STRATEGIES FOR DEVELOPING GESTURES IN VISUALLY IMPAIRED CHILDREN FOR EFFECTIVE COMMUNICATION

Submitted

by

RECHANA.R

(Reg. No.07USM15)

Under the Guidance of

Mrs.R.NAGOMI RUTH

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Special Education(Visual Impairment)

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Special Education(Visual Impairment)

Signature of the	**Signature of the**	**Signature**
Head of the department	**Dean**	**of the Guide**

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CONTENTS

INDEX

LIST OF TABLES

LIST OF FIGURES

LIST OF PLATES

LIST OF APPENDICES

INTRODUCTION

CHAPTER I

INTRODUCTION

Education is the art of making man ethical.

- Georg Hegel

Education is the knowledge of putting one's potentials to maximum use. One can safely say that a human being is not in the proper sense till he is educated. The training of a human mind is not complete without education. Education makes man a right thinker. It tells man how to think and how to make decision. Greg Mortenson says "Education provides opportunity, hope and a future. One should seize everything it offers". The opportunity provided in education is to a large extent that it makes an individual complete.

It is only through the attainment of education, man is enabled to receive information from the external world; to acquaint himself with past history and receive all necessary information regarding the present. Without education, man is as though in a closed room and with education he finds himself in a room with all its windows open to towards outside world.

At a very young age, children learn to develop and use their mental, moral and physical powers, which they acquire through various types of education. Education is commonly referred to as the process of learning and obtaining knowledge at school, in a form of formal education. One does not only acquire knowledge from a teacher; one can learn and receive knowledge from a parent, family member and even an acquaintance. In almost all societies, attending school and receiving an education is extremely vital and necessary if one wants to achieve success and healthier life. And Suman Ahliya,2010 says , "Its the education which renovates a being to survive a healthier life".

An important aspect of learning is for students to be able to communicate what they know, or think they know. The development of effective interpersonal communication skills is an important endeavor for any individual who is seeking to

become a stronger and more efficient communicator. Children use communication skills to maintain relationships, transfer information, and convey emotions. In many ways communication is the foundation, the backbone, of a well-functioning and healthy society. Although we usually recognise communication with speech, communication is composed of two areas: verbal and non-verbal. Non-verbal communication has been defined as communication without words. It includes apparent behaviours such as facial expressions, eyes, gestures, touching, and tone of voice, as well as less obvious messages such as dress, attitude and distance between two or more people. Non-verbal communication is also an important aspect of interpersonal communication in the children. Although humans have language, 55% of communication is through nonverbal. In which, gesture is widely regarded to play an important role in communication.

Gestures allow the speaker to convey a message or thought that is not easily expressed through verbal language. (Christoph wulf,2011) gestures play a major role in the dissemination and acquisition of knowledge in educational contexts, and that the human body functions as a medium for understanding, enabling people to acquire practical knowledge through a mimetic grasp of information. Indeed, gesture is known to develop even before the onset of spoken words. Once the child has the ability to speak, gestures are used to express thoughts that are not expressed vocally ; eventually, gestures complement vocalized ideas.

Gestures help the speakers to retrieve words more efficiently, particularly words with spatial meaning. Preventing people from gesturing makes their language production less fluent. (Iverson,1992)Gesturing is a window into thought. It serve cognitive functions for the speaker, independent of their impact on the listener. In classroom settings, gestures can aid learning. More generally, gestures help with tasks that require maintaining or transforming spatial and motoric information in memory.

(Phil Hatlen, 1996) Good Social Interaction Skills are essential if students are to successfully apply skills learned in other curricular areas. Social skill such as smiling frequently is perceived as more likeable, friendly & approachable. Smiling is often a great catch in many students as they will react kindly & learn a great deal more. If

people fail to gesture while speaking, they are perceived as boring & dull. A lively and animated style captures the other person's attention, makes the material more interesting, facilitates learning & provides a bit of entertainment. Head nodding, forms of gestures communicate positive support to students and indicate that they are listening. Messages are communicated by the way of walk, talk, stand and sit. Standing upright, but not rigid, and leaning slightly forward communicates to the person that considered as interested and sensitive. Such type of communication helps the children to have more friends and can independently convey their message.

Good manners are a set of behaviors which mark someone as a civilized and cultured member of a society. Manners are usually taught from a very young age, with some people receiving additional training in etiquette, formal rules of conduct which apply to a variety of situations. Someone who lacks good manners may be considered boorish or inappropriate, and he or she may be at a disadvantage in many social situations.(Susan Dunn,2007) Manner is personality-the outward manifestation of one's innate character and attitude towards life.

Every child is known by his behavior. The manners of children are observed by the people. Manners are much more than just saying "please" and "thank you." They are ways of showing kindness and consideration. At young age, it is easy to teach good manners. Good manners are lifetime asset. The rewards of this asset are several and the cost is negligible. Parents and teachers are responsible for their children's behaviour.

In visually impaired children, the effect of gestures and mannerisms play a repeal role. This may be due to the limitation in their vision. Sighted children learn almost by visually observing other people and behaving in socially appropriate ways based on that information. Individuals who are blind and visually impaired cannot learn skills of social interaction in this casual and incidental fashion. So it leads to the Repetitive movements such as body rocking, head swaying, eye poking or rubbing, wrist flicking and head dropping or extension, which are socially inappropriate because of the number of times they are done and the intensity with which they are done, may be called "blindisms" or "stereotypic mannerisms." These mannerisms can lead parents and others to fear the child or believe that he/she is

retarded, autistic, or emotionally disturbed. They can lead to teasing and avoidance and may interfere with the child's ability to learn from the environment. Also, constant eye rubbing and poking can damage the delicate tissue surrounding the eye. Which may result in turning dark in color, or the eye cavity to sink in. They are almost unaware of the good gestures existing in the society. But many are not taking this facet as seriously. It has to be taken into account, since gestures and mannerisms play a vital role in effective communication.

Helping them to understand the importance of gestures and mannerisms is an essential part for their valuable communication. Children who are blind gesture less frequently and express fewer distal gestures than do sighted children (Iverson,2000). " Instruction in these skills is such a fundamental need that it can often mean the difference between social isolation and a satisfying and fulfilling life as an adult." For these children, information must be provided through timely, insightful, and sequential instructions. Information associated with gestures and to get rid of negative mannerisms must be made available to who are blind or visually impaired. Furthermore, peers of students who are visually impaired require specific instruction to increase their awareness of the implications of vision loss on social interaction if they are to become both comfortable in their interactions with their classmate who is visually impaired and knowledgeable about how to include this student.

Keeping in view, the investigator decided to take up a study to develop the gestures and also to avoid the bad mannerisms in visually impaired children.

Title of the study:

Strategies for developing gestures in visually impaired children for effective communication.

Definitions

Blindness :

According to WHO,1995,

Blindness refers to a condition where a person suffers
from any of the following conditions, namely:

Total absence of sight; or Visual acuity not exceeding 6/60 or 20/200 (Snellen) in the better eye even with correction lenses; or

Limitation of the field of vision subtending an angle of 20 degree or worse.

For deciding the blindness, the visual acuity as well as field of vision have been considered.

Gesture

Gestures are defined by Iverson and Thal (1998) as "actions produced with the intent to communicate and are typically expressed using fingers, hands, and arms, but can also include facial features (e.g. lip smacking for "eating") and body motions (e.g. bouncing for "horsie")."

Low Vision:

The Persons with Disabilities Act, 1995 also recognizes low vision as a category of disability and defines it as follows:

"Person with low vision" means a person with impairment of visual functioning even after treatment or standard refractive correction but who uses or is potentially capable of using vision for the planning or execution of a task with appropriate assistive device".

Effective communication

Effective communication is the passing of the right message or information:

- to the right person,
- in the right way,
- at the right time, and
- with the right effect, impact and outcome.

by **Jean Roberts**

Objectives:

- To prepare a tool to find out the difficulties in using gestures among visually impaired children.

- To make the visually impaired children understand the significance of gestures
- To prepare various materials, activities to enhance the communication skills of visually impaired children.
- To help them inculcate the good gestures and reduce negative mannerisms.
- To make them communicate effectively through gestures.
- To evaluate the impact of the intervention through a post test.

Hypothesis:

- There is no significant difference between pre and post test
- There is no significant difference between the performance of girls and boys
- There is no significant difference between blind and low vision children
- There is no significant difference between I-V and VI-X standard students.

Need for the study:

Gestures play an important role in communication. Children with visual impairment children also gesture when they talk. But due to the limitation in the vision, they develop negative mannerisms and their good gestures diminish.

The scientific method on the gestures in visually impaired children is very limited. Parents and teachers are not much aware of the gestures in the visually impaired children. Through scientific method, and the qualitative and quantitative research shall make a alarm in the identification of negative mannerisms and good gestures in visually impaired children. The teachers , parents, and even society shall get knowledge about the gestures in visually impaired children. There is not much help to the visually impaired children for their development of good gestures and reduction of the negative mannerisms, so that these children can attain an optical communication levels and get socially included and can earn for the future.

SCOPE OF THE STUDY:

- The findings of the present investigation may help the visually impaired children understand the significance of gestures.
- This study may help to explore the gestures used in visually impaired individuals who have never seen gestures and have no experience with its communicative function.
- This study may help to find out the negative mannerisms in visually impaired children.

REVIEW OF LITERATURE

CHAPTER II

REVIEW OF LITERATURE

INTRODUCTION:

"Nothing is so practical as a good theory"

- Phil Buchanan

Review of literature is an existing task calling for deep knowledge and clear perspective of investigation.No researcher can think of understanding a study without acquainting himself with the contribution of previous investigation for worthwhile study in any field particularly in research.Information about what has already been done in that particular area is very essential for a researcher.

Researcher takes advantages of the knowledge which has accumulated in the part as a result of constant human endeavour.It can never be undertaken in isolation of the work that has already been done on the problems which are directly or indirectly related to a study propoed by a researcher.A careful review of the research journals,books,dissertations,thesis and other sources of information on the problem to be investigated in one of the important steps in the planning of any research study.

Sharon Begley on his article title **Gesturing As You Talk Can Help You Take A Load Off Your Mind** has proposed that Gesturing seems to decrease "cognitive load," the amount of mental effort needed to perform some task. He tested on the volunteers who listened to a set of definitions and had to provide the word being defined. The study revealed that who were told to keep their hands in the pocket of an apron came up with fewer words than people whose hands were free and gesturing. This study was a bit ambiguous, though, since most people who found the right words did so before they gestured.

Şeyda Özçalışkan, (2009) **investigates how the gestures of the blind differ across cultures** along with Susan Goldin-Meadow of the University of Chicago, stated that gestures differ depending upon the language and culture **.**He says that In American English, gestures are tied more with concepts such as running or crawling, while in a structurally different languages like Turkish, they are tied with concepts involving directions, such as moving up, down, exiting and entering. Özçalışkan then says ,Gestures also vary with age..By age 5, gestures can become more linked with abstract and metaphorical concepts such as "time flying . It evidences of emerging abilities, involving cognitive changes where children might be able to focus on multiple dimensions both the physical and the abstract simultaneously.

The study takes both factors sight and language differences into account. "When you see your parent talking and performing manner-like gestures, it leads to gesturing in native-like ways," Özçalışkan said.

Kunz et.al, (2012) conducted a study on **Impact of visual learning on facial expressions of physical distress: a study on voluntary and evoked expressions of pain in congenitally blind and sighted individuals.**The study deals with the ability to facially communicate physical distress (e.g. pain) can be essential to ensure help, support and clinical treatment for the individual experiencing the physical distress. The researcher wanted to know to which degree this ability represents innate and biologically prepared programs or whether it requires visual learning. The study evoked the voluntary facial expressions of pain in congenitally blind (N=21) and sighted (N=42) individuals. The repertoire of evoked facial expressions was comparable in congenitally blind and sighted individuals ;the study found that , blind individuals were less capable of facially encoding different intensities of experimental pain and less capable of voluntarily modulating their pain expression. In conclusion that the repertoire of facial muscles being activated during pain is biologically prepared. However, visual learning is a prerequisite in order to encode different intensities of physical distress as well as for up- and down-regulation of one's facial expression.

Francis Quek (2005) conducted a project on **Embodiment awareness' research aim to help the blind learn math more quickly and it**

says that Gestures help reveal the major points of accompanying words and help the listener focus on important elements of a conversation. The NSF(National science foundation) project focused on math discourse and education for blind students, who typically lag one-to-three years behind their sighted fellow students in math. Mathematical reasoning is rich in spatial imagery revealed in gestures, which have the capacity to create images that serve as "objects of contemplation." When a graphic or illustration is available for math instruction, the lessons usually include gestures of spatial reference to the graphic. Research with individuals who are blind suggests that they have remarkable capacity for visual imagery, memory, and conceptualization and are able to access graphical content through tactile image technology and lack of visual access to the embodiment of the instructor makes mastery of the material more difficult for blind students. He proposes to remedy this problem by giving blind students the use of tactile devices that can provide elements of embodiment awareness. He concluded that the project should have significant direct impact on inclusive mathematics instruction at all grade levels for visually impaired students provide a sense of embodiment awareness to students who are blind has not yet been studied and it has the potential for empowering such students.

Prof . **Anthony Adornato** (2010) says that **Gestures can bolster communication .**He further says When you want to get a point across, let your mouth and hands do the talking.That's the advice from Spencer Kelly.

In this study, volunteers, In some of the trials (congruent trials), the speech and gestures were related — the word "chop" and a chopping gesture, while during other trials (incongruent trials), what was said did not match the gesture, such as the word "chop" and a twisting gesture. The volunteers had to indicate that whether the speech and gesture were related to the initial video they watched. The results revealed that the volunteers performed better during congruent trials than incongruent trials. They responded faster and more accurate when the gesture matched the spoken word. According to the research, when gesture and speech convey the same information, they are easier to understand. The results indicated that gesture and speech form an integrated system that helps us in language comprehension and only by combining gesture and speech does the full meaning of the message become clear.

Dario Galati ,et.al(2001) conducted a investigation **on Judging and coding facial expression of emotions in congenitally blind children.**They investigated the facial expression of emotions in very young congenitally blind children to find out whether those were objectively and subjectively recognisable. They also tried to see whether the adequacy of the facial expression of emotions changed as the children got older. They video recorded the facial expressions of 10 congenitally blind children and 10 sighted children (as a control group) in seven everyday situations considered as emotion elicitors. The recorded sequences were analysed according to the Maximally Discriminative Facial Movement Coding System (Max; Izard, 1979) and then judged by 280 decoders who used four scales (two dimensional and two categorical) for their answers. The results showed that all the subjects (both the blind and the sighted) were able to express their emotions facially, though not always according to the theoretically expected pattern. Recognition of the various expressions was fairly accurate, but some emotions were systematically confused with others. The decoders' answers to the dimensional and categorical scales were similar for both blind and sighted subjects. Their findings on objective and subjective judgements show that there was no decrease in the facial expressiveness of the blind children in the period of development considered.

The Use of Tangible Cues for children with Multiple Disabilities and Visual Impairment, **Trief,Ellen,**(2007) The study presented introduces a communication system that uses tangible cues to all 48 of the preschool and lower school children at the Lavelle School for the Blind in the Bronx, New York, who met the criteria for the intervention. These children had multiple disabilities, including visual impairment, and limited to no verbal skills.

Galati, Darioet.al (2003) conducted a study on **Spontaneous Facial Expressions in Congenitally Blind and Sighted Children Aged 8-11**,and found that the emotional facial expressions of 10 congenitally blind and 10 sighted children, ages 8-11, were similar. However, the frequency of certain facial movements was higher in the blind children than in the sighted children, and social influences were evident only in the expressions of the sighted children, who often masked their negative emotions.

David Matsumoto and Bob Willingham, (2009),conducted a research on **Spontaneous Facial Expressions of Emotion of Congenitally and Noncongenitally Blind Individuals**.In this study, the researchers compared the expressions of congenitally and noncongenitally blind athletes in the 2004 Paralympic Games with each other and with those produced by sighted athletes in the 2004 Olympic Games. The researchers also examined how expressions change from one context to another. There were no differences between congenitally blind, noncongenitally blind, and sighted athletes, either on the level of individual facial actions or in facial emotion configurations. Blind athletes did produce more overall facial activity, but these were isolated to head and eye movements. The blind athletes' expressions differentiated whether they had won or lost a medal match at 3 different points in time, and there were no cultural differences in expression. These findings provide compelling evidence that the production of spontaneous facial expressions of emotion is not dependent on observational learning but simultaneously demonstrates a learned component to the social management of expressions, even among blind individuals.

Iverson et.al(2000) conducted a study on **The Relation Between Gesture and Speech in Congenitally Blind and Sighted Language-Learners**.The aim of their study was to explore the role of vision in early gesturing and examined the gesture development in 5 congenitally blind and 5 sighted toddlers videotaped longitudinally between the ages of 14 and 28 months in their homes while engaging in free play with a parent or experimenter. All of the blind children were found to produce at least some gestures during the one-word stage of language development. However, gesture production was relatively low among the blind children relative to their sighted peers. Moreover, although blind and sighted children produced the same overall set of gesture types, the distribution of gesture types across categories differed. Blind children used gestures primarily to communicate about objects that were nearby, while sighted children used them for nearby as well as distally located objects. These findings suggested that gesture may play different roles in the language-learning process for sighted and blind children. It is clear that gesture is a robust phenomenon

of early communicative development, emerging even in the absence of experience with a visual model.

Jana M. Iverson and Susan Goldin-Meadow (2001) studied on **The resilience of gesture in talk: gesture in blind speakers and listeners**. **Their study lights on the spontaneous gesture frequently accompanies speech.** They tested the two non-mutually exclusive possibilities. First, speakers may gesture simply because they see others gesture and learn from this model to move their hands as they talk. They also tested this hypothesis by examining spontaneous communication in congenitally blind children and adolescents. They tested the hypothesis by examining whether speakers gesture even when communicating with a blind listener who is unable to profit from the information that the hands convey. They found that congenitally blind speakers, who had never seen gestures, nevertheless gestured as they spoke, conveying the same information and producing the same range of gesture forms as sighted speakers. Moreover, blind speakers gestured even when interacting with another blind individual who could not have benefited from the information contained in those gestures. These findings underscore the robustness of gesture in talk and suggest that the gestures that co-occur with speech may serve a function for the speaker as well as for the listener.

Anna-Karin Magnusson & Gunnar Karlsson (2008) conducted the study on **The Body Language of Adults Who Are Blind** .The aim of their study was to deepen the understanding of different forms of body expression, or “body language”, in adults who are blind. Their Data consisted of video-taped interviews with five congenitally blind, two adventitiously blind and two sighted individuals. The data were analysed in a hermeneutical and phenomenological sense. The results consisted of a typology of 19 different forms of body expression. All in all, they found that the congenitally blind participants expressed themselves mainly in a functional and concrete manner. They also seemed to have limited experiences with abstract, symbolic body expressions.

Auditory-tactile speech perception in congenitally blind and sighted adults by **Marc Sato, Christian Cavé, Lucie Ménard, Annie Brasseur (2010).**The present study investigated whether manual tactile information from a speaker's face modulates

the intelligibility of speech when audio-tactile perception is compared with audio-only perception. Since more elaborated auditory and tactile skills have been reported in the blind, two groups of congenitally blind and sighted adults were compared. Participants performed a forced-choice syllable decision task across three conditions: audio-only and congruent/incongruent audio-tactile conditions. Interestingly, no perceptual differences were observed between blind and sighted adults. These findings demonstrate that manual tactile information relevant to recovering speech gestures modulates auditory speech perception in case of degraded acoustic information and that audio-tactile interactions occur similarly in blind and sighted untrained listeners.

Gestures expressed by children who are congenitally deaf-blind: topography, rate, and function were examined by Susan M. Bruceet.al (2007).This descriptive study examined the topography, rate, and function of gestures expressed by seven children who are congenitally deaf-blind. Participants expressed a total of 44 conventional and idiosyncratic gestures. They expressed 6-13 communicative functions through gestures and 7 functions through a single type of gesture. They also expressed typically associated with those gestures.

Susan M. Bashinski et.al(2010)taught **Teaching Communicative Gestures To Children With Deaf-Blindness, Through Adapted Prelinguistic Milieu Teaching.** The raw data reveals that the vast majority (. 90%) of the children's communication acts were initiations. All children showed increases in rates of communication when an intervention was given(PMT).

Nancy C. Brady and Susan M. Bashinski(2008) conducted a study on **Increasing Communication in Children With Concurrent Vision and Hearing Loss** with Nine children with complex communication needs and concurrent vision and hearing losses participated in an intervention program aimed at increasing intentional prelinguistic communication. The intervention constituted a pilot, descriptive study of an adapted version of prelinguistic milieu teaching(A-PMT). The results shows all nine participants increased their rates of initiated, intentional communication substantially during the course of intervention; in addition, each participant acquired new forms of natural gestures.

By **Iverson** et.al(1997) studied on the role of communication in gestures of congenitally blind children. It lights on the need to explore gesture use in congenitally blind individuals who have never seen gesture and have no experience with its communicative function. Four children blind from birth were tested in 3 discourse situations (narrative, reasoning, and spatial directions) and compared with groups of sighted and blindfolded sighted children. Blind children produced gestures, although not in all of the contexts in which sighted children gestured, and the gestures they produced resembled those of sighted children in both form and content. Results suggest that gesture may serve a function for the speaker that is independent of its impact on the listener.

Sharkey, William et.al(2000) conducted a investigation on **Hand Gestures of Visually Impaired and Sighted Interactants.**

The types of gestures used, the frequency of the gestures, and the total time engaged in gestural communication by 11 visually impaired--sighted dyads; 12 sighted--sighted dyads; and 8 visually impaired--visually impaired dyads. Regardless of the type of dyad, the persons who were visually impaired used more adaptors and used gestures, emblems, and illustrators less often than did those who were sighted.

Individuals who have been blind from birth ,DinoGane,(2008). His research has shown that when speaking, individuals who have been blind from birth and have thus never seen anyone gesture nonetheless make hand motions just as frequently and in the same way as sighted people do, and that they will gesture even when conversing with another blind person.

CONCLUSION:

Review of literature if conducted carefully and well presented, add much to an understanding of the selected problems and helps to place the results of the study in the historical perspective.The review of related literature presented in this chapter provides information that support or challenge the conclusion of the investigator and provides clues for further research.

METHODOLOGY

CHAPTER III

METHODOLOGY

INTRODUCTION:

"Research is a systematized effort to gain new knowledge"

-Redman and Mory

Research in common parlance refers to a search for knowledge.It is used to find out the truth which is hidden and which has not been discovered yet.

Methodology is the study of a strategic system on how to collect raw data and analyse it by set principle and infer on the hypothesis(premise) to conclude with a result. It is also a research method.

The word methodology is defined as a system which comprises the principles, practices and procedures which are applied to a specific branch of knowledge. It refers to the way in which information is found or the way something is done. It also includes the methods, techniques and procedures which are used to collect and analyse information.

Experimental Method:

"Experimental method implies a controlled observation of a succession of events. The aim is to search for a causal connection"

V.H.Bedkar

The design of an experiment has the function of providing for collection of facts in such a manner that inferences of a causal relationship between the dependent and independent variables can be drawn while framing an experimental design .Some important aspects should be kept in mind such as the method of selecting experimental groups, measurement of dependent and independent

variables ,times of measurement ,pattern of controlled groups used and number of possible causal variables.

Selection of Area:

The investigator visited several inclusive schools, special schools, and identified visually challenged children from grade I to X from Palayamkottai and Coimbatore districts.

Selection of sample:

"A simple random sample is a sample of size *n* drawn from a population of size *N* in such a way that every possible sample of size *n* has the same chance of being selected".

-Edward O. Garton

It was intentional to identify the negative mannerisms and to develop the good gestures among the visually impaired children in special and inclusive schools.

A meticulous literature survey on the methods of sample made the researcher free think to choose simple random sampling method as it seemed to be the most suitable method for the present study.

SAMPLE SIZE

Based on the availability, the sample were selected. A number of forty samples were selected from special and inclusive schools. Twenty pupils were from special school among which ten were male and ten were female. Twenty pupils were from inclusive setups out of which ten were male and ten were female.

TABLE 3.1

Distribution of the sample from inclusive and special schools

S.no	Type of school	No of students	
		Male	Female
1	Inclusive	10	10
2	Special	10	10

These schools were randomly selected since they have been educating visually impaired children for more than a decade. Totally forty pupils have participated in the research from these schools.

TABLE 3.2: **Sample Selected For The Study**

Name of the school	Number of students			
	Totally blind		Low vision	
	Girls	Boys	Girls	Boys
Inclusive Schools				
Coimbatore District				
CSI Primary school	5	2	1	1
T.E.L.C Middle school	-	2	1	2
St.Micheal's Hr.Sec.school	-	-	-	1
St.Antony high school	-	-	1	2

Sri .Avinashilingam Primary School	1	-	1	-
Special school.				
High School for the Blind, palayamkottai	5	5	5	5
	11	9	9	11
Total = 40				

TABLE 3.3

LOCATION BASED DISTRIBUTION OF THE SAMPLE

Rural		**Urban**	
N	Percent	N	Percent
10	25%	30	75%
Total =40			

The above shows that the samples were selected from both rural and urban schools with a sample size of 10 and 30 respectively.The above table shows that high percentages of samples were taken from the urban area.

TABLE 3.4

GENDER BASED DISTRIBUTION OF THE SAMPLE

	Male		**Female**	
	N	**Percent**	**N**	**Percent**
	20	50%	20	50%
	Total =40			

The table above enumerates that the total number of samples used for the study. There is an equal distribution of male as well as female consisting of 20 male pupils and 20 female pupils each.

TABLE 3.5

STANDARD WISE DISTRIBUTION OF THE SAMPLE

Almost 67.5% Of Children are from 1-5 grade. On comparing the standard of the children it is seen that the number of children are at the grade in I-V followed by VI-VIII grade and IX-X standards.

Grades from I-X standard	**No. of pupils**	**Percent**
I-V	27	67.5%
VI-VIII	11	27.5%
IX-X	02	6%

TABLE 3.6

TYPE OF DISABILITY BASED DISTRIBUTION OF THE SAMPLE

Low Vision		Totally Blind	
N	**Percent**	**N**	**Percent**
20	50%	20	50%
Total =40			

The table above enumerates that the total number of samples used for the study. There is an equal distribution of low vision as well as totally blind consisting of 20 low vision pupils and 20 totally blind pupils each.

Tool preparation:

In developing the tool the researcher made a thorough study on the literature available, consultated the experts in the area of special education and listed out the number of bad mannerisms and good gestures, in order to identify the bad mannerisms and impart the good gestures among visually impaired children. The quality of a good tool was borne in mind during tool preparation. The gestures were enlisted and the mannerisms were divided into five categories based on the body parts involved. They are Head, Arms and Hands, Fingers, Legs and Feet(.APPENDIX-II)

Evaluation of the tool:

Reliability:

Joppe (2000) defines reliability as: "The extent to which results are consistent over time and an accurate representation of the total population under study is referred

to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable".

Validity:

Joppe (2000) provides the following explanation of what validity is in quantitative research: Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are. In other words, does the research instrument allow you to hit the bull's eye of our research object. Researchers generally determine validity by asking a series of questions, and will often look for the answers in the research of others.

Jury Opinion:

The draft pool of statements were given to a panel of experts who are in the education of disabled children with a request to review and restructure or reword the lists of negative mannerisms and good gestures to be studied among visually impaired children in the special and inclusive setup.

Pilot Study:

A pilot study is a small replica of the main study. However, tool should be smoothly organised and checked carefully(Thanulingam,2000).

The investigator conducted a pilot study for three pupils at Sri Avinashilingam primary school, Coimbatore district. The prepared tool was administered and based on the results, the tool was refined.

Scoring procedure:

The scoring procedure is important for a tool to yield correct data. The listed mannerisms and gestures were marked "yes", if the participant mannerism or gestures is present. And marked "No" if the participant mannerism or gestures is absent. All twenty five mannerisms and ten gestures were checked thoroughly. The gestures or mannerisms were observed and collected from the teachers, peers, and parents of the children.

Personal data sheet:

To collect demographic profile of the sample a personal data sheet was prepared and attached to the checklist.

The personal data sheet consisted of information such as name, age, onset of disability, gender, type of school, type of disability, standard of the pupils to help the investigator obtain the relevant information.(APPENDIX-I)

Administration of the pre-test:

After conducting the pre-test, the administrator approached the school and got permission from the respective head masters and head mistess and she met the concerned pupil to get fill the checklist. The duration of the test was 30 minutes each.

The pre test data were analysed and the aspects considerd to be addressed in the package were compiled.

Construction of the package:

Construction of the package is an essential step to direct guidance for teachers who handle the special children towards the future and prosperity.

To construct the package, the researcher underwent a literature review which had a critical analysis about the special need children from various perspectives and of different opinions from different personality published in journals, newsletters, books etc. It was a systematic study regarding the special need children.

The purpose of the intervention package was to help the visually impaired children who were unaware of the good gestures and to develop those listed good gestures in the children for good and effective communication.

PLATE 1:DEVELOPING THE GESTURES IN TOTALLY BLIND CHILD

PLATE2:DEVELOPING THE GESTURES IN LOW VISION CHILD

Implementation of the package:

After conducting the pretest, intervention was given with the help of the package, which aimed at supporting to develop gestures among visually impaired children for their effective communication.

Administration of the post test :

The post test was conducted for the same samples with the same tool .This was to evaluate the children whether they perform the gestures correctly and how the package was effective in developing the gestures for their good communication. The same tool was used to check the negative mannerisms also.

After collecting the data from the samples the checklist were scrutinized and evaluated.

Statistical techniques used in the study:

The score of pre and post tests were consolidated, tabulated and analyzed statistically using the following statistical techniques.

→Mean

→Standard deviation

→ 't'-test

→ANCOVA

Mean:

Mean is defined as the sum of all the values of the items in a series divided by the number of items(Gupta 2005).

$$\text{Mean} \quad \overline{X} = \frac{\sum fx}{\sum f}$$

$\overline{X}$ - mean score

$\sum$ - summation sign

f - frequency

$\sum fx$ - sum of all the fx scores

N - number of children

Standard deviation:

This measure describes how scores vary about the mean score.It is the measure of deviation expressed in standard units about the mean score, hence the name standard deviation. Mathematically, the standard deviation is equal to the square root of the sum of the squared deviations about the mean divided by the total number of scores

$$\text{S.D } \sigma = \sqrt{(\sum fx^2 / N) - ((\sum fx / N)^2)}$$

Where,

σ -standard deviation

$\sum fx$ -sum of all the fx scores

N -number of scores

The t-test:

The test of signification(t-test) for difference between means for large impendent samples(garette,1081), is used to compare the mean obtained by any two group of subject on any of the variables. The t-test is based on t-distribution and is considered as an appropriate test for judging the significance of difference between the means of the two samples, in case of small variance the sample an estimate of the population is not known in which case we use t-test variance the samples as estimate of the population variable(Kothari,2004).

$$t = \frac{\overline{X_1} - \overline{X_2}}{S.E}$$

$$S.E = \sqrt{\frac{\sigma_1^{\,2}}{N_1} + \frac{\sigma_2^{\,2}}{N_2}}$$

S.E - standard error

$\sigma_{1,}\ \sigma_2$ - standard deviation

$\overline{X}_{1,}\overline{X}_2$ - arithmetic means

Qualitative analysis

As the data is of qualitative type, the investigator had chosen the percentage method for the calculation purposes. The formula used is

$$\frac{n}{N} \times 100$$

Where,

n - number answered

N - total sample

ANACOVA:

The Analysis of Covariance (generally known as ANCOVA) is a technique that sits between analysis of variance and regression analysis. It has a number of purposes but the two that are, perhaps, of most importance are:

1. to increase the precision of comparisons between groups by accounting to variation on important prognostic variables;

2. to "adjust" comparisons between groups for imbalances in important prognostic variables between these groups.

The raw measure of the covariance between two variables,X and Y, is a quantity known as the sum of co-deviates:

$$\mathbf{SC} = \sum(X_i — \mathbf{M_X})(Y_i — \mathbf{M_Y})$$

$(X_i — \mathbf{M_X})$ --- deviate_x

$(Y_i — \mathbf{M_Y})$ --- deviate_y

$(X_i — \mathbf{M_X})(Y_i — \mathbf{M_Y})$ --- codeviate_{xy}

Conclusion:

In this chapter a true report on the selection of sample, tools used for the study, pilot study, methods of administration, reliability, validity, statistical analysis are portrayed. The next chapter will lead towards the analysis and interpretation of the data.

ANALYSIS AND INTERPRETATION

CHAPTER 1V

ANALYSIS AND INTERPRETATION

INTRODUCTION:

"Researcher's background and philosophy affect the choice of a data analysis strategy"

-E.James

Analysis of interpretation of data section is the heart of the research report. The data analysis and interpretation may either be presented in separate chapter or may be integrated and presented in one chapter. The data is presented in tables and figures accompanied by textual discussion

Once the research data have been collected and the analysis has been made, the researcher can proceed to the stage of interpreting the results. The process of interpretation is essentially one of stating what the result show. What are their meanings and significance? What is the answer to the original problem? Interpretation is not the routine and mechanical process. It calls for a careful, logical and critical examination of the results obtained after analysis.

In the light of the interpretation of data, the researcher has to use all care and caution in formulating the conclusion and generalizations. This final step of research process demands critical and logical thinking in summarizing the findings of the study and compare with hypothesis formulated in the beginning. T he researcher should not draw conclusion which are draw conclusion which are inconsistent among themselves or with external realities. The generalizations drawn on the basis of research findings should be in agreement with facts .

The interpretation and Analysis of the study on "Strategies of developing gestures in visually impaired children for effective communication" is presented on the following headings.

1. Types of school

2. Types of gender

3. Types of disability(Low vision and Totally blind)

Comparison Between Pre And Post Test Scores

TABLE-4.1

Comparison between Pre and post test scores on mannerisms in visually impaired children

Test	Mean	S.D	No.	't'-Value
Pre Score	23.73	1.58	40	30.945 **
Post Score	12.08	2.73	40	

**significant at 1% level

The researcher had listed out some Of the negative mannerisms in the children and conducted pre and post test. After the pretest ,intervention was given through hand on hand method, instruction and games. Through instruction , child was asked not to repeat the mannerisms by stating its delusion of behavior in the society. Paired sample t-test was applied to find whether the mean mannerisms scores differ significantly between pre and post tests. The calculated t-test value is 30.945 which is higher than the 12.08table value of 2.708 at 1% level of significance. since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests. Hence the hypothesis ,there is no significant difference between pre and post test scores of mannerisms in visually impaired children is rejected. As the post test

depicts the decrease of negative mannerism after the intervention,the alternative hypothesis pre test is greater than post test score is accepted.

TABLE 4.2

Comparison between Pre and post test scores of gestures in visually impaired children

Test	Mean	S.D	No.	't'-value
Pre Score	3.55	1.72	40	22.796**
Post Score	9.57	.55	40	

** significant at 1% level

From above table it is understood that there is a development in gestures from the intervention. Since visually impaired children cannot see the gestures visually , researcher thought to develop the gestures through hand on hand method as one of the strategies. Childs hand was holded by the researcher and was helped it to keep at right position when they speak or sit.

To find whether the mean gesture scores differ significantly between pre and post tests, Paired sample t-test was applied. The calculated t-test value is 22.796 which is higher than the table value of 2.708 at 1% level of significance. Since the calculated value is higher than the table value it is inferred that the mean gesture scores differ significantly between pre and post tests. Hence the hypothesis, There is no significant difference between pre and post test scores of gestures in visually impaired children is rejected and the alternative hypothesis post test is higher than the pre test score in visually impaired children is accepted.

Figure1

Comparison between Pre and Post Test scores of gestures in visually impaired children

TABLE 4.3

Comparisons Between Pre And Post Scores Of Mannerisms In Special School Children.

Test	Mean	S.D	no.	't'-Value
Pre Score	23.30	1.87	20	23.993**
Post Score	10.70	2.66	20	

** significant at 1% level

Children in special school showed negative mannerisms widely. By instructing not to keep the hands in such a manner and explaining that onlookers may misunderstand the information conveyed by them, these mannerisms were decreased .To check it statistically, The t-test was carried out, and the table value is significant at 1% level. Since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests. Therefore it can be concluded that the intervention given to reduce negative mannerism was highly useful.

Figure2

Comparison between pre and post Test scores of bad mannerisms in special school children

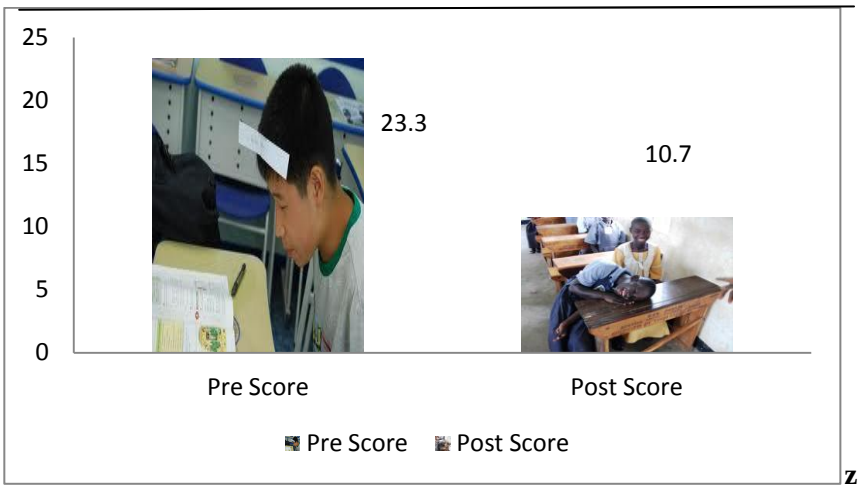

TABLE 4.4

Comparison between pre and post scores of gestures in special school children

Test	Mean	S.D	No.	't'-Value
Pre Score	3.20	1.40	20	18.856**
Post Score	9.45	.60	20	

** significant at 1% level

From the pre-test ,researcher found that there are not much good gestures existing among the visually impaired children. So by listing out the good gestures ,those gestures were introduced to the children through the intervention.

Paired sample t-test was applied to find whether the mean gesture scores differ significantly between pre and post tests.The calculated t-test value is 18.856 which is higher than the table value of 2.861 at 1% level of significance.since the calculated value is higher than the table value it is inferred that the mean gesture scores differ significantly between pre and post tests. The hike in the post test scores of the visually impaired hildren from the special schools shall be attributed to the intervention given.

TABLE 4.5

comparison between pre and post scores of mannerisms in inclusive schools.

Test	**Mean**	**S.D**	**No.**	**'t'-Value**
Pre Score	24.15	1.14	20	23.291**
Post Score	13.45	2.06	20	

** significant at 1% level

Negative mannerisms were seen in visually impaired children from inclusive schools. Those mannerisms were identified and quantified using a test and they were given intervention. After the intervention,a post test was carried out.

The Paired sample t-test was applied to find whether the mean mannerisms scores differ significantly between pre and post tests.The calculated t-test value is 23.291 which is higher than the table value of 2.861 at 1% level of significance. Since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests.The reduction in the post test scores are due to the intervention given.

Figure 3

comparison between pre and post Test scores of bad mannerisms in inclusive schools:

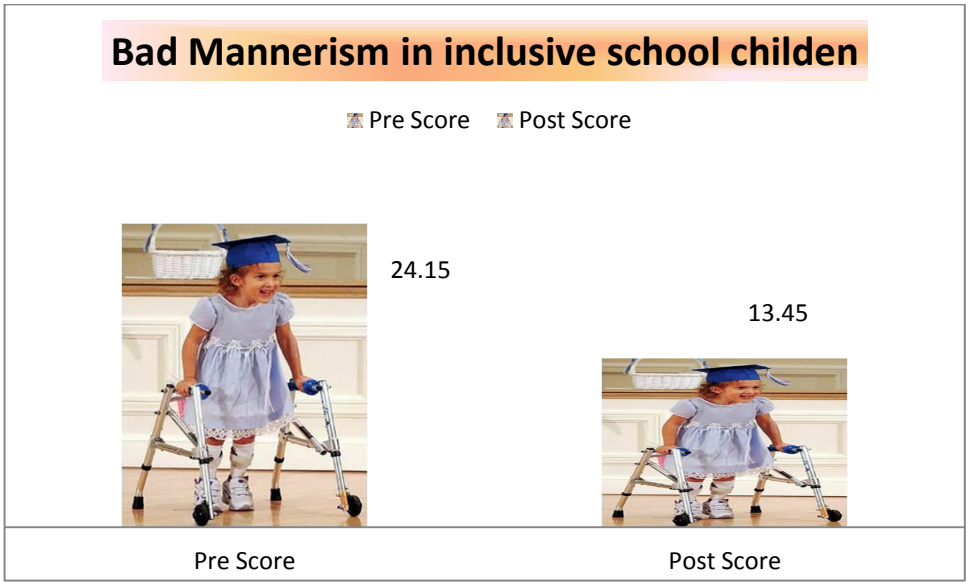

TABLE 4.6

Comparison between pre and post scores of gestures in inclusive schools.

Test	Mean	S.D	No.	't'-Value
Pre Score	3.90	1.97	20	14.002**
Post Score	9.70	.47	20	

** significant at 1% level

There was only some good gesture existing in inclusive children. The gestures that were absent were introduced through teaching through hand on hand method.

The t-test was applied to find whether the mean gesture scores differ significantly between pre and post tests.The calculated t-test value is 14.002 which is higher than the table value of 2.861 at 1% level of significance.since the calculated value is higher than

the table value it is inferred that the mean gesture scores differ significantly between pre and post tests. The significant boost in the scores is due to the intervention given.

TABLE 4.7

Comparison Between Pre And Post Scores Of Mannerisms of Boys

Test	Mean	S.D	No.	't'- Value
Pre Score	23.65	1.81	20	22.785**
Post Score	11.95	2.70	20	

** significant at 1% level

Many negative mannerisms were present among visually impaired boys.To alleviate them,an intervention was planned and carried out.To check the influence of training,a post test was given .The pretest scores are statistically compared to find out the effect of the training.The 't' value reveal that the mean mannerism scores differ significantly between pre and post tests.Hence the hypothesis, " There is no significant difference between pre and post test scores of mannerisms of boys" is rejected and the alternative hypothesis pre test is greater than post test score is accepted.

Figure 4

Comparison Between Pre And Post Test Scores of Mannerisms of Boys

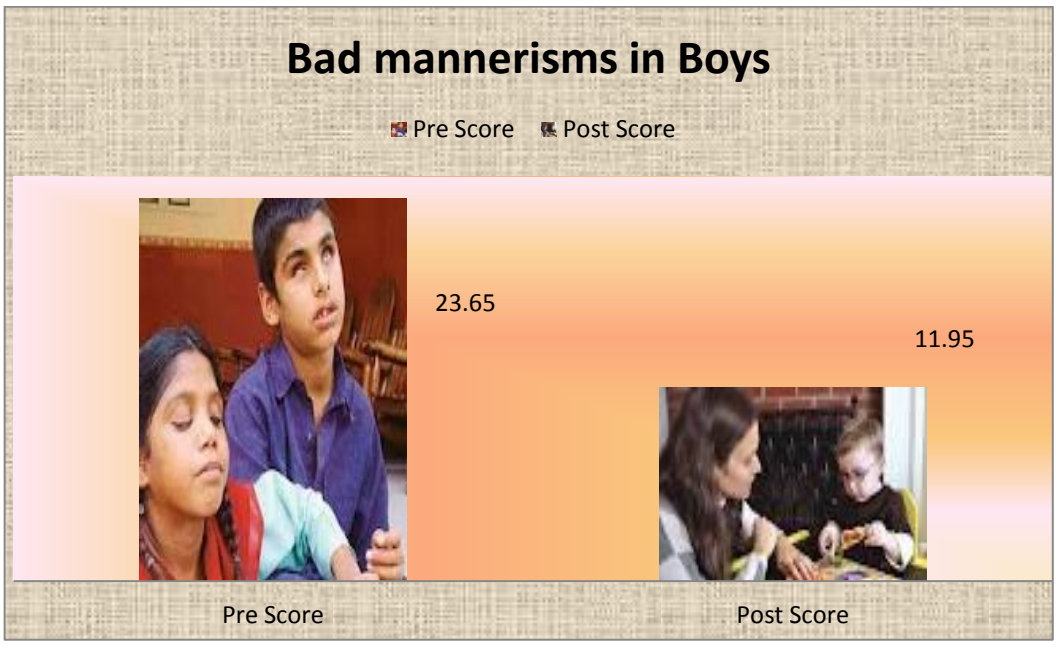

TABLE 4.8

Comparison Between Pre And Post Scores of Gestures of Boys

Test	Mean	S.D	No.	't'-value
Pre Score	3.60	1.98	20	14.414**
Post Score	9.65	.49	20	

** significant at 1% level

The gestures of the boys were assessed through a pre-test.To develop more good gestures,the researcher used various methods among visually impaired children.To find out the efficacy of the intervention,a post was carried out.

Paired sample t-test was applied to find whether the mean gesture scores differ significantly between pre and post tests.The calculated t-test value is 14.414 which is higher than the table value of 2.861 at 1% level of significance. since the calculated value is higher than the table value it is inferred that the mean gesture scores differ significantly between pre and post tests. Hence the hypothesis , "There is no significant difference between pre and post test scores of gestures of boys" is rejected and the alternative hypothesis post test is greater than pre test scores is accepted.

Figure 5

Comparison Between Pre And Post Test Scores Of Gestures of Boys

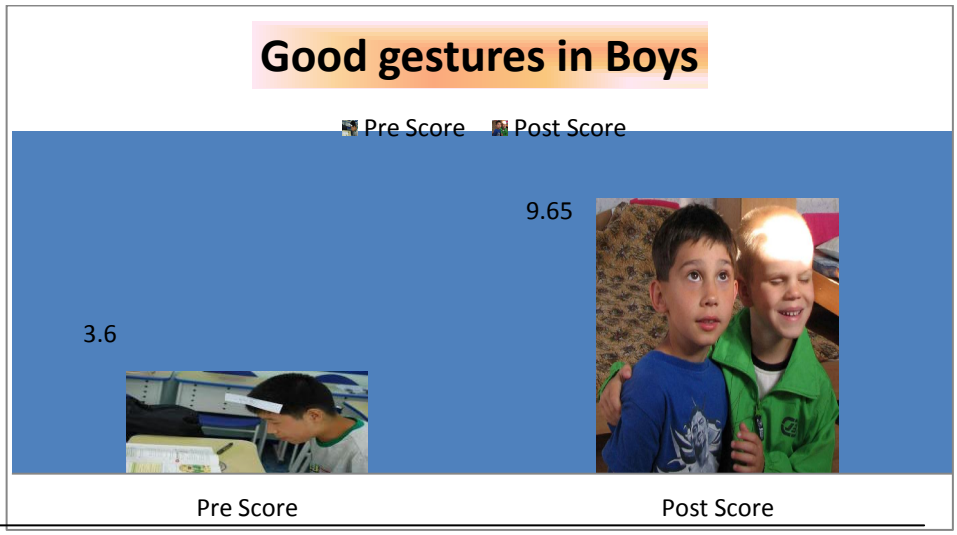

TABLE 4.9

Comparison Between Pre And Post Scores Of Mannerisms of Girls

Test	Mean	S.D	No.	't'-Value
Pre Score	23.80	1.36	20	20.574**
Post Score	12.20	2.82	20	

** significant at 1% level

Girls too showed more negative mannerisms, and these mannerisms were eliminated through instruction strategy.To check its statistical significance, Paired sample t-test was applied. The calculated t-test value is higher than the table value of at 1% level of significance. since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests. Hence the hypothesis , "There is no significant difference between pre and post test scores of mannerisms of girls" is rejected and the alternative hypothesis pre is greater than post test score is accepted.

Figure 6

Comparison Between Pre And Post Test Scores Of Mannerisms of Girls

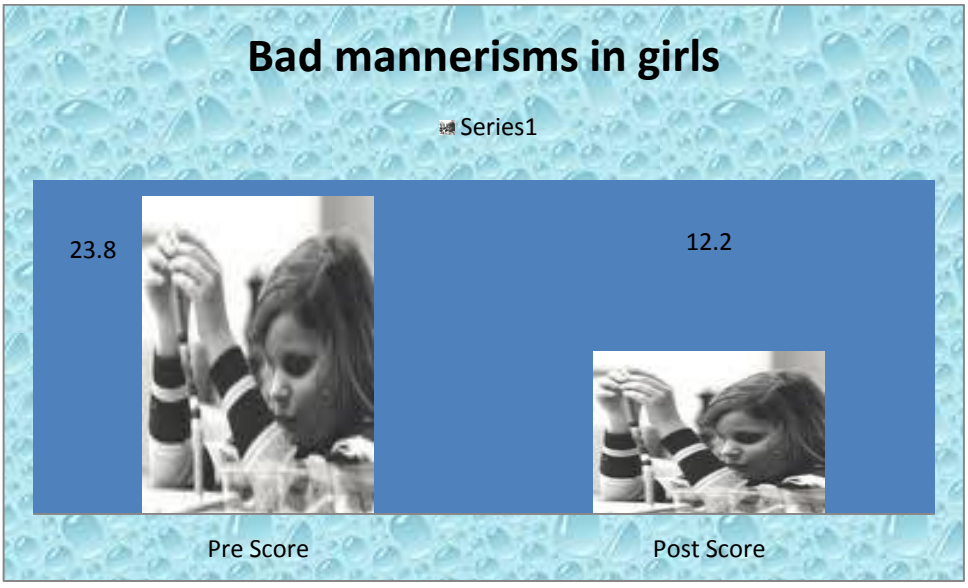

TABLE 4.10

Comparison Between Pre And Post Scores Of Gestures of Girls

Test	Mean	S.D	No.	't'-value
Pre Score	3.50	1.47	20	18.048**
Post Score	9.50	.61	20	

** significant at 1% level

Pre test scores tevealed a need for introduction of good gestures. They were taught by hand on hand strategy. Their hands were beholded while teaching for their better understanding.After that a post test was carried out.

Paired sample t-test was applied to find whether the mean gesture scores differ significantly between pre and post tests.The calculated t-test value is 18.048 which is higher than the table value of 2.861 at 1% level of significance.since the calculated value is higher than the table value it is inferred that the mean gesture scores differ significantly between pre and post tests. Hence the hypothesis, There is no significant difference between pre and post test scores of gestures of girls is rejected and the alternative hypothesis pre test is greater than post test score is accepted.

TABLE 4.11

Comparison Between Pre And Post Scores Of Mannerisms of 1-5th Standard Children

Test	Mean	S.D	No.	't'-value
Pre Score	23.41	1.80	27	25.150**
Post Score	11.48	2.72	27	

** significant at 1% level

To eliminate negative mannerisms the pre test scores of visually impaired children from 1-5th standard called for an intervention.Instruction about bad behavior was insisted to the visually impaired children. Repeated supervision and instruction,a reduction in the negative mannerisms could be experienced. To quantify it,a post test was conducted.To check the relative significance of the post test scores,it was statistically compaired with the pre test scores using 't'test.

The calculated t-test value is 25.150 which is higher than the table value of 2.779 at 1% level of significance.since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests and it is due to the training given.

TABLE 4.12

Comparison Between Pre And Post Scores Of Gestures of 1-5th Standard Children

Test	Mean	S.D	No.	't'-value
Pre Score	3.07	1.52	27	21.135**
Post Score	9.48	.58	27	

** significant at 1% level

The gestures of 1-5th standard visually impaired children were assessed.A training program was planned to inculcate more good gestures. As primary children, games were conducted as one of the strategies.Whomever exhibit the gestures properly, they were given extra points in the games. So there is a significant change expected and a post test was conducted.

Paired sample t-test was applied to find whether the mean gesture scores differ significantly between pre and post tests.The calculated t-test value is 21.135 which is higher than the table value of 2.779 at 1% level of significance.Since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests. The mean hike in the post test is observed from the table;which is because of the training.

TABLE 4.13

Comparison Between Pre And Post Scores In Mannerisms of 6-9th standard.

Test	Mean	S.D	No.	't'-Value
Pre Score	24.38	.65	13	18.337**
Post Score	13.31	2.39	13	

** significant at 1% level

Negative mannerisms in 6-9th students were reduced through the instruction strategy.

Paired sample t-test was applied to find whether the mean mannerisms scores differ significantly between pre and post tests.The calculated t-test value is 18.337 which is higher than the table value of 3.055 at 1% level of significance.since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests. Hence the hypothesis ,There is no significant difference between pre and post test scores of mannerisms of 6-9th standard is rejected.

TABLE 4.14

Comparison Between Pre And Post Scores In Gestures of 6-9th std

Test	Mean	S.D	No.	't'-value
Pre Score	4.54	1.76	13	11.494**
Post Score	9.77	.44	13	

** significant at 1% level

For 6-9th students,the existed mannerisms was avoided through hand on hand technique .The Paired sample t-test was applied to find whether the mean mannerisms scores differ significantly between pre and post tests.The calculated t-test value is 11.494 which is higher than the table value of 3.055 at 1% level of significance.since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests.

Figure 7

Comparison Between Pre And Post Test Scores In Gestures of 6-9th standard

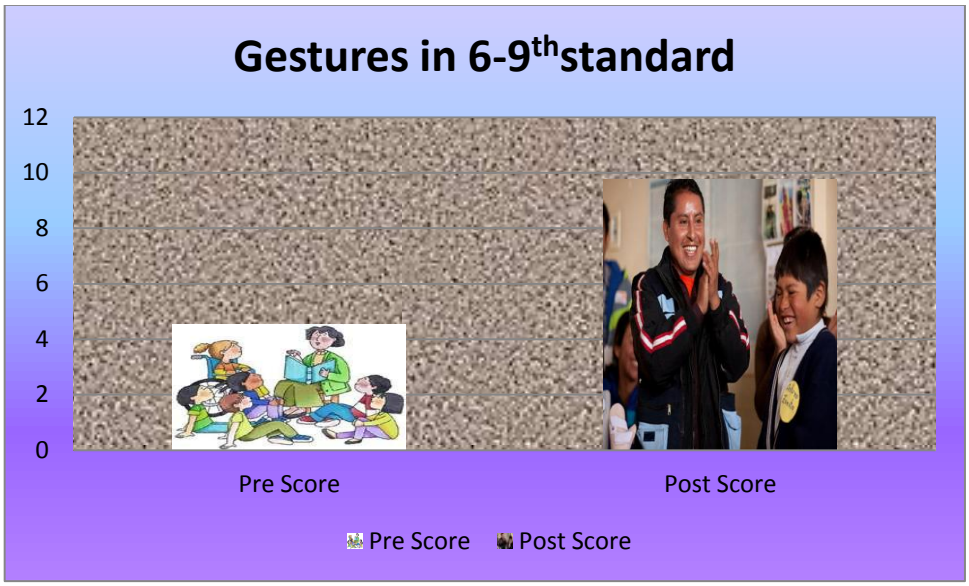

TABLE 4.15

Comparison Between Pre And Post Scores Of Mannerisms of Low Vision Children

Test	Mean	S.D	No.	't'-Value
Pre Score	23.45	2.04	20	25.181**
Post Score	12.60	2.66	20	

** significant at 1% level

The toal sample consisted of totallt blind and Low vision.The pre test scores of low vision are tabulated and compared because a simple discourage on the impact of those negative mannerisms in society could begin in an awareness among them.To study the impact of the given instructions, Paired sample t-test was applied between pre and post tests.The calculated t-test value is 25.181 which is higher than the table value of 2.861 at 1% level of significance.Since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests. Hence the hypothesis , "There is no significant difference between pre and post test scores of mannerisms of low vision children is rejected and the alternative hypothesis pre test is higher than post test is accepted.

TABLE 4.16

Comparison Between Pre And Post Scores Of Gestures of Low Vision Children.

Test	Mean	S.D	No.	't'-Value
Pre Score	4.45	1.64	20	15.200**
Post Score	9.75	.44	20	

** significant at 1% level

The importance of good gestures was taught to low vision children during intervention which was initiated after the pre test .To study its impact,Paired sample t-test was applied.The calculated t-test value is higher than the table value at 1% level of significance.Since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests. Hence the hypothesis , "There is no significant difference between pre and post test scores of gestures of low vision children" is rejected and the alternative hypothesis post test score is greater than pre test score is accepted.

TABLE 4.17

Comparisons Between Pre And Post Scores Of Mannerisms For Totally Blind Children

Test	Mean	S.D	No.	't'-Value
pre Score	24.00	.92	20	21.712**
Post Score	11.55	2.76	20	

** significant at 1% level

Totally blind children were unaware of the negative mannerism existed in them. Helping them understand about those mannerisms is important.The researcher took steps to explain in detail about the mannerisms that are present among totally blind and conducted a post test to check their understanding.

Paired sample t-test was applied to find whether the mean mannerisms scores differ significantly between pre and post tests.The calculated t-test value is 21.712 which is higher than the table value of 2.861 at 1% level of significance.Since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests. Hence the hypothesis, "There is no significant difference between pre and post test scores of mannerisms of totally blind children" is rejected and the alternative hypothesis pre test score is greater than post test score is accepted.

TABLE 4.18

Comparisons Between Pre And Post Scores Of Gestures For Totally Blind Children

Test	Mean	S.D	No.	't'-Value
Pre Score	2.65	1.31	20	20.364**
Post Score	9.40	.60	20	

** significant at 1% level

The pre test given to the totally blind revealed that they were unaware of many good gestures.Hence good gestures needs to be introduced to totally blind children. Hand on Hand strategy was used for better communication.

Paired sample t-test was applied to find whether the mean mannerisms scores differ significantly between pre and post tests.The calculated t-test value is 20.364 which is higher than the table value of 2.861 at 1% level of significance.Since the calculated value is higher than the table value it is inferred that the mean mannerisms scores differ significantly between pre and post tests. Hence the hypothesis is rejected.

Figure 8

Comparison Between Pre And Post Test Scores of Gestures of Totally Blind Children

ANACOVA

COMPARISONS OF POST TEST SCORES

Analysis of covariance was applied to find whether the post test scores for mannerisms differ significantly between special and inclusive students for this the following hypothesis was framed and tested.

TABLE 4.19

ANACOVA For Mannerisms of Post Test Score By Type Of School

Source Of Variation	Mean Square	F	Sig.
Covariate -Mannerisms -Pre Score	40.267	8.519	**
Between TYPE OF SCHOOL	44.173	9.346	**

Combined Adjusted Means for Mannerisms-Post

Special school 10.98310

Inclusive school 13.16690

Mannerisms are formed based on the environment of the students. To find the influence of the ambience ANACOVA test is carried out to check the levels of mannerisms of visually impaired children from special and inclusive schools in post test**.** Since the calculated f value is greater than table value,it is inferred that the mannerism post test scores differ significantly between types of schools.

Hence the hypothesis, "the post test scores for mannerisms do not differ significantly between special and inclusive school students" is rejected.The adjusted means for special schools is 10.98 which is less than the inclusive schools with adjusted mean score of 13.17.Therefore the alternative hypothesis the post test scores for mannerisms of inclusive school students is greater than special school students.

Table 4.20

ANACOVA For Mannerisms of Post Test Score By Gender

Source Of Variation	Mean Square	F	Sig.
Covariate- Mannerisms -Pre Score	71.242	12.041	**
Between GENDER	.148	.025	Ns

Combined Adjusted Means for Mannerisms-Post

Boys	12.01403
Girls	12.13597.

To find the influence of gender, ANACOVA test is carried out to check the levels of mannerisms of visually impaired boys and girls in post test scores**.** Since the calculated f value is lesser than the table value,it is inferred that the mannerism of the post test scores do not differ significantly between boys and girls.

Hence the hypothesis, the post test scores for mannerisms do not differ significantly between boys and girls is accepted. Hence it is inferred gender has no influence in blind mannerisms.

TABLE 4.21

ANACOVA for Mannerisms of Post Test Score by standard

Source of variation	Mean Square	F	Sig.
Covariate- Mannerisms - Pre Score	51.861	9.153	**
Between STANDARD	9.407	1.660	Ns

Combined Adjusted Means for Mannerisms-Post

1-5TH	11.85322
6-8TH	12.93596

As the children grow up, it is usually expected that they develop better. To check it, the visually impaired children from 1-5 and 5-6 were grouped and ANACOVA test is carried out for post test scores of mannerisms. Since the calculated f value is lesser than the table value, it is inferred that the mannerism of the post test scores do not differ significantly between standards.

Hence the hypothesis, "the post test scores for mannerisms do not differ significantly between standards of students" is accepted. Hence it is inferred that levels of education (1-8 standards) have no influence in blind mannerisms.

TABLE 4.22

ANACOVA for mannerisms of post Test score by type of disability.

Source of variation	Mean Square	F	Sig.
Covariate-Mannerisms - Pre Score	84.551	16.027	**
Between TYPE OF DISABILITY	23.858	4.522	*

Combined Adjusted Means for Mannerisms-Post

L.V	12.85951
T.B	11.29049

To find the influence of type of disability,ANACOVA test is carried out to check the levels of mannerisms of visually impaired children between standard in post test**.** Since the calculated f value is greater than the table value,it is inferred that the mannerism of the post test scores differ significantly between types of disability. Hence the

hypothesis, the post test scores for mannerisms do not differ significantly between low vision and totally blind children is rejected. The adjusted means for low vision children is 12.85 which is more than the totally blind children with adjusted mean score of 11.29.Therefore the alternative hypothesis,the post test scores for mannerisms of low vision is greater than totally blind children is accepted.

TABLE 4.23

ANACOVA for Gestures of Post Test Score By Type Of School

SOURCE OF VARIATION	**Mean Square**	**F**	**Sig.**
Covariate-Gestures-Pre Score	.520	1.811	Ns
Between TYPE OF SCHOOL	.391	1.361	Ns

Combined Adjusted Means for Gestures-Post

Special	9.47396
Inclusive	9.67604

To find the influence of type of school , ANACOVA test is carried out to check the levels of gestures of visually impaired children between type of schools in post test scores**.** Since the calculated f value is lesser than the table value, it is inferred that the gestures of the post test scores do not differ significantly between type of schools. Hence the hypothesis, the post test scores for gestures do not differ significantly between special and inclusive school students is accepted. Hence it is inferred that type of school has no influence in gestures.

TABLE 4.24

ANACOVA for Gestures of Post Test Score By Gender

SOURCE OF VARIATION	Mean Square	F	Sig.
Covariate-Gestures-Pre Score	.731	2.500	Ns
Between GENDER	.202	.690	Ns

Combined Adjusted Means for Gestures-Post

Boys 9.64603

Girls 9.50397

ANACOVA test is carried out to check the levels of gestures of visually impaired boys and girls in post test scores**.** Since the calculated f value is lesser than the table value,it is inferred that the gestures of the post test scores do not differ significantly between boys and girls. Hence the hypothesis, " the post test scores for gestures do not differ significantly between boys and girls" is accepted. Hence it is inferred that the gender has no influence on gestures.

TABLE 4.25

ANACOVA for Gestures of Post Test Score By Standard

SOURCE OF VARIATION	Mean Square	F	Sig.
Covariate-Gestures-Pre Score	.329	1.136	Ns
Between STANDARD	.301	1.040	Ns

Combined Adjusted Means for Gestures-Post

1-5TH	9.52411
6-8TH	9.72660

To find the influence of level of education in the gestures of visually impaired children,ANACOVA is carried out**.** Since the calculated f value is lesser than the table value,it is inferred that the gestures of the post test scores do not differ significantly between standards. Because,ANACOVA result shows that the covariate gestures are not significant at 5%level.

Hence the hypothesis, the post test scores for gestures do not differ significantly between standard is accepted. Hence it is inferred that the level of education has no influence in gestures.

TABLE 4.26

ANACOVA for Gestures of Post Test Score By Type Of Disability

SOURCE OF VARIATION	**Mean Square**	**F**	**Sig.**
Covariate-Gestures-Pre Score	.111	.395	Ns
Between TYPE OF DISABILITY	.582	2.063	Ns

Combined Adjusted Means for Gestures-Post

L.V	9.71713
T.B	9.43287.

To find the influence of amount of loss of vision in the levels of gestures of visually impaired children in post test scores, ANACOVA test is carried out**.** Since the calculated f value is lesser than the table value, it is inferred that the gestures of the post test scores do not differ significantly between types of disability.

Hence the hypothesis, the post test scores for gestures do not differ significantly between low vision and totally blind children is accepted. Hence it is inferred that the amount of loss of vision has no influence in gestures.

SUMMARY AND CONCLUSION

CHAPTER V

SUMMARY AND CONCLUSION

Introduction:

The summary of the highlighted findings are given below. In addition to the summary, suggestion for further study and recommendations are also specified below.

Findings:

- There is significant difference between mean scores of pre test (23.73)and post test(12.08) mannerisms in visually impaired children
- There is significant difference between mean scores of pre test (3.55) and post test(9.57) gestures in visually impaired children.
- There is significant difference between mean scores of pre test(23.30) and post test(10.70) mannerisms in special school children.
- There is significant difference between mean scores of pre test(3.20) and post test(9.45) gestures in special school children.
- There is significant difference between mean scores of pretest(24.15) and post test (13.45) mannerisms in inclusive schools.
- There is significant difference between mean scores of pretest(3.90) and post test (9.70) gestures in inclusive schools.
- There is significant difference between mean scores of pretest(23.65) and post test (11.95) mannerisms of boys
- There is significant difference between mean scores of pretest(3.60) and post test (9.65) gestures of boys
- There is significant difference between mean scores of pretest(23.80) and post test (12.20) mannerisms of girls.
- There is significant difference between mean scores of pretest(3.50) and post test (9.50) gestures of girls
- There is significant difference between mean scores of pretest(23.41) and post test (11.48) mannerisms of 1-5th standard children.

- There is significant difference between mean scores of pretest(3.07) and post test (9.48) gestures of 1-5th standard children
- There is significant difference between mean scores of pretest(24.38) and post test (13.38) mannerisms of 6th standard children
- There is significant difference between mean scores of pretest(4.54) and post test (9.77) gestures of 6th standard children
- There is significant difference between mean scores of pretest(23.45) and post test (12.60) mannerisms of low vision children
- There is significant difference between mean scores of pretest(4.45) and post test (9.75) gestures of low vision children
- There is significant difference between mean scores of pretest(24.00) and post test (11.55) mannerisms of totally blind children
- There is significant difference between mean scores of pretest(2.65) and post test (9.40)gestures of totally blind children
- The post test scores for mannerisms differ significantly between special and inclusive school students
- The post test scores for mannerisms do not differ significantly between boys and girls
- The post test scores for mannerisms do not differ significantly between standards of students
- The post test scores for mannerisms differ significantly between low vision and totally blind children
- The post test scores for gestures do not differ significantly between special and inclusive school students
- The post test scores for gestures do not differ significantly between boys and girls
- The post test scores for gestures do not differ significantly between standard
- The post test scores for gestures do not differ significantly between low vision and totally blind children

Suggestions for future research:

- The investigator suggests to have a study on the influences of type of family on gestures and mannerisms of visually impaired children.

- A further research may include variables such as economic status and parental influences on gestures and mannerisms of visually impaired children.
- A further more research can be conducted regarding facial expressions and tone of voice among visually impaired children.
- A research can be conducted in higher secondary school and college students on gestures and mannerisms of visually impaired children.

Recommendation:

- More strategies have to be developed to inculcate good gestures and mannerisms among visually impaired children.
- Guidance can be given to the parents and teachers to develop good gestures and mannerisms .
- Work upon the perception among the public regarding the gestures and mannerisms among the visually impaired children.
- Teachers responsibility in developing good gestures is an essential part.

Conclusion:

Teaching gestures to the children is an extensive practice. The children gained much awareness on importance of gestures in communication process. There is an improvement in the table of good gestures after the intervention was given. The negative mannerisms are also reduced through the intervention package. From this study, it can be understood that gestures play a important role and it can be imparted in visually impaired children provided proper identification and rehabilitation is taken up.

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APPENDICES

APPENDIX-I

STRATEGIES OF DEVELOPING GESTURES IN VISUALLY IMPAIRED CHILDREN FOR EFFECTIVE COMMUNICATION

PERSONAL DATA SHEET

Name of the student :

Date of birth :

Age :

Sex :

Class :

Type of Disability :

Onset of Disability :

Name of the school :

Locality : Rural/Urban

Type of family :Joint/Nuclear

Typr of living condition :Residential/Non-Residential

Details of the family background:

S.no	Name	Relationship	Age	Qualification	Occupation	Income

APPENDIX-II

CHECKLIST

Contents	yes	No
Negative Mannerisms		
1.Head		
• Nodding slowly to urge someone		
• Nodding up and down		
• Inclined briefly		
• Head bends down		
• Head swaying		
2.Arms and Hands		
• Widely outstretched		
• Firmly folded across the chest		
• Hand held over the eye		
• An or both hand held over the mouth		
• Flat of hand patting the desktop		
3.Fingers		
• Running on the tabletop		
• Stabbing the air with forefinger		
• Patting the fingers together with fingers to both hands stretched		
• Rubbing the thumb and fingers		
• Clenched into fist		
4.Legs and feet		
• Leg and foot making kicking motion		
• Foot or toes tapping the ground		
• Moving up and down shaking while seated		
• Both legs widely separated while seated		
• Rocking one foot to other		
5.Composure		
• Nervous mannerisms		
• Self-touching		
• Rigid/stiff posture		
• Touching		

• Getting physically close		
GESTURES		
• Nodding the head for ‘yes’		
• Tossing the head for ‘No’		
• Upholding the head		
• Waving the hand for bye-bye		
• Moving the hand for come		
• Shrugging the shoulder		
• Shake hands		
• Folding the hands for prayer		
• Smiling		
• Arching the eye-brow to surprise/shock		

APPENDIX-III

Strategies for Developing gestures in visually impaired children for effective communication

Introduction:

A human being is a social animal. They communicate through speech and gestures.Communication has been identified as the major factor for growth of social interaction. For children with visually impaired ,communication plays an important role in expressing their ideas and thoughts.

Communication in visually impaired children:

Children who are visually impaired cannot learn skills of social interaction due to the limitation in their vision. So it leads to the Repetitive movements such as body rocking, head swaying, eye poking or rubbing, wrist flicking and

head dropping or extension, which are socially inappropriate because of the number of times they are done and the intensity with which they are done.

Aspects of effective communication:

For the effective communication of visually impaired children,two aspects remains imperative which are noted in the researchers tool and they include ,

- Good Gestures and
- Removal of negative mannerisms

A gesture is a visible bodily action that may implicit meaning

List of gestures:

- Nodding the head for ‘yes’
- Tossing the head for ‘No’
- Upholding the head
- Waving the hand for bye-bye

- Moving the hand for come
- Shrugging the shoulder
- Shake hands
- Folding the hands for prayer
- Smiling
- Arching the eye-brow to surprise/shock

Mannerism:

A ***mannerism*** is a behavior or habit that a person keeps on doing without even thinking about it.

List of mannerisms:

1. Head

- Nodding slowly to urge someone
- Nodding up and down
- Inclined briefly
- Head bends down
- Head swaying

2. Arms and Hands

- Widely outstretched
- Firmly folded across the chest
- Hand held over the eye
- An or both hand held over the mouth
- Flat of hand patting the desktop

3. Fingers

- Running on the tabletop
- Stabbing the air with forefinger
- Patting the fingers together with fingers to both hands stretched
- Rubbing the thumb and fingers
- Clenched into fist

4. Legs and feet

- Leg and foot making kicking motion
- Foot or toes tapping the ground

- Moving up and down shaking while seated
- Both legs widely separated while seated
- Rocking one foot to other

5. **Composure**

- Nervous mannerisms
- Self-touching
- Rigid/stiff posture
- Touching
- Getting physically close

Existing Gestures:

Gestures which were already present in some visually impaired children are**, Folding the hands for prayer, Nodding the head for 'yes', Tossing the head for 'No'**.

And other Listed gestures were not existed in visually impaired children and are to be inculcated in those children. The strategies used are Instruction, Hand on Hand method and Games.

STRATEGIES OF DEVELOPING GESTURES:

Gesture:

Nodding the head for ‘yes’

strategies: Instruction, Game

Most of the visually impaired children lack in their gestures.The meaning of ‘yes’ and was taught first. For ‘yes’ the childs head was holded and made to move in up and down motion. Then the game was held that whenever the researcher says ‘yes’ the child has to move his head in up and down position ,and whoever do it correctly, are given extra points and clappings.

Gestures:

Tossing the head for ‘No’

Strategies: Instruction, game

The meaning of ‘No’ and was taught first.i.e explaining “that this gesture is used to denote disagree”. Then the child’s head was holded first and made to move in up and down motion. After repeating this , the game was held that whenever the researcher says ‘No’, the child has to move his head in left and right position ,and whoever do it correctly, are given extra points and clapping.

Gesture

Upholding the head

Strategy: Instruction

Instruct to the child that not to bend his head frequently,that It shows ‘submissive behaviour’. By positioning the child’s head into normal by upholding his head through touching and asking them to maintain this position always are teached.

Gestures:

Waving the hand for bye-bye

Strategies: Instruction, Hand on hand

Hand on hand strategy was used to position the hand to perform bye-bye gesture. Instructing the child that “Bye-bye is usually said when someone leaves from you”. In hand on hand method, the childs hand was holded and asked to straight his fingers and to shake only his wrist when someone says bye bye.

Gesture:

Moving the hand for come

Strategies: Instruction, Hand on hand

The child is instructed that “If you wanted to call somebody, just stretch your hand and move all the fingers in up and down motion”. For the child to understand properly, his hand is holded straight and make him to continuously

shake up and down motion of fingers together. And finally asking him to move his hand for come is done.

Gesture:

Shrugging the shoulder

Strategies: positioning, instruction

If you want to say 'I don't know', just shrink your shoulder into the neck and move your hands in rounded position and say' I don't know'. then Holding the child's shoulders to raise such that head shrinks into the neck and helping him to keep his hand in round position is made through the hand on hand technique.

Gestures:

Shake hands

Strategy: Instruction,Hand on hand

Child is first instructed that 'when you meet a person it is a good manner by greeting him with shakes hand. Giving shake hand make the person to be more happy and more closer.

At first the childs right hand was holded by the researcher and made to hold other childs right hand. And then little shake was done for a second, then the hands are separated from each other.

Gesture:

Folding the hands for prayer:

Strategy: Hand on hand

Holding the childs both right and left hand at vertical position and making them to touch each other . The hands should be kept just a inch from the chest was demonstrated to the child.

Gesture:

Smiling

Strategy: Tickle game:

The children were seated in the circular position. When researcher calls the name of the child, And that child have to touch others body in such a manner he has to make them laughter. This game features that every child obviously starts laugh and that improves smile.

Gesture:

Arching the eye-brow to surprise/shock

Strategies: Instruction, Action game

“If you hear any surprising news, you have to raise your eyebrow” was instructed. Then by touching his eyebrow and make him feel by raising his eyebrow, the child understands it better. The action game was held that the child was asked to perform the gesture when the researcher says “I broke your pen”, The child raised his eyebrow and did well.

Negative mannerisms:

Many children exhibit negative mannerisms widely. It must be eliminated in order to avoid misconception of the child by others.The strategies are used to give remedy for the problem. strategies used are Instruction, Hand on hand method and games.

Head:

- Nodding slowly to urge someone
- Nodding up and down
- Inclined briefly
- Head bends down
- Head swaying

Strategies: Explanation, Reinforcement

The Child is not conscious about his negative mannerisms. By explaining the child that not to shake his head in such a manner that makes an awkward look towards the listeners. By Telling the child “when someone speaks to you, then only you have to nod inorder to urge someone”.

“Unnecessary movement of the head such as nodding up and down, head swaying leads you to mark a retarded child by the society” was explained.

By Holding his head and locating it in a right position makes the situation more helpful.

Then activity is conducted to the child saying that “whoever remain the head normally for long period of time ,they will be awarded with chocolates”. Children who remained for long time without moving their head, were given chocolates.

Arms and Hands

- Widely outstretched
- Firmly folded across the chest
- Hand held over the eye
- An or both hand held over the mouth
- Flat of hand patting the desktop

Strategies: Instruction, Positioning

The improper mannerisms of arms and hands which exist in the child were noted first. Explaining them that “widely outstretching the hands and arms, hand patting the desktop are shoddily perceived by the people. It has to be eliminated immediately”. By unfolding their hands from improper position and placing their hands in the abdomen region just below the chest is done when the child firmly folds across the chest

Making them understand that hand held over the eye and mouth are unsafe that prones to the infection and nerve damage in the eye.

Then the child's hand was holded from improper position and positioned to keep the hands straight. The child then did it correctly and practised it.

Fingers

- Running on the tabletop
- Stabbing the air with forefinger
- Patting the fingers together with fingers to both hands stretched
- Rubbing the thumb and fingers
- Clenched into fist

Strategies: Explanation, Exercise

The significance of finger mannerism was explained to the child by stating that Communication was also made through fingers. It is the strong communicator that is easily misunderstood when it is not used properly.

Firstly the child was explained Clenched into fist is such a manner that is considered as indecent mannerism. Stabbing the air with forefinger and patting fingers with widely stretched hands makes listeners to think as a retarded. Rubbing the thumb and finger and running on the tabletop are a negative mannerism that misunderstands the child to a bad behaviour boy.

Then giving them a exercise by shrinking and withdrawing the fingers ,moving the hands back and fro repeatedly helps them control over those mannerisms to some extent.

4. Legs and feet

- Leg and foot making kicking motion
- Foot or toes tapping the ground
- Moving up and down shaking while seated
- Both legs widely separated while seated
- Rocking one foot to other

Strategies: Instruction, positioning the legs by touching.

Children were first explained to understand that mannerism of leg such as kicking motion, tapping ground, rocking one foot to other are considered as the aggressive behaviour. And stating that “aggressive behaviour is seen in you” . “Did you wanted to repeat this behaviour?” was asked. The child seemed not to attempt those mannerisms, from those questions. Then positioning the legs by touching it from widely separated legs, and moving up and down shaking mannerism was located to normal position.

From this ,the child understands the ghastly behaviour of him and tries to avoid it.

5. Composure

- Nervous mannerisms
- Self-touching
- Rigid/stiff posture
- Touching
- Getting physically close

Strategies: Passing the ball, Instruction

Some children seems to be more nervous and stand in rigid posture. Such emotionally disturbed mannerisms must be avoided. The coward act of the child is attempted to remove through play activities. Socially mingling with others by making them to pass the ball to other child, run as the train by holding others shoulders one by one at the back. This make the child to forget about the nervous and interestingly engage into play.

Keeping up a feet distance between the listener/peer during conversation is important. Getting physically close and touching others and self – touching makes the child to be interpreted wrongly is also made understood.

Conclusion:

Developing strategies are an important aspect to evade the social problems existing in the children. The suitable strategies for the problem are essential for the good result.The intervention was given such that the children showed good results.