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## **TEACHING AND LEARNING PROGRAMS FOR AUTISTIC CHILDREN**

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### **I. WHAT IS AUTISM?**

The psychologist, Leo Kanner, separated autism from others and coined the term, infantile autism in 1943. The word "autism" comes from the Greek words – "au", which means "self" and "ism", which implies "orientation or state". Autism is then the condition of somebody who is unusually absorbed in himself or herself (Reber, 1985). It is a life-long disability affecting areas of the brain that control understanding, emotions, speech and gesticulation, and the general ability to interact socially.

The signs of autism generally appear during early childhood, that is before three years old. Autistic children, if unattended, can become so withdrawn that they have difficulty in developing normal social and emotional relationships with the people around them, and in comprehending and being fully aware of their environment as a result of mental deficiencies. Normal development of communication is inhibited and speech is delayed or developed abnormally. As a result of this failure to cope with people and situations, the child is slow in the play and social interaction. When the development of social skills is retarded, the autistic child appears to be odd in the areas of self-growth, family orientation and interaction in society.

An autistic child tends to resist change and is often upset when something new is introduced to him or her. Therefore, ritualistic use of objects, odd and repetitive behaviour and obsession with objects are usual. More often than not, the child is

hyperactive and does not know when to stop. Prolonged temper tantrums and screaming fits are very common.

Autism frequently occurs with other disorders, including mental retardation. It affects four times as many boys as girls. Other than this gender bias, there appears to be no other pre-disposing traits such as social class or race. Autism varies from mild, moderate to severe. Based on recent studies, autism globally affects 10 to 15 children per 10,000 children.

The actual cause of autism is not known. Studies have shown (a) abnormal brain development e.g. in the hippocampus and amygdale regions; (b) increase in total brain volume; (c) abnormal EEG brain tracing; (d) biochemical imbalance such as serotonin level is increased in the brain (but this is not specific to autism as it is also seen in people with depression, obsessive compulsive disorder and tics); (e) genetic factors; or (f) a multiple combination of the above factors.

## **II. INTRODUCTION**

In this paper, the author will present the teaching and learning programs used in the Association of Resource and Education for Autistic Children (Lions REACH). The Centre was conceived in 1987 and its sole objective is to meet the special needs of autistic children and their families. The REACH's vision is to provide their services to all autistic children in Penang specifically and Malaysia in general. To realize this, the Centre embark on innovative programs that holistically focus on the needs of the autistic children, their families and caregivers.

Its main objectives are to (a) be a source of information and the training ground for autistic children and their parents; (b) help the autistic child to become an accepted member of society; and (c) provide workshops and seminars to improve the skills of the volunteers, parents and family members in dealing with the many facets of autism.

## **1. Holistic Development**

The REACH's structured programs are developed to accommodate each child's individual needs as no two autistic children are completely alike. These programs are meant to help the autistic child develop in the five areas of development, namely mental; language, speech and communication; motor; social; and self-help skills.

### **Flower Diagram**



### **Mental Development**

Understanding concepts is part of mental development. This process is achieved through activities that emphasize shapes, colours, sizes, objects, alphabets, numbers, time, money, events, and feelings. Every object displays size, colour, shape and its use. The teaching methods and aids draw attention to these characteristics in order for the children to recognize and accept objects and things in the way we, as ordinary and normal people, are accustomed to.

These concepts are taught to the child during the one-to-one learning sessions. The teachers focus on ensuring that the child understands, absorbs and retains facts that are being taught. Also the child can apply what he/she has learnt into his/her day-to-day activities. Progress is gauged continuously and curriculum adjusted to keep up with the pace of learning.

Progress is possible if the child shows understanding of the concepts and has the mental capacity to cope. The teacher then start to prepare the child for academic work that will allow him/her to attend, if not normal classes, then special classes in the government school system. Focus is shifted to reading, counting and writing in preparation for entering normal schools.

### **Motor Development**

Most autistic children lack fine motor skills and are weak in motor coordination. Focus is given to the development of gross and fine motor skills.

Fine motor skills involve finger and wrist movements. This is taught through a range of activities that include training the child for example, to button and unbutton, zip and buckle, scribble, peg, thread, stack blocks, colour, draw, cut and paste, and write.

On the other hand, gross motor skills focus more on the child's muscular movements. These entail teaching the child to jump, dance, skip, catch balls, bounce ball, kick ball, walk over hoops, squat, roll and knead playdough, and so on. Training on hand-leg coordination and movements is the next goal.

### **Language, Speech And Communication Development**

Speech impairment is a dominant feature of autism. For some, even communication of any form is virtually non-existent. This is when life starts to get difficult, not just for the child but also for the family. The inability to communicate results in some form of behavioural problems and this causes frustration for both - the child fails to understand instructions while the parents fail to understand the child.

There is a special speech and communication curriculum to suit each individual child. Good results are achieved only through the consistent and persistent effort of their teachers and parents to encourage the child to mouth, verbalize and imitate. The speech and communication curriculum concentrates on getting sound/speech out of the child. It promotes exercises that encourage mouth movements. Example: mouth

exercises, blowing a windwheel/recorder, whistling, and blowing bubbles that exercise facial and jaw muscles. A proven method is encouraging sound imitation that will eventually lead to some form of speech to begin with.

Once the child develops speech, the task returns to vocabulary and word usage that we take for granted with normal children. Generally the methods remain the same. For example, pictures of objects are consistently introduced to improve their memory capacity while speech is encouraged. The added ingredients are the patience, dedication and perseverance of the parents who continue the processes at home.

Structure of speech is next introduced to those who have speech but are unable to communicate. The child is first trained to respond through greetings with eye contact, choosing the right words to use that suit the particular occasion. Then he/she will learn to speak in sentences. The next step is to teach him/her to answer questions that carry who, what, and where before progressing to those with why and how. These are language skills we take for granted in normal children. However, they represent barriers for autistic children.

Some autistic children may not develop speech at all. There is an alternative strategy for such children. They are taught to use COMPIC cards or PEC cards that allow them to signal their needs. To ensure success, parents must be consistent in the use of these cards.

### **Social Development**

Social development that includes behavioural and emotional training is another major part of the programs. Social development is vital for swift and smooth integration of the autistic child into normal school and society.

This behavioural development is achieved through teaching the children to acknowledge the presence of another person and to behave according to social ethics and rules. They learn to recognise and respond to different facial expressions and so

learn to differentiate emotions displayed by people. They also learn skills to indicate their needs and to follow instructions either through verbal orders or written signs. Most importantly, they learn to maintain eye contact with the person they are communicating with.

The social development of these children is very much enhanced by our group sessions in which participation is encouraged. The children have opportunities for horizontal social play with their peers and vertical social interaction with the family members, volunteers and other adults.

### **Self-Help Development**

Self-help development is definitely important for an autistic child as it is geared towards training the child to be independent and maintain healthy living standards. This aspect of development is included in the child's curriculum so that the child may be trained to take care of himself/herself. Such self-help skills include taking care of personal hygiene and doing some basic household work.

The autistic child needs to be trained to take care of himself/herself first. Personal habits that develop naturally in normal children must be taught. These children must learn to button and unbutton, zip and unzip, brush their teeth and gargle, comb their hair, wear socks and shoes, serve themselves, eat and drink on their own, wash their cups and plates after use, wipe tables and chairs, put away things in their proper places, and use the toilet independently.

Household skills include learning to wash and fold clothes; ironing, sweeping and mopping; learning to cook basic meals; working on handicrafts and woodwork; learning to use money and the concept of earning money.

All these training on self-help must start at an early age as it will eventually enable these children to lead a more normal and independent lifestyle as they grow into adulthood. This ability to be independent provides a relief to the anxieties of their families as they learn to live with some form of normality.

It is important to encourage the parents to participate in these self-help programs so that training may be reinforced at home until the child is able to manage.

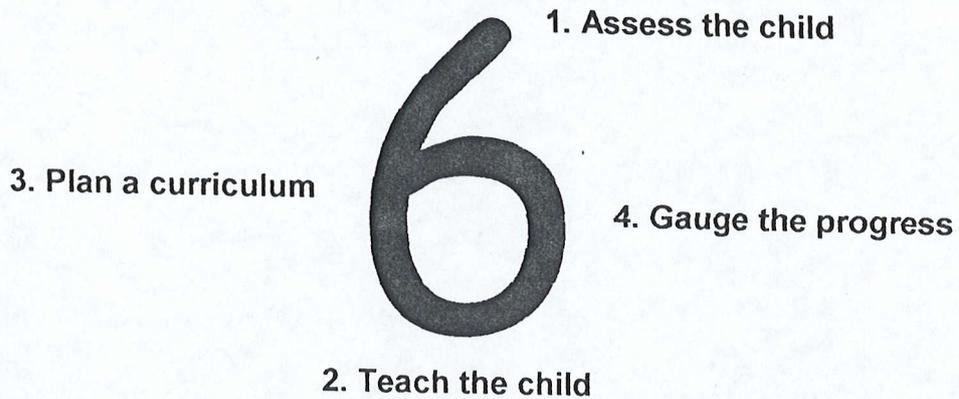
## **2. How Do We Do It?**

The REACH's method of teaching autistic children support the many literature which state that autistic children manage and learn better on a one-to-one basis. It seems a contradiction to use an autistic feature, which is of sameness and routine, through a timetable that is constant and a personal teacher who remains the same, to modify other autistic features but it is proven to be an effective method to reach the child. It requires a high level of commitment and perseverance on the part of both teachers and parents to meet such a demanding schedule.

The individual one-to-one teaching programs include one-to-one learning session, computer class, and art and creativity class. There are also group programs such as (i) music therapy, (ii) pre-vocational, (iii) story telling, (iv) play group therapy, (v) and Snoezelen room. All these strongly reinforce the learning process of our children and enable them to recognise, differentiate, value and appreciate people, things, objects and situations in a natural and orderly manner.

The REACH programs focus on the overall development of the child in terms of mental; language, speech and communication; motor; social; and self-help. Most parents tend to believe that only the mental and speech defects of the child need to be corrected and once those are adjusted, the child should be able to make progress in the other areas. This is unfortunately not true. All five areas must be addressed simultaneously in order for them to be included into normal schools and be integrated into society.

Below is a diagram of how each autistic child is taught at the Centre.



### 3. REACH Programs

The programs at REACH are for both the autistic child and his/her family. The prime objective is to cultivate a closer relationship between the child and his/her parents and family members. This is conveniently achieved through their group programs where parents learn to fully understand the different behaviours and conditions of their child and also those of other children in the group. Marked improvements in other children that they can see for themselves give them hope and motivation to continue to learn how to handle and manage their child better.

Parents and family members are required to participate in all the group programs as it is important that the child receives continuous training outside of the Centre. This continuation of training from Centre to home often reforms family relationships because the autistic child benefits both in terms of love and training while family members learn to better understand and to love this special child in their midst.

The individual teaching and learning activities and group activities are presented as follows.

## **The Individual Activities**

### **(a) One-To-One Learning Program**

This individual learning program is carried out according to a specially tailored curriculum for each child. The main objective is to train the child in the following aspects of development, i.e. mental; motor; language, speech and communication; social; and self-help.

The one-to-one sessions with a teacher are provided to meet the needs of each child. Each child is assigned to a teacher for one hour and twenty minutes per session.

For the low functioning children, the curriculum emphasizes on the mental, speech and communication, motor, and self-help development. For the high functioning children, the curriculum emphasizes on the academic; language, speech and communication; and social development.

### **(b) Computer Class**

Apart from the objective of introducing the children into the new information era, this program also hopes to build and strengthen the thinking capacity of autistic children by using computer stimulated pictures in a structured manner.

Interactive activities through the computer with words, pictures, and moving scenes are made possible by sound stimulation, speech stimulation, and visual stimulation. Creative and educational programs that include language, science, mathematics, and memory games are introduced to the child to stimulate his/her mind and memory. For the children, stimulation appears to peak when objects, animals, numbers, places, and colours are repetitively displayed on the computer screen.

Motor and coordination skills are strengthened here as the child learns to manipulate the mouse and keyboard through interactive response to the computer games in excitement and fun.

### **(c) Art And Creativity Program**

This program is planned to stimulate and enrich the children's imaginations and expressions. This is achieved by flashing pictures and art pieces on the computer accompanied by a relevant piece of music. Here, the children are encouraged to give an account of what they see, feel or imagine, whether on the picture itself or the characters involved. If they are not able to express verbally, they are encouraged to make a drawing.

The sound track is important here for it draws out different emotions in different children and we try to make sense of why the child responds in that manner. The aim is to uncover the thinking pattern of the autistic child so that we can guide him/her to adopt and to changes in the environment.

### **The Group Therapy Programs**

#### **(a) Music And Play Program**

Music plays a big part in our normal everyday lives. The rhythms and harmonies of different tunes can attract the attention of an autistic child. And when this happens, the child becomes more responsive and reacts favourably as his/her sensory functions (sight, sound and touch) are gradually stimulated by the music.

Language development is reinforced as the child is taught to sing and create sounds along with the music. The underlying concept is a combination of the elements of music and speech that will focus and refine their coordination skills.

Coordination skills are further strengthened when dance, actions and play are introduced together with the music. Carefully chosen, these actions can also improve the gross and fine motor skills of the child.

Social interaction is experienced when these children come together. Here they learn to appreciate and enjoy music and play through cooperation and mutual fun.

The value of this program lies in the effectiveness of helping the autistic child manage the areas he/she is deficient in. It improves language, speech and communication; mental; social; motor and coordination; auditory; visual and tactile; and affective skills.

### **(b) Pre-Vocational Session**

Pre-vocational sessions teach and encourage the autistic child to be creative and independent. This is achieved through given opportunities to freely display his/her creative talent in art and crafts.

The objectives of such a structured approach are firstly, to inculcate aesthetic values in these children by stimulating their visual, auditory, sensory and motor abilities through art and craft activities. The different colours, textures, shapes and sizes of objects used can contribute to this enhancement. Again, as parents are greatly involved here, communication and bonding are poised to be improved.

The second objective lies in promoting good working habits. Cooperation, sharing and cleanliness are learned and cultivated as they work together in a group and are responsible in cleaning up their own workstations.

Pre-vocational activities definitely improve fine motor skills through their manual efforts. Simultaneously, social skills are reinforced from working together on group projects while good work habits are exercised. All in all, this program plays a major role in the child's development as adulthood approaches.

### **(c) Story-Telling Session**

This is a special play session where stories are created and played out by teachers to stimulate the language and speech, social, and creative thinking skills of these autistic children. We also use stories and real life situations to teach values. All stories incorporate appropriate speech, communication, actions, emotions and social behaviours.

Here, the children are encouraged to respond verbally and to participate physically. To check on their understanding of the stories told, the children are asked to do a drawing or produce a work that illustrates the subject or content of the story. For instance, if the theme of the story is on helping out at home, then they would be asked to draw anything which comes to mind that reflects home. As this exercise would entail drawing, colouring and cutting; imagination and creative thinking are fostered.

This program uses stories to stimulate the children to develop receptive (listening and understanding) and expressive skills, imagination and creative thinking, role play and dramatisation, and social skills. The story telling sessions appear to be ideally suitable for 'brain gym' exercises, which are light exercises that involve the coordinated movements of hands, legs, fingers and body. Brain gym exercises both sides of the brain to function simultaneously, which therefore promote coordination.

Interestingly, the singing part of this program is very popular with the children and there is karaoke singing occasionally.

#### **(d) Sunday Play Group Therapy**

This weekend program has been designed with two specific objectives in mind, one for the children and the other for the parents/family.

For the children, this program aims at creating opportunities for them to socialize and interact with each other while learning self-help and living skills. They learn to do household work, handicraft, woodwork, prepare meals, line up for the canteen, and also learn the concept of money. There is no doubt that the developments of their social and motor skills are enhanced in this program.

Next, the program encourages the involvement of the parents or family members in the training of their children and support for each other. This is where parents are trained to handle their children and cope with difficult behaviours.

The Sunday Play Group Activities include:

### **GREETINGS**

- To sign or say hello/goodbye to every friend.
- To recognise their own name and the names of friends.

### **HANDICRAFT SESSION**

- To do handicraft according to a teacher's instruction.
- To ask for glue, eraser, colour pencil etc. from teacher.
- To learn to share items when necessary.
- To improve their fine motor skills.

### **HOUSEWORK SESSION**

- Wash plates, cups, saucers.
- Make drinks.
- Make sandwiches, cakes, buns etc.
- Wipe tables, chairs, windows, doors etc.
- Dust tables, chairs, windows, doors etc.
- Sweep floor.
- Mop floor.
- Wash clothes.
- Fold clothes (shirts, pants, towels).
- Iron clothes.
- Hang clothes.

### **WOODWORK CLASSES** (For older boys to learn handling different tools)

- To share, take turns, and listen to instructions.
- To produce a whole 'product' e.g. shelves, boxes.

## **TEA TIME**

- To learn how to serve others and to take turns.
- To sit down quietly while eating or drinking.
- To wash their hands before tea time and to wash their cups/plates after drinking/eating.
- To say “I want” when they want food, and to say “thank you” when served.

## **TELEMATCHES**

- To listen to instructions.
- To develop motor skills – gross and fine, e.g. jumping, running, holding, coordination of hands and legs etc.
- To queue in line.
- To work as a team.

## **MUSIC AND MOVEMENT**

- To understand instructions.
- To learn imitation and co-ordination skills.
- To develop and improve language and social skills.

## **CANTEEN**

- To understand concept of money.
- To train high function children to sell and give correct change.
- To train low function children to buy and accept correct change.
- To wait and queue while buying things.

### **(e) The Sensory Integration - Snoezelen Program**

Sensory integration using Snoezelen has proven to be effective in calming the autistic children. This therapeutic room provides an environment for tranquility and relaxation. It is specially decorated and equipped with special effects for visual, auditory and touch stimulation. Here, the children are able to respond to the gentle and soothing stimulation that helps to reduce temper tantrums and agitation.

Structured stimulation and activities are planned for the children in the room. The children are calmer when the stimulation and activity are given one at a time as we prepare them to receive changes. Encouragingly, the children learn to cope with changes under this soothing environment.

### **III. CONCLUSION**

The goal of the REACH programs is aim towards the holistic development of a child, so that the autistic child can be integrated into the school and society. There is hope for autistic children. Although autism is a life-long disability, these children will improve if they are trained with the appropriate programs.

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