

3.1 INTRODUCTION

This chapter describes the methods used to find the answers to the research questions posed in Chapter 1. It includes the approaches taken to carry out the research; description of the study sample; the design of the test instrument; the process of data collection; and the administration of the test.

3.2 THE STUDY SAMPLE

For the purpose of this study, ten autistic children were chosen from the Klang Autistic Educational Centre based on the following variables. First, these ten students had just joined the centre at the time the researcher was carrying out her study and hence they had not started on the ABA programme. The study sample consists of only male students because the three female students at the centre have been under the ABA programme for four years. Besides that, they were all non-verbal.

Second, only children without physical disabilities were chosen so that they could do the activities such as imitating gross motor skills, pointing and matching.

Third, only children who had some form of verbal skills were selected. It does not mean that they could speak but were able to make use of their vocal cords to communicate dissatisfaction or happiness.

The fourth variable was attendance. The selected children were those who could attend class everyday. Some of the children at this centre could only attend class on alternate days due to transport problems.

At the Autistic Educational Centre in Klang, the children are taught various skills based on the Curriculum Guide developed by Catherine Maurice (1996) under the ABA programme (Appendix 3). The teachers at this two-session centre use an

Assessment Plan (Appendix 4) to evaluate the child before placing him/her in a class. Referring to the Assessment Plan, the teacher selects the skills from the Curriculum Guide to plan an IEP (Individualized Education Plan) (Appendix 5) to teach the child. Children who are six and below are placed in the Early Intervention Programme (EIP) class. Children who are older are put in groups of three, four or five according to the teachers capability and the child’s behaviour.

Table 3.2.1: Particulars of the study sample

Subject	Age (Years)	Sex	Father’s Occupation	Mother’s Occupation	Language of Instruction at the Centre	Language spoken at home
A	8	Male	Businessman	Housewife	Malay	Malay
B	8	Male	Businessman	Housewife	English	English
C	8	Male	Labourer	Housewife	English	Chinese
D	8	Male	Supervisor	Clerk	Malay	Malay
E	8	Male	Shopkeeper	Housewife	English	Chinese
F	8	Male	Clerk	Housewife	English	Chinese
G	10	Male	Mechanic	Housewife	Malay	Malay
H	10	Male	Shopkeeper	Housewife	English	English
I	11	Male	Businessman	Housewife	Malay	Malay
J	11	Male	Carpenter	Housewife	Malay	Chinese

Table 3.2.2 : Information about study sample

Subject	No. of days absent from class per month	Attending Extra/ Tuition Classes	Receiving Guidance from parents at home
A	10	No	No
B	2	No	Yes
C	3	Yes	No
D	1	No	Yes
E	6	No	No
F	2	No	Yes
G	4	Yes	No
H	3	Yes	No
I	5	No	No
J	7	No	No

The children go through an established routine when they reach school. They remove their shoes, and arrange them on a rack outside. Then they put their bags on a

specific table assigned for that purpose and begin their 'morning cycle'. This is an activity where each child has to greet the teachers and friends. Then they move to their specific classrooms with their teachers.

Once they are seated, the teacher conducts one-to-one sessions with one child while the others play with toys or do some colouring or written work. The teacher ensures that each child comes to her for an individual session before the end of the day. Then, they take a break at about half past ten. The teachers give the children the food that they have bought from home. After the break, the better children are assigned to clean up the place while the others sit with the teachers. The morning session children leave as the afternoon session students walk in at one in the afternoon.

During the one-to-one session, the teachers teach the child the skills that they have planned for the child in the Individualized Education Plan (IEP). The mastery of each skill is determined using the Discrete-Trial system or the Ten-trial system (Appendix 6). After teaching the skill, the teacher tests the child using the Ten-trial system. Each child is required to repeat the skill. If the child can perform the skill at least 8 times out of 10, then the child is considered to have mastered the skill. The child is tested on the same skill at an interval of 2 to 3 weeks using the same Ten-trial system to ensure that the skill has been mastered.

3.3 DATA COLLECTION

The main objective of this research is to test the communication skills exhibited by the autistic children before and after undergoing the ABA programme. Three methods which were used to facilitate data collection were:

1. An adapted version of the Behavioural Language Assessment Form
(Sundberg & Partington, 1998) (Appendix 7).
2. Interview sessions with teachers.

3. Observations by researcher.

3.3.1 The Behavioural Communication Assessment Form

This assessment was used as a pre-test to evaluate the communication skills exhibited by the autistic children at the beginning of the year and as a post-test at the end of the year after going through the ABA programme, to determine the level of the various skills that they have mastered. The communication skills which were tested are :

1. Cooperation with Adults
2. Requests
3. Motor Imitation
4. Vocal Play
5. Vocal Imitation
6. Matching to Sample
7. Receptive
8. Labelling
9. Receptive by Functions, Features and Class
10. Conversational Skills
11. Letters and Numbers
12. Social Interaction
13. Greeting
14. Gestures

Each skill consists of five levels and each level has certain characteristics. Therefore, a child has to possess the characteristics stated in that particular level in order to be placed in that level (Appendix 8). A child is evaluated and the level (for each skill) which the child achieves is marked on the bar graph. Based on the child's performance in each skill, the child is placed in a certain Profile Level. Altogether there are five Profile

Levels (Appendix 9).

The 14 skills have been chosen based on certain criteria. First, these are the skills, used by behaviourists to evaluate the communicative abilities of autistic children which is also the basis of the ABA method. Moreover, the Curriculum Guide, that is being used at the Autistic Educational Centre in Klang covers all these 14 skills.

Second, the selected children were going to be taught these skill during that academic year. Furthermore, communication of each child would be considered having improved if the child achieves the goals of each skill as stated in the table below.

Table 3.3.1.1: Communication Skills and Goals

Skill	Goal
1. Cooperation with Adults	The child can work with teachers and parents.
2. Requests	The child can ask or use gesture to indicate that wants something.
3. Motor Imitation	The child can copy people's actions and learn from it
4. Vocal Play	The child can exercise its facial muscles to facilitate speech.
5. Vocal Imitation	The child uses echolalia to communicate.
6. Matching To Sample	The child is able to identify the different objects in its environment. The child can understand the relationship between realia and picture.
7. Receptive	The child can understand what is being told in order to be able to follow instruction.
8. Labelling	The child is able to label various actions and item connected to its environment.
9. Receptive by Functions, Features and Class (Referred to as R1 in graphs)	The child knows the functions, feature and class of a object.
10. Conversational Skills	The child is able to ask for and give information.
11. Letters and Numbers	The child will be able to use the numbers in daily activities such as counting.

12. Social Interaction	The child will be able to seek others in order to communicate.
13. Greeting	The child will be able to acknowledge another person's presence and greeting
14. Gestures	The child will be able to understand simple gesture to facilitate communication.

3.3.2 Interviews with Teachers

The teachers at the centre were interviewed. The purpose of this interview was to get their perspectives on the problems faced by them teachers while carrying out the ABA programme.

The interview questions were divided into five sections (Appendix 10) Section A: Personal, Section B: The Programme, Section C: The Centre, Section D: The Parents and Section E: The Child.

Section A questions aimed at finding out the teacher's qualifications and work experience. Section B questions elicited the teacher's opinion of the programme, the students communication skills after going through the programme and the problems encountered while implementing it. Section C deals with the parents of the autistic children, how cooperative or difficult they are. Section D contains questions about the suitability of the infrastructure as the learning centre. Finally, Section E deals with the factors that influence the student's performance at the centre.

3.3.3 Observations of the Researcher

Observations were carried out by the researcher once or twice a week throughout the academic year(January 2000-December 2000). Observations were focused on:

1. the child's behaviour inside and outside the classroom.
2. the relationship between the teacher and the child.

3. the interaction among the students in the class and school.
4. interactions among the children during the extra curricular activities held in the school and outside the school such as camping.

3.4 THE PILOT STUDY

A pilot study was conducted with the help of the teachers at the centre. The Behavioural Communication Assessment Form was administered to two children. The selection of these children was also based on the controlled variables used for the selection in the main study. The objectives of the pilot study are:

1. to make the teachers familiar with the test.
2. to ensure the smooth and efficient administration of the Behavioural Communication Assessment Form for the pre-test and post test

3.5 THE ADMINISTRATION OF THE TEST

Since the researcher was unknown to the children, the teachers conducted the pre-test and the post test using the same items (Appendix 7) to determine the communication level of each child. The pre-test was conducted at the beginning of the year and the post test was conducted at the end of the year. The table below shows how each skill was tested.

Table 3.5.1: Method to test each skill

Skill	Method
1. Cooperation with Adults	Teacher observes how child cooperates with adults while performing tasks.
2. Requests	Teacher observes whether child requests for items.
3. Motor Imitation	Teacher shows the action, students imitate.
4. Vocal Play	Teacher observes the sounds made by child.
5. Vocal Imitation	Teacher says the sounds and words and waits for the student to repeat.

Table 3.51(Cont'd)

6. Matching to Sample	Teacher gives objects and pictures to the child and instructs to match the picture with the object.
7. Receptive	Teacher instructs the child to do something or point to item actions, persons or adjectives.
8. Labeling	Teacher shows the child some pictures. Teacher instructs the child to vocally label the item or action.
9. Receptive by function, feature and class	Teacher shows some objects. Teacher states the function of the objects and instructs the child to identify the object.
10. Conversational skills	Teacher sings songs leaving out words. Teacher says part of sentence and waits for the child to complete it. Teacher asks students questions.
11. Letters and Numbers	Teacher says letters, words and numbers. Students identify them.
12. Social Interaction	Teacher observes how students interact with adults and peers.
13. Greeting	Teacher observes whether students greet adults and peers.
14. Gestures	Teacher makes simple gestures and waits for students to acknowledge the gestures

The observations were made by the researcher throughout the year. The researcher visited the centre every week to observe the students. During the same time, the teachers were interviewed.