

CHAPTER V

CONCLUSIONS

The topic for the present study is **"Effect of Individualized Training Programme on Communication Skills, and certain associated variables in the Mentally Retarded"**.

HYPOTHESES

The major hypotheses for the study were:

1. The level of communication skills in the mentally retarded will be related to the degree of retardation.
2. The level of motor and socio-emotional skills of the mentally retarded will be related to the degree of retardation.
3. Planned Individualized Training Programme will have an effect on level of communication skills and certain associated variables in the Mentally Retarded.
4. The degree of effectiveness of planned Individualized Training Programme on the Communication skills and certain associated variable of mentally retarded will differ according to degree of retardation and time of intervention.

OPERATIONAL TRANSLATION

The hypotheses were tested operationally as follows:

1. The level of attainment of communication skills and

certain associated variables (motor and socio-emotional skills) of educable mentally retarded will be significantly higher than the level of attainment of communication skills and motor and socio-emotional skill of trainable mentally retarded.

2. The level of attainment of communication skills and motor and socio-emotional skills of groups exposed to the Individualized Training Programme will be higher than the level of attainment of communication skills and motor and socio emotional skills of groups exposed to the traditional curriculum within educable mentally retarded and within trainable mentally retarded.
3. The effect of the Individualized Training Programme will be higher on early intervention group than late intervention group.

OBJECTIVES

The main objectives of the study were:

1. To measure the level of communication skills in the mentally retarded, classified as Educable Mentally Retarded (EMR), and Trainable Mentally Retarded (TMR).
2. To measure the levels of motor and socio-emotional skills in the mentally retarded classified as Educable Mentally Retarded and Trainable Mentally Retarded and to compare the levels of motor and socio-emotional

skills of Educable Mentally Retarded and Trainable Mentally Retarded.

3. To measure the effect of the planned Individualized Training Programme on level of communication skills, and on motor and socio-emotional skills in the mentally retarded classified as Educable Mentally Retarded and Trainable Mentally Retarded and to compare the effect of the planned Individualized Training Programme on communication skills and motor and socio-emotional skills of Educable Mentally Retarded and Trainable Mentally Retarded.
4. To measure the level of communication skills in the mentally retarded classified as Early and Late Intervention Group and to compare the level of communication skills between the early and late Intervention Group.
5. To measure the levels of motor and socio-emotional skills in the mentally retarded classified as Early and Late Intervention groups and to compare the levels of motor and socio-emotional skills between Early and Late Intervention groups.
6. To measure the effect of the planned Individualized Training Programme on level of communication skills and on motor and socio-emotional skills in the mentally retarded classified as Early Intervention and late

Intervention groups and compare the effect of the planned Individualized Training Programme on communication skills and on motor and socio-emotional skills of Early Intervention group and Late Intervention group.

7. The study should also provide the opportunity to test the capability of the variables taken up for study viz communication skills and motor and socio-emotional skills to serve as criteria for classification of Educable Mentally Retarded and Trainable Mentally Retarded.

SPECIFIC OBJECTIVES

The specific objectives of the study were

1. To prepare the Individualized Training Programme for development of Communication skills and motor and socio-emotional skills.
2. To implement the planned Individualized Training Programme as experimental treatment on a sample of mentally retarded, classified further, on the basis of degree of retardation and time of intervention.
3. To measure the effect of the planned Individualized Training Programmer on communication skills and motor and socio-emotional skills in the mentally retarded, classified further, on the basis of degree of

retardation and time of intervention.

4. To compare the effects of the planned Individualized Training Programme on communication skills and motor, and socio-emotional skills between the relevant subsamples among the mentally retarded.

THE STUDY

The levels of attainment of communication skills and motor and socio-emotional skills of a group of Educable Mentally Retarded (n = 60) and a group of Trainable Mentally Retarded (n = 60) were measured and compared. The groups were further divided into experimental (n = 30) and control (n = 30) groups within Educable Mentally Retarded and Trainable Mentally Retarded, who were matched for relevant factors (age, sex and socio-emotional status).

The experimental groups were exposed to the Individualized Training Programme and the control group to the traditional group method of teaching for a period of 24 weeks. The pre-test and post-test scores were compared. The study was repeated on two groups of early intervention and late intervention groups as well.

The Individualized Training Programme was implemented through a series of checklists prepared for the purpose.

CONCLUSIONS

The Conclusions of the study are given in eight sections.

1. Communication skills, motor and socio-emotional skills of Educable Mentally Retarded and Trainable Mentally Retarded.
2. Communication skills, motor and socio-emotional skills of experimental and control groups within Educable Mentally Retarded.
3. Communication Skills, motor and socio-emotional skills of experimental and control groups within Trainable Mentally Retarded.
4. Comparison of extent of gain on communication skills, motor and socio-emotional skills of Educable Mentally Retarded and Trainable Mentally Retarded.
5. Communication skills, motor and socio-emotional skills of experimental and control groups within Early Intervention groups.
6. Comparison of extent of gain on communication skills, motor and socio-emotional skills of Early and Late Intervention Groups.
7. Capabilities of communication skills and motor and socio-emotional skills criteria for classification of Educable Mentally Retarded and Trainable Mentally Retarded.
8. Case Studies.

CONCLUSIONS - SECTION-I

Communication skills, motor and socio-emotional skills of Educable Mentally Retarded and Trainable Mentally Retarded.

The level of attainment of communication skills and motor and socio-emotional skills of EMR can be stated to be significantly higher than the level of attainment of communication skills and motor and socio-emotional skills of TMR (Vide Tables 4.1 to 4.5).

- 1.1 The mean score of EMR on oral skills was significantly higher than the mean score of TMR (EMR M 14.25, SD 2.51 TMR M 11.82, SD 2.30, C.R 5.53).
- 1.2 The mean score of EMR on reading skills was significantly higher than the mean score of TMR (EMR M 16.10, SD 2.19 TMR M 10.45, SD 1.32, C.R 17.99).
- 1.3 The mean score of EMR on writing skills was significantly higher than the mean score of TMR (EMR M 11.81, SD 1.53 TMR M 6.72, SD 1.51, C.R 18.37).
- 1.4 The mean score of EMR on Motor skills was significantly higher than the mean score of TMR (EMR M 19.22, SD 3.51 TMR M 10.80, SD 1.54, C.R 17.21).
- 1.5 The mean score of EMR on socio-emotional skills was significantly higher than the mean score of TMR (EMR M 19.93, SD 3.41 TMR M 10.76, SD 1.33, C.R 19.5).

1.6 EMR and TMR differ in the ranks assigned to the skills studied on the basis of mean scores obtained (Vide Table 4.8). The highest mean score obtained by EMR was for socio-emotional skills and by TMR was for oral skills.

1.7 The difference between EMR and TMR is maximum for socio-emotional skills and minimum for oral skills.

CONCLUSION - SECTION-II

Communication skills, motor and socio-emotional skills of experimental and control groups within Educable Mentally Retarded.

The level of attainment of communication skills and motor and socio-emotional skills of the groups exposed to ITP can be stated to be significantly higher than the level of attainment of communication skills and motor and socio-emotional skills of the group exposed to the traditional curriculum within EMR (Vide Tables 4.9 to 4.13).

2.1a The difference between the pre-test mean scores on oral skills of Groups A and B within EMR was not significant (A M 14.40, SD 2.54, B M 14.10, SD 2.35, C.R .47)

A refers to Experimental Group.

B refers to Control Group.

- 2.1b The difference between the Post-test mean scores on oral skills of Groups A and B within EMR was statistically significant. (A M 23.17, SD 2.25, B M 19.10, SD 2.93, C.R 6.05)
- 2.2a The difference between the Pre-test mean scores on reading skills of Groups A and B within EMR was not statistically significant. (A M 11.30, SD 1.47, B M 11.07, SD 2.00, CR .511).
- 2.2b The difference between the Post-test mean scores on reading skills of Groups A and B within EMR was statistically significant. (A M 17.7, SD 2.38, B M 14.3, SD 1.95, C.R 6.05).
- 2.3a The difference between the pre-test mean scores on writing skills of Groups A and B within EMR was not statistically significant. (A M 8.93, SD 1.43, B M 9.03, SD 1.24, C.R .29).
- 2.3b The difference between the post-test mean scores on writing skills of Groups A and B within EMR was statistically significant. (A M 12.67, SD 9.03, B M 10.90, SD 1.35, C.R 4.59).
- 2.4a The difference between the Pre-test mean scores on motor skills of Groups A and B within EMR was not statistically significant. (A M 14.5, SD 3.05, B M 14.13, SD 3.59, C.R .453).
- 2.4b The difference between the Post-tests mean score on

motor skills of Groups A and B within EMR was statistically significant. (A M 20.78, SD 3.00, B M 17.27, SD 3.47, C.R 4.20).

2.5a The difference between the Pre-test scores on socio-emotional skills of Groups A and B within EMR was not statistically significant. (A M 14.77, SD 2.92, B M 14.57, SD 2.88, C.R .027).

2.5b The difference between the Post-test scores on socio-emotional skills of Groups A and B within EMR was statistically significant. (A M 21.77, SD 3.41, B M 17.83, SD 3.02, C.R 4.72).

2.6 The extent of impact of the Individualized Training Programme as measured by difference between Pre-test and Post-test scores of Group A of EMR for the deferent skills is clear (vide Tables 4.9 to 4.13).

2.7 The impact of the Individualized Training Programme is maximum for oral skills and minimum for writing skills as shown by the difference between Pre-test and Post-test scores for EMR A group.

CONCLUSION - SECTION-III

Communication Skills, motor and socio-emotional skills of experimental and control groups within Trainable Mentally Retarded.

The level of attainment of communication skills

and motor and socio-emotional skills of group exposed to Individualized Training Programme can be stated to be significantly higher than the level of attainment of communication skills and motor and socio-emotional skills of groups exposed to the traditional curriculum within TMR (Vide Tables 4.17 to 4.21).

3.1a The difference between the Pre-test scores on oral skills of groups A and B within TMR was not statistically significant. (A M 8.66, SD 1.22, B M 8.40, SD 1.14, C.R .858).

3.1b The difference between the Post-test scores on oral skills of groups A and B within TMR was statistically significant. (A M 12.81, SD 1.50, B M 10.70, SD 1.10, C.R 6.224).

3.2a The difference between the Pre-test scores on reading skills of groups A and B within TMR was not statistically significant (A M 7.63, SD 1.35, B M 7.16, SD 1.27, C.R 1.35).

3.2b The difference between the Post-test scores on reading skills of groups A and B within TMR was statistically significant. (A M 11.7, SD 1.59, B M 9.20, SD 1.28, C.R 6.74).

3.3a The difference between the Pre-test score on writing skills of groups A and B within TMR was not statistically significant. (A M 5.7, SD 0.78, B M

- 5.43, SD 1.19, C.R 1.046).
- 3.3b The difference between the Post-test score on writing skills of groups A and B within TMR was statistically significant. (A M 7.63, SD 1.29, B M 6.20, SD 1.58, C.R 3.85).
- 3.4a The difference between the Pre-test score on motor skills of groups A and B within TMR was not statistically significant. (A M 8.50, SD 1.55, B M 8.43, SD 1.43, C.R .184).
- 3.4b The difference between the Post-test score on motor skills of groups A and B within TMR was statistically significant. (A M 12.00, SD 1.38, B M 9.60, SD 1.78, C.R 5.85).
- 3.5a The difference between the Pre-test score on socio-emotional skills of groups A and B within TMR was not statistically significant. (A M 8.16, SD 1.02, B M 8.30, SD 1.30, C.R .14).
- 3.5b The difference between the Post-test score on socio-emotional skills of groups A and B within TMR was statistically significant. (A M 11.40, SD 1.18, B M 10.13, SD 1.48, C.R 3.68).
- 3.6 The extent of impact of the Individualized Training Programme as measured by difference between Pre-test and Post-test mean scores, differ for the different skills of TMR (vide Table 4.24).

3.7 The impact of the Individualized Training Programme is maximum for oral skills and minimum for socio-emotional skills as shown by the difference between Pre-test and Post-test scores for TMR group (vide Table 4.24).

CONCLUSION - SECTION-IV

Comparison of extent of gain on communication skills, motor and socio-emotional skills of Educable Mentally Retarded and Trainable Mentally Retarded:

The extent of impact of the Individualized Training Programme is higher for EMR than TMR as compared through gain scores of Experimental groups (Vide Table 4.25).

1. The gain scores are significantly higher for EMR than TMR for the four skills, oral, reading, motor and socio-emotional skills.
2. For writing skills there is no difference in gain scores of EMR and TMR.
3. The maximum gain is for socio-emotional skills and the minimum gain is for writing skills.
4. Oral, reading and motor skills do not differ from each other as to the extent of impact.

CONCLUSION - SECTION-V

Communication skills, motor and socio-emotional skills of experimental and control groups within Early Intervention groups.

The level of attainment of communication skills and motor and socio-emotional skills of the groups exposed to Individualized Training Programme can be stated to be higher than the level of attainment of communication skills and motor and socio-emotional skills of the group exposed to the traditional curriculum within the Early Intervention Group (Vide Tables 4.27 to 4.30.

- 5.1a The difference between the Pre-test scores on oral skills of Group A and B within Early Intervention Group was not statistically significant. (A M 9.93, SD 1.75, B M 9.47, SD 1.87, C.R .987).
- 5.1b The difference between the Post-test scores on oral skills of Groups A and B within Early Intervention Group was statistically significant. (A M 22.33, SD 2.94, B M 14.87, SD 2.09, C.R 11.33).
- 5.2a The difference between the pre-test score on reading skills of Groups A and B within Early Intervention Group was not statistically significant. (A M 7.87, SD 1.39, B M 7.80, SD 1.44, C.R .198).
- 5.2b The difference between the Post-test scores on reading skills of Groups A and B within Early

Intervention Group was statistically significant. (A M 16.53, SD 2.18, B M 12.30, SD 2.27, C.R 7.42).

- 5.3a The difference between the Pre-test scores on motor skills of Groups A and B within Early Intervention Group was not statistically significant. (A M 9.80, SD 1.72, B M 9.40, SD 1.84, C.R .87).
- 5.3b The difference between the Post-test scores on motor skills of Groups A and B within Early Intervention Group was statistically significant. (A M 19.70, SD 2.61, B M 14.33, SD 1.51, C.R 9.66).
- 5.4a The difference between the Pre-test scores on socio-emotional skills of Groups A and B within Early Intervention Group was not statistically significant. (A M 9.10, SD 1.54, B M 9.50, SD 1.61, C.R .985).
- 5.4b The difference between the Post-test scores on socio-emotional skills of Groups A and B within Early Intervention Group was statistically significant. (A M 19.10, SD 1.78, B M 13.23, SD 1.52, C.R 13.65).
- 5.5 The extent of impact of the Individualized Training Programme as measured by difference between Pre-test and Post-test mean score differs for the different skills within Early Intervention Group. (Vide Table 4.32).
- 5.6 The impact of the Individualized Training Programme is maximum for oral skills and minimum for reading

skills as shown by the extent of difference between Pre-test and Post-test score for A group within Early Intervention Group (Vide Table 4.34).

- 5.7 The level of attainment of communication skills and motor and socio-emotional skills of groups exposed to the Individualized Training Programme is significantly higher than the communication skills and motor and socio-emotional skills of groups, exposed to the traditional curriculum with Late Intervention group as stated in Section II and III of Conclusions.
- 5.8 The effect of Individualized Training Programme is higher for Early Intervention than Late Intervention (TMR & EMR) groups for all the four skills studied, vide Table 4.35.
- 5.9 Late Intervention groups (EMR & TMR) have significant lower scores than Early Intervention groups for all the four skills studied (Vide Table 4.36).
- 5.10 The effect of early intervention has greater impact of TMR than EMR for all the four skills studied.

CONCLUSION - SECTION-VI

Comparison of the extent of gain on communication skills, motor and socio-emotional skills of Early and Late Intervention Groups.

The extent of impact of Individualized Training Programme differs with skills and with groups for Early and Late Intervention groups vide Table 4.37.

- 6.1 The difference between the gain scores of Early and Late Intervention groups (EMR and TMR) is maximum for oral skills and minimum for reading skills.
- 6.2 The difference between the gain scores of Early and Late Intervention Groups (EMR and TMR) is not significant for reading.
- 6.3 The difference between the gain scores of Early and Late Intervention groups (EMR and TMR) is significant for socio-emotional skills.
- 6.4 The difference between the gain scores of Early and Late Intervention groups (EMR and TMR) is maximum for motor skills.
- 6.5 The effect of Early Intervention has greater impact on TMR than EMR for all the four skills studied:

CONCLUSION - SECTION-VII

Capabilities of communication skills and motor and socio-emotional skills criteria for classification of Educable Mentally Retarded and Trainable Mentally Retarded.

Attainment in oral, reading and writing skills and motor and socio-emotional skills can in combination provide a profile which could serve as classification and validative

criteria for classification of EMR and TMR (Vide Table 4.39).

7.1 The distance score of Individuals of EMR group from their group means, and from the TMR group means, show that twenty eight out of thirty individuals belong to the EMR group, and for the two individuals who differ, the differences are too low to classify them as TMR. They can be considered as borderline cases.

7.2 The difference score of individuals of TMR group from their group means, and from the EMR group means, show that twenty eight out of thirty individuals belong to the TMR group, and for the two individuals who differ, the differences are too low to classify them as EMR. They can be considered as borderline cases.

CONCLUSION - SECTION-VIII

Case Studies

The case studies given in Chapter - IV serve to illustrate the following of the study.

8.1 EMR and TMR differ in their communication skills, motor and socio-emotional skills.

8.2 The effect of Individualized Training Programme is higher for Early Intervention than Late Intervention.

8.3 Borderline cases are possible when EMR and TMR are classified.

MAJOR CONCLUSIONS

1. EMR has significantly higher scores than TMR in communication skills: oral, reading and writing and in the associated variables: motor and socio-emotional skills.
2. EMR exhibit different attainment levels for the five skills studied.
3. TMR exhibit different attainment levels for the five skills studied.
4. The effect of Individualized Training Programme is significant for all the skills studied for EMR and TMR.
5. The effect of Individualized Training Programme on EMR is higher than the effect on TMR for four of the five skills studied. For writing skills the effect is similar.
6. Early Intervention group differ significantly from late intervention group (Educable Mentally Retarded and Trainable Mentally retarded) in all the skills studied.
7. The difference between Early and Late Intervention Group (TMR) is higher than the difference between Early and Late Intervention group (EMR) for attainment levels on all skills studied.
8. The extent of effect of Individualized Training Programme is different for the five skills studied across groups.

9. The extent of effect of Individualized Training Programme is different for the five groups studied across skills.

The findings of the study generally support the evidence available on the effect of Individualized Training Programme. However the extent of difference is seen to differ for the different skills and for the different groups studied. The minimal difference seen between the gain scores for EMR and TMR in writing have implications for further studies in the area. The wide differences seen in oral skills for one group and in socio-emotional skills for the other, indicate that the differences between EMR and TMR is not one of extent only on the single dimension of intelligence. The need for profiles based on several indication for classification, and the necessity to treat the classification as tentative is underlined in the study. The possibility of development of oral skills through Individualised Training needs to be utilised. The effect on reading and writing are lower and hence the need to explore support facilities is emphasised. The impact of Individualized Training Programme on socio-emotional skills is shown to be independent of the effects on the other skills, and can be taken as an objective for education of the mentally retarded.

The low language level of the Mentally Retarded

has been documented (Phelp 1954, Smith,1974) and its relation to severity of retardation has been established (Robinson and Robinson, 1965, 1976; Jordan, 1976). The present study confirms these findings. The several variables related to socio-emotional problems of Mentally Retarded children have also been studied (Gollay et al, 1978; Gottlieb, 1979; Gottlieb, 1981; Romor and Heller, 1982; Morrison and Borthiwick, 1984; Morrison, 1985). The findings of the present study provide a probable line for action to minimise the socio-emotional problems. A large number of studies have dealt with various aspects of communication skills (Labato and Feldmen, 1981). The impact of Individualised Training Programme on their aspects need to be explored. It is possible to expect the findings to be positive and perhaps more significant when the target is the different aspects of communication skills, motor and socio-emotional skills (Hunt, 1975; Snyder, 1978; Drews, 1980; Liner and Drews, 1980).

Hypotheses of the study

Hypothesis-I "the level of communication skills in the mentally retarded will be related to the degree of retardation" - can be accepted on the basis of the conclusion of the study. The level of attainment in communication skills of the E.M.R was significantly higher

than the level of attainment of TMR.

Hypothesis-II "the level of motor and socio-emotional skills of the mentally retarded will be related to the degree of retardation" - can be accepted on the basis of conclusion of the study. The level of attainment in motor and socio-emotional skills of EMR was significantly higher than the level of attainment of TMR.

Hypothesis-III "Planned Individualised Training Programme will have an effect on level of communication skills of mentally retarded" - can be accepted on the basis of the conclusions of the study. Hypothesis III can also be further extended as follows:

- a. The extent of effect of Planned Individualised Training Programme on communication skills will differ for the three communication skills studied : oral, reading and writing.
- b. The extent of effect of Planned Individualised Training Programme on motor skills and socio-emotional skills will differ.
- c. The duration of effect will be possible for all the skills studied.

Hypothesis-IV "the degree of effectiveness of planned Individualised Training Programme on the mentally retarded will differ according to degree of retardation and

time of intervention" - can be accepted on the basis of the conclusions of the study. It has to be pointed out that due to the limitations of the study the conclusions related to the degree of effectiveness of Individualised Training Programme on the mentally retarded with reference to time of intervention need to be further established through a longitudinal study.

Suggestions

Individualised Training Programme can be introduced effectively to improve the teaching and training of the mentally retarded, with special reference to their communication skills, motor and socio-emotional skills. The positive effects of the Individualised Educational Programme has already been cited for other groups.

Certain pre-requisite conditions are required to be evolved and spelt out specifically, before introduction of the I.T.P. They include:

1. Physical Environment
2. Trained Personnel
3. Parental Awareness
4. Standardised Curriculum
5. Evaluation

1. Physical Environment

Physical environmental facilities are very important in special education. Ample facilities should be provided for the appropriate accommodation of pre-school and special class mentally retarded children. Specially designed class rooms and furniture, audio-visual aids, other teaching aids, specially designed Speech Therapy room, Physiotherapy room, etc are essential for a special school. Besides, well equipped playground can better facilitate motor skill development.

2. Trained Personnel

There is acute scarcity in the number of trained personnel required for the special education and training of the mentally retarded in India. The NIMH is already conducting 16 Special Teachers' Training Centres in India based on the nationally standardised curriculum provided by the Rehabilitation Council of India. In Kerala there are two such centres, one being The Bala Vikas Teachers' Training Centre in Trivandrum. Non-availability of the required number of properly trained special educators, Speech Therapists, Physiotherapists and Occupational Therapists has been found to be a problem for the teaching and training of the mentally retarded since the services involved are of an inter-disciplinary nature.

3. Parental Awareness

Parental awareness needs to be emphasised. Most of the parents are ignorant of the characteristics, causes and prevention of mental retardation, and the need for early identification and intervention. Mass media has to be used to the fullest extent possible to educate and motivate the parents. Participation of parents in the education and training of the retarded is rather very important. Their involvement is needed in identification, assessment, planning and evaluation programme. Parent Counselling will help the parents to come out of their guilt feeling, and to accept the children as they are, in addition to assisting them play their role effectively in the home training of the retarded. According to Hewett and Forness, mothers are to be totally involved, and encouraged to believe that their interaction with their children will make a difference in the child's future. Hewett and Forness further state that "School professionals should reduce their reliance on professional jargon, communicate with parents on regular basis, prepare them for their involvement, and encourage or support their efforts at every stage of the IEP process" (P.325).

4. Standardised Curriculum

Standardisation of curriculum for the entire

country can bring about uniformity in the approach. Uniformity in classification is particularly important. Newly developed standardized scales and checklists for classification are the needs of the time. The philosophy and practice of Individualised Training Programme implemented on the basis of the current level of the child, in various areas should be the primary content of the curriculum. Since each child is different, he needs a specially designed curriculum for his total development.

5. Evaluation

After implementing the appropriate Programme based on the child's current level and his needs, the programme has to be evaluated periodically. Quarterly, half yearly and annual evaluations are useful feed backs to find the effectiveness and also draw backs, if any, of the programme. Evaluation of children's programs can be an extremely complex process involving many approaches and techniques (Dunst, 1979; Jenkins, Deno and Mirkin, 1979; Maher and Barbrack, 1980; Peterson, Zable, Smith and White, 1983).

Pre-school Programmes

Children tend to come to special schools very late. They come after constant failures in a regular school. If resource rooms staffed by specially trained teachers are

provided in regular schools, mildly retarded children could be integrated with normal children. Younger children needs special pre-school classes for their sensory-motor, and communication skill development. Early intervention will help the development of readiness skills. The Demonstration and Research Centre for Early Education in U.S.A (DARCEE) emphasizes that early intervention programme is a remediation of linguistic and conceptual deficiencies and the development of attitudes related to academic achievement (Gray, Klaus, Miller and Forrester, 1966). Head Start Project for preschool children, remedial program for the acquisition of academic skills are all intended to help the mentally handicapped at a very early stage in life of a child (Bereiter-Engleman, 1966). More emphasis has to be given to Pre-school training.

Suggestions for further Research

Based on the conclusions of the present study, further investigations are recommended such as:-

1. A longitudinal study to be undertaken to find the effectiveness of Early Intervention and the effect of Individualised Training Programme in Mentally Retarded Children.
2. The impact of Individualised Training Programme on the different aspects of communication skills, motor and

socio-emotional skills.

3. The optimum condition for Individualised Training Programme implementation if identified, would be of practical help in the implementation of programme for the mentally retarded children.

CASE STUDIES

Six case studies are presented to support the salient findings of the research.

Early Intervention - Case Study No. 1

AZEEB, a boy of 6 years was rejected by a Nursery School, because of his hyperactivity, his poor self help skills and poor seat work ability. His parents took him to SAT Hospital. After examination the Paediatric Neurologist of the Hospital referred Azeeb to the Bala Vikas Institute for Special Education and Training. He came with his parents and uncles. The following information was collected from the parents through the taking of case history:

The boy's father aged 35 years, was working in Dubai for the past few years. He came once in an year to meet his family members. His wife was staying with the husband's parents, and theirs was a joint family. Azeeb was the 1st child, and his younger sister aged 4 years was studying in a Nursery school. There was no case of mental retardation in the family.

Pregnancy was a wanted one and no strong medicine was taken by the mother during pregnancy. Mother was free from infectious diseases, accidents and X-ray exposure. Her nutritional status was satisfactory. Delivery was normal and

was conducted in a hospital. The baby was healthy at birth. But it was found that the developmental milestones were delayed. The child walked late, and speech came very late. He spoke one word, "Umma" (mother) at the age of four. Only at this stage he started walking and speaking a few words. His socialization history showed that he never mingled with peers or other family members. He smiled rarely and had behaviour problems. He used to run around picking up things, and breaking them. His attention span was very poor. He was a heavily built boy. The check list was administered to assess communication skills - oral, reading, writing and also associated skills, motor and socio-emotional skills. The child was then asked to draw the picture of a man. He could not do this. His gross motor was clumsy while his fine motor skills were poor. He could not pick up small objects or hold a crayon or throw objects by using both the hands. He failed to hold objects in his palm. A management plan was chalked out for him. The goals and objectives were fixed on priority basis. Taking into consideration his hyperactivity, it was decided to:

- (1) Keep him in a place without much distractions
- (2) give colour for finger painting
- (3) give opportunity for clay work-kneading, rolling, folding, making balls etc
- (4) Expose the child to sand and water play
- (5) introduce him to music and other auditory training activities.
- (6) Expose him to

vocabulary. Parallel talk, and running commentaries to develop his oral skills when he attains seat work skills. Each play situation was to be used to develop his vocabulary- simple one word training-to phrases - to simple sentences.

The goals were split into short term objectives and the teachers were asked to use appropriate teaching strategies, teaching aids, and reinforcements. The quarterly evaluation done by using the check list showed that Azeeb could sit on his seat. His interest in play, helped him to improve his motor skills and socio-emotional skills. He picked up few simple phrases and his over weight reduced helping him to move freely. He acquired more self-help skills. The teacher was asked to develop the next higher sequential skills after evaluating him with the check lists.

By the end of the 6th month Azeeb was finally assessed by using the check lists to find the effects of Individualized Training Programme. Azeeb acquired more ability to look and listen, and pick up simple functional words. He could communicate simple needs and take up simple instructions. He became more confident and he liked to play musical chair and do frog-race. His motor control improved and he became friendly to peers and other children. He improved well in his oral and picture reading skills. He

also picked up two simple nursery rhymes. He now liked stories about animals and started imitating animal sounds. Azeeb could improve in his communication skills, motor and socio-emotional skills, as the Individualised training was imparted at an early stage in his life.

**Late Intervention - E.M.R Experimental Group - Case study
No. 2**

VINOD was admitted into a Nursery School. He showed disinterestedness in studies. According to the teacher his memory was poor, and took no active part in school activities. He was promoted to primary school. He failed in the 2nd, 3rd and 4th standard. He played with younger children, and exhibited problems and was found to be a misfit in the class. The teacher reported the matter to the Headmistress who asked the parents to take the child to a special school. This was how Vinod came to Bala Vikas with his parents. Vinod was 13 years old.

General Background information was collected from the parents of Vinod. This included the family background, number of siblings, socio-emotional factors, pre-natal, natal and post-natal history, developmental history and such other relevant data. This was necessary to study the child.

This was a wanted child. During pregnancy the mother had no problems. The term was completed and the

delivery was conducted in a hospital. The child cried immediately. The child was normal in all respects. Immunization was given on time. There was no history of developmental delays. The child was very healthy according to the parents.

Educational Evaluation was done after case history taking. Vinod could follow instruction and read a few pages of the 2nd standard text book. His vocabulary was fairly good. But he could not converse like a thirteen year old child. He could hold a pencil and draw vertical and horizontal lines, a circle, triangle, and square. He identified red, black and green colours. He could write few sentences in Malayalam and few words in English. He could say the names of his family members, but could not mention his address.

He was asked to draw the picture of a man. He held the pencil correctly and could move the hand from left to write. He drew his concept of a man. He drew the head in a semi circle. Hands and a few other body parts, were absent. He took more than 15 minutes to draw. No prompting was given.

After studying the child's background history and his school history, the current level performance was studied for selecting instructional goals and objectives. Short term objectives are the breaking down of annual goals

into smaller units. The following goals were selected for six months; (1) Development of reading and writing skills, (2) Socialization (3) Motor skill development (using colours, playground gyms, monkey bars and swings, and (4) Play activities in group. The teacher was asked to give appropriate reinforcements immediately. After the third month, an evaluation was done. It was found that the boy took interest in peer group activities and his interest in reading and writing had developed. The socio-emotional factors had also improved. He had gained more vocabulary and conversation became more assertive. His drawing of a man now showed improvement.

After three months the first evaluation was done. The final objectives were set and given for implementation for the next three months. The strategies, reinforcements, and activities were strengthened. The final evaluation showed that he could read the third standard book and could write well. He was taught letter writing and he succeeded in writing a letter independently. His motor skills improved. He became friendly with his friends. He communicated with confidence and his "draw a man" performance showed further improvements.

The application of ITP was very effective in the case of Vinod. But this is a typical case in which, reasons for the retardation could not be traced.

TMR: Borderline EMR - Case study No. 3

SUNIL, aged 12 years, was brought to Bala Vikas Institute for Special Education. He was referred by the Principal of a normal School, due to his lack of interest in studies, and poor social behaviour. He was quiet and spoke very few words, and walked in a clumsy way. He belonged to a middle class family. His mother was a school teacher, and father, a government servant.

Medical, and Psychological reports showed that Sunil was a Trainable Mentally Retarded Child.

Sunil was assessed by administering the check list. Back-ground information was thus collected. This included his family history, number of siblings and other members in the family, socio-emotional factors, pre-natal, natal and post natal history, development history, immunisation history, and other related details.

Sunil was the second child and the pregnancy was a wanted one. The mother had no problems during the pre-natal period. Delivery took place in a hospital. Labour pain had to be induced. The child was under weight, and had loose motion in the first week of its birth. Doctors could not diagnose the reason for this problem. He was given immunisation in the appropriate time. The mother felt that he became alright after the age of 3 years. His vocabulary

was poor and was not interested in his environment. He was physically weak.

As the mother was a school teacher the boy passed on from nursery class to the second standard without much of a problem. Sunil had to study in the same school even when his mother was transferred to another school. He was poor in academic performance, and he refused to play with peers. The teachers complained that Sunil had poor memory, and was disinterested in studies. This was the background in which Sunil came to Bala Vikas Institute with his parents.

Assessment and Educational evaluation showed that he did not like to play with boys of his age, and that social and motor skills were not in keeping with his age. He drew the picture of a man, but several parts of the body in the picture such as hands, ears, and nose were missing. His writing was not clear or readable.

Sunil's current level of performance was found after studying his background history and school history. Instructional goals and objectives and short term objectives were drawn. The following goals were given priority. (1) Development of Vocabulary and communication skills. (2) Development of motor skills. (3) Development of socio-emotional skills. The goals were split into short-term objectives for implementation.

In Sunil's program, emphasis was given to motor

and socio-emotional skill development in the first three months. Physical Exercises, jumping, running, Yoga, group play activities, picnics and outings were emphasised. Teaching strategies, and reinforcements were fixed.

The first evaluation showed that Sunil's motor skills had improved considerably, and his peer interaction had developed. He was found to be active, interested in the environment, and was self confident. The short term objectives were selected for final implementation. The strategies, reinforcements and activities were given further emphasis.

Sunil was assessed at the end of the study. It was found that his vocabulary developed, and he could converse with his teacher and peers. The assessment further showed that his reading skill had improved, and that he could perform more than a Trainable Retarded Child. His clumsy motor skills had improved considerably and he gained more friends. He learned to share things, and became acceptable to his classmates.

'Draw a man' test showed that body parts were not missing this time. The application of ITP was found to be very effective in the teaching and training of Sunil and he appeared to belong more to the EMR group rather than the TMR group.

TMR: Borderline EMR -Case study No.4

SHANAVAS, aged 9 years, belonged to a lower middle class family. His father was a coolie, and his mother, a domestic servant. The boy was found backward in studies. He was examined by the Doctor. Psychological reports confirmed that the boy was retarded. He was admitted in a Government special school for the mentally retarded. The School reports also confirmed that he was a trainable child.

Shanavas was the only child and parents were very much interested in his training. They were over protective, and their expectation about the child was rather high.

The boy was referred to the Bala Vikas Institute by a Doctor. The boy's class performance reports indicated that he was TMR.

A detailed assessment showed that there was no case of mental retardation in the family. The pregnancy was a wanted one and the delivery took place in a hospital. The child cried immediately after birth. Immunisation was incomplete, and there was delay in a few of the milestones of development. The child was healthy and fine till the age of five years. At the age of six he had high fever and fits. He underwent treatment and was cured. He spoke few words and had problems in speech. His attention span was poor and was interested in moving around aimlessly.

Check-list administered showed defects in oral,

reading and writing skills, besides socio-emotional skills. His fine and gross motor activities were fairly good.

A management plan was drawn for implementation. That included: (1) Development of auditory attention and memory. (2) Oral skill development. (3) Functional Reading. (4) Functional writing. (5) Socio-emotional skill development. The goals were divided into objectives. Teachers were asked to use appropriate teaching strategies, teaching aids and reinforcers. The boy was introduced to water play and painting.

According to the first evaluation, the child showed deep interest in all the activities, and besides, he developed a liking for painting. His vocabulary improved and he picked up speech as well. He learned to read few survival words. He could now trace and copy a few functional words.

By the end of the ITP, he was assessed again. It was clear that ITP could enhance the communication skills, and motor and socio-emotional skills in mentally retarded child. The individualised curriculum, special teaching strategies, and teaching aids devised could improve a child from the category of Trainable to that of Educable.

EMR Borderline TMR - Case study No.5

AJITHA, aged 11 years, was a Down Syndrome girl. Her parents belonged to middle class family. Her father was

a Government servant while his mother was working in a private firm. She was referred by a Psychologist. According to him the girl's IQ was 52. Her motor skill was fairly good but her speech was limited. She spoke few incomplete sentences but her vocabulary was limited. She had studied in a Special School and the School reports showed that she was an E.M.R child.

Initially Ajitha was sent to a regular school for two years. Because of poor performance she was admitted into a Special School near their house. The parents were anxious about her promotion and class activities. However the parents found that the girl's progress in the Special School was not according to their expectation. So they stopped sending her to the Special School. She was kept at home for two years. They then brought her to Bala Vikas Institute.

Ajitha was the 2nd child and the parents felt that she could study and join a regular school after a few years at the Bala Vikas Institute.

Assessment showed that she was an unwanted girl. The pregnancy had its full term, and delivery was in a hospital. The child cried immediately after birth. There was no problem during her infancy. She was given immunization at the appropriate time. There were delays in her developmental milestones. She sat late, walked late, and her first word came late. Her memory was not good according to her parents.

They found that she was not behaving like other children of her age. She liked music and most of the time, she sat near the radio and TV.

Check list was administered to find the current level of functioning. Her readiness skills, Vocabulary, and socio-emotional skills were found to be not satisfactory.

Management plan for the improvement of readiness skills, Communication, and socio-emotional skills were developed. Goals and short term objective were planned. Teachers were asked to apply appropriate teaching aids, teaching strategies and reinforcement.

The first evaluation showed that her vocabulary had developed through music. Her social skills had developed through group activities. She could not however recall her name and address.

After the completion of the Individualised Training Programme the child was assessed and found that she was only a Trainable (Borderline) child. Her readiness skills improved fairly well. She could communicate a few functional words. She picked up few sentences as well. But the researcher felt that she needed further improvement in readiness activities through Individualised Training Programme.

EMR Borderline TMR - Case study No.6

SAM, aged 10 years came to Bala Vikas with his parents for admission. He belonged to an upper class family. His father and mother were working in Gulf. The boy was the only son and was studying in a school near his native place. His gait was bent forward and he had flat foot. His speech was not clear and he often uttered illegible words. The boy's previous school record showed that he was Educable Mentally Retarded. His IQ was 54, according to psychological report. The boy was assessed to find his current level of functioning. The assessment showed that pregnancy was a wanted one. Mother had no problem during pregnancy. Delivery was done in a hospital. The child was a blue baby. He had several fits before his first birthday. He was given medicine for epilepsy.

The check-list showed that his readiness skill was poor. His fine motor and co-ordination skills were poor as well. He could not pick up small objects or thread beads. His visual and auditory attention was not good. He failed to recall the names of his family members. The boy's mother mentioned that he wanted to be left alone at home. He used to walk around the house aimlessly. After the assessment his management was made. The plan included:-

1. Development of auditory visual attention
2. Development of vocabulary

3. Use of functional words
4. Use of phrases and sentences
5. Development of motor and socio-emotional skills.

The first evaluation after 3rd month showed that he picked up the names of three teachers and names of two class fellows. His social skill had improved. He liked to play with bat and ball.

After the implementation of the programme at the end of the 6th month the boy was finally assessed. It was found that he was only a Trainable retarded child and not Educable Mentally Retarded. His auditory and visual attention improved slightly. He learned to communicate through phrases, but failed to learn the use of sentences. He social skills had improved.