PART – III

INDIVIDUALIZED EDUCATION PROGRAM AND HOME BASED SKILL TRAINING FOR CHILDREN WITH INTELLECTUAL DISABILITY

Part-III of the study consists of two model case studies on Individualized Education Program conducted on two subjects and an extensive study on home based skill training. All the three studies have been conducted in the CBR Project area of the Chetana Institute for the Mentally Handicapped. The two model case studies were conducted to demonstrate the procedure of home-based skill training. One of the model case studies was conducted following the procedure of the behavioral scale Madras Developmental Programming System (MDPS) and the other model case study was conducted following the procedure of the behavioral scale Functional Assessment Checklist for Programming (FACP).

The extensive study on home-based skill-training was conducted in five CBR Units of Chetana Institute for the Mentally Handicapped, Bhubaneswar, as follows: (1) Borigumma, (2) Oupada, (3) Shamakhunta, (4) Dharmasala, and (5) Nuapada Blocks of Orissa. This is an Exploratory Study on Home Based Skill Training of Children with Intellectual Disability. This study provides information on the state of special education intervention for the intellectually disabled children under community based rehabilitation programs in interior and rural areas of Orissa.
CHAPTER – 11

A MODEL CASE STUDY OF INDIVIDUALIZED EDUCATION PROGRAM USING ‘MADRAS DEVELOPMENTAL PROGRAMMING SYSTEM’

This chapter describes a model case study of an intellectually disabled child using the 'Madras Developmental Programming System'. The child was a 13 year old girl selected from the 'Jaraka' Community Based Rehabilitation Unit functioning under the Chetana Institute for the Mentally Handicapped, Bhubaneswar. The village of the child is located in a rural area and the skill training was conducted in the home of the child.

DESCRIPTION OF THE SUBJECT

One intellectually disabled child was selected from the "Jaraka" CBR Unit for the Special Education Intervention. The case study is presented below:

Subject's Name - X
Age - 13, Sex - Female
Language Known - Oriya
Father's Name - Y
Occupation - Cultivation
Mother's Name - Z
Occupation - House wife
Annual Income of the Family - Rs. 12,000/- (Low socioeconomic status)

Present complaints – she was unable to speak clearly, unable to understand properly, unable to give proper answer to questions, unable to complete an assigned task, she had a poor memory and also she was hard of hearing.

Previous management and results – She was shown to a Doctor and given some medicines. There was no effect of medicine on her. Parents also performed special worships to different Deities for their blessings to cure her.

Personal History

Prenatal – Pregnancy was wanted. During pregnancy father's age was about 28 years and mother's age was about 24 years. The movement of the fetus inside the uterus was slow during the period of pregnancy.
**Natal** - She was delivered by a trained midwife at home. The delivery was normal. Mother had a prolonged and painful labor. Her birth weight was normal.

**Post natal** - She was breast fed. She fell down twice from the bed, and fell down once from the lap of a family member. Balanced diet was not available to the child.

**Family history** – There is no known history of intellectual disability, mental illness, and epilepsy in the family.

**Immunization Schedule** - Routine immunizations like DPT, BCG, OPV, Measles, and TT were given to the child as per advice of the PHC level Medical Officer.

**Milestones of Development** - All the milestones of development were delayed.

**Psycho-Social Environment** – Psycho-Social environment of the family was good. The relationship between both the parents was good. The behavior of the parents towards her was good. The family had a good relationship with the neighbors. She liked to play together with others. Her behavior towards other children during play was good. She invited children from the neighborhood to play.

**Expectation of the family** - The family expected the child to speak properly, to be competent in self-help skills, and as a woman should be able to run her family.

**Assessments report** – The child was assessed by MDPS, and Seguin Form Board Test. On the basis of MDPS assessment, she was placed in Pre-Primary level and was recommended training in deficient skills (see MDPS Profile) on priority basis with special attention to speech and language intervention. On the basis of Seguin Form Board Test, her Mental age was found to be 6.5 years. Her IQ was 50 and she was a mild intellectually disabled child.

**General Description of the Child** – She was physically well built. She was able to use her hands and legs properly. She was independent in self-help skills. As she could not speak properly she used gestures to communicate with others. She behaved well with others. She sometimes did household works like cleaning of the floor and collecting water for the family.

**DETAILS OF ASSESSMENT REPORT**

The first MDPS assessment of the subject was conducted on 8th August, 1999. The MDPS profile of the subject showed that her performance was good in Gross Motor Activities, Fine Motor Activities, Dressing, Grooming, Toileting, Receptive Language, and Domestic Activities. Her performance was poor in Expressive Language, Social Interaction, Reading, Writing, Numbers, Time, Money, Community Orientation, Recreation and Leisure Time Activities, and Vocational Activities.
Table-11.1:  Madras Developmental Programming System - Behavioral profile

Name of the child ...X.... Name of the observer - CBR Instructor - Date of initial assessment - 8.8.1999 - Date of final assessment - X
(If the person performs the activity, Mark ‘A’ and shade Blue. If the person is yet to perform the activity, Mark ‘B’ and shade Red:

| Skills                        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | Initial Assessment |
|-------------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|-------------------|
|                              | A | A | A | A | A | A | A | A | A | A  | A  | A  | A  | A  | A  | A  | B  | B  | B  | B  | A's | B's   |
| 1 Gross Motor activities     | A | A | A | A | A | A | A | A | A | A  | A  | A  | A  | A  | A  | A  | B  | B  | B  | B  |     |      |
| 2 Fine Motor Activities      | A | A | A | A | A | A | A | A | A | A  | B  | A  | B  | B  | B  | B  | B  | B  | B  | B  |     |      |
| 3 Meal Time Activities       | A | A | A | A | A | A | A | A | A | A  | A  | A  | B  | B  | B  | B  | B  | B  | B  | B  |     |      |
| 4 Dressing                   | A | A | A | A | A | A | A | A | A | A  | B  | B  | B  | B  | B  | B  | B  | B  | B  | B  |     |      |
| 5 Grooming                   | A | A | A | A | A | A | A | A | A | A  | A  | A  | B  | B  | B  | B  | B  | B  | B  | B  |     |      |
| 6 Toileting                  | A | A | A | A | A | A | A | A | A | A  | A  | A  | A  | A  | A  | B  | B  | B  | B  | B  |     |      |
| 7 Receptive Language         | A | A | A | A | A | A | A | A | A | A  | A  | A  | B  | B  | B  | B  | B  | B  | B  | B  |     |      |
| 8 Expressive Language        | A | A | A | A | A | A | A | A | A | A  | A  | A  | B  | B  | B  | B  | B  | B  | B  | B  |     |      |
| 9 Social Interaction         | A | A | A | A | A | A | A | A | A | A  | B  | B  | B  | B  | B  | B  | B  | B  | B  | B  |     |      |
| 11 Writing                   | A | A | A | A | A | A | A | A | A | A  | B  | B  | B  | B  | B  | B  | B  | B  | B  | B  |     |      |
| 15 Domestic Activities       | A | A | A | A | A | A | A | A | A | A  | B  | B | B  | B  | B  | B  | B  | B  | B  | B  | B  |     |      |
| 17 Recreation and Leisure    | A | A | A | A | A | A | A | A | B | B  | B  | B | B  | B | B | B | B | B | B | B |     |      |

Total = 155 205
Figure-11.1: Skill development of the child as per MDPS assessment. ‘X’ axis shows the 18 skill domains, and ‘Y’ axis shows the 20 items in each skill domain.

1. Gross Motor activities –

Assets- She was able to walk, run, jump, stand on tip toe, and walk continuously for a period of 15 minutes (performed first 18 items of the domain).

Deficits- She was unable to carry her own luggage to bus stand / station, ride a bicycle, and swim (failed to perform last 2 items of the domain).

2. Fine motor activities –

Assets- She was able to use a spoon to stir sugar / salt to mix drink, string beads on to a string (performed first 13 items of the domain).

Deficits- She was unable to perform all other fine motor activities beginning from opening the door by operating the latch up to threading a medium sized sewing needle (failed to perform last 7 items of the domain).

3. Meal time activities –

Assets- She was able to drink and eat without assistance and without spilling, empty his plate into a trash can and wash it after eating (performed first 14 items of the domain).
Deficits- She was unable to perform all other meal time activities beginning from taking appropriate quantities of food when offered to ordering and eating in a public dining facility (failed to perform last 6 items of the domain).

4. **Dressing** -

Assets- She was able to put on dresses and remove dresses as and when required without assistance including buttoning/ closing of chains in dresses (performed first 12 items of the domain).

Deficits- She was unable to perform all other dressing activities beginning from tying a knot with ribbon to wearing a dress and managing it in the same manner throughout the day (failed to perform last 8 items of the domain).

5. **Grooming** -

Assets- She was able to brush her teeth, take bath using soap, apply face powder independently and comb hair (performed first 16 items of the domain).

Deficits- She was unable to perform all other grooming activities beginning from cleaning and clipping the finger nails with the nail clippers, to maintain self clean, odor-free, and groomed (failed to perform last 4 items of the domain).

6. **Toileting** -

Assets- she was able to use a toilet as and when required, clear bowel and bladder in the toilet, clean her self, and wash hands with soap unassisted (performed first 16 items of the domain).

Deficits - She was unable to perform rest of the toileting activities beginning from obtaining help for any toileting problem, to choosing the correct toilet (men / women) in public places (failed to perform last 4 items of the domain).

7. **Receptive language** -

Assets- she was able to respond to non-verbal communication from others such as frowning, crying, smiling etc., to pointing to pictures of objects in a book upon request (performed first 11 items of the domain).

Deficits - She was unable to receive all other receptive language beginning from following verbal instructions like 'put the ball into the box' or 'put the broom behind the door' to responding to jokes, or humorous happenings at home (failed to perform last 9 items of the domain).
8. Expressive language-

Assets - She was able to make voice sounds to get attention, and also able to say 'yes' or 'no' in response to questions (performed first 3 items of the domain).

Deficits - Her expressive language was totally deficient. She was unable to speak even 5 words (failed to perform last 17 items of the domain).

9. Social interaction –

Assets - She was able to identify by pointing, naming friends and acquaintances from strangers, greet others upon meeting, either verbally or with non-verbal friendly gestures, and wait for her turn in a group (performed first 8 items of the domain).

Deficits - She was unable to appropriately receive guests, relatives, and service persons, and distinguish items that belong to others. She did not achieve other higher social interaction skills (failed to perform last 12 items of the domain).

10. Reading –

Assets - She was able to look at objects presented when seated at a table, turn the pages of a book one at a time, match pictures with objects, sort pictures of similar/familiar objects into the same category, that is, animals, people, vehicles, fruits, flowers etc. (performed 5 items of the domain).

Deficits - She was unable to read even functional three letter words (failed to perform 15 items of the domain).

11. Writing –

Assets - Her writing skill was little better than reading. She was able to trace three letters functional words (performed first 9 items of the domain).

Deficits - She was unable to copy her name, and also to copy a printed sentence. She did not achieve other higher writing skills (failed to perform last 11 items of the domain).

12. Numbers –

Assets - She was able to separate one object from a group upon request, that is, 'give me one block' (performed first 3 items of the domain).
Deficits - She was unable to even point to big and small when asked (failed to perform last 17 items of the domain).

13. **Time** –

Assets - She was able to point out different time of the day like, morning, noon, and afternoon (performed first 3 items of the domain).

Deficits - She was unable to indicate her own age and other time skills (failed to perform last 17 items of the domain).

14. **Money** –

Assets - She was able to sort coins from other small metal objects. She was able to select a rupee note from other paper objects (performed first 2 items of the domain).

Deficits - She was unable to identify 25p, 50p, 1 rupee, 2 rupees, and 5 rupees coins. She did not learn other higher money skills (failed to perform last 18 items of the domain).

15. **Domestic activities** –

Assets - she was able to perform domestic activities like washing and drying dishes and preparing lemon juice (performed first 10 items of the domain).

Deficits - She was unable to peel and cut vegetables and other domestic activities (failed to perform last 10 items of the domain).

16. **Community orientation** –

Assets - She was able to go to public places in a supervised group without calling unfavorable attention to self (performed first 4 items of the domain).

Deficits - She was unable to identify police man, post man, bus conductor etc. and other activities related with community living (failed to perform last 16 items of the domain)

17. **Recreation and Leisure time Activities** –

Assets - She was able to watch TV without disturbing others, play indoor and simple outdoor games not governed by rules with others (performed first 7 items of the domain).

Deficits –She was unable to play out door games involving simple rules with others and rest of the recreation and leisure time activities (failed to perform last 13 items of the domain).
18. Vocational Activities –

Assets - She was able to assume a body position at a task or at play such that both hands are available for use (performed the first item of the domain).

Deficits – She was unable to perform any other activity under vocational activities (failed to perform last 19 items of the domain).

ANNUAL GOALS

1. To count number of objects up to 5.
2. To write her name.
3. To Identify big and small.
4. To take appropriate quantities when food is offered.
5. To clean and clip finger nails with a nail clipper.
6. To follow command such as put the broom behind the door.
7. To imitate 5 words heard from the teacher.
8. To say ‘please’, ‘thank you’ and ‘sorry’ in appropriate situations.
9. To reads out functional three letter words.
10. To identify short long and tall
11. To cut out a picture involving straight lines using scissors from a magazine or a picture book.

SHORT TERM GOALS:

1. To count number of objects upto 5.
2. To write her name.
3. To identify big and small.

SKILL-1- TO COUNT NUMBER OF OBJECTS UP TO 5:

Justification for selecting the Skill-1:

To count number of objects up to 5: Counting is a basic mathematical skill and foundation of all mathematical operations. This skill is necessary to count any house hold object, such as, pants, shirts, plates, spoons etc.; to count coins, notes etc. As the counting skill of the subject was in a preliminary stage, it was decided to teach counting of number of objects up to 5.
Current Level of Skill Development

To count number of objects up to 5: - In counting number of objects, the subject was able to give one object from a group of objects.

Specific Objective

To count number of objects up to 5: - When the teacher will provide required materials to the child and ask her to count and give objects up to number 5, she will be able to count objects up to number 5 with 80% of accuracy at the end of 4 weeks of training.

Materials Required:

- Beads, Sticks, Stones.

Task Analysis:

- Matching objects - 1 with 1, 2 with 2, 3 with 3, 4 with 4 and 5 with 5.

  Giving objects - 1 from 5, 2 from 5, 3 from 5, 4 from 5, 5 from 5, 5 from 6, and 5 from 7.

PROCEDURE:

The teacher made the child to sit comfortably on a chair and motivated her to learn the skill. Then he brought the required teaching materials that are beads, sticks, and stones and placed on the table in front of the child. Then he took one bead from the table, showed it to the child and asked her to give one bead by imitating him. Likewise the teacher made the child to match the beads with the beads up to 5. The teacher used beads, sticks, and stones alternatively in different training sessions. Then he asked the child to give one object from five. Likewise he asked the child to count and give objects one to five sequentially. Then the teacher asked the child to give the objects according to the teacher's instructions randomly. In each and every step when the child faced difficulty in performing the activity the teacher provided verbal prompting, physical prompting and made her to achieve the goal. In each and every successful step the child was given primary reinforcement like chocolate and social reinforcement like 'very good, well done' etc. Gradually the teacher faded
the assistance, and made the child to perform the activity independently. The training program continued for a period of 4 weeks having one session of 30 minutes on all working days. In spite of best trials the child could not correctly count up to 5. It was decided to continue the training further.

**SKILL- 2- TO WRITE HER NAME:**

**Justification for Selecting the Skill - 2:**

To write her name: - Writing one’s name is very much necessary for any person. Every individual is required to sign his / her name for various activities like receiving a registered letter, money order, deposit or withdraw money from the post office or bank, to receive money from any other source etc. The parents also requested to teach her to write her name. Therefore, it was decided to teach the skill to write her name.

**Current Level of Skill Development:**

To write her name: - In writing of her name, the subject was able to trace the letters.

**Specific Objective:**

To write her name: - When the teacher will provide required materials to the child and ask her to write her name, she will be able to write her name, with 80% of accuracy at the end of 4 weeks of training.

**Materials Required:**

- Exercise book, Pencil.

**Task Analysis:**

- Copying her name.
- Writing her name.

**PROCEDURE:**

The teacher made the child to sit comfortably on a chair. Then he motivated the child to learn the skill. Then he kept the required teaching materials, that is, exercise book, and pencil on the table in front of the child. Then he provided a flash card of her name and asked her to copy her name.
After she was able to copy her name, she was asked to write her name. In each and every step when the child faced difficulty in performing the activity the teacher gave verbal prompting, physical prompting etc. and made her copy her name, and write her name. In each and every successful step the child was given primary reinforcement like chocolate and social reinforcement like 'very good, well done' etc. Gradually the teacher faded the assistance, and made the child to perform the activity independently. The training program continued for a period of 4 weeks having one session of 30 minutes on all working days. In spite of repeated trials the child could not learn to write her name correctly. It was decided to continue the training further.

**SKILL- 3- TO IDENTIFY BIG AND SMALL:**

**Justification for Selecting the Skill- 3:**

To identify big and small: - The child did not have the concept of big and small. Development of the concept of big and small is very much necessary for every individual as it is useful for various activities connected with daily living. While buying cloth, fruits, and vegetables, one must know whether to buy a small piece or big piece; while using utensils for cooking and eating one must know which size is necessary. Every thing we come across in the world could be big or small. Therefore, it was decided to teach the concept of big and small.

**Current Level of Skill Development:**

To identify big and small: - In identification of big and small, the subject was unable to tell which one was bigger of the two objects.

**Specific Objective:**

To identify big and small: - When the teacher will provide required materials to the child and ask her to identify big and small objects, she will be able to differentiate big and small objects, with 80% of accuracy at the end of 4 weeks of training.

**Materials Required:**

Big Pencil - Small Pencil, Big Bottle - Small Bottle, Big Glass - Small Glass, Big Ball - Small Ball, Big Tray - Small Tray.
Task Analysis:
- Matching a big object with a big object.
- Matching a small object with a small object.
- Will be shown a small object and will be asked to identify it.
- Will be shown a big object and will be asked identify it.

PROCEDURE:

The teacher made the child to sit comfortably on a chair. Then he motivated the child to learn the skill. Then he kept the required teaching materials, that is, Big Pencil - Small Pencil, Big Bottle - Small Bottle, Big Glass - Small Glass, Big Ball - Small Ball, Big Tray - Small Tray on the table in front of the child. First the subject was asked to match a big object with a big object. Then she was asked to match a small object with a small object. After the child was able to match small and big objects she was asked to identify small and big objects. In each and every step when the child failed to perform the activity the teacher provided verbal prompting, physical prompting etc. and made her match and identify small and big objects. In each and every successful step the child was given primary reinforcement like chocolate and social reinforcement like 'very good, well done' etc. Gradually the teacher faded the assistance, and made the child to perform the activity independently. The training program continued for a period of 4 weeks having one session of 30 minutes on all working days. After the child learned to match and identify successfully small and big, the teacher provided reinforcement to the child.

RESULTS AND DISCUSSION

The progress of the child was recorded as per the following progress code prescribed by the MDPS. The scores vary from 1 to 7 depending on the percentage of progress of the child in the skill taught.

Progress Code:
1. Below base line 2. No Progress 3. 25% Progress
4. 50% Progress 5. 75% Progress 6. 100% Progress
7. 100% Progress before deadline
### Table-11.2: Weekly Program Progress Record - skill-1- To count number of objects up to 5:

<table>
<thead>
<tr>
<th>Weeks</th>
<th>1st week</th>
<th>2nd week</th>
<th>3rd week</th>
<th>4th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress code</td>
<td>3 (25%)</td>
<td>4 (50%)</td>
<td>4 (50%)</td>
<td>5 (75%)</td>
</tr>
</tbody>
</table>

### Table-11.3: Weekly Program Progress Record - skill-2- To write her name:

<table>
<thead>
<tr>
<th>Weeks</th>
<th>1st week</th>
<th>2nd week</th>
<th>3rd week</th>
<th>4th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress code</td>
<td>3 (25%)</td>
<td>4 (50%)</td>
<td>4 (50%)</td>
<td>5 (75%)</td>
</tr>
</tbody>
</table>

### Table-11.4: Weekly Program Progress Record - skill-3- To identify big and small:

<table>
<thead>
<tr>
<th>Weeks</th>
<th>1st week</th>
<th>2nd week</th>
<th>3rd week</th>
<th>4th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress code</td>
<td>3 (25%)</td>
<td>4 (50%)</td>
<td>5 (75%)</td>
<td>6 (100%)</td>
</tr>
</tbody>
</table>

### Table-11.5: Consolidated Progress:

<table>
<thead>
<tr>
<th>Goals</th>
<th>Objectives</th>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>To count up to 5</td>
<td>1</td>
<td>3 (25%)</td>
</tr>
<tr>
<td>To write her name</td>
<td>2</td>
<td>3 (25%)</td>
</tr>
<tr>
<td>To identify big and small</td>
<td>3</td>
<td>3 (25%)</td>
</tr>
</tbody>
</table>
Figure-11.2: Percentage of improvement of the skill ‘Count number of objects up to 5’ in 4 weeks training:

Figure-11.3: Percentage of improvement of the skill ‘To write her name’ in 4 weeks training
One of the objectives of the present study was to assess the child by the MDPS and prepare a Behavioral Profile showing the assets and deficits of the child. The second objective was to provide training in selected skills through Individualized Education Program prescribed by the MDPS. It was expected that the child would learn the selected skills within the stipulated period of 4 weeks.
MDPS assessment revealed that, mostly, the child performed better in gross motor activities, fine motor activities, self-help skills, and domestic skills, and poor in expressive language skills, Socialisation skills, Academic skills, and Vocational skills (See MDPS Behavioral Profile – Table- 11.1, Figure- 11.1).

It was decided that the subject required planning and implementation of Individualized Educational Program (IEP), for possible improvement in the poorly performed skills.

Out of the 11 Annual Goals selected for intervention through out the year, 3 Goals, namely, to count numbers of objects up to 5, to write her name, and to identify big and small, were selected as short term goals.

Skill training was given to the subject through the procedure described above. The results showed that the subject’s achievement in the skills ‘to count number of objects up to 5’ and ‘to write her name’ was up to the level of 75% (Tables- 11.2 & 11.3, Figures- 11.2 & 11.3). The subject achieved 100% improvement in respect of the skill ‘to identify big and small’ (Tables- 11.4, Figure- 11.4). It may be concluded that compared to the intellectual level of the child, the difficulty level of the skills was higher, for which the subject could not achieve 100% development within the stipulated training period of 4 weeks. It was suggested that a further period of training might improve the level of skill development of the subject.

Further, to conclude, it may be stated that it may not be possible to teach some of the difficult skills to an intellectually disabled child, in spite of the best efforts. After trying for a reasonable period of time, the trainer should discontinue training of a difficult skill, otherwise, too much of pressure on a week brain may lead to behavioral problems. The trainer should continue to assess and reassess the achievements of an intellectually disabled child, and take appropriate decisions keeping in mind the well-being of the child.