight of objects	45
2.	Vocabulary (new words)	**Teaching**	
		- One's name	70
		- Parent's name	65
		- Address	65
		- Functional words	65
		- Environmental words	50
		- Survival words	45
3.	Craft work	**Teaching**	
		- Vegetable printing	55
		- Cotton printing	55
		- Crayon work	50
		- Clay modelling	50
		- Thread painting	50
		- Leaf painting	50
		- Collage	50
		- Folding	50
		- Cutting	50
		- Paper mache	45

Prior to training, the teachers had not practiced I.E.P. Encouragingly all the primary school teachers spent time in preparing and implementing I.E.P. to teach the M.M.R. after training. As for arithmetic, 60-65 per cent of the teachers prepared I.E.P. to teach concept of numbers, addition and subtraction while 40-45 per cent taught money concepts, multiplication, division and metric measurements such as length, weight and height.

Sixty five to 70 per cent teachers had adopted I.E.P for vocabulary teaching. The M.M.R. had been taught name, address, parents' name and functional words. Survival words and environmental words had been taught through I.E.P. by 45-50 per cent of the teachers. Forty five to 55 per cent of the teachers had also used I.E.P. to teach, art and craft such as vegetable printing, cotton printing, crayon work, clay modelling, leaf painting, collage, paper folding, cutting and paper mache.

Evelyn (1995) contends that the preparation of I.E.P. and implementing it in teaching various concepts to the M.M.R. is the most essential component of a successful educational programme for them. The results of this study too highlights that the I.E.P., as a practical method has enabled the teachers to carefully plan and teach essential concepts to the M.M.R. successfully even though they had to spend a lot of time and effort. Most of the teachers had

done it confidently and with conviction. This aspect probably reflects on the adequate motivation offered to the teachers through the training programme.

b. Peer involvement in educating the M.M.R.

Peer involvement is an effective teaching strategy for repetition and overlearning. Peers' help and participation is very useful in enhancing the learning skills of M.M.R., especially in an integrated set up.

Table XIV represents the areas of peer involvement in learning.

TABLE XIV

PEER INVOLVEMENT IN EDUCATING THE M.M.R.

S. No.	Views	Number in percentage Before training (N=20)	After training (N=20)
I.	**Learning**		
1.	Seat work (Dictation, copying)	10	55
2.	Writing notes	10	60
3.	Coaching in lessons	5	50
4.	Spelling exercise	-	50
5.	Group reading	-	50
II.	**Extra curricular activities**		
1.	Games	10	60
2.	Craft work	5	55
3.	Art activity	5	55

Subsequent to training, the post evaluation a year after, revealed a distinct difference of peer help received

in teaching the M.M.R. Fifty to 60 per cent of the teachers had involved peers to aid the M.M.R. in group reading, seat work namely dictation and copying, writing notes, coaching in lessons and spelling exercises as against 5-10 per cent teachers before training.

There was a big shift and increase by 50 per cent in the number of teachers who took peer help in games, craft work and art activities. The influence of the training programme in convincing the teachers about the involvement of peers in getting the M.M.R. learn to the extent possible and feasible is an appreciable element and hence pins down the need to replicate such training to the large community of primary school teachers.

c. Motivational strategies used with M.M.R.

Positive strategies motivate and enhance children's performance. While, 50 per cent of the teachers had motivated the M.M.R. before training, 90 per cent responded favourably after the training. Table XV represents methods adopted by teachers to motivate the M.M.R.

TABLE XV

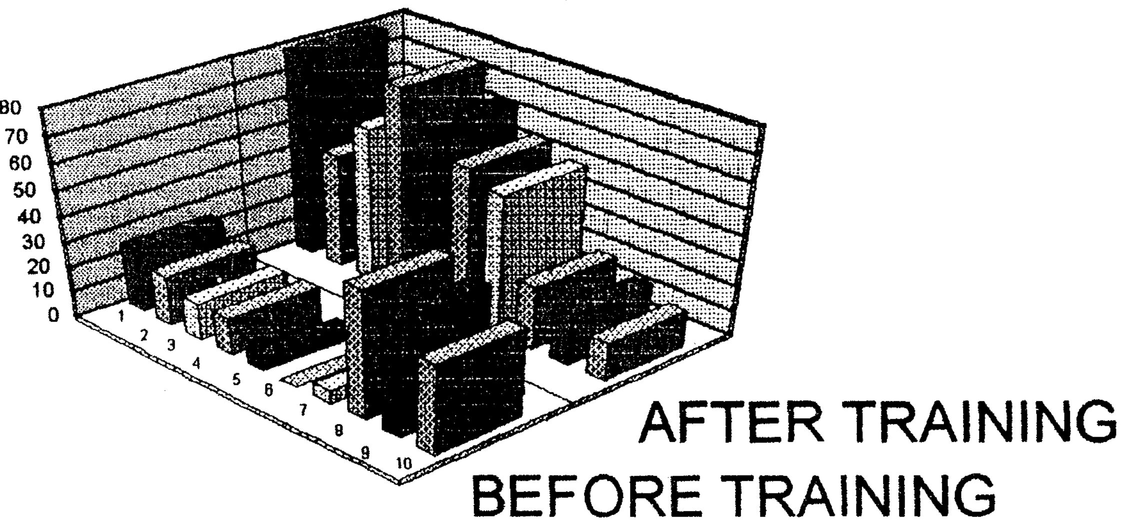
METHODS OF MOTIVATION ADOPTED BY TEACHERS

S. No.	Methods adopted	Number in percentage (N=20) Before training	After training
	Positive methods		
1.	Recognition through verbal praise	25	80
2.	Activity reinforcers like asking the child to be the leader for the day, collecting books of the classmates, reading for the class, minding the class	20	45
3.	Clapping	15	60
4.	Patting	15	80
5.	Giving material reinforcers like chalkpiece, pencil, eraser etc.	5	70
6.	Making the M.M.R. sit in the front row	–	60
7.	Involvement in co-curricular activities	5	55
	Negative methods		
8.	Being very strict	50	25
9.	Verbal reprimands	45	20
10.	Beating	35	15

Prior to training only 25 per cent of the teachers had used verbal praise to motivate the M.M.R., while after the teachers underwent training, the number increased three fold (80%). Reinforcers like assigning the child to be the leader

FIGURE 16

MOTIVATIONAL APPROACHES ADOPTED BY TEACHERS



1. VERBAL PRAISE
2. ACTIVITY REINFORCERS
3. CLAPPING
4. PATTING
5. MATERIAL REINFORCERS
6. FRONT ROW SEAT
7. INVOLVEMENT IN CO-CURRICULAR ACTIVITIES
8. BEING VERY STRICT
9. VERBAL REPRIMANDS
10. BEATING

for the day, collecting books from classmates, reading passages from a lesson had been adopted by 45 per cent of the teachers against 20 per cent of them initially (Figure 16).

Clapping and patting by others encourage children to be more active and involved in class work. Fifteen per cent of the teachers had used this technique before training and about 60 per cent and 80 per cent of them encouraged through clapping and patting especially the M.M.R. after training. Motivating children by giving chalk piece, pencils and erasers was practiced by a remarkably high number of teachers (70%) after training. Prior to training only five to 15 per cent of the teachers who involved the M.M.R. children in extracurricular activities. This increased by 50 per cent after training. Making the M.M.R. sit in the front row in the class in order to draw their attention is a noteworthy procedure adopted by 60 per cent teachers after training.

Prior to the participation in training, the negative strategies like being very strict (50%), using verbal reprimands (45%) and beating (35%) were practiced by about 50 per cent.

d. Supplementary aids and materials used by the teachers

Supplementary aids and materials are very essential for teaching M.M.R. in an effective way. Table XVI depicts the supplementary aids and materials used by teachers before and after training.

TABLE XVI

SUPPLEMENTARY AIDS AND MATERIALS USED

S. No.	Supplementary aids used	Number in percentage (N=20) Before training	After training
1.	Black board	50	90
2.	Charts and drawings	40	70
3.	Real objects	-	60
4.	Picture cards	-	40
5.	Models	-	40
6.	Indigenous materials	-	40
7.	Puppets	-	20

Visual aids, auditory materials and other supportive measures are often a pleasant source to foster easy learning, especially in children with limited intellectual functioning. The teachers' response to the use of supplementary aids revealed that prior to training only 40 to 50 per cent of them used visual charts and blackboard.

One of the sessions in their training was devoted to material preparation, using locally available and cost effective measures. Most of the teachers, after training, favoured the use of aids in that 90 per cent of the teachers used the blackboard, 70 per cent used charts, 60 per cent

used real objects, 40 per cent used picture cards, models and indigenous materials and 20 per cent made use of puppets, reflecting the favourable outcomes of the training programme. The finding also reinforces the concept that the primary school teachers are receptive to imbibing new ideas in educational practices.

e. Problems in educating the M.M.R.

Enquiry on problems in educating the M.M.R. brought forth answers from teachers as indicated below.

TABLE XVII

PROBLEMS IN EDUCATING THE M.M.R.

S. No.	Supplementary aids used	Number in percentage (N=20) Initial	Final
1.	Poor in reading and writing	80	80
2.	Unable to comprehend	70	60
3.	Repeated failures	65	50
4.	Very poor marks	60	50
5.	Disinterested	50	40
6.	Slow in progress	50	30
7.	Poor memory	45	30
8.	Difficulty in communication	30	25
9.	Socially less active, isolated	30	25
10.	Frequent absenteeism	20	20
11.	Aimless gazing	-	10

It has been an established fact that children with mental retardation encounter problems in academic tasks and are slow and low achievers in school programmes. The responses of the primary school teachers on the question of

academic problems of M.M.R. also revealed the same. Prior to training, 70 to 80 per cent of the teachers found retarded to be poor in reading and writing, poor comprehenders and ones who experienced repeated failures. However, after training, these problems were reported by 20 per cent less number of teachers. Before training 30 to 50 per cent of the teachers found that M.M.R. children were disinterested, slow in progress, had poor memory and difficulty in communication. But, after training such problems were reported by only 25 to 40 per cent of the teachers. Twenty per cent found the M.M.R. to be frequent absentees from school because these children were under medication. After training 10 per cent of the teachers identified the gazing nature of M.M.R. children.

The findings reveal that though the academic problems of M.M.R. persisted, there was a reduction in these because the teachers, after the training knew the art of handling the problems of these children and tackled them with more consideration and dedication. They clearly understood the problems and stimulated the M.M.R. using appropriate reinforcement strategies and educational methods.

f. Potentials of the M.M.R.

The outcomes of teacher training was also assessed in terms of teacher's ability to identify the potentials of the M.M.R. Table XVIII and Figure 17 reveals the potentials of the M.M.R. as identified by the teachers.

FIGURE 17

TALENTS IDENTIFIED AMONG THE M.M.R.

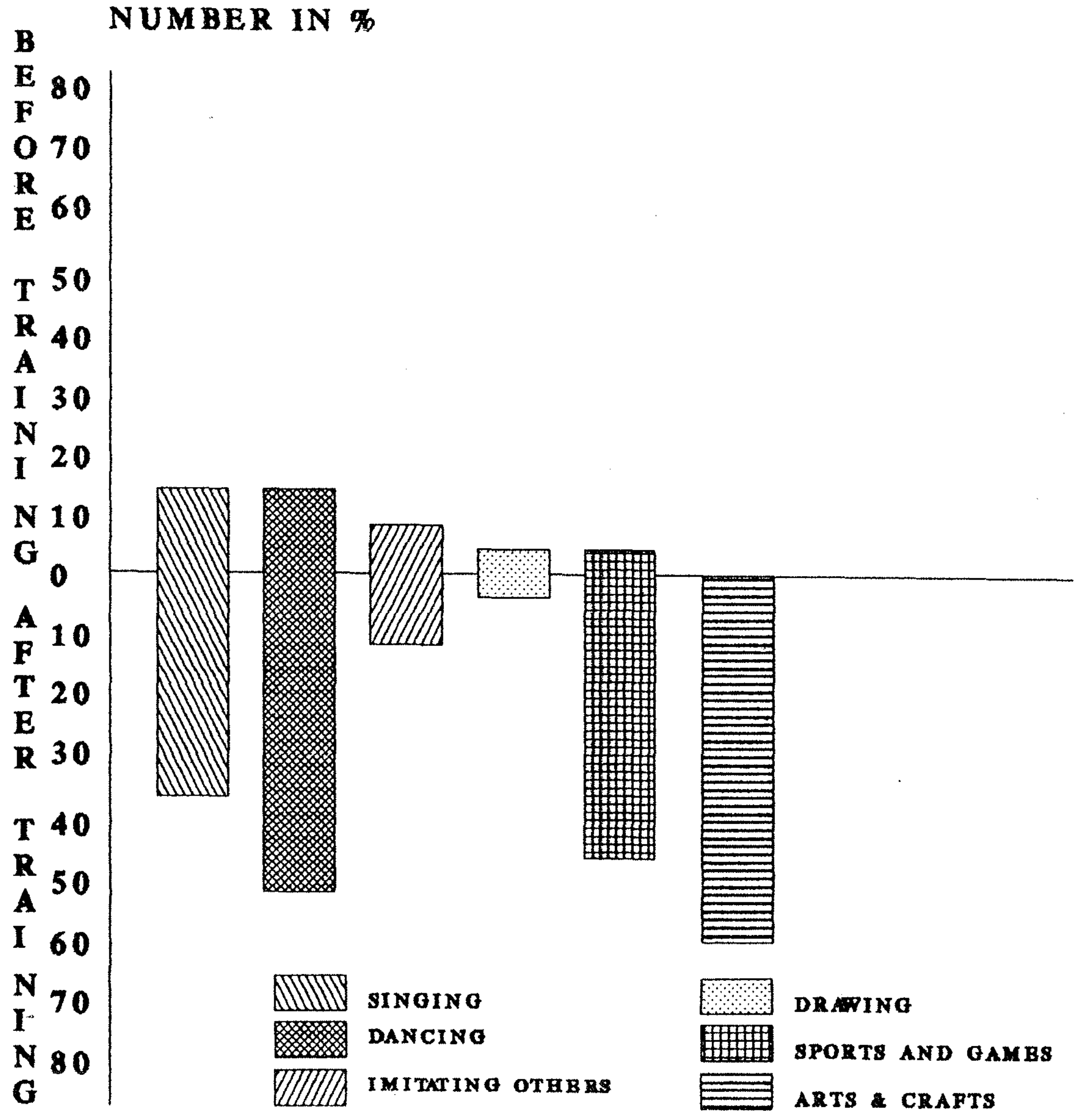


TABLE XVIII

TALENTS AMONG THE M.M.R.

S. No.	Talents identified	Number in percentage Before training (N=20)	After training (N=20)
	Good at		
1.	Singing	15	35
2.	Dancing	15	50
3.	Dramatization	10	10
4.	Drawing	5	15
5.	Sports and games	5	45
6.	Arts and crafts	-	55

Fifteen per cent of the teachers identified talents of the M.M.R. such as singing, dancing and others before training. But, after training these talents were identified by 35 per cent and 50 per cent teachers respectively.

Creative talents in arts and crafts of M.M.R. children were identified by teachers only after the training. The fact that more than half of the teachers (55%) made a mention of identification of the skills of the M.M.R. after their participation in the training substantiates the positive and favourable outcomes of the training organised for the teachers.

g. Labels attached to the M.M.R.

Positive and negative labelling have a deep impact on the minds of developing individuals. Table XIX reveals some of the common labels attached to the M.M.R. children by the primary school teachers.

TABLE XIX

LABELS USED BY TEACHERS ON M.M.R.

S. No.	Label used Before training	 After training
1.	Dull headed	You can do
2.	Monkey	You are a child
3.	Stupid	You have abilities
4.	Troublesome	Can change
5.	Good for nothing	Can improve
6.	Lazy	Can be active
7.	Idiot	Can be trained
8.	Problematic	Can be managed
9.	Truant	Can be regular

Labelling and stigmatisation are common features explicit among human beings in all spheres of life. The tendency to use derogatory labels towards the disabled can not be overestimated. In this study, the labels and negative stigmas used by primary school teachers with M.M.R. were brought to light. Prior to training, the teachers had ridiculed them by calling them as dull headed, monkey,

stupid, idiot, good-for-nothing, highly problematic and truant. However, a year after the training, the teachers had developed positive feelings and perceptions towards the M.M.R. The optimistic labels such as 'you can do', 'you can change' 'you can improve for the better', used by primary school teachers bear testimony to the positive effects of the training programme.

Such a positive change in the minds of teachers is possible through a well planned comprehensive training on all issues of educating the M.M.R. Hence, immediate efforts need to be taken by the Government to plan short term refresher training courses on education of the M.M.R. for all the teachers to ensure better learning environment for the M.M.R. in regular schools.

g. Social responses elicited from the M.M.R.

Initially the M.M.R. children identified were sitting without bothering about the next peer or the events going on in the classroom. Table XX enlists the social responses elicited from the M.M.R.

TABLE XX

SOCIAL RESPONSES OF THE M.M.R.

S. No.	Responses elicited	Number in percentage (N=20)	
		Before training	After training
1.	Comes along with peers to school	5	90
2.	Participates in play activities	5	80
3.	Takes message from one class to another	5	45
4.	Greets teachers	5	45
5.	Claps hands when somebody is appreciated	5	40
6.	Brings news from home to teacher	-	40
7.	Moves head or eyes to see the person nearby	-	40
8.	Gathers books from the classmates	-	50
9.	Pours water for the classmates and collects plates during lunch	-	50

The teachers were able to elicit better social responses from the M.M.R. after training. Perhaps genuine care and concern encouraged and enabled the M.M.R. to display the responses listed in the above table.

The changes in social relationship pattern of the M.M.R. in the school context after training may be due to the teacher's efforts to improve the social climate among the M.M.R. and their non-disabled peers. Eighty to 90 per cent of the M.M.R. participated socially by coming together

to school and playing together. Helping the classmates and sharing work, during lunch interval like serving food, washing plates etc., were done by 50 per cent of the M.M.R. There was also a strong sense of appreciation for the M.M.R. among their peers. Exchange of greetings with peers and teachers were noticed in 45 per cent of the M.M.R. Forty per cent of them were socially responsive in bringing news from home and also in responding to the call of outsiders and acknowledging their presence. These changes may be due to the recognition and acceptance of the M.M.R. by the teachers and also due to the supportive assistance of the non-disabled peers as the latter were involved to help the M.M.R. in their learning tasks.

h. Parent involvement

Parents are the best teachers of their children and parents' participation is vital in educating their children. Ways of teachers' involvement of parents of M.M.R. in school activities are shown in Table XXI.

TABLE XXI

PARENT INVOLVEMENT

S. No.	Ways of Involvement	Number in percentage (N=20) After training
1.	Interested in sharing child's progress	50
2.	Motivated the child to do home work	50
3.	Met teachers at school	50
4.	Discussed problems with the teachers	45
5.	Helps child to attend the school regularly	35

Before the training, since the teachers were not aware of the special needs of the M.M.R. children, they did not involve the parents in the education of their children. It was only after the training that teachers realised the significant role played by parents in the education of the M.M.R. children and hence steps were taken to avail of their cooperation in the educative process. The cooperation extended by parents in checking the progress of the child and motivating the M.M.R. to do home work was found to be beneficial. After training, 45 per cent of the parents contacted the teachers to discuss the child problems while 35 per cent of them evinced interest to send their children regularly to school. It is obvious from the above table that effective training and teaching of the mentally retarded requires committed support, involvement and cooperation from the parents of mentally retarded children. Fredrick (1995) also supports this view.

Though the teachers in this study have been able to involve the parents of the M.M.R. creditably over a period of one year, the link between parents and teachers especially in the case of M.M.R. needs to be enhanced in order to create favourable and adequate learning environment for each child.

3. Performance of the M.M.R. in reading, writing and arithmetic

The performance of M.M.R. in reading, writing and arithmetic was adjudged through a test developed for each class separately. The tests were administered at the end of the academic year.

a. Performance of the M.M.R. in reading, writing and arithmetic

The mean scores derived by the M.M.R. initially and finally were tabulated and statistically treated as shown in Table XXII.

TABLE XXII

PERFORMANCE OF THE MMR IN READING, WRITING AND ARITHMETIC

S. No.	Variable	Maximum	Mean scores Intial	Mean scores Final	S.D. Initial	S.D. Final	't' value
1.	**Total scores in**						
	Reading	50	18.33	23.45	6.01	8.12	7.974*
	Writing	50	21.39	29.18	4.94	7.73	10.008*
	Arithmetic	50	20.70	31.91	5.46	9.64	9.304*
	Mean		20.17	28.18			
2.	**Scores of boys**						
	Reading	50	18.06	23.44	5.93	8.23	6.212*
	Writing	50	21.94	29.28	5.53	8.76	6.305*
	Arithmetic	50	20.00	31.44	5.24	9.54	8.931*
	Mean		20.00	28.05			
3.	**Scores of girls**						
	Reading	50	18.67	23.47	6.30	8.29	4.889*
	Writing	50	20.73	29.07	4.23	6.58	8.192*
	Arithmetic	50	21.53	32.47	5.78	10.06	4.939*
	Mean		20.31	28.30			

* Significant at 5 % level

Overall final scores reveal 5, 8 and 11 points difference from that of the initial scores in reading, writing and arithmetic respectively. There was a difference of eight points in the mean scores. The scores obtained by boys and girls were similar.

The mean scores of the boys and girls prior to an after training were statistically treated using paired 't' test and was found significant at 5 per cent level.

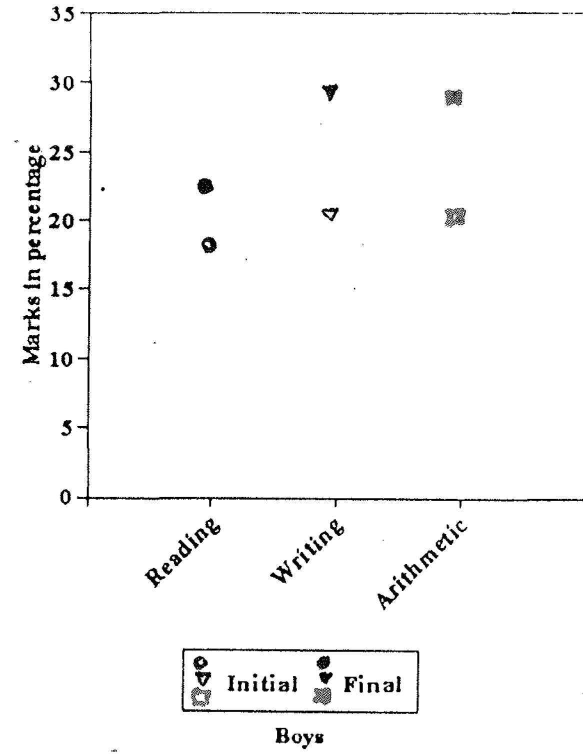
The findings (Figure 18) revealed that irrespective of gender difference there was an overall improvement in the performance scores of the M.M.R. in reading, writing and arithmetic after training, the reasons for which may be attributed to the training given to teachers on promotion of such basic skills among the M.M.R. It appears that the teachers paid greater attention towards educating the M.M.R. in the regular class after the training than earlier, when they did not have such a specific training.

Hence, the hypothesis that there is no significant difference in the reading, writing and arithmetic scores of boys and girls before and after the teachers training programme is disproved in this study.

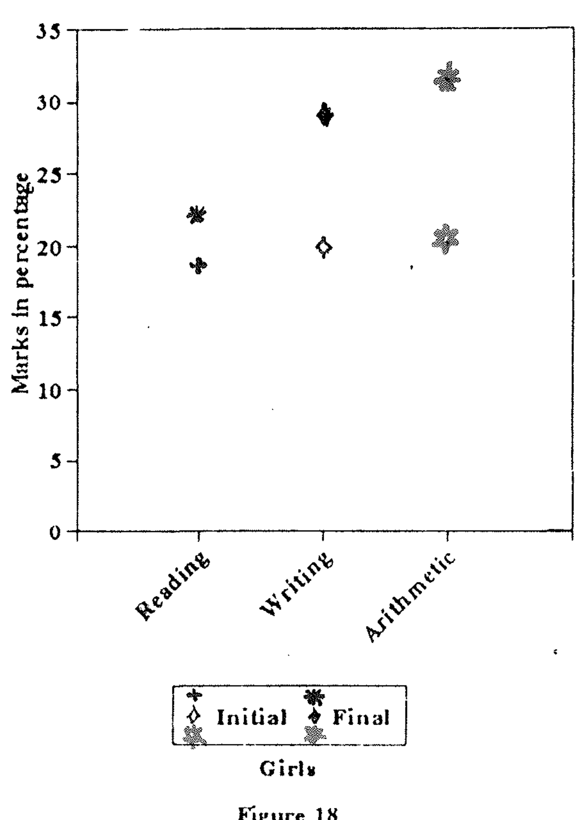
b. Levels of improvement of the M.M.R. children

Based on total marks scored by the M.M.R. in all subjects, in the quarterly, half-yearly and annual

PERFORMANCE OF THE M.M.R. IN READING, WRITING AND ARITHMETIC



Boys



Girls

Figure 18

examination obtained from the teachers, the level of improvement of each child was adjudged. Marks ranging from 5-10 was considered to have no improvement, marks between 11-20 in the category of minimal improvement and marks 21-30 marking good improvement. Marks obtained in the range 31-35 was assumed to be 'near pass' level. Table XXIII shows the level of improvement of the M.M.R. over the academic year.

TABLE XXIII

LEVELS OF IMPROVEMENT OF THE M.M.R.

S. No.	Levels of improvement	Range of marks	Number in percentage (N=20)		
			Quarterly	Half yearly	Annual
1.	No improvement	5-10	70	30	10
2.	Minimal improvement	11-20	20	30	10
3.	Good improvement	21-30	10	35	70
4.	Near pass	31-35	-	5	10

Regardless of the class in which the M.M.R. children studied, the first quarterly assessment revealed that 70 per cent of them showed 'no signs of improvement' with a total of 5-10 marks; 20 per cent showed 'minimal improvement' (11-20 marks) and 'good improvement' (21-30 marks) was noticed in ten per cent of the M.M.R.

The half-yearly examination performance revealed that 30 and 35 per cent showed minimal and 'good improvement'

respectively. No improvement was noticed in 30 per cent of the M.M.R., while five per cent were 'near pass' in their achievement.

The final assessment of the annual examination showed remarkable improvement. Seventy per cent got shifted to the category of 'good improvement' as against 25 per cent in the half yearly examinations. On comparison with the half-yearly marks, 'near pass' increased by five per cent in the annual examination.

The M.M.R. children appear to improve, though in their own phase and pattern as revealed in the number (10) who were able to secure 'near pass' with marks between 31 and 35 in annual examinations. The small but significant improvement achieved may be attributed to the teachers' new efforts and concern for the M.M.R.

C. Teacher's views on training and training package

Teachers' impressions brought forth on the training given to them are shown as excerpt bits in Figure 19.

The teachers feeling confident and proud of handling M.M.R., viewing that the training helped them to gain enthusiasm and privilege to serve the disabled, getting to know more useful practical hints such as peer tutoring and I.E.P. implementation stand to warrant the efficacy of the training planned and implemented in this study.

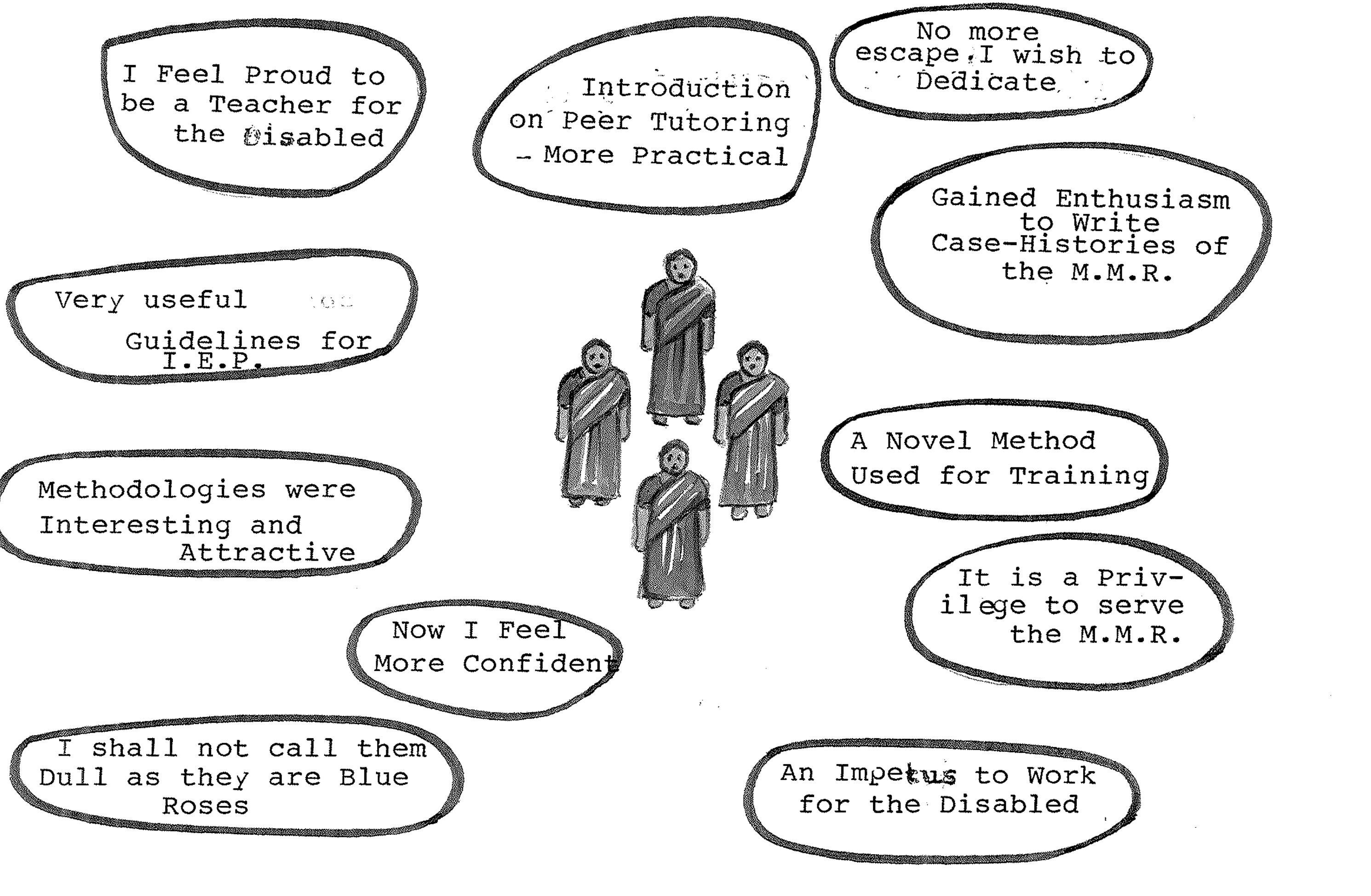


Figure 19

EXCERPTS ON TEACHER TRAINING PROGRAMME

The training package materials designed to educate and train primary school teachers to effectively handle the M.M.R. were used in succession in the training programme. At the end of the programme the teachers' views on each item of the package were elicited and are enumerated as under:

Training package	Teacher's views
1. Ready Reckoner (Very useful - 90%)*	- A resource guide in a 'nutshell'.
	- Short presentation of facts
	- A handy guide on M.M.R.
2. Manual for teachers (Very useful guide-100%)*	- Outlines teaching approaches
	- Specific with model lesson plans.
	- Useful hints to teach functional academics
	- Highlights multi-sensory approach
	- Useful for visual material preparation
	- An eye opener to plan teaching
	- Useful ideas on peer involvement
3. Story: 'Mawna Erul' (Motivating - 95%)*	- Inspiring and motivating to work for disabled
	- Socially important theme, dealt with
	- Story with a difference
	- Many were inspired to write stories.
	- Teachers identified with characters in the story

4.	Song: Vindhai Chaium Vithakar (Very good - 95%)*	- A creative way to portray the M.M.R.'s aspirations - A different approach - Beautiful theme brought out in an auditory form - The song could have been sung by M.M.R.
5.	Case Profile (Very good - 95%)*	- A novel way of describing strengths of retarded children - An eye opener to many of us - Highly informative - Illustrations with descriptive statements - Poetic verses enjoyable
6.	Game: Magic Ladders (Very good - 90 %)*	- Brings out impact of positive motivation - Useful in educating parents and others - Recreational and informative

* Number commenting.

Overall views of the teachers who were trained to use the package of materials on educating the M.M.R. indicate that they were highly impressed with the novel approaches in producing such a package. The fact that they were strong forces of motivation is a satisfying feature.

This study emphasises that the M.M.R. would definitely improve in the class room learning, if teachers are given the needed appropriate training to bring out the abilities

of the M.M.R. which could contribute towards the nations goal "Education for All" by 2000 A.D.

Based on the findings of the study, the researcher states the following paradigm of strategies (Figure 20) to replicate integrated education for the M.M.R. in primary schools in future.

Including the M.M.R. in Integrated Education is a must, if the goal of equal educational opportunities for all should be realized. Strategies that would lead to the realisation of such a goal require:

* Political will and governments' efforts to include formulation of policies on enrolling and educating the M.M.R. in regular schools;
* Crash training for primary school teachers to equip them with adequate knowledge and skills on educating the M.M.R.;
* Involvement of health department for regular health check up in all the primary schools to identify children needing referral services;
* Persistent support of Department of Education to augment facilities such as basic requirements, teacher recruitment in primary schools;
* Joint efforts of District Rehabilitation Centre (DRC) and Educational Institutions Offering courses in Special Education and Integrated Education to screen,

FIGURE 20

PARADIGM ON STRATEGIES FOR EXPANDING INTEGRATED EDUCATION OF THE M.M.R

GOVERNMENT

POLICIES ON EDUCATING THE M.M.R.

CRASH INSERVICE TRAINING FOR PRIMARY SCHOOL TEACHERS

HEALTH DEPARTMENT

REGULAR HEALTH CHECK UP AND REFERRAL

EDUCATION DEPARTMENT

AUGMENTING FACILITIES IN PRIMARY SCHOOLS

NCERT/ SCERT/ TRAINING INSTITUTE

INCLUSION OF MODULES ON M.M.R. IN TEACHER TRAINING CURRICULAR

STRATEGIES FOR EXPANDING INTEGRATED EDUCATION OF THE M.M.R.

DRC AND EDUCATIONAL INSTITUTIONS

SCREENING IDENTIFICATION AND ASSESSMENT OF THE DISABLED OF FOLLOW UP

NGO's & COMMUNITY ORGANISATION

NETWORK OF EDUCATIONAL INSTITUTIONS FOR THE DISABLED

PRINT & ELECTRONIC MEDIA

PUBLICITY ON EDUCATION OF THE M.M.R.

ATTITUDINAL CHANGES AT ALL LEVELS

REGULAR/RESOURCE TEACHERS

SCHOOL ADMININSTRATION & OTHER SUPPORTIVE PERSONNEL

SIBLINGS PARENTS & PEERS

MEDIA, PROFESSIONAL AND NGO's

identify and assess the disabled, enroll them in schools, assist teachers in planning and implementing the I.E.P. suitably and offer follow-up.

* Impressive performance of print and electronic media focussing and spotlighting education of the M.M.R.;
* The NCERT/SCERT and Teacher Training Institutes monitoring the issues on inclusion of relevant modules in teachers training curricula;
* NGOs and community organisation creating a network of Educational Institutions serving the disabled to offer all kinds of support service towards the cause of integrated education for the M.M.R. bringing about attitudinal changes at all levels.

If the inputs listed in paradigm are genuinely contributed, all the disabled and the M.M.R. in particular can enjoy learning in the school. The integrated strategy mix suggested might prove to be refreshingly different and a worthwhile programme if operationalized adequately and effectively.

Summary and Conclusion

V. SUMMARY AND CONCLUSION

Primary education is of prime importance in the sense that it is the first exposure of the child to this world. It accelerates the potentialities of the child and is solely responsible in making a child, especially a disabled child into a self reliant individual. Overcoming shambles of darkness and mysticism, integrated education has opened up new vistas in the social opportunities for the M.M.R. The impact of education in the lives of mildly mentally retarded has been tremendously realized to have positive gains. If this trend is to be made a long term reality, the teacher's role is imperative.

The process of education keeps on changing according to the contemporary demands and needs of the M.M.R. and the teacher needs to be equipped to energize, activate, move and direct her expertise to meet the needs of the disabled children and thereby promote the goal of "Universalisation of Education and Education for All".

Against this backdrop, the researcher aimed to carry out a study on the education of the M.M.R. in Panchayat Primary schools, by training regular teachers through a material package developed to empower them with necessary skills and expertise to handle and teach the M.M.R. in an integrated set up. In the course of the study, not only the efficacy and feasibility of the material package was tested,

but also the researcher explored the knowledge of teachers towards the M.M.R. and also found out the varied educational approaches they put into practice in teaching the M.M.R. children in regular schools. Competencies of the M.M.R. in the functional areas of reading, writing and arithmetic assessed through pre and post test also served as definite parameters in evaluating efficiency of the teacher training.

The research exercise was carried out in three phases. The first phase comprised of screening, identification and assessment, which focussed on identifying children with varied disabilities and children with M.M.R. gathering relevant prolific information and finally assessing their I.Q., sensory problems and academic performance.

The second phase was exclusively devoted to preparing material package for training teachers and working out the modalities and schedules for training programme and getting critique from experts and professionals on the material package developed for the training programme.

The last phase included implementation of the training and evaluation of the training programme in terms of its impact on teachers' knowledge, practices and academic achievement of the M.M.R. children after a period of one year.

The findings of the present study are summarized below.

A. Profile of Disabled Children in the Selected Primary Schools of Tiruverumbur Block

1. The survey made in 1993 with 12713 Primary School Children indicate that the total number of disabled was 163 (1.28%) as against 260 (2.10%) in 1991 survey done with 12374 children. The number of disabled decreased by 97 (0.82%) over a period of three years.

2. As for specific disability, the number of orthopaedically disabled was high both in the year 1991 (137) and 1993 (85) than the other categories among 12374 and 12713 children respectively. The M.M.R. formed the second largest group, the number being 50 in 1991 and 33 in 1993. Visually impaired stood third with a total of 42 in 1991 and 32 in 1993. Hearing impaired were few both in the year 1991 (31) and 1993 (13).

3. Class wise, the number of the disabled were more by about 12 in IV and V standard than in the I, II and III standard. On the contrary, the M.M.R. were more in I and II standard.

4. Age wise, out of 163 disabled children identified in primary school population, incidence of M.M.R. was high (16) among 5 to 17 years than in the age group 8 to 10 (10) and 11-15 years (7). The orthopaedically disabled were more in the latter age groups.

5. As regards the physical features, high cheek bones, large head, slanting eyes and protruding tongue were

seen in 21-45 per cent of the cases. In 6-15 per cent of the cases small head, low set ears, flat nose, open mouth and drooling in the mouth were noticed.

6. All the 33 M.M.R. children had poor attention span. About 60-72 per cent had speech and language problems and were isolated, shy and withdrawn.

7. As for family profile, 55 per cent of the M.M.R. had an annual family income of Rs. 5001 to Rs. 10000/-. One fourth each had family income below Rs. 5000 and above Rs. 10000 to Rs. 20000/- with most of the parents being wage earners and occupied in petty business.

8. Marriage patterns among parents of the M.M.R. showed that 55 per cent were consanguineously related.

Knowledge of the teachers

9. Less than 30 per cent of the teachers enumerated parameters for identification of the M.M.R. prior to training. However, after training, 90 per cent did so and knew additional parameters.

10. Prior to training, only 20 per cent of the teachers knew the causes leading to mental retardation. However, their knowledge on etiology increased after training in that, 80-90 per cent of them had learnt about maternal infections, failure to immunise, birth defects and malnutrition of the mother as probable causes of mental retardation.

11. All the teachers responded that education was essential to aid the M.M.R. live independently. Helping the M.M.R. acquire basic academic skills, know their rights and accept their disability were additional dimensions perceived by 80, 60, 50 per cent of the teachers respectively as an outcome of the training.
12. Education as a right for the M.M.R. was conceded by only 45 per cent of the teachers prior to training as against the 80 per cent after their participation in training.
13. After the training, there were remarkable and positive changes (15% to 90%) in the responses of primary school teachers towards integration of M.M.R. in the regular schools in that they communicated favourably on the advantages of integrated education of the M.M.R.
14. About 60 per cent of the teachers were able to identify their role in educating the M.M.R. with ease after the training. They had internalized their role in assessing the M.M.R., planning the curriculum based on individual needs and counselling and guiding parents only after the training.
15. While the number of teachers being able to identify the talents of the M.M.R. was only 15 per cent initially, it increased to 55 per cent finally. Sports and games (45%) and arts and crafts (55%) were two important talents identified only after the training.

16. Quantitative assessment of knowledge of teachers was also made prior to and after the training. The calculated 't' value between the pre and post level knowledge scores of the teachers was significant at five per cent level reflecting the gain in knowledge scores after the training.

B. Educational Practices of Teachers - Pre and Post Training Level

17. Though the teachers had not practiced the I.E.P., all of them did so after their training on educating the M.M.R. 60 to 65 prepared I.E.P., to teach arithmetic, 40 to 45 per cent to teach mathematical concepts, 70 per cent for vocabulary teaching and 45.55 per cent to enthuse art and craft works.

18. At the post training level, 50 to 60 per cent of the teachers had involved peers to assist the M.M.R. in group reading, seat work namely dictation and copying, writing notes, coaching in lessons and spelling exercises as against 5-10 per cent teachers before training.

19. The number of teachers who used verbal praise to motivate the M.M.R. increased three fold after the training. Sixty per cent and 80 per cent of the teachers had encouraged the M.M.R. through clapping and patting respectively as against 15 per cent each initially.

20. After training 90 per cent of the teachers used the blackboard, 70 per cent used charts, 60 per cent used real objects, 40 per cent used picture cards, models and indigenous materials and 20 per cent made use of puppets, reflecting the favourable outcomes of the training programme.
21. Greater awareness on the common academic problems in M.M.R. children were noticed in teachers after the training. Though the academic problems persisted, there was reduction in number as the teachers had tackled them with confidence and consideration acquired in the training.
22. The fact remains that more than half the teachers (55%) made a mention of identification of the skills of the M.M.R. after their participation in the training. Creative talents in arts and crafts of M.M.R. children were identified by 55 teachers only after the training.
23. From negative and derogatory labels like monkey, stupid, idiot, prior to training, the teachers shifted to using encouraging and motivating labels such as 'you can do', 'you can change', 'you can improve'.
24. The teacher's efforts in developing the M.M.R. socially are evident from the large number of children (50-90%) manifesting socially desirable responses that are positive and encouraging.

25. It was only after the training that 50 per cent teachers realised the significant role played by the parents in the education of the M.M.R. and hence motivated them to involve in the educational activities of their wards.
26. Overall final scores reveal 5, 8 and 11 point difference from that of the initial scores in reading, writing and arithmetic respectively and the difference was found to be statistically significant at 5 per cent level.
27. The level of improvement in academic performance of the M.M.R. revealed, only 10 out of 33 securing 'near pass' with marks between 31 and 35. Though small, it assumes great significance in the case of the identified children.
28. The primary school teachers expressed appreciative comments on the various items/materials of the training package. They found them to be very useful and highly creative as a spring board to teach and train the M.M.R. children.

From the findings of this study, the following recommendations emerge :

1. The Government must direct all the primary schools to enroll children afflicted mildly by all categories of disabilities.

2. In-service training must be implemented in a phased manner to train all the primary school teachers in educating the disabled.
3. Teacher training curricula must include adequate theoretical and practical content to equip them deal with the disabled children.
4. As peer involvement has been proved to be a promising method, especially to assist the M.M.R. in the learning process, teachers need to be sensitized towards the approach for favourable learning outcomes.
5. Teachers at primary level must involve parents, siblings, volunteers in implementing I.E.P. for the M.M.R.
6. Infrastructure and recruitment of personnel must be augmented to ensure success of I.E.P. in Panchayat Union primary schools.
7. Mass media should be effectively utilised to educate the public on the scope and benefits of integrated education for the disabled. It should be advocated as a complementary approach in providing cost-effective education and training for children with disabilities.
8. Parent - Teacher association should be constituted in all schools as they could serve as change agents in getting the right kind of education offered to their children. They could also serve as 'pressure groups' to bring the disabled to the school.

9. The universities and colleges having special education and integrated education should train teachers, adopt slums and villages and create an awareness on different disabilities and stress on the need to educate them along with their peers.

10. The Government can set up adequate number of Teacher Training Institutions that offer multi-category specialization so that requisite trained manpower is available for schools with I.E.P.

11. Apart from teachers, the training can be extended to the field workers at the grass root level to help them identify and educate non-school children too.

12. Resource centres at district level may be established to make available for teachers, professional guidance and expertise whenever necessary.

13. Follow-up researches should be undertaken on educating the M.M.R. and its related issues.

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Appendices

APPENDIX - I

LIST OF SCHOOLS, TEACHERS AND M.M.R. CHILDREN

S. No.	Name of the School	Name of the Child	Class	Name of the teachers
1.	Adi Dravidar Welfare School, Kattur	1. Durgadevi	I	Ms. Lakshmi
		2. Govindaswamy	III	Ms. Periyakkal
		3. Sivaji	I	Ms. Arokiamary
2.	P.U. Middle School Kamaraj Nagar	4. Abdul Appas	I	Ms. Alli
		5. Syed Mustafa	I	Ms. Kanagamani
		6. Venu Thangam	I	
		7. Selvi	I	
		8. Balan	V	
		9. Bacheerali	V	
3.	P.U. Middle School, Ellakudi	10. Ratnagiri	I	Ms. Kamala Bai
4.	P.U. School, Pappakuruchy	11. Anthoniammal	III	Ms. Gelasarani
		12. Arumugam	III	
5.	P.U. School, Malaikovil	13. Ramalingam	IV	Ms. Geraidine Manjula
		14. Baskar	IV	
6.	P.U. School, Bagavathipurm	15. Jaya	V	Ms. Vijayalakshmi
		16. Sahabuddin	V	
		17. Vallikannu	V	
		18. Tirupathi	V	
7.	P.U. School, Veedivadaikam	19. N. Velmurgan	III	Ms. Florence Mary
8.	P.U. School, Thangeswarinagar	20. Thaheer Batcha	I	Ms. Josephine
		21. Rajaram	I	Ms. Jessy Athisayaswamy
9.	P.U. School, Ariyamangalam	22. Muniamma	I	Ms. John Mary
10.	P.U. School, Ambihapuram	23. Bharathiraja	II	Ms. Jeya Packiam
11.	St. Joseph's School, B.H.E.L.	24. Shanthi	I	Ms. Philomena
		25. Arivusudar	II	Ms. Jain
12.	P.U. School, Natarajapuram	26. Thangam	III	Mr. Sundaramoorthy
13.	P.U. School, Thuvakudi	27. R. Lilly	II	Ms. Nagalakshmi
14.	Holy Cross Primary School, Ponmalaipatti	28. Kamali	I	Ms. Josephine Mary
		29. Chambu	I	
		30. Mageswari	III	Ms. Gnanamani Alphonse
		31. Karthigaiselvam	III	
		32. Saranya	I	
		33. Parimala	I	

APPENDIX - II

PROFORMA FOR TEACHERS

I. General Information

1. Name of the school :

2. Address :

3. Total no. of students in the school }

II. Basic Information about Disabled Children

S. No.	*Categories screened*	*Child's Name*	*Age*	*Sex M/F*	*Standard*	*Section*	*Reasons for Disabilities*

APPENDIX - III

OBSERVATION CHECK LIST TO IDENTIFY THE MENTALLY RETARDED CHILDREN

A.	***Facial features***	**Yes/No**
1.	*Small head*	
2.	*Large head*	
3.	*Slanting eyes*	
4.	*Flat nose*	
5.	*High chee bones*	
6.	*Open Mouth*	
7.	*Protruding tongue*	
8.	*Drooling*	
9.	*Broad face*	
10.	*Low set ears*	
B.	***Behavioural features***	
1.	*Social Isolation, shy & withdrawn*	
2.	*Repetitive Autistic tendency*	
3.	*Language and speech problem*	
4.	*Temper tantrum*	
5.	*Sexual problems like masturbation*	
6.	*Hyperactive*	
7.	*Self injurious behaviours like head banging*	
8.	*Difficulties in coping with functional academics of the school*	
9.	*Harmful*	
10.	*Restless*	

APPENDIX - IV

INTERVIEW SCHEDULE FOR PARENTS TO COLLECT FAMILY DETAILS

Parents Name and Address	Education	Occupation	Type of family		Type of marriage		Income per year/annum
			Nuclear	Joint	Consanguious	Non-consanguious	

APPENDIX - V

PSYCHOLOGICAL ASSESSMENT TOOLS

A. Performance Tests
(Non-Verbal Test)

Draw-a-man test

The draw-a-man test is the simplest of the I.Q. test administered to get an approximation of the child's intellectual capacity. It can be easily administered provided the tester is thorough with the procedure and scoring of the test. The test consists of instructing a child or a group of children to draw-a-man, on a piece of paper. Later the child's illustration is carefully analysed and scores are provided in accordance with the instructions in the test manual. The scores of each child are later compared with the grade norms and the corresponding mental age is obtained. Later I.Q. is calculated using the formula given below.

$$I.Q. = \frac{M.A.}{C.A.} \times 100$$

The draw-a-man test can be used as a quick measure of intelligence of children from 5 to 9 years of age. However for critical individual study the readings of draw-a-man test must be supplemented by the readings of some other test of intelligence. In primary schools the test can be used for the following.

- *To decide the tentative placement of a new comer.*
- *To locate the group of children who are not upto the normal level and hence would require individual attention.*
- *To have a comparative study of children in one class.*
- *To have a quick judgement about a class.*

Seguin form board test

Form boards are commonly used for screening purposes. Seguin Form Board is a performance test of intelligence. It is very useful in measuring psycho-motor and visual perceptual abilities of children. The test gives a quick measure of general intelligence in children between 3-11 years and for mentally retarded adults.

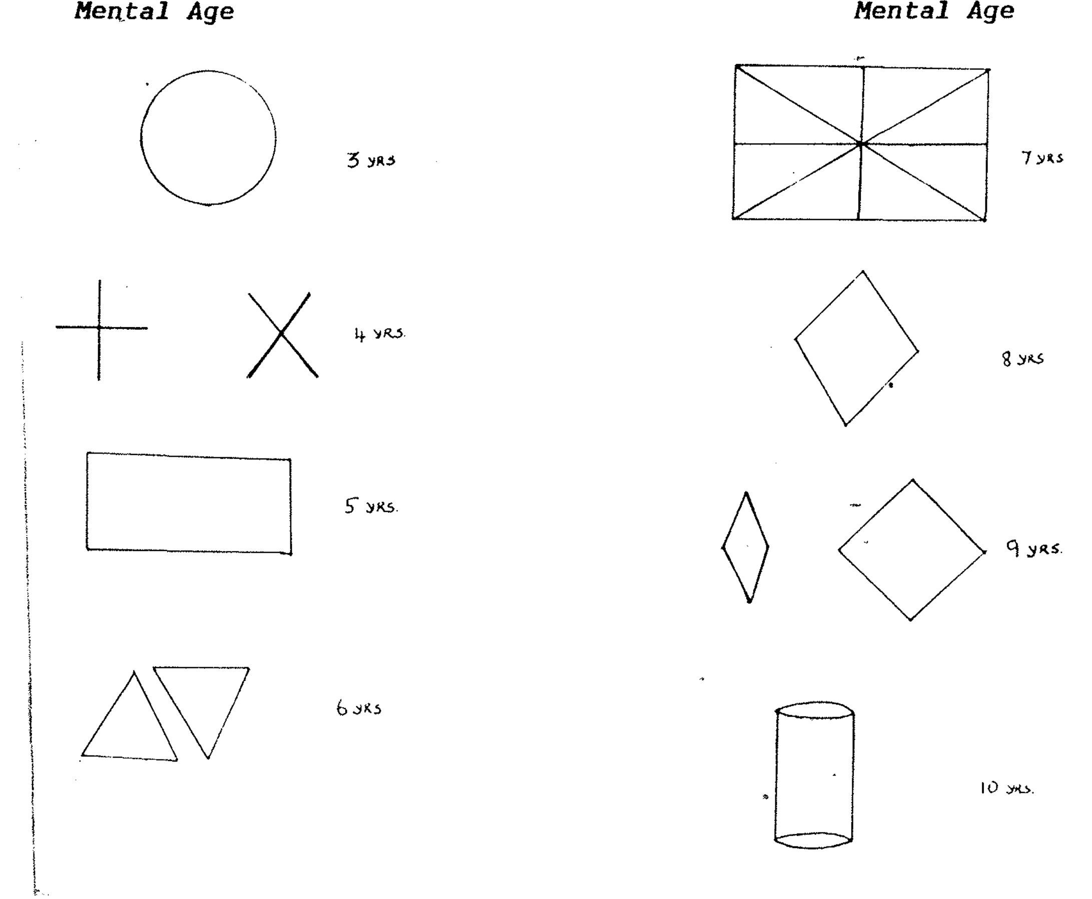
The test equipment comprises of a form-board with slots of different shapes. Wooden pieces shaped as star, rectangle, triangle, oval and half circle fitting in the slot is to be arranged correctly.

The administration involves a tester and a subject, who is required to put the 10 pieces as fast as they can. Initially blocks are stacked by the examiner rapidly without any suggestion or nervous haste. The bottom to top order of stacking are memorized and arranged. After arrangement the child is instructed to arrange the pieces. The test consists of three trials including any trial marked incomplete and for each trial the time taken for completion is noted down. The score taken includes the shortest time in seconds out of the three trials. The scores are converted into mental ages by referring to the norms and finally I.Q. is calculated.

Gesell's drawing test

This test is yet another simple performance test and is indeed a useful test to get a quick measure of the child's intelligence.

The test comprises of a series of geometrical design's that are depicted for each age. The test begins with the child having to copy a figure as drawn by the tester. If she/he proves successful, she/he is given the next picture for completion. The test is stopped when the child is unable to draw a particular figure and the corresponding age at which the child is able to draw the geometrical figure is taken as his/her mental age. From the known mental and chronological ages, I.Q. is calculated. The Gesells test figures are illustrated below.



B. Verbal Test

Binet Kamath Test

Originally, a revision of the Stanford Binet Test of Intelligence, the Binet Kamath is an Indian adaptation devised by V.V.Kamat in 1934.

The Binet Kamath is an extensively used Verbal Test for mentally retarded persons from 3-22 years of age. It gives a pattern analysis for seven primary abilities namely language, memory, conceptual thinking, reasoning, numerical reasoning, visual motor co-ordination and social intelligence. Most of the items are either oral or simple manipulative tasks like drawing, writing and following simple directions.

The administration, scoring and interpretation of the test is very simple. The test is not so rigid as it allows the examiner to begin the test for each child with the test items that are of interest to the child, so as to win his confidence and elicit his/her co-operation verbally.

For scoring, the test begins with of the child's age. The child may answer some of the test items but fail in a few. The test is continued till the child cannot answer a single question of the particular year (age group). Then the tester comes back to the years below the chronological age, until the child answers all the tests of a year. Sub tests should be scored plus or minus separately in the margin of the square assigned to a particular test and then the whole test should be scored plus or minus.

APPENDIX - VI

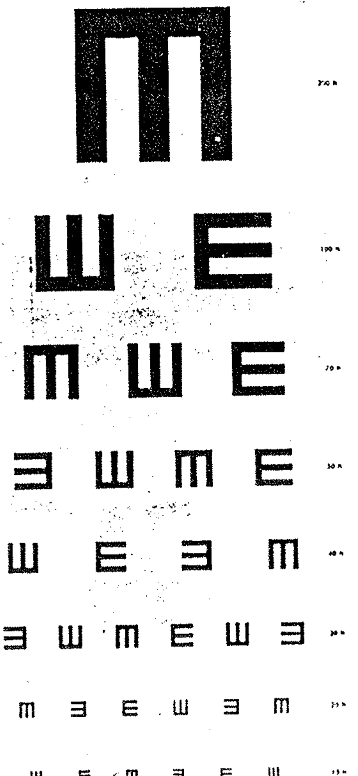
TOOLS FOR ASSESSMENT OF ASSOCIATED SENSORY PROBLEMS

A. Vision Test

The child's visual functioning was tested using the "Snellens' E-chart". The child was made to stand at a distance of 20 ft/6mts from the E-chart displayed on a clear surface of the wall devoid of any distraction. The tester uses a pointer and points from the largest to the smallest E in the chart positioned in different sizes in different directions. The child has to show the position of E through hand movements. The responses of the child gives us an indication of his/her visual functioning. The Snellens', E-chart is given below.

SYMBOL CHART FOR 20 FEET

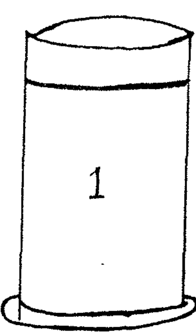
Snellen Scale

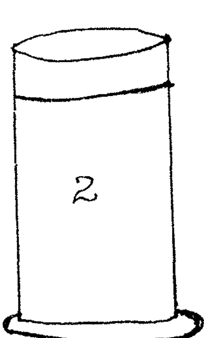


Snellen symbol chart. Courtesy of the National Society to Prevent Blindness, Inc.

B. *Hearing Test*

The hearing test is a simple indigeneous test. Here two empty snuff boxes are filled in with pepper and mustard in each. On shaking the box 2 with pepper sounds with a high intensity and box 1 with mustard is of low intensity. Using this the child's hearing function can be tested for high and low intensity sounds from the range of normal hearing. This test gives us a simple and quick measure of the hearing ability of the retarded child.





Box 1 - contains mustard - sounds with low intensity

Box 2 - contains pepper - sounds with high intensity

TEST OF ARTICULATION IN TAMIL

The Test of Articulation or the TAT, as it is most often called is a fairly simple test to find out of the child has any speech problems like adding or omitting letters, substitution or deleting them etc. A list of words with varying syllables is said and the child is asked to repeat them. Each word is aimed to test a specific sound. From the child's response through pronunciation, the errors if any are noted down. The TAT test is depicted below.

Date : Class :

S. No.	Word	Sound English	Sound Tamil	Correct response	Substi-tution	Ommis-sion	Disto-rtion	Addition
1.	அப்பு	a-	அ					
2.	கண்	-a-	அ					
3.	ஆரஞ்சு	ā-	ஆ					
4.	கால்	-ā-	ஆ					
5.	ரோஜா	-ā	ஆ					
6.	இட்லி	i-	இ					
7.	கோழி	-i	இ					
8.	ஈ	ī-	ஈ					
9.	வீடு	-ī-	ஈ					
10.	டீ	-ī	ஈ					
11.	உதடு	u-	உ					
12.	முடி	-u-	உ					
13.	ஊசி	ū-	ஊ					
14.	நூல்	-ū-	ஊ					

S. No.	Word	Sound English	Sound Tamil	Correct response	Substi-tution	Ommis-sion	Disto-rtion	Addition
15.	எலி	e-	எ					
16.	ஏழு	ē-	ஏ					
17.	தேங்காய்	-ē-	ஏ					
18.	ஒட்டகம்	o-	ஒ					
19.	ஓடு	ō-	ஓ					
20.	கை	k-	க					
21.	கத்தரிக்காய்	-k-	க					
22.	குரங்கு	g-	க					
23.	புத்தகம்	-k-	க					
24.	சாவி	c-	ச					
25.	பூச்சி	-c-	ச					
26.	ஜன்னல்	j-	ஜ					
27.	மஞ்சள்	-j-	ஜ					
28.	பூட்டு	-ṭ-	ட					
29.	டப்பா	-d-	ட					
30.	கடை	d-	ட					
31.	தாத்தா	t-	த					
32.	பத்து	-t-	த					
33.	புலி	p-	ப					
34.	பாப்பா	-p-	ப					
35.	பொம்மை	b-	ப					
36.	கரும்பு	-b-	ப					
37.	ஷர்ட்	ṣ-	ஷ					

S. No.	Word	Sound English	Sound Tamil	Correct response	Substi-tution	Ommis-sion	Disto-rtion	Addition
38.	சீப்பு	s-	ச					
39.	காசு	-s-	ச					
40.	மாங்காய்	-n-	ங்					
41.	வண்டி	-n-	ண					
42.	பெண்	-n	ண					
43.	நாய்	n-	நா					
44.	ஜன்னல்	-n-	ன					
45.	மீன்	-n	ன					
46.	பந்து	-n-	ந					
47.	ஊஞ்சல்	-n-	ஞ்					
48.	மலை	m-	ம					
49.	எறும்பு	-m-	ம					
50.	மரம்	-m	ம					
51.	வாழைப்பழம்	-l-	ழ					
52.	சிமிழ்	-l	ழ					
53.	வளையல்	-l-	ள					
54.	தேள்	l	ள					
55.	லாரி	l-	ல					
56.	பல்லி	-l-	ல					
57.	பால்	-l-	ல					
58.	ரொட்டி	r-	ர					
59.	கரும்பு	-r-	ர					
60.	கார்	-r	ர					
61.	நரி	-r-	ர					
62.	வாழைமரம்	v	வா					
63.	தவளை	v	வ					
64.	யானை	y-	யா					
65.	முயல்	-y-	ல					
66.	வாய்	-y	ய					

APPENDIX . VIII

APPENDIX - VII

ASSESSMENT OF READING, WRITING AND ARITHMETIC

I std.

Reading and Writing Test (25 words).

1	அணில்	10	குடம்	18	கோழி
2	ஆடு	11	குடை	19	தேள்
3	நாகம்	12	சீப்பு	20	பல்லி
4	குதிரை	13	பந்து	21	மீன்
5	நாய்	14	பூட்டு	22	யானை
6	குரங்கு	15	விசிறி	23	கண்
7	பூனை	16	எலி	24	கால்
8	மயில்.	17	கிளி	25	வாழைப்பழம்.
9	ஏணி				

I std

Total 20 marks.

I ஒப்பிடுதல் : [சிறியது முதல் பெரியது வரை வரிசைப்படுத்துக:-

1.

2.

II எண்ணி எழுதுக:-

1.

2.

3

III முந்திய எண், அடுத்த எண் எழுதுக:-

1. 7

2. 10

3. 15

IV. எண்களை ஒப்பிடுதல்:-

1. (8) (6)

2. (7) (5)

ஏறு வரிசையில் எழுதுக:-

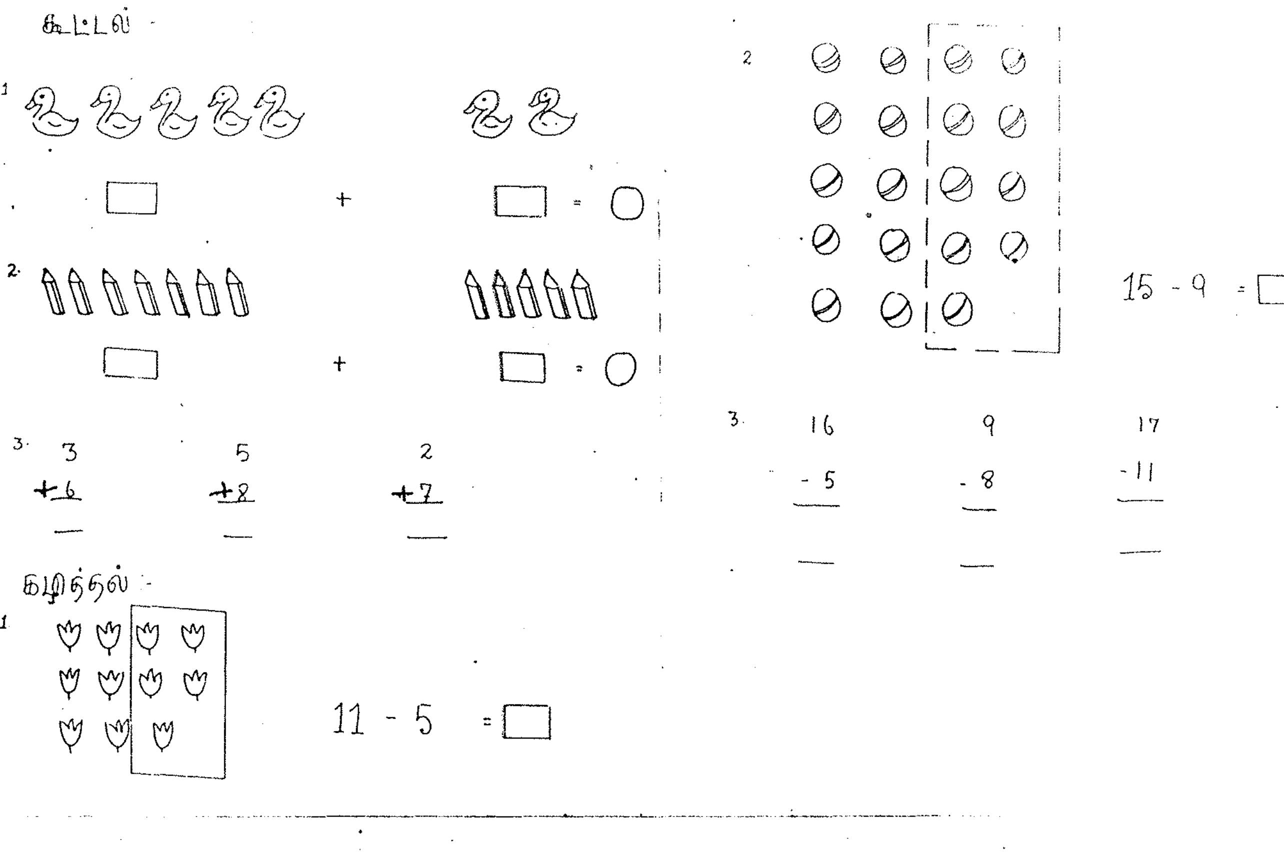
1. 9 5 7 8 6 4

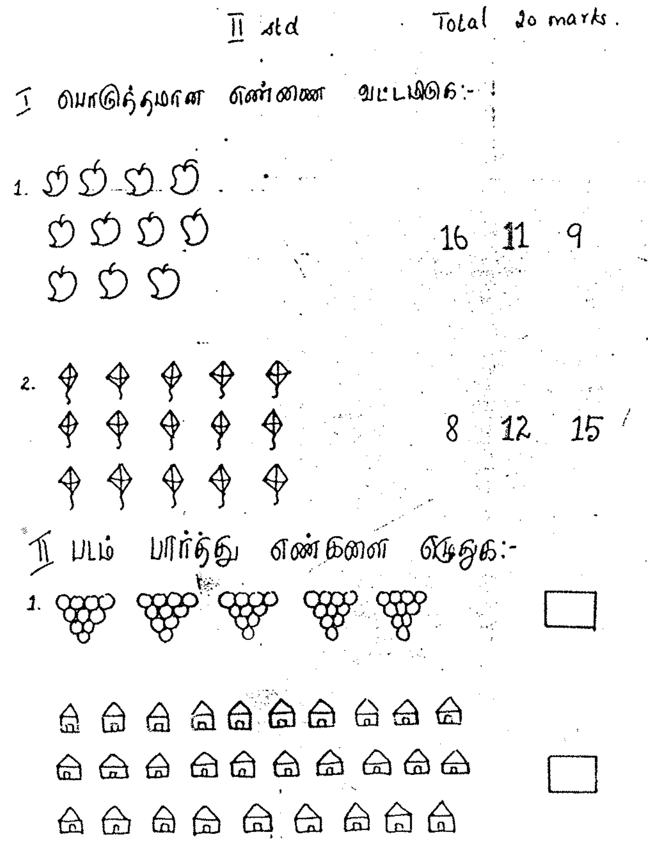
2. 12 9 13 10 15 7

இறங்கு வரிசையில் எழுதுக:-

1. 8 7 10 9

2.





Reading & Writing Test

II Std

வீட்டு விலங்குகள்

அம்மா! அம்மா! என அழைக்கும் பசு மே.. மே... எனக் கத்தும் ஆடு, லொள்... லொள்... எனக் குரைக்கும் நாய், மியாவ்... மியாவ்...எனக் கத்தும் பூனை - இவையெல்லாம் நாம் வீடுகளில் வளர்க்கும் விலங்குகள்.

வீட்டு விலங்குகள் நமக்குப் பல வகைகளில் உதவி செய்கின்றன. பசு மிகவும் அமைதியான விலங்கு. அது இனிய பாலைத் தருகின்றது. பாலி லிருந்து தயிர், மோர், வெண்ணெய் ஆகியவற் றைப் பெறுகின்றோம். பசுவின் சாணம் எருவாக வும் எரிபொருளாகவும் பயன்படுகின்றது.

Reading & Writing Test

III Std.

சென்னிமலை என்னும் சிற்றூர் ஈரோட்டுக்கு அண்மையில் உள்ளது. அவ்வூரில் 1904 ஆம் ஆண்டு அக்டோபர்த் திங்கள் நான்காம் நாள் குமரன் பிறந்தார். அவர் தந்தையார் பெயர் நாச்சிமுத்து. தாயார் பெயர் கருப்பாயி அம்மாள். அவருக்குப் பெற்றோர் இட்ட பெயர் குமாரசாமி. அப்பெயரே குமரன் என்று வழங்கப் பெறுகிறது.

குமரனின் பெற்றோர் வறுமையில் வாடினர். எனவே அவர் ஐந்தாம் வகுப்பு வரை படித்தார். பின்னர், அவர் நெசவுத் தொழிலில் ஈடுபட்டு உழைத்து வந்தார். அவருக்குப் பத்தொன்பதாம் அகவையில் திருமணம் நிகழ்ந்தது. அவருடைய மனைவியின் பெயர் இராமாயி அம்மாள். பின்னர், குமரன் திருப்பூரில் ஒரு பஞ்சு ஆலையில் எழுத்துப் பணியில் சேர்ந்தார். அப்பொழுது ஓய்வு நேரங்களில் திருக்குறளைப் படித்தார்.

கூட்டல் :-

```
  63 +      50
  89        79
  ___       ___
  ___       ___
```

கழித்தல் :-

```
  65        79
 -36       -34
  ___       ___
  ___       ___
```

பெருக்கல் :-

1. 6 x 2 = ____________
2. 3 x 5 = ____________

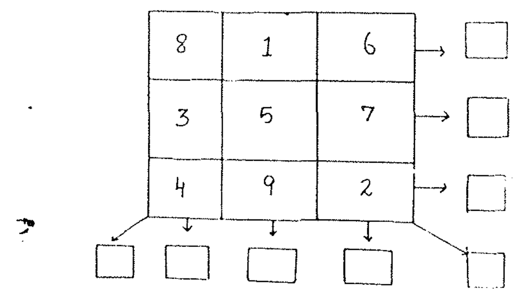
III Std   Total 20 marks

I படத்தில் விடப்பட்டுள்ள எண்களை எழுதுக :- (5 ...

ஆயிரங்கள் ○ நூறுகள் ○ பத்துகள் ○ ஒன்றுகள் ○

எண் [ ]

II ஆய்வுக்குரிய கணக்கு : 5 marks



III சிறிய எண்ணை வட்டமிட்டுக் காட்டுக :-

9	12
36	24
58	85

IV பெரிய எண்ணை வட்டமிட்டுக் காட்டுக :-

15	51
38	67
33	20.

V விடுபட்ட எண் உருக்களை எழுதுக :-

1. 441, ___ ___ ___ ___ ___ ___ ___ ___ 450.
2. 253 ___ ___ ___ ___ ___ ___ 260.

VI எண் பெயரை எழுதுக :-

1. 56 - ________________________
2. 112 - ________________________

IV Std

I எண் உரு தருக :- 3 marks

1. நூற்று இருபத்தைந்தாயிரத்து முந்நூற்று இருபது ______
2. தொண்ணூற்றெட்டாயிரத்து இருநூற்றைந்து ______
3. இரண்டாயிரத்து முப்பது. ______

II பெரிய எண்ணை வட்டமிடுக :- 2marks.

1. 30217 21730 17302 27031
2. 80316 63016 71213 13068.

III விடுபட்ட இடத்தில் தகுந்த எண்களை எழுதுக (5marks)

```
  2 *        * 1 2
  3 1        2 * 4
  * 4        4 5 *
  5 1
 -----      -------
 12 9        1 1 8 9
```

கோடிட்ட இடங்களை நிரப்புக 5marks

1. 2 இன் மடங்குகள் : 2, 4, ___, ___, ___, ___
2. 10 இன் மடங்குகள் 10, ___, ___, ___, ___, ___

வகுத்தல் :- (5marks)

2√48 5√605

விடை காண்க :- 5 marks.

```
+ 213     + 605     + 152
   88        33        10
  729        48       289
 ----      ----      ----

- 9474    - 7082
  5852      2695
  ----      ----
```

பெருக்கல் :- 3 marks.

```
   40        61
 x 52      x 34
 ----      ----
```

விடை காண்க 2marks

7 x 1 = □

0 x 8 = □

Reading & Writing Test

IV Std

உயிர்களுக்கு ஊறு செய்யாமை

இவ்வுலகம் மிகப் பரந்தது. நீரையும் நிலத்தையும் தன்னகத்தே கொண்டது. இவ்வுலகில் எண்ணற்ற உயிரினங்கள் வாழ்கின்றன. விலங்குகள், பறவைகள், நீர் வாழ்வன, ஊர்வன எனப் பல்வேறு வகையான உயிரினங்கள் நம்மிடையே வாழ்கின்றன.

நம்மோடு வாழும் பிற உயிர்களிடத்தில் நாம் அன்பு செலுத்துதல் வேண்டும். அவை உறும் துன்பம் கண்டு இரக்கப்படுதல் வேண்டும். அவற்றிற்குத் தீங்கு செய்யக் கூடாது. அவற்றுள் பல நமக்கு நன்மை செய்கின்றன.

பசுவும் எருமையும் நமக்குச் சுவை மிகுந்த பாலைத் தருகின்றன. எருது வண்டியிழுக்கவும் பயிர்த் தொழில் செய்யவும் உதவுகின்றது. ஆடு, மாடு இவற்றின் சாணம் பயிர்களுக்கு நல்ல எருவாய்ப் பயன்படுகின்றது. வெள்ளாட்டுப் பாலும் கழுதைப் பாலும் சில நேரங்களில் நமக்கு மருந்தாகப் பயன்படுகின்றன.

V Std Total - 20 marks.

I. மிகப் பெரிய எண்ணை எடுத்து எழுதுக :- (2 marks)

19, 006, 13, 709, 100000.

II. சிறிய எண்ணை எடுத்து எழுதுக :- (2 marks)

24, 356, 23, 564, 24, 199.

III. எண் உருவை எழுதுக :- (6 marks)

பத்தாயிரத்து பத்து ________

இரண்டு இலட்சத்து ஐம்பதாயிரத்து ஏழு ________

ஒரு மில்லியன் ________

IV. ரோம எண்களை எழுதுக :- (6 marks)

5 - ________

17 - ________

50 - ________

V. வகுத்தல் :- (4 marks)

3) 7254

Reading & Writing Test

V Std

மரம் நடுவிழா

பள்ளிகளில் ஆண்டுதோறும் மரம் நடுவிழா கொண்டாடுகிறார்கள்; மரங்களையும் நடுகின்றார்கள். "வீட்டுக்கொரு மரம் வளர்ப்போம்; நாட்டு வளம் காப்போம்", "மரம் வளர்ப்பீர்! பணம் குவிப்பீர்!" என்பன போன்ற விளம்பர அறிவிப்புகளைச் சாலைகளில் காண்கின்றோம். இவற்றின் நோக்கம் என்ன? மரங்களை மிகுதியாக வளர்க்க வேண்டும் என்பதுதான்.

மா, பலா, வாழை முதலிய மரங்கள் உண்பதற்குக் காய், கனிகளைத் தந்து உதவுகின்றன. தென்னை, முருங்கை முதலிய மரங்கள், உண்ணக் காய்களைத் தருகின்றன. வேம்பு, வாதமடக்கி முதலிய மரங்கள் மருந்தாகப் பயன்படுகின்றன. அகில், சந்தனம் முதலிய மரங்கள் மணப்பொருள்களைத் தருகின்றன. எல்லா மரங்களுமே தங்குவதற்கு நிழலைத் தருகின்றன. மரங்கள் அழிந்த பிறகும் விறகாகவும் கரியாகவும் பயன்படுகின்றன.

இவை மட்டுமா? இவற்றினும் மேலான பயன்களை மரங்கள் நமக்குத் தருகின்றன. அவை என்ன? நாம் உயிர் வாழக் காற்று மிகவும் தேவை. அக்காற்றை "உயிர் வளி" (பிராண வாயு) என்பர். நமக்கு வேண்டாதது "கரிக் காற்று" ஆகும். இதனைக் "கரியமிலவாயு" என்பர். நாம், காற்றை மூக்கின் வழியாக உள் இழுக்கும் போது நம் உடல், உயிர்வளியை ஏற்றுக் கொள்கிறது; வெளிவிடும் போது கரிக்காற்றை வெளியே அனுப்புகிறது. ஆனால் மரங்கள் என்ன செய்கின்றன? கரிவளியை உள்ளே இழுத்துக் கொண்டு நமக்குத் தேவையான உயிர்வளியை வெளிவிடுகின்றன. இது மரங்கள் மக்களுக்குச் செய்யும் பெருந்தொண்டல்லவா?

APPENDIX·X

ஒரு மௌன இருளி

மணி காலை 8.50 மதுரையில் பெரியார் பேருந்து நிலையமாகையால் இரைச்சலுக்கு பஞ்சமில்லை, டவுன் பஸ்களும், ரூட் பஸ்களும் கும்பலை வாரியிறைத்து வண்ணமிருந்தன. சாலையோரங்களில் இருக்கும் அனைத்து கடைகளும் அப்போது திரையான படத்தின் பாடல்களை ஒலிபரப்பிக்கொண்டிருக்க

ஜீவா மீண்டும் மணி பார்த்தாள் 9.00 இன்னும் பஸ் வந்தபாடில்லை. வானம் லேசாக தூற ஆரம்பித்தது அதற்குள் பஸ் 49 அருகில் வந்துவிட அவசரமாகச் சென்று தொற்றிக் கொண்டாள்.

வேடம்பட்டி பஞ்சாயத்து பள்ளியில் வேலைக்கு சேர்ந்து மூன்று நாள்தான் ஆகிறது. இந்த பஸ் போக்குவரத்து அதற்குள் அலுத்துவிட்டது. எங்கு பார்த்தாலும் ஒரே இரைச்சலாய்பட்டது. அந்த இரைச்சலால் அனைவருமே பாதிக்கப்படுவதாம் தோன்றியது. வெளியில் மழை வலுத்திருந்தது. பசுமலை ஸ்டாப் வந்தவுடன் இறங்கி குடையை விரித்துக் கொண்டாள். பள்ளியின் காம்பவுண்டுக்குள் நுழைந்து சிறிதுநேரம் நடக்க வேண்டும். என்னதான் குடைபிடித்திருந்தாலும் மழை அவளை பாதி நனைத்திருந்தது.

ஓட்டமும் நடையுமாக அந்த ஆலமரத்திற்கு அருகிலிருந்த சிமெண்ட் பெஞ்சை கடக்க முயலும்போது மனதில் ஏதோ ஒன்று இடறியது. சட்டென அந்த பெஞ்சை நிமிர்ந்து பார்த்தவளுக்கு அதிர்ச்சி....'. சொல சொலவென்று நல்ல சிவப்பு நிறத்தில் ஒரு சிறுவன் ஸ்கூல் யூனிபார்ம் அணிந்து, குளிரில் நடுங்கிக் கொண்டு அவளையே பார்த்தவாறு இருந்தான். இத்தனை ஆர்பாட்டத்துக்குமிடையே அச்சிறுவனின் நிச்சலனமான அமைதி அவளுக்குப் புதிதாய்பட்டது. மழை ஆங்காரத்துடன் அவனை நனைத்துக் கொண்டிருக்க தடுமாற்றமில்லாத அவன் பார்வை ஜீவாவின் மேலிருந்தது.

இது, இதுவரையில் பார்த்திராத ஆச்சரியம். ஒரு நிமிடம் கூட ஓரிடத்தில் நிற்காமல் துள்ளி விளையாடும் அக்கா பையன் நிரேஷ் நினைவுக்கு வந்தான். இதைப் பற்றியெல்லாம் யோசிக்க நேரமில்லை. உடனடியாக ஏதேனும் செய்ய வேண்டும் என்ற எண்ணத்தில் அச்சிறுவன் முன் வந்து நின்று –

'ஏம், மழை எப்படி கொட்டுது? இப்படியே உட்கார்ந்திருந்தா காய்ச்சல் வந்திடும். சீக்கரமா எழுந்திரு. கிளிக். சீக்கிரம் எந்திரிச்சி என்னோட வா' – அவன் முகத்தில் எவ்வித சலனமுமில்லை. 'வாம்மா, என் கண்ணுல்ல' என்ற ஜீவா அவன் கையைப்பற்றியவுடன் பயத்துடன் அவளையே பார்த்துவிட்டு எழுந்தனித்தான். அவனை பற்றி இரக்கி விழேவிட்டு அவனுக்கும் குடை பிடித்தவண்ணம் நடக்க ஆரம்பித்தாள். தன் பிஞ்சுக்கரங்களினால் அவளை இறுக்கப்பற்றிக்கொண்டு மெதுவாக.... மிக மெதுவாக நடந்தான் அவன்.

முதலில் தெரிந்த வகுப்பறைக்குள் நுழைந்து தன் கைப்பையில் வைத்திருந்த ஒரு டவலை எடுத்து வேகமாக அவனுக்கு துவட்டிவிட்டாள். அவனுடைய ஆடைகளை கழற்றி அந்த வகுப்பறையின் மின்விசிறியின் கீழ் சிறிது நேரம் சாயவைத்தாள்.

'உன்னோட பேர் என்ன?'

பதிலே இல்லை

'உன்னோட பேரு என்னம்மா?'

திரும்பவும் முயன்றாள். அதற்குள் அவன் வகுப்பு கோபி கேண்டீனிலிருந்து காப்பி வாங்கி வந்து ஜீவாவின் கையில் கொடுத்துக்கொண்டே சொன்னான்.

'புது டீச்சர், புது டீச்சர், அவன் பேரு வஸந்த். அவன் எப்பவாச்சுந்தான் பேரு சொல்வான்'. அவனிடம் திரும்பி 'வஸந்த்'ன்னு சொல்லு' என்று கூறியவுடன் அவனும் 'வஸந்த்–ன்னு சொல்லு' என்றவுடன் கோபி சிரித்தான். வஸந்தும் சிரித்தான். முதன் முதலாக அவனை அப்படிப்பார்ப்பது ஜீவாவுக்கு மிகவும் சந்தோஷமாக இருந்தது. வாங்கி வைத்திருந்த காப்பியை எடுத்து அவனிடம் நீட்டினாள். திருதிருவென்று முழித்தான். 'உனக்குத்தான் வாங்கிக்க!' இரண்டு கைகளிலும் அவன் நீட்டியடம்ளரை பெற்றுக் கொண்டான்.

...3

'குடி' என்றாள் ஜீவா. மெதுவாக தூக்கி வாயருகில் கொண்டு சென்று குடிக்க ஆரம்பிக்க, ஒழுங்காய்ப்பற்றி குடிக்காததால் காபி அப்படியே கீழே சிந்தலாயிற்று. அந்த நேரம் பார்த்து பள்ளிக்கு மணியடிக்கவே கண்ணாடி டம்ளர் தானாக நழுவி தூள் தூளாயிற்று. சட்டையைத் திரும்பப் பெற்றுக்கொள்ளாமல் வசந்த் தன் வகுப்பறை நோக்கி நடக்கவாரம்பிக்க, ஓடிச்சென்று சட்டைய மாட்டிவிட்டு அனுப்பினாள். பரபரவென்று வகுப்பை சுத்தம் செய்துவிட்டு அன்றைய வேலைகளில் ஆழ்ந்து போனாள்.

மதியத்திற்குமேல் சென்று வசந்தை பார்க்க வேண்டும்போலிருந்தது. முதல் பாடவேளை இவளுக்கு வகுப்பு எடுக்க வேண்டியிருந்ததால் 3-ஆம் வகுப்பில் ஆங்கிலம் நடத்திக் கொண்டிருக்கும்போது, பக்கத்து வகுப்பில் யாருக்கோ பலமாக அடி விழுந்து கொண்டிருந்தது. வேகமாக வகுப்பை விட்டு வெளியே வந்து அந்தப்பக்கம் நடப்பதைப் போல் வகுப்பை நோட்டமிட்டபோது, அந்த மரகதம் டீச்சர் மாட்டையடிப்பது போல் வசந்தை அடித்துக்கொண்டிருக்க சுருண்டுபோய் அந்த இடத்தை விட்டு நகர்ந்தாள் ஜீவா. இவளுக்கு வலித்தது.

'இது எப்படி? இது எப்படி சாத்தியம்? இந்த டீச்சருக்கு அந்த சின்ன மனசை காயப்படுத்த எப்படி மனசு வந்தது? எதிர்த்து அடிக்க மாட்டானென்று தெரியுந்தானே? குடி, கூத்தின்னு அலையற இவ புருஷன்கிட்ட இவளால ஒரு வார்த்தை பேச முடியுமா? இவளும் ஒரு தாய்தானே, இவ புள்ளைய போட்டு இப்படி அடிப்பாளா?

சுட்டுவிட வேண்டும்போலிருந்தது. ஆசிரியத் தொழிலுக்கே அவமானம். இயலாமையை எண்ணியெண்ணி கோபம் வந்தது. அந்த இடத்தைவிட்டு அகன்று ஆசிரிய அறைக்கு வந்தாள். 10 நிமிடங்களுக்கெல்லாம் மரகதமும் உள்ளே வர மனத்தில் புகை மூண்டது. 'சனியனுங்க, எங்கேயோ இருக்க வேண்டியதெல்லாம் இங்க வந்து என் உசிர வாங்குது' என்று மரகதம் கத்த, 'என்ன டீச்சர் ஆச்சி?' என்று ஆண்டாள் பரிவுடன் வினவ இ '1-ஆம் கிளாஸ் வசந்து ஒரு தலைவலி இருக்கு, ஒரு நாள் லெஸன் அவனுக்கு சொல்லித்தர ½ மணி நேரம் ஆகுது. பயங்கர அழுத்தம். வேற பசங்க கிட்டயும் கத்துக்கறது இல்ல. இவன் மாதிரி பசங்களால ரிசல்ட் வரலன்னா புரிஞ்சுக்காம இந்த எச்.எம் அம்மா என்னைய புடிச்சி கத்தறது. சீ, எனக்கு நேரமே சரியில்ல.

[illegible]

ஜீவாவுக்கு ஏதாவது செய்துவிடத் தோன்றியது. ஆனால் எதுவுமே முடியவில்லை. பள்ளி முடிவதற்கு அறிகுறியாய் மணி அடித்தது. ஒவ்வொருவராய் கிளம்ப ஆரம்பித்தனர். ஜீவா அமர்ந்திருந்தாள் கால்மணி நேரம் தனியாக!

மெதுவாக எழுந்து அனைத்தையும் எடுத்து வைத்தாள். மனதில் ஏற்பட்ட வலி அவளை சோர்வாக்கியது. நடக்க ஆரம்பித்தாள். கண்கள் தானாக அந்த சிமெண்ட் பெஞ்சை நாட, அங்கு கைகளையும், கால்களையும் சுருக்கிக்கொண்டு அந்த சிமெண்ட் பகுதியில் முகம் பதித்து பரிதாபமாக... வசந்த்! நடை விறுவிறுத்தது. வேகமாக சென்று பார்த்தபோது அவன் தேம்பித்தேம்பி அழுது கொண்டிருக்க, அவனை வாரி மடியில் வைத்துக்கொண்டே கேட்டாள் ஜீவா.

'வசந்த், என்னம்மா, என்ன ஆச்சி டீச்சர் கேட்கறேனில்ல பதில் சொல்லுப்பா! அழுதான்! அடி வாங்கியது வலித்திருக்கும் போலிருக்கிறது. 'அம்மா' என்று கதறி அழத்தெரியாமல், 'ரொம்ப வலிக்குது இந்த டீச்சர் என்னைய அடிச்சிட்டாங்க' என்று தேம்பாமல், இவனால எப்படி....? இவனோட மனசுல இருக்க அந்த மௌன இருட்டுக்கு பேர் என்ன? வசந்த அவள் மடியில் சுருண்டு கொண்டான். அவன் இரு கரங்களும் அவளின் ஒரு கையை இறுக்கப்பற்றி வளைத்திருந்தன.

ஐந்து நிமிடத்திற்கு பிறகு, அவன் அழுகை நின்றது. கொஞ்சம்கூட ஆடாமல் அசையாமல் அதே நிலையில் இருந்தான் அவன். சிறிது நேரம் கழித்து தூரத்தில் கேட்ட அந்த சைக்கிள் மணிக்கு அவனிடம் சிறிது அசைவு தெரிந்தது. சைக்கிளில் வந்த இளைஞனுக்கு முப்பது வயதிருக்கலாம். அழுக்காகத் தெரிந்தான். இவளைக் கேள்விக் குறியுடன் பார்த்துவிட்டு 'வசந்த், அப்பாவிட்ட வாடா! என்று அழைக்கவே இயந்திரத் தனமாக அவன் மடியிலிருந்து எழுந்து வழக்கத்தைவிட தளர்ந்த நடையுடன் அவன் சைக்கிள் அருகே செல்ல அவனை சைக்கிளின் பின்னால் அமரவைத்து சைக்கிளை நகர்த்தினான். வசந்த் போய்விட்டான் புரியாத சுமையை ஜீவாவின் மனதில் விட்டுவிட்டு!.

APPENDIX - XI

சின்ன சின்ன ஆசை / சிறகடிக்கும் ஆசை
முத்து முத்து ஆசை / முடிந்த வைத்த ஆசை
வண்ணச்சிறு பூக்கள் / வாழ்ந்திட ஆசை
முன்னை விட மாறி மென்மையுற ஆசை (சின்ன...)

மென்மையின் பூவாய் அன்பு பெற ஆசை
நல்லதைக்கண்டு நாடிவிட ஆசை
தேக நிலை எல்லாம் தெளிவு பெற ஆசை
சோகங்களை எல்லாம் விட்டுவிட ஆசை
ஊர் உலகைப்போல வாழ்ந்து வர ஆசை (சின்ன...)

நேற்று நிலைமாறி பண்பு பெற ஆசை
நான் உறுதி கொண்டு நடந்து வர ஆசை
புலன் வழியே கல்வி படித்துக் கொள்ள ஆசை
கருணையுடன் கடமை ஆற்றி வர ஆசை
இத்தனைக்கு மேலே ஏற்றமுற ஆசை (சின்ன...)

தன்நிலையில் மாறி தன்மை பெற ஆசை
எம் மனத்துக்குறையை எடுத்தெறிய ஆசை
சுற்றியுள்ள நீங்கள் சுகந்தரவே ஆசை
பெற்ற சுகமெல்லாம் பெருகிடவே ஆசை
கருணையுள்ள உள்ளம் கண்டு வர ஆசை (சின்ன...)

ஆசை அதிகம் வச்சு / மனசைத்தான் முடக்கி வைக்கலாமா? — ஏ சாமி!
பாசத்தை கொட்டிபுட்டு / பரிவத்தான் காட்டி வைக்கலாமே
— ஏ ஆமாம்
இந்த ரோசாக்கள் எம்மோடு / எந்தன் ராசாவே வந்தாடு
— எம் செல்வங்களே (ஆசை)

சின்ன சிட்டுதான் / இவை வெள்ளி ரதம் தான்
வண்ண மலர் தான் / இவை வா/டா மலர் தான்
நன்றி பொறுமை / எந்நாளும் / கொண்டு
கல்வி துணையே / இங்கு / கற்று தந்தோம்
எந் / நன்மையும் / தீமையும் / கண்டு கொள்ள
இப் / பிஞ்சினின் / நெஞ்சிலே / ஒளியைத்தந்தோம்
இக்காலம் / பொன்னாகும் / வாழ்வு இவரில்
இது / கண்ணாலே காணும் காட்சி
— எம் செல்வங்களே (ஆசை)

சொந்தமிருந்தும் / இவர் சிந்தையறியா
வந்த பிள்ளையை / யாம் வா/ழ/ வைத்தோம்
பண்பு கலந்து நல் பாசம் காட்டி
அன்பு செய்து / நல் / ஊக்கம் தந்தோம்
இவ்வித்தையை கற்றதால் தேர்ந்திடுவோம்
இவர் நெஞ்சினில் / மாறுதல் / செய்திடுவோம்
தினம் போலே / உங்களைக் காத்திடுவோம்
இங்கு / பொன்னாகி மின்னும் வாழ்வு
— எம் செல்வங்களே (ஆசை)

சுமையென்று தானே / இங்கு அதை, எண்ணாமல்
இந்தப் பணியை / அழகாய்ச் செய்வோம்
சாந்தம் இங்குதானே / எங்கள் சொத்துதானே
அன்பு மனத்தால் / ஆக்கி வைப்போம்
இப்பிஞ்சுகளை அத்தனை கல்வி பெற
எம் நெஞ்சிலே / எந்நாளும் / எண்ணம் வைப்போம்
இச்சேவையை / எக்காலும் / செய்திடுவோமே
இக் / கோலம் பொன்னாகுமே
— எம் செல்வங்களே

APPENDIX - XII

BEING BORN DIFFERENT

[A Short - style Profile of Senthil - a Down's Syndrome, Mentally Retarded Child]

Introduction

A flip into the pages would bring before the minds eye the silent spectacle of young innocence and humane tenderness of 'SENTHIL' - a normal who happens to be slow". Yes! one may wonder what a perplexing condition this may be. Certainly its the most common and serious of handicapping condition. Its nothing other than.......MENTAL RETARDATION.

This profile is an attempt to drive home the thought to

"Applaud them when they run
Console them when they fall
Cheer them when they recover
And let them Pass on"

Profile

On a starry night of 7th August, 1984, amidst the hustle of the blowing winds and squeaking noises of the cricket, "the red moon" (of different hue) rose to splendour..... glorifying the horizon; a cute little one was born. Yes! Senthil was indeed this little boy bringing happiness to GANESAN and SUGUNA DEVI, as he was their first born child.

Name	: SENTHIL
Date of Birth	: 7-8-1984
Age	: 9 years
Sex	: Male
Fathers Name	: Ganesan (late)
Occupation	: Advocate
Mothers Name	: Suguna Devi
Occupation	: House wife
Address	: North street Ettarai Kulumani (P.O) Trichy.
Sibling(if any)	: Yes! 1 Younger brother 1 Younger sister
Birth order	: First born
Economic condition	: Lower middle class
Emotional environment	: Stable and good

Days rolled by. ...... the child "Senthil" gradually grew to shape but with a difference.

Developmental milestones

Mileus of life ....certainly are the growing phases of development, bringing to light the expectancies and activities to be achieved at different ages.

- Comparatively in Senthil's life, these phases of life bloomed rather lately or never at all - marked by lags/delays. The birth cry of the child was delayed.

- *Cooing and babbling were to be seen, but rather very late, some where around 9 to 10 months after birth.*
- *A sweet smile borne on his rosy lips yet not instantly, but rather after much contemplation.*
- *Reflexes, relatively few or not present at all.*
- *Slow to talk and walk.*
- *The little bud first set out to touch the floor rather very late. Comparatively a developmental lag, but yet this achievement of their first born brought glory and happiness to the young couple.*
- *A clear picture and the first major indication of Senthil - being different and hence undoubtedly called "Red Moon".*

The first years of life are certainly the best years of life and this is all the more for a first born. This was true is Senthil's case. Ignorance in the part of his parents and absence of any obvious facial and physical features made many to believe that he was a normal child who happened to be a little slower. But this feeling did not prevent his parents from doing the best for their child.

Years rolled on......the developmental lags and marked physical signs of a Down's syndrome child became more pronounced. A cloud of gloom descended on the family, thus making everyone aware and especially his parents that something was wrong with their beloved one.

Physical Characteristics

A SPECIAL CHILD......special in every way and in a way different from other children of his age. His charming phenotype (physical make

up) with some extra ordinary features certainly make him a "Special Child".

Facially

- *a short, round and broad one with*
- *slanting small eyes*
- *a flat nose*
- *open mouth*
- *low set ears*

Ya! naturally a Down's syndrome by birth, but yet a bonnie baby to the beloved parents.

Physically

- *short statured*
- *slow in walking and talking*
- *a grimace and a broad smile that throbs the heart of anyone*
- *dolly hands with tiny fingers, compliant and pleasant to look*
- *resoundingly watchful but slow at responding to others call.*
- *generally a custodially looked after, weak child by the parents, who were by the time aware that something was wrong with their child.*

Moon struck!..........isn't it? ....Differently born and definitely slow in progress.

Socialisation

Birthdays are a blessing in bringing special joy as they help one to understand life as a gift in a treasured way". In Senthil's life, birthdays were duely celebrated with the bountiful blessings of his near and dear ones.

Mostly unfound and shy to surge and spread its radiance progressively, it could be "no moon days" - ....wondered some. But to the surprise of many this moon gradually grew in phases awakening the dawn of a new moon night.

- *the little boy enjoyed to be in the midst of people.*
- *exhibited minimum fear in getting into contact with normal peers of his age.*
- *everwilling to play.*
- *greeted everyone with smile, willing to join hand with them.*

Thus a 'Loved one' had the same affection and love for other members at home. Right from the stages of infancy to early childhood. Senthil had a liking and longing to be in the midst of young and old. Amidst his peers, siblings, relatives and friends. He was one among them. He enjoyed their company and his face glittered like a radiant beam of moonlight brightening the entire group.

Interaction with siblings

The first born's love for his siblings was like the deep and unending ocean. He played, ate, slept and spent most of his time with them, before his departure to the special school.

Behavioural characteristics

Being born differently...behaviourally the characteristics showed traces of uncertainty and unwillingness to get along well with the normal life stream, as he advanced in age.

He was

- *Too fussy to eat*
- *Crying excessively at times and refusing to get easily consoled.*
- *Lethargic at work, restless to concentrate on learning*
- *Dependent on mother for grooming, toileting and in following other normal tasks of life.*
- *But inspite of his behavioural deficits, he was the lovable kid at home, full of mischief and childhood pranks, but yet marked by exhibiting different behavioural characteristics from age appropriate peers.*

Senthil a part of their world and the family. Just as any ordinary child of school going age, the anxious parents put him into school. He was clad in blue trousers and an attractive white shirt, the tender feet entered the lawns of St.Mary's school. The new environment and faces of many children left the little kid bewildered. Shy and shunning away from social groups, over loaded with writing and number work, commanded to recite rhymes and action songs and many more.... do's made life at school threatening and miserable.

......Expectances ran high, teachers over loaded, parents forced and peer criticism resulted in failures.

......Rejection and unhappiness were evil roots that spread venom in this tender heart and 'made shool' - a dreaded place to venture in

......Days went on.

......Fortunately, came a team of professionals for a screening camp.

......One conscious and good willed gentleman observed and noted the peculiar traits of Senthil.

......Finally he reported that he was different and referred him for a special assessment.

- *Parents approached the special assessment team, got a clear picture of the child's condition and sought the necessary supportive services.*
- *Accordingly, Senthil - the special child was admitted into Vidivelli - a special school for mentally retarded.*

Days at Vidivelli....enabled Senthil to bloom in a better way and the services he received in several areas prepared him for integration into a normal school.

- *Days flew by*
- *Senthil was slowly getting on and on.*
- *Finally the quality of his life was enhanced and Senthil grew to be different....but not as earlier but differently and definitely in the right perspective.*

APPENDIX · XII

வித்தியாசமான குழந்தை

செந்தில் என்ற குழந்தையை பற்றிய குறிப்பேடு

இந்தப் புத்தக பக்கங்களை நீங்கள் திருப்பும்பொழுது உங்கள் மனக்கண் முன் செந்தில் என்ற கள்ளங் கபடமற்ற - ஆனால் மற்றவருடன் ஒப்பிடும்பொழுது அனைத்து காரியங்களையும் செயலாற்றுவதில் பின் தங்கிய குழந்தை. ஆம்! இந்த நிலையை ஒரு சில குழந்தைகளிடம் காணலாம். இது தான் மூளை வளர்ச்சி குன்றிய நிலை என்று கூறப்படுகிறது.

இந்த குறிப்பேட்டை பயன்படுத்தி இவ்வகையில் பாதிக்கப்பட்ட குழந்தைகளை எவ்வழியில் நடத்திச்செல்லாம் என்று அறிந்து கொள்ளலாம்.

உற்சாகப்படுத்துங்கள் அவர்கள் ஓடும் பொழுது,
ஆறுதலளியுங்கள் அவர்கள் விழும் பொழுது,
மகிழ்ச்சியூட்டுங்கள் அவர்கள் விழுந்து எழும் பொழுது,
எல்லாவற்றையும் அவர்கள் கடந்து செல்லட்டும்.

விளக்கம் :-

மெய்மையான காந்த வீசக்கூடிய அந்த நட்சத்திர இரவான ஆகஸ்டு 7-ம் தேதி 1984-ல் "_ஒரு_சிவப்பு_நிலா_" எல்லோரையும் மகிழ்விப்பது போல தொடுவானத்திலிருந்து அழகிய நட்சத்திர கூட்டங்களுக்கு நடுவே உதயமானது. ஆம்! அந்த சிவப்பு நிலா உண்மையில் ஓர் அழகிய குழந்தைதான்! கணேசன், சுஜாதாதேவி தம்பதிக்கு மகிழ்ச்சியை கொடுக்கும் வண்ணம் அவர்களுக்கு பிறந்த அந்த முதல் ஆண் குழந்தை தான் செந்தில்.

பெயர்	: செந்தில்
பிறந்த தேதி	: 7.8.1984
வயது	: 9
தந்தையின் பெயர்	: கணேசன்
தந்தையின்தொழில்	: வக்கீல்
தாயின் பெயர்	: சுஜாதா தேவி
தாயின் தொழில்	: குடும்பத் தலைவி
முகவரி	: வடக்கு வீதி, எட்டரை; குழுமணி ( ) திருச்சி.
மற்ற குழந்தைகளின் விவரம்	: 1. தம்பி; 1. தங்கை.
பிறந்த நிலை	: முதல் குழந்தை
பொருளாதார நிலை	: நடுத்தர வருமானம்.

நாட்கள் உருண்டோடின.............. அந்தக் குழந்தை செந்தில் வளர்ந்தான். ஆனால் முற்றிலும் மாறுபட்டவனாய்!

உருவ அமைப்பு:

வளர வளர இந்தக் குழந்தை .... பல வழிகளிலும், முறைகளிலும் பிறரிடம் இருந்து தனித்து விளங்கி நின்றது. அவனது அழகும், தோற்றமும், அசாதாரணமான உடலமைப்பும் எல்லோருடைய கவனத்தையும் கவர்ந்து, அவனை உண்மையிலேயே இப்பூவுலகில் "சிறப்பு குழந்தையாய்" விளங்கச் செய்தது.

முகத் தோற்றம்:-

- சிறிய வட்டமான முகத்தில் சாம்வான பார்வையுடன்
- சிறிய கண்கள்
- அமுங்கிய, சப்பையான மூக்குடன் கூடிய திறந்த வாய்
- சற்று கீழே இறங்கிய காதுகள்.

ஆம் இயற்கையிலேயே டவுன்ஸ் சிண்ட்ரோம் (   ) பாதிப்பில் பிறந்தவன் செந்தில். ஆனால் குறையுடன் பிறந்த போதிலும், அவன் அன்பான பெற்றோர்களுக்கு பிரியமான குழந்தையாகத் திகழ்ந்தான்.

உடல் தோற்றம்:-

- குள்ளமான தோற்றம்
- பேச்சிலும் நடையிலும் சற்று தாமதம்
- அவன் காட்டும் புன்னகை எல்லோருடைய இதயத்தையும் ஆக்ரமிக்கும்
- ரேகைகளற்ற பிஞ்சு கையின் சிறிய விரல்களுடன் பார்ப்பதற்கு சாந்த முகத்துடன் இருப்பான்
- சிறிய முகமல் சப்தத்துடன் நடக்கலாம்
- மற்றவர்களின் அழைப்புக்கு தாமதமாக செயல்படலாம். ஆயினும் செந்தில் பெற்றோரின் பாங்கான பராமரிப்பில் வளர்ந்தான்.

ஆம்! அந்த நிலா மிகவு தாமதமாக வளர்ந்து கொண்டிருக்கும் ஒரு வித்தியாசமான நிலா.

வளர்ச்சியில் முக்கிய சம்பவங்கள்:-

ஒவ்வொருவர் வாழ்க்கையிலும் வளர்ச்சி பருவம் என்பது .... வெவ்வேறு கட்டங்களில் அவர்கள் அடையும் வளர்ச்சியையும், அவர்கள் சாதிக்கும் ஒவ்வொரு செயலையும் பொறுத்தது ஆகும்.

செந்திலின் வாழ்க்கையில் இந்த வளர்ச்சிகள் சற்று காலதாமதமாகவும் சில சமயங்களில் நடைபெறாமலும் இருந்தது. இப்பூவுலகில் பிறந்த இவனது முதல் அழுகைக் குரல் கூட சற்று தாமதம் தான். அந்த பிஞ்சுக் குழந்தையின் மழலைச் சொல்லின் ஒலியோ 10 மாதங்களுக்குப் பிறகுதான் எல்லோராலும் கேட்க முடிந்தது. அந்தச் சிறிய சிவந்த உதடுகளிலிருந்து வரும் புன் சிரிப்பு கூட உடனடியாகக் கேட்காமல் ஆழ்ந்த அர்த்தமில்லாத சிந்தனைக்குப்பிறகு வெளிப்படும். அந்தக் குழந்தையின் இயக்கங்கள் கூட சில நேரத்தில் இருந்தும், பல நேரங்களில் இல்லாமலும் இருந்தது. பேச்சிலும், நடையிலும் அசாதாரணம் இருந்தது.

செந்திலின் ஆரம்ப கால வெளிப்பாடுகள், மாறுபட்டுக்காணப்பட்டதால், சந்தேகமில்லாமல் ஒரு சிவப்பு நிலவாய் உதயமானது.

முதல் குழந்தைக்கு இளம் பருவம் மிகவும் சிறந்ததாக இருக்கும் என்பது செந்திலின் வாழ்க்கையில் உண்மையானது. மூளை வளர்ச்சி குன்றிய நிலை பற்றிய பெற்றோர்களின் அறியாமையும், வெளித்தோற்றம், முகத் தோற்றத்தில் எந்தவித குறைபாடு இன்மையும் செந்திலை சாதாரணக்குழந்தை என மற்றவரை நம்பச் செய்தது. ஆனால், தன் வயதுக் கேற்ற செயல்களை அடைவதில் செந்தில் பின் தங்கியிருந்தான். அவனுடைய பெற்றோரை இந்த உணர்ச்சிகள் எதுவும் பாதிக்கவில்லை. செந்திலின் பெற்றோர்கள் செந்திலுக்கு நகைகள் போட்டு அலங்கரித்து மகிழ்ந்தனர்; நன்றாக கவனித்துக்கொண்டனர். இதிலிருந்து நாம் அறிவது என்னவென்றால், பெற்றோர்களுக்கும், குழந்தையை கவனிப்போர்க்கும், குழந்தைப் பருவத்திலேயே வளர்ச்சி குன்றிய குழந்தைக்கான அறிகுறியை கண்டுபிடிப்பது கடினம்.

பல வருடங்கள் கழித்து, செந்திலின் உடலில் டௌன் சிண்ட்ரோமிற்கான அறிகுறிகள் தெரிய வந்தன. செந்திலின் பெற்றோருக்கு அப்பொழுதுதான் தன் குழந்தையிடத்தில் ஏதோ மாற்றம் (அல்லது) குறைபாடு இருப்பது தெரிய வந்தது.

- வீட்டில் அதிகமாக நேசிக்கப்படுபவனாய் இருந்தபோதிலும், அதிக குறும்புத்தனமும், விளையாட்டுத்தனம் மிக்கவனாய் வயதிற்கு பொருந்தாத வேறுபாடான பழக்க வழக்கங்களை உடையவனாய் இருந்தான்.

<u>பள்ளி சூழ்நிலை:-</u>

செந்தில் அவனுடைய உலகத்திலும், அவனுடைய குடும்பத்திலும் ஒரு முக்கிய நபராக இருந்தான்

- எல்லா குழந்தைகளும் பள்ளிக்கு போகும் அதே வயதில், செந்திலின் பெற்றோர் அவனையும் பள்ளிக்கு அனுப்பினர்.
- நீல நிறத்தில் கால் சட்டையும், வெள்ளை நிறத்தில் சட்டையும் உடுத்தி தனது மென்மையான பாதங்களில் பளபளக்கும் பூட்ஸ் அணிந்து புனித மேரி பள்ளியில் நுழைந்தான்.
- அந்தப் புதிய சூழ்நிலையும், பல குழந்தைகளின் முகங்களும், செந்திலை ஆச்சரியத்திலும் பயத்திலும் ஆழ்த்தின.

வெட்கப்பட்டு மற்றவர்களுடன் நெருங்கிப் பழகாமல் விலகுதல் பள்ளியில் எதிர்பார்த்த எழுத்து வேலை, பாடங்களை மனப்பாடம் செய்ய வேண்டிய நிர்பந்தம், கணித வேலை, ஆகியன அவன் மற்றவர்களைக்கண்டு அஞ்சுவதற்குக் காரணமாக இருந்தது.

செந்திலின் நல்ல செயல்களைக் காண அனைவருடைய எதிர்பார்ப்புகளும் அதிகரித்தன. ஆசிரியரின் எதிர்பார்ப்பு, பாடச் சுமை, பெற்றோர்களின் கண்டிப்பும், நண்பர்களின் நகைத்தல் அவனது தோல்விகளை அதிகரித்து நடுங்க வைத்தது.

- தோல்விகளும், அதனால் உண்டான மனச்சுமையும் அவனது பிஞ்சு மனதில் வருத்தத்தை உண்டாக்கி பள்ளிக்கு செல்ல பயத்தை உண்டாக்கியது.
- நாட்கள் கடந்து ஓடின.
- ஒரு நாள் பள்ளிசிறுவர்களை மதிப்பீடு செய்ய மருத்துவக்குழு ஒன்று வந்தது.
- அக்குழுவில் இடம் பெற்றிருந்த நல்லுள்ளம் கொண்ட ஒருவர், செந்திலின் பழக்க வழக்கங்களை கண்டார்.
- இறுதியாக, அவனது உண்மை நிலையை அறிந்து அவன் மனவளர்ச்சி குன்றியோருக்கான சிறப்பு பயிற்சி பெற பரிந்துரைத்தார்.

-அதன்பொருட்டு செந்திலின் பெற்றோர், அவனை மன நல மருத்துவமனைக்கு அழைத்து சென்று அவனுக்கேற்ற தனி பயிற்சி முறைகளை கண்டறிந்தனர்.

- அவர்களின் ஆலோசனைப்படி 'செந்தில்' 'விடிவெள்ளி' என்னும் சிறப்பு பள்ளியில் தனிப்பயிற்சிக்காக அனுமதிக்கப்பட்டான்.
- விடிவெள்ளியில் அவனிருந்த நாட்கள் அவனுக்கு [illegible]

<u>சமூகத் தொடர்பு - உறவு நிலை:-</u>

பிறந்த நாள் கொண்டாட்டங்கள் என்பது ஒவ்வொருவரின் வாழ்விடம் முக்கியமான நாளான விளங்குகிறது. அது நம் வாழ்நாளின் பெரும் பரிசாகவும் விளங்குகிறது. அது நம் வாழ்நாளின் பெரும் பரிசாக விளங்குகிறது. செந்திலின் வாழ்விலும் இக்கொண்டாட்டங்கள் இடம் பெற்றன.

- அந்த நிலா தன்னைக் காட்டிக் கொள்ளாமல் வெட்கத்துடன் வெளியே வராமல் தன் எண்ணங்களை பரவவிடாமல், அமாவாசையை நோக்கி செல்லும் தேய் பிறையாய் அல்லாமல் பௌர்ணமி நோக்கிச் செல்லும் வளர்பிறையாய் திகழ்ந்தது.
- மற்றவர்களுடன் பழகுவதில் எப்பொழுதும் பாசத்தை வெளிப்படுத்துவதுடன், தன் மற்ற வயதை ஒத்த குழந்தைகளுடன் பழகுவதில் கூட இன்பத்தை வெளிக்காட்டிக் கொள்வான்.
- வெட்கத்துடனும், பயத்துடனும் விளையாட மறுப்பவன் அல்ல.
- வீட்டின் மூலையில் தனிமையானவனாய் அமர்ந்து கொண்டு ஒதுங்கி இருப்பவனும் அல்ல.
- மற்றவர்கள் மகிழ்ச்சியுடன் செய்யும் புன்முறுவலை ஏற்றுக்கொண்டு தானும் அதை வெளிப்படுத்த தெரிந்தவன்.

செந்தில் என்னும் அச்சிறுவன் தன் சகோதர சகோதரியிடம் அளவு கடந்த அன்பு கொண்டிருந்தான். அவன் அவர்களோடு சிரித்து விளையாடி, ஒன்றாக உண்ணுவதிலும், உறங்குவதிலும் அதிக நேரம் செலவு செய்து, மகிழ்ச்சியுற்றான்.

<u>பழக்க வழக்க குறைபாடுகள்:-</u>

வித்தியாசமான பிறப்பினால் அவனுடைய பழக்க வழக்கத்தில் நிலையான, அறிவு ரீதியான தன்மை இல்லாமலும் தன் வயதுக்கு ஒத்த மற்றவர்களுடன் தன்னை ஈடுபடுத்திக் கொள்ள இயலாமலும் இருந்தான்.

உண்பதற்குக் கூட மிகவும் பிடிவாதமாக இருந்தான்.

- மிக அதிகமாக அழுது கொண்டிருப்பான். அந்த நேரத்தில் எளிதில் சமாதானப் படுத்த இயலாது.
- வெட்கத்துடனும், பயத்துடனும் வீட்டிற்குப் புதிதாக வந்தவர்களைப் பார்த்துக் கொண்டு இருப்பான்.
- வேலையில் மிகவும் மெத்தனமாகவும், கற்றுக் கொள்ளுதலில் கவனம் செலுத்தாமல் [illegible]

'விடிவெள்ளி' ஆசிரியர்கள் அவன் பல துறைகளில் முன்னேற வழி செய்து அவனும் மற்றவரோடு பயில பள்ளிப்படிப்படிப்பிற்கு தயார் செய்தனர். கருணை உள்ளம் கொண்ட சகோதரி மேரி அவர்களின் நல்லாசியுடன், பட்டர்வார்த் பள்ளியில் அவனை ஒத்த வயதுடைய ஊனமில்லா குழந்தைகள் பயிலும் பள்ளியில் அனுமதிக்கப்பட்டான்.

- நாட்கள் பறந்தோடின.
- செந்தில் மெல்ல மெல்ல தனது ஆற்றல்களை அறியத்தொடங்கினான்.
- இறுதியில், அவனது வாழ்வு சிறப்புற்றதாக, நிறைவு பெறும் என்பதும் திண்ணம்.

APPENDIX XIII

GAME - MAGIC LADDERS

Goal/Theme: *i) Motivate the teachers to help mentally retarded child learn necessary things in the right perspective.*

ii) To Understand the impact of positive and negative motivation of mentally retarded child.

No. of Players: *2-5*

Materials Required: *Dice and Counter/s for each player.*

Procedure:

i) The players sit in a circle.

ii) The first players takes his/her turn and throws the dice. Initially, he is supposed to throw number 'one' in the dice to start the game. If he succeeds in getting 'one', he places his/her counter on the first square. If unsuccessful, he passes the dice to the second player and waits for his turn. Thus the game goes on.

iii) Having started the game players take turns to throw the dice. Corresponding to the number on the dice, the counter is positioned in the board.

iv) In the board, there are two types of Ladders' namely

i) Red Ladder -- Descending Ladder, denotes negative attitudes

ii) Green Ladder -- Ascending Ladder denote positive attitudes

Eg. Say after 1, if in the next turn the person throws 'three' on the dice. From 1 he counts three squares and moves to '4'. At '4' is the ascending ladder and hence he climbs through this ladder and places his counter on 25th square. Simultaneously there is a positive quality in square 4, that ensures positive growth.

On the other hand if by virtue of his turn, he reaches No. 13, there is a descending ladder with a negative trait and it forces the person to move his counter back to No. 7.

Thus the game goes on, and inspite of ups and downs the person who reaches the 100th square first is the Winner.

Positive Qualities		Impact
1. Love & Affection	--	Socialization
2. Kindness	--	Co-operation and Involvement
3. Motivation and acceptance	--	Better performance
4. Caring and supportive	--	Respect and dignity
5. Systematic and patient teaching	--	Skill development

Negative Qualities Impact		
1. Rejection, scolding and beating	--	Withdrawal and hatred
2. High Demand	--	Stunted growth
3. Anger	--	Frustration & dislike
4. Discouraging	--	Poor performance
5. Punishing too much	--	Fear
6. Abuse	--	Low self image
7. Inability to understand	--	Failure

APPENDIX - XIV

QUESTIONNAIRE TO ELICIT TEACHERS' KNOWLEDGE ON MILDLY MENTALLY RETARDED

1. Can you identify the mildly mentally retarded in normal schools?

Yes	No	Ways of Identifying

2. Do you know the causes leading to mental retardation?

Yes	No	Reasons

3. What are the common behaviour problems noticed among the M.M.R.?

4. Is education essential for mildly mentally retarded?

Yes	No	Reasons

5. Is education a right of mildly mentally retarded?

Yes	No	Reasons

6. Is integrated education needed for M.M.R.?

Yes	No	Reasons

7. Do teachers have a definite role in educating the mildly mentally retarded?

Yes	No	Specify roles

8. Do you identify talents of M.M.R.?

Yes	No	Specify reasons

I. Identification of diabilities (10 Marks)

1. ------------------, ------------------, ----------------- and ---------------------- are the 4 major categories of handicapped.
2. ------------------- chart is used to test the vision of visually impaired.
3. A normal child at 7 months will be able to ----------.
4. The speech problems in a hearing impaired can be assessed using the test of --------------.
5. ----------------, ----------------, ------------- and ------------- are the different degrees of mildly retarded.
6. A child of three years who does not indicate his/her toilet needs should become a concern. T/F
7. When mental retardation is suspected in a child he can be referred to a faith healer. T/F
8. Multi disciplinary team approach is very vital in assessing and planning intervention programmes for handicapped. T/F
9. Medicines cannot cure mental retardation. T/F
10. Mental illness and mental retardation are one and the same. T/F

II. Planning the available resources (10 Marks)

1. ------------------ and ---------------- are the two essential criteria to be followed in designing materials for mentally handicapped.
2. The principle of teaching mentally retarded should always be from --------------- to ------------ and ----------- to ---------------.

3. ------------------------ approach was proposed by Maria Montessori as a teaching methodology to be followed with mentally retarded.

4. ----------------------- programmes are very useful and is an effective method of teaching mentally retarded.

5. ------------------, ---------------, -------------- are the three essential criterias to be followed in teaching and planning resources for mentally retarded.

Say T/F

6. While teaching the mildly mentally retarded person one should teach the most difficult task first. T/F

7. The mildly mentally retarded students individual needs in the classroom can be met through peer tutoring. T/F

8. Goal setting is very vital in planning I.E.P's for teaching the mildly mentally retarded. T/F

9. List 4 low cost aids used in teaching arithmetic.

10. List 4 criteria which you would consider before you plan a lesson for the mentally retarded child.

III. Specific knowledge about behaviours of the mildly mentally retarded children (10 Marks)

1. The feature of mental retardation includes all the following except.

   a) Slow at responding

   b) Having suicidal tendencies

   c) Difficulty in understanding

   d) Inability to express clearly

2. *All the following can cause mental retardation except*

a) Brain fever

b) Difficult delivery

c) Poor nutrition during pregnancy

d) Black magic

3. *While advising the parents of the mildly mentally retarded one should.*

a) Give less time to understand their feelings

b) Develop high hopes in them about their child

c) Make them feel that one understands the problem

d) Should discourage them.

4. *All the following will help in the prevention of mentally retarded except.*

a) Balanced diet in the mother

b) Avoiding accidents during pregnancy

c) Proper care during delivery

d) Avoiding contact with mentally retarded children.

5. *The following include behaviour problems of mentally retarded except one.*

a) hyperactivity

b) nail biting

c) masturbation

d) P.K.U

Say T/F

1. *Delayed development is not an indicator of mental retardation. T/F*
2. *Down's syndrome is an associated problem* T/F
3. *Sweet is an example of material reinforcer* T/F
4. *Marriage among close relatives is not a cause for birth of mentally retarded child* T/F
5. *Some persons with mental retardation cannot control their feelings and may show disturbed behaviour* T/F

IV. *Integrated Education and Adapting Materials and Instructional Methodologies* *(10 Marks)*

1. *The mild mentally retarded who can be integrated and taught many things at school are called Educable Retarded* T/F
2. *Art instruction for the mild retarded helps in developing manual dexterity and in teaching colour concepts* T/F
3. *Integration implies social, psychological, cultural, academic and physical interaction with the normal population.* T/F
4. *Punishing the mentally retarded for every short coming of theirs will improve their performance.* T/F
5. *Ability grouping is one method of grouping mentally retarded and normal students to enhance their learning in an integrated set up.* T/F
6. *Arithmetics skills can be effectively taught through play way method* T/F
7. *Process oriented approach is not useful in teaching basic sciences.* T/F

8. ----------------, ----------------, ------------ and ------------- are the different models in teaching educable retarded in integrated settings.

9. --------------, carefully planned training and ------------ are vital to help mildly mentally retarded learn appropriate responses to social situation.

10. List four essential components of an I.E.P.

V. Role of Professionals (10 Marks)

1. ----------------------- is a person who travels from one school to another to work with individual students.

2. The team of professionals who work with the disabled child is called --------------.

3. The qualified personnel who assesses the intelligence level of a mentally retarded child is called --------------.

4. The ---------------- is a person who supports child in school by providing supportive services when needed.

5. Mentally retarded students in regular class can be effectively taught through ----------------.

Say T/F

6. Parental involvement is essential in improving integrated education of the handicapped. T/F

7. School Administrators are not included in the team of implementing I.E.D. T/F

8. The client background information should be kept confidential. T/F

Children with physical deformities and mobility impairments is therapeutically assisted with exercises by a physiotherapist. T/F

The regular teacher is responsible for instilling positive attitudes about the mentally retarded. T/F

Key

I. Knowing the handicapped people and identification

1. *Visually Impaired, Hearing impaired, Physically handicapped and Mentally retarded.*
2. *Snellen's E - chart*
3. *To sit independently*
4. *Test of Articulation*
5. *Mild, Moderate, Severe and Profound*
6. *True*
7. *False*
8. *True*
9. *True*
10. *False*

II. Planning the Available Resource

1. *Creativity and Discovery*
2. *Simple to Complex : Concrete to abstract*
3. *Multisensory*
4. *Individualized Education*
5. *Acquisition, Maintenance and Generalisation*
6. *False*

7. True

8. True

9. Stones, sticks, clay, beads, buttons, etc.,

10. Flexible, specific and Accurate, Time oriented.

III. Specific knowledge about mildly mentally retarded behaviours

1. Having suicidal tendencies

2. Black magic

3. Make them feel that one understands the problem

4. Avoiding contact with mentally retarded children

5. P.K.U.

6. False

7. True

8. True

9. False

10. True

IV. Integrated Education and Adapting materials and instructional methodologies

1. True

2. True

3. True

4. False

5. True

6. True

7. False

8. *Consultant teacher model; Diagnostic Prescriptive Teacher model, Resource teacher model, special class teacher model*

9. *Frequent practice and reinforcement*

10. *Prevent functioning levels, annual goals, short term behavioural objectives, special and related services, regular education, responsibility, evaluation, parent involvement.*

V. Role of Professionals

1. *Itinerant teacher*
2. *Multi-disciplinary team*
3. *Psychologist*
4. Resource teacher
5. Peer tutoring
6. True
7. False
8. True
9. True
10. True

APPENDIX - XV

QUESTIONNAIRE TO ELICIT EDUCATIONAL METHODS AND PRACTICES OF THE TEACHERS

1. *Did you prepare I.E.P. for teaching mildly mentally retarded?*

Yes		No		Specify Areas of Preparation	
B.T	A.T	B.T	A.T	B.T.	A.T.

2. *Did you involve the peers in teaching the M.M.R.?*

Yes		No		Specify the Areas	
B.T	A.T	B.T	A.T	B.T.	A.T.

3. *Did you motivate the mildly mentally retarded?*

Yes		No		Motivation strategies	
B.T	A.T	B.T	A.T	B.T.	A.T.

4. *Did you use supplementary aids & materials in teaching the mildly mentally retarded?*

Yes		*No*		*Specify, Aids used*	
B.T	*A.T*	*B.T*	*A.T*	*B.T.*	*A.T.*

5. *Mention the talents you have identified in the M.M.R.*

Before training	*After training*

6. *Did you try to socialise the M.M.R. with their peers in the school*

Yes		*No*		*Specify the activities*		*How did you encourage sheer involvement*
B.T	*A.T*	*B.T*	*A.T*	*B.T.*	*A.T.*	

7. *What are the common labels used by you to refer the M.M.R.?*

Prior to training	*After training*

8. *Did you involve the parents in the education of the mildly mentally retarded?*

Yes		*No*		*Specify the Areas*	
B.T	*A.T*	*B.T*	*A.T*	*B.T.*	*A.T.*

**B.T. - Before Training*

A.T. - After Training

APPENDIX - XVI

PAIRED 't' TEST

Paired 't' test is a way to test two related samples involving small values of sample size 'n'. The assumption under this test is that the two populations are normally distributed but not necessarily with equal variances. For a paired 't' test, it is necessary that the observations in the two samples be collected in the form of what is called "matched pair" such a test is generally considered appropriate in a "Before and After" treatment study. For instance, we may test a group of respondents before and after the interventi[illegible] programme Training programme) in order to know whether the training programme is effective.

To apply this test, we first work out the different score for each matched pair and then find out the average of such differences, d, along with the samples variance of the difference score. If the values from the two matched samples are denoted as Xi and Yi and the differences by di (di=Xi-Yi) then the mean of the differences is

$$d = \frac{(di)}{n}$$

and the Variance of the difference is

$$Sd^2 = \frac{1}{n-1} (di-d)^2$$

Assuming the said differences to be normally distributed and independent. We can apply the paired 't' test for Judging the significance of mean of differences and work our the test statistic 't' as

$$t = \frac{d}{Sd/ n}$$

With n - 1 degree of freedom

Where d = mean of differences

Sd = Standard deviation of difference

n = number of matched pairs

This calculated value of 't' is compared with the table value at a given level of significance.

If the calculated value is less than the table value, then the null hypothesis is accepted and the test is said to be not significant. Otherwise, the null hypothesis is rejected which implies that the test is significant.

Application

The paired 't' test was applied in the present study to test the effectiveness of the training programme by comparing the scores of knowledge gained by the teachers and reading, writing and arithmetic scores of the children before and after their teachers training programme.