

CHAPTER FOUR

CHAPTER FOUR : ANALYSIS AND INTERPRETATIVE (181 - 410)
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ANALYSIS AND INTERPRETATIVE DISCUSSIONS

Analysis of the data collected, along with interpretative discussions has been presented in this chapter. Analysis has been done keeping the model presented in Chapter-III as the reference point. The discrepancies found out in the existing educational system in comparison with the proposed model have been reflected in the analysis.

Analysis has been presented according to the order of objectives of the study viz. objective No: II - interpretative discussion of the structural and functional aspects of the schools for the hearing impaired, followed by objective No: III - study of adequacy of functioning of supportive organizations.

While presenting and analysing the data regarding the schools, the schools have been referred to, by the numbers given for each school in the methodology chapter. (Page No.75).

4.1.

Objective II : Structural and Functional Aspects of School

Functioning of any system is greatly determined by the resources, both human and material, present in the system. It is only when these resources are adequately manipulated and utilized that the system becomes effective.

4.1.1.

Structural Aspects

The structural aspects which included background

information, and both human and material resources were collected through an information schedule from office records of each school. The structural aspects included in this study were - the type of management, syllabus followed, standards offered (pre-school to SSC), types of vocational training given, strength, enrolment and drop-out, staff composition, teacher-pupil ratio, and infrastructural facilities.

The structural aspects of all the schools have been presented first, followed by an assessment of schools with reference to these aspects.

(See appendix No. 18 for a tabular presentation of background information and the resources of all schools.)

4.1.1.1.

Management

There were 22 schools established by private trusts, recognized and aided by the government. (Schools recognized by the government later than March, 1991, were not included). 3 schools were established and maintained by government.

All the schools were under the Department of Social Defence, Ministry of Social Welfare. Recognition and grants for the schools were sanctioned by the Department of Social Defence. Teachers to the Schools were recruited by this department, minimum qualifications being a graduate degree with post-graduate diploma in Education of the Deaf (D.D Ed.).

4.1.1.2.

Source of funds

All the 22 schools recognized by the state government, got the following benefits from the government.

State Government

The salary of the staff was totally covered by funds from State government. 65% of contingency, within fixed limits was given by the state government, along with 150 per head for the hostel expenditure, and funds for a fixed number of personal hearing aids depending on the strength and socio-economic status of the students.

Central Government

Funds for building (school and hostel) and special equipments were sanctioned by Central Government.

Voluntary Organizations and Individual Donors

Apart from the government's funds, different schools were helped by different voluntary organizations and individual donors. These funds made a considerable degree of difference in the financial status of different schools. From principal's responses and office records the following data was obtained.

Table No. 9

Schools with percentage of Expenses met by Voluntary Organizations and Individual Donors

Schools	Percentage of Annual Expenses met by Voluntary Organizations and individual donors.
1) 5, 6, 7, 13, 19, 22 } Six Schools } (24 %) }	35 - 45 %
2) 3, 8, 9, 17, 24, 25 } Six Schools } (24 %) }	45 - 55 %
3) 1, 2, 11, 12, 15, 16, } 20, 23 } Eight Schools } (32 %) }	55 - 65 %
4) 4, 18 } Two Schools } (08 %) }	65 - 70 %
5) 10, 14, 21 } Three Government Schools } (12 %) }	Totally maintained by government

In the aided schools, all the remaining expenses not met by government's funds and voluntary organizations/individual donors, were met by the trust itself. All the aided schools (84%) except 4 & 18 had problems of lack of funds. This was acutely expressed by principals of 6 schools (No. 5, 6, 7, 13, 19 & 22). Government schools (all the 3) - (12%) had a great deficiency of funds, as expressed by teachers and principals, because they were not supposed to accept money from any other source other than government. It was revealed by one of the teachers :

"You won't see hearing aids in any government schools. When teachers do not have tables and chairs how can you expect hearing aids? For everything we have to wait for government sanction ...".

4.1.1.3.

Syllabus

The first five years (2 years of KG and 1st, 2nd, 3rd standards) were devoted to development of special skills for the hearing impaired, viz. (i) speech development, (ii) development of skill of listening and perceiving sound and (iii) speech reading, along with basic academic skills common to all children - reading, writing and arithmetic. This special syllabus was developed by a group of experts (academicians, and practitioners), approved by the government and was followed in all schools. In the IVth standard, regular 1st standard syllabus started in these schools. So, in effect, the hearing impaired were three years behind schedule as compared to the regular students. (See appendix No.19 for special syllabus)

4.1.1.4.

Strength of students

Strength varied from 20 to 550, depending on many factors including year of establishment and the number of standards offered (see appendix No.18 for strength of all schools during 1991-92).

4.1.1.5.

Enrolment and Drop-out of 5 years - 1986-87 to 1990-91

The figures of total enrolment and drop out of 5 years, along with average of percentages of enrolment and drop out of 5 years are presented in the table No.10. For yearly enrolment and drop-out of each school, during the 5 years, see appendix No.20.

Table No. 10

Enrolment and Drop-out during 1986 to 1991

Year	No. of Schools	Strength at the beginning	New Admission	Total strength	Dropout	% of Drop-out	No. of Students who have finished the course
1986-87	22	2816	472	3288	340	10.34	106
1987-88	22	2842	464	3306	332	10.04	54
1988-89	23	2920	559	3479	317	9.11	133
1989-90	24	3029	579	3608	296	8.20	116
1990-91	25	3196	563	3759	281	7.48	Not collected

Average Drop-out : 9.03

In order to see the link between enrolment, drop-out and the background of students, percentage of students from rural background and whose parents were educated were collected. This data is presented in Table No.11.

Table No. 11

Percentage of students from Rural Background and whose Parer were Educated

School	Percentage of Rural Students	Percentage of Students whose Parents were educated.
1	76	34
2	80	38
3	70	53
4	84	40
5	100	12
6	89	15
7	100	15
8	75	45
9	92	22
10	89	18
11	91	22
12	93	22
13	97	21
14	96	18
15	89	31
16	85	35
17	88	23
18	83	23
19	76	34

(Table Contd...)

School	Percentage of Rural Students	Percentage of Students whose Parents were educated.
20	88	24
21	95	17
22	87	20
23	75	42
24	91	20
25	78	86

Rural : Who lived in the village, irrespective of their way of earning.

Educated : Whose atleast one parent had studied upto VIIth.

Thus, it was evident that majority of the students of all the schools were from rural background with uneducated parents.

4.1.1.6.

Standards Offered

It was only in fourteen Schools (64%) that standards upto Xth (regular VIIth) were offered (No.2,3,4,8,11,12,15,16,18,19,20, 23,24, 25). Two Schools (8%) offered classes upto IXth (No.14, 17). In other schools standards offered varied from IVth to VII (1st to 5th of regular schools).

4.1.1.7.

Pre-School Education

Eight Schools (32%) had KG Section (Nos. 1, 2, 3, 4, 16, 18, 20 & 23).

4.1.1..8.

SSC Programme

School No. 2 had started SSC Programme as early as 1982. School No, 4 and 18 started them in 1991. Thus only 3 schools (12%) had students being prepared to appear for SSC examination. School No, 2 had one batch every year appearing for SSC examination. School No. 4 and 18 had their first batch getting ready during the year of data collection (1991-92).

4.1.1.9.

Vocational Training - (Primary level class V to X)

Five Schools (20%) had only drawing as in all regular schools (No. 6, 8, 9, 10, 14). Three schools (12%) did not have any vocational training, with neither a teacher employed for vocational training (No. 5, 7, 21).

The other 19 schools (76%) had different vocations like :-

- tailoring
- drawing and painting
- candle making
- incence stick making
- door mats making

- embroidery and knitting
- wall hangings and other handicrafts
- pottery.

Tailoring, embroidery, knitting and handicrafts were the most common vocations offered across the schools.

4.1.1.10.

Advanced Vocational Training - (Adult Training)

Advanced Vocational training was 2 years' training for hearing impaired of minimum of age 14 years. The upper age limit was 45. The students got a **Diploma in Technical Training** of Special Education Department, Gandhinagar, for which they were exempted from theory paper (written). Five schools (20%) offered such vocational training course (No. 2, 4, 11, 12 & 18).

4.1.1.11.

Staff Composition : Teacher-Pupil Ratio

Table No. 12

The Teacher/Pupil Ratio in the Different Schools

Ratio	No. of Schools	Percentage (in 25 schools)
1:12	2, 3, 4, 1 & 18 (5)	20
1:14	11, 12, 8, 20, 15, 16 & 23 (7)	28
1:15	13, 19, 24 (3)	12
1:17	5, 6, 7, 9, 10, 17, 22 & 25 (8)	32
1:20	14 & 21 (2)	08

The number of teachers, although not sufficient, was reported as 'manageable' by 11 Principals (44%); and deficient and unmanageable by 14 Principals (56%). The reason for insufficient number was given by 8 principals (32%) as problem of government sanction of the post. 3 Principals (9%) gave the reason that the posts were reserved for SC/ST and suitable candidates were not available.

- **Craft teacher** (for training vocations) -- 23 Schools (92%) had a craft teacher who managed the vocational training. Three schools (No.5, 7 & 21) did not have a craft teacher.
- **Special Assistants** - (Audiologist, speech therapists, technicians) -- Two schools (No. 4 and 18) had an audiologist who also took care of speech therapy of students. None of the other schools had such a specialist.

None of the schools had a technician - as government did not sanction such a post. 18 Schools (72%) had an **ENT Specialist** as a consultant for medical examination and assessment of hearing of students.

4.1.1.12.

Infrastructural facilities :-

Class rooms :

Ten Schools (40%) out of 25 did not have adequate number of classrooms, with the result that students of two different standards were accommodated in one room (No. 1, 5, 6, 7, 10, 13, 14, 19, 21 & 22). The other 15 schools (60%) had

adequate number of classrooms and each classroom had students of one standard only.

Furniture :

Eight Schools (No. 5, 6, 7, 8, 18, 20, 22 & 23) (32%) did not have adequate furniture in the class rooms. Among these, three were recently started (No. 5, 6, 7) and were in the process of acquiring resources one by one. 3 Schools did not have adequate furniture to fix group hearing sets (GHS), (No. 8, 14, 17). Seventeen Schools had adequate furniture (68%).

Hostel Building

Out of the 25 Schools, 24 had hostel facility. Four schools (16%) did not have a hostel building as such and used the school building for the purpose (No. 3, 5, 7, 17).

Audiology Room

Two Schools (No.4 & 18) had special audiology room where audiometer was kept and audiological assessment was done.

Ear-mould Laboratory

Three Schools (No.1,4,18) had ear mould laboratory where ear moulds for fixing the Personal Hearing Aid in the ear were made, according to the size of the ear.

Library room and Books

Six Schools (24%) had a library room with adequate number of reading books (No. 2, 4, 8, 9, 16, 18). Out of the 20

schools left, 5 Schools (20%) had few reading books (essentially comics and picture books) (No. 1, 3, 23, 24, 25) and the rest of the 15 schools (60%) did not have any books.

Television :

Fourteen Schools had television (56%) kept in the hostel.

Video Cassette Player (VCP) :

Only 2 Schools had VCP (No. 4 & 18).

Tape Recorder :

Four Schools (16%) had taperecorder (No. 4, 18, 2, 23).

Film Projector :

Five Schools (20%) had over head film projector (No. 2, 4, 14, 15, 25).

Group Hearing Sets (GHS)

Twenty one Schools (84%) had GHS, number ranging from 1 to 7 sets, although only in 2 schools (No, 4 & 18) were all in working condition. In all the other schools one or two sets were not working since more than a year, and were not repaired (till the period of data collection 1991-92).

Personal Hearing Aid (PHA)

Seven Schools (28%) were regularly procuring PHA, with funds from sources such as Department of Social Defence, Ali

Yavar Jung National Institute for the Hearing Handicapped, individual donors, and voluntary organizations (No. 4, 18, 1, 23, 25, 16, 20).

In other Schools there had been efforts to procure PHA once in three years (7 schools - 28%), once in two years (11 schools - 44%) and a few PHA had been procured in these schools.

Audiometer

Sixteen Schools (64%) had an audiometer, although in 4 schools (16%) it was not working. 9 schools (36%) did not have an audiometer at all.

Speech Trainer

Twenty Schools (80%) had speech trainers (ranging in number from 1 - 4) and 5 schools (20%) did not have (No. 1, 5, 6, 7, 8). See Appendix No.18 for a tabular representation of resources available in all the 25 schools.

4.1.2.

Critical Assessment of the Schools

The availability of human and material resources in the different schools has been presented already, on the basis of which the schools were assessed. The use of these resources has been presented separately with an assessment on the basis of functioning.

Critical assessment on the basis of availability of resources is presented below separately for government and aided schools.

Government Schools :

The three government schools (12% - No. 10, 14 and 21) were assessed below the expected norms as per the model, with regard to majority of the resources under study as explained under :-

- * Teacher-pupil ratio was 1:20 in 2 schools (school No. 21 & 14) and 1:17 in 1 school (school no. 10). This remained far away from that proposed in the model 1:10-12.
- * Number of classrooms was inadequate. School No. 10 and 14 had one classroom in each where more than students of one standard were seated. School No. 21 had all students seated in one classroom.
- * None of the schools had library or reading material.
- * All the three schools had insufficiency of appropriate furniture to fit group hearing sets. One school did not

have chair and table for the class teacher.

- * None of the three schools procured Personal Hearing Aids for the Students every year.
- * There was no vocational training run in school No, 21 and 14 although school No. 10 had one vocation offered.
- * None of the three schools had been upgraded even upto Xth (regular VIIth) School No. 14 had classes upto IXth, School No. 10 upto VIIth and School No. 21 upto Vth. None of the schools offered pre-school education.
- * There was no ENT surgeon, for consultation even once a year, as in other schools.

Aided Schools

- 1) Out of the 22 aided schools 5 schools (20%) (No. 5, 6, 7, 13, 22) were assessed as poor because, as in the case of government schools, many of the aspects remained unsatisfactory, as under :
 - * The schools did not have proper school and hostel building and did not have enough number of classrooms, nor the required furniture; teacher-pupil ratio was 1:17 in School No, 5, 6, 7 and 22, and 1:15 in School No. 13, which was far away from the ratio proposed in the model (1:10-12).
 - * There was lack of special equipments and personal hearing aids. There was no library room or reading material, Pre-school education was not offered, and standards offered were, upto IVth (regular Ist) in school No. 5, upto VIth (regular IIIrd) in school No, 6, upto VIIth (regular IVth) in

school No. 7, 13, and upto Vth (regular IInd) in school No. 22. None of the schools had a regular service of ENT surgeon

2) 15 Schools (60%) (No. 1, 2, 3, 8, 9, 11, 12, 15, 16, 17, 19, 20, 23, 24 and 25) were assessed as average.

* They had no insufficiency of teachers or equipments, had suitable school and hostel building, offered atleast 3 vocations, had a regular service of ENT specialist.

But they did not have : (i) sufficient number of personal hearing aids, (ii) a specialist for assessment of hearing sensitivity, (iii) suitable furniture for fitting group hearing sets thus rendering these hearing sets non-functional.

3) 2 schools (8%) (No. 4, 18) were assessed as satisfactory.

They had suitable school and hostel building with adequate staff, furniture, had required equipments and hearing aids for children. They had an audiologist employed for assessment of hearing sensitivity and speech training, and had an ENT surgeon visiting the school whenever required. They had a routine acquisition of teaching aids annually. Some aids were purchased from market and some were prepared by the teachers themselves.

They offered pre-school education, and also offered training in different vocations (both primary and advanced training).

They offered classes upto Xth (regular VIIth) and conducted special SSC programme as well.

The schools 5, 6, 7, 13 and 22 which were assessed poor depended on the government for most of their expenses and only 35-45% of the expenditure was covered by funds from voluntary organizations. Out of the 14 schools assessed as average 8 schools (1, 2, 11, 12, 15, 16 20 and 23) got financial aid from voluntary organizations and individual donors so as to cover 55 - 65% of their expenditure and the other 6 (3, 8, 9, 17, 24 and 25) got only 45 - 55% covered through these sources. In comparison to all these, schools assessed as satisfactory (No. 4, 18) got 65-70% of their expenditure covered through donations from voluntary organization and individuals whereas government schools assessed poor depended wholly on government funding. Thus a close relationship between funds and facilities was obviously found. Education of the hearing impaired is an expensive affair and a school that could not manage funds could not acquire the required paraphernalia to be effective in achieving its goals.

So far the resources available in the schools have been presented. For an effective functioning of a school, procuring the resources is not sufficient. What is important is how these resources are utilized. The following sections are devoted to the ways and means of utilization of resources and the ways of conducting the school activities.

4.1.3.

Functional Aspects

4.1.3.1.

Admission Procedure

On the principle that primary language acquisition takes place in the first 5 years, the model proposes that children should not be older than 4 years when they start schooling (pre-school). Moreover, on the principle that school programme should be matched with special needs of each child, a child who has additional problems cannot be done justice to, in a school exclusively for the hearing impaired, and this calls for special schools for multiply handicapped children. Thus the admission policy proposed in the model is that the school system has to be strict about the age of the child (upper age-limit as 4 for admission to KG-I) and about medical certification by a registered medical practitioner that the child has no additional impairments.

Responses from all 25 principals was collected through (semi-structured) interview schedule.

Responses of principals, followed by interpretations are presented in the following paragraphs.

4.1.3.1.1.

Responses of Principals

Maximum number of students enrolled in a class

Eighteen (72%) principals reported that they maintained

the maximum number of students in a class at 12-15, and restricted admission accordingly, and that the policy was 'first come first served'.

It was stated by principals of government schools (3) and principals of 4 aided schools that such restriction was not maintained.

Upper age limit

Only 8 schools offered KG classes. Of these, Principals of 6 schools (24%) revealed that the upper age limit for admission into KG-I was - 5. Principals of 2 schools (8%) (No. 4 and 18) maintained the upper age limit as 4 for admission into KG-I, and the rest of the 6 schools extended this upto 5 although the limit was fixed at 4.

Out of the other 17 schools, 14 schools (aided) (64%) maintained the upper age limit as 8 years (extended upto 10 as revealed by 5 principals). The 3 government schools (12%) could not restrict admission by such criteria and were supposed to admit any student who sought admission with a certificate of hearing impairment from a doctor.

It was admitted by all principals that, it was generally difficult to be strict about the age limit because majority of the students who sought admission were over-aged (over 6-7 years).

The Other Criteria for Admission

It was stated by principals of 8 schools with KG classes that it was confirmed through discussion with the parent that the child was toilet trained, before admission was granted.

Out of 25 principals, it was revealed by 5 Principals (20%) that a medical certificate showing that the child was only hearing impaired and had no other impairment, was demanded, before deciding on the admission.

It was stated by 17 (68%) principals that they only did a sweeping test to see whether the child was hearing impaired by seeing his response to the noise of clapping from his back, and that they confirmed that he/she was mentally healthy through discussions with parents.

Principals of the 3 government schools (12%) revealed that no such criteria was fixed for admission. It was so reported by these principals that generally children from orphanages and rescue homes sought admission submitting a court order, and that irrespective of their age, or mental health, or physical fitness, they were to be given admission. (The investigator did encounter a group of 12 students of a class, in a government school - 7 of whom were mentally retarded. It is also a point to be noted in this context that, out of the 25 schools under study it was one of the government schools that had the lowest strength of 20 students).

Minimum limit of Hearing Loss

All 25 Principals admitted that there was no such limit

fixed in practice and that despite this majority of those who sought admission were all profoundly impaired from birth.

Interpretations

The admission policy proposed in the model is a strict one, fixing the upper age limit for admission into KG-I as 4, demanding a doctor's certificate saying that the child had only one impairment namely hearing deficiency but nothing else. It is also proposed that the number of new admissions should be appropriately checked to maintain the teacher-pupil ratio of 1:10 or 12.

Among the 25 schools, only two schools (No.4 & 8) were close to the model with the upper age limit for admission into class I fixed as 5. The other 23 schools (92%) were rather flexible in the age limit, the plight of government schools being lamentable with absolutely no fixed criteria for admission. The reality was that the schools could not fix an upper age limit because most of the students who sought admission were above 7-8 years. This was realized as a problem arising from ignorance of the society the solution of which lays outside the school system per se and hence not delied into in the study. That, the schools did not demand a doctor's certification of a child being normal in all aspects of health other than hearing deficiency, could lead to far reaching damages. The instruction offered was geared to meet the needs of a hearing impaired child assuming that the child had no other problems. Hence flexible admission criteria were very much against the whole philosophy of

individual needs and matching the provisions for these needs, adopted in the model.

4.1.3.2.

Age of Admission into School

Early intervention being an important principle for successful development of communication-skills and language, the problem of late schooling was delved into, by examining the records of the 25 schools and also by collecting responses from the 250 parents selected for the study.

The data from the office records are presented first with subsequent presentation of responses of parents followed by interpretations.

4.1.3.2.1.

Data from Records of the schools

The admission forms from all schools of 5 years (1986-91) were scrutinized and average percentage of students in each age group during the 5 years (1986-91) was calculated. These data are presented in table No.13

Table No. 13

Percentage of Newly Admitted Students (into class-I*) in Different Age Groups. (of 5 years : 1986 - 1991).

School	Age in completed years				
	5 - 6	6 - 7	7 - 8	8 - 9	9 - 10
1		25	75		
2		15	60	25	
3	50	40	10		
4	65	35			
5				75	25
6		42	28	20	10
7				65	35
8	48	30	22		
9		42	58		
10			40	32	28
11			43	38	19
12			48	30	22
13		26	53	21	
14			56	28	16
15	28	48	24		
16	36	54	10		
17		38	43	10	9
18	52	48			
19		49	31	20	
20	5	37	29	29	
21			43	42	15
22	10	42	29	19	
23	29	38	33		
24		2	42	38	18
25		37	49	14	
Average	13%	26%	33%	20%	8%

* In the case of the 8 schools with KG classes, the age of the 1st standard students (and not of KG) was considered.

Two schools (No. 5 and 7) (8%) had majority of the students in the 8-10 age group. These schools had 100% rural population with percentage of students with educated parents as 12% and 15% respectively (See table No.11).

The problem of a high percentage of students over-aged for respective classes, evident from the table No. 13 and subsequent analyses, was supported with responses of parents regarding the time of suspecting some problem in their child, and the time of taking any step to help the child. These responses are presented in the following paragraphs.

4.1.3.2.2.

Responses of Parents (250)

130 parents (52%) sensed the difference in their child (lack of response to sound or lack of speech) at around the age of 2 years and 120 parents (48%) at around the age of 3 years.

82 parents (33%) thought of taking some action about the problem only after more than a year after sensing the problem and 168 parents (67%) after even more than 2 years! The reasons for such delay were given by all parents (100%) as lack of money and also lack of awareness regarding what to do.

Responses regarding the immediate steps taken :-

215 parents took religious measures (86%), 27 parents (11%) discussed with educated people, and 8 parents (3%) consulted a doctor.

Responses regarding the age of the child at the time of consulting a doctor :-

No. of Parents	Age of the child when the doctor was consulted.
190 (76%)	Over 6 years.
35 (14%)	Around 6
15 (06%)	Around 5
10 (04%)	Around 4

202 parents (81%) admitted their child in school after the age of 7 and 48 parents (19%) after 6.

From the responses of parents it was clear that all of the parents were late to detect any problem. These findings were supported by the analysis of criteria of admission. To top all the disadvantages, all parents reported that they did not talk to their child after suspecting that he/she could not hear !

The inferences in the foregoing paragraphs from the age of students admitted into 1st standard and responses of parents, went against the basic principle of early detection and intervention of hearing impaired children, proposed in the model.

4.1.3.3.

Assessment of Hearing Sensitivity

Assessment of hearing sensitivity is one of the first procedures to be done after admission of a child into the school.

Procurement of a hearing aid, is based on the assessment, and hence the procedure of assessment assumes great importance. The model proposes a thorough assessment of hearing sensitivity done in two-three sessions with the audiologist. (See appendix No.2 for measurement of hearing sensitivity)

Assessment of hearing sensitivity was studied from responses of the 25 principals and 130 teachers interviewed, and by observing the records of each school.

Responses of principals and teachers are presented first, followed by observations by the investigator, and interpretations.

4.1.3.3.1.

Responses of Principals and Teachers

Assessment

All the 25 principals reported that they got an audiogram made for each newly admitted student with one sitting of each child with the specialist. But it was revealed by 116 teachers (89%) covering 23 schools (92%) that they did not know the specific degree of hearing sensitivity of each child.

In 2 schools (No. 4, 18) an audiologist was employed, who carried on the assessment work at intervals twice during the first year of admission of the child apart from that done in the beginning of the year of admission. It was also revealed that the first assessment of a child was done only after 2-3 sittings of 5-8 minutes each, with the audiologist, so that the child got

used to the audiometer, audiologist and the whole procedure.

Attitude to Audiograms

It was stated by 23 principals (92%) and 116 teachers (89%) of 23 schools (92%) that they did not generally refer to the audiograms of the students, giving the reason that most of the students were profoundly hearing impaired from birth and that the predominant mode of communication by students was manual, and that the audiograms were thus not useful. (See appendix No.2 for a sample of audiogram and details).

Interpretation of Audiograms

It was revealed by 12 principals (48%) that they did not know how to interpret an audiogram. They did not know what O.....O and X.....X meant. (air conduction of right ear and left ear respectively). 10 principals (40%) knew what was meant by X.....X and O.....O, but did not know how to interpret an audiogram. 95 teachers (73%) covering 21 schools (84%) did not know to interpret an audiogram, whereas 35 teachers (27%) covering 4 schools (16%) (4,16, 18 and 23) reported that they were familiar with audiograms.

4.1.3.3.2.

Observations by the Investigator

In each school records of 5 years [1986-1991] were examined to see the procedures of hearing assessment.

Record of Audiograms

Ten schools (40%) (No. 1, 3, 4, 5, 6, 8, 15, 16, 18 and 23) had records of audiograms of 5 years.

Ten schools (40%) (No. 2, 9, 11, 12, 13, 17, 19, 20, 24 and 25) had records of audiograms of a few students. On probing, it was revealed that it was an additional work for the teachers who were already overloaded with teaching work and hence the irregularities.

Five schools (20% - No. 7, 10, 14, 21 and 22) had no audiogram maintained at all. The reasons given by the principals were the same as mentioned above.

Interpretations :

In majority of the schools (except 2 aided schools - No. 4 & 18) there was no emphasis given on hearing assessment. The students were all conveniently labelled as profoundly hearing impaired, and were treated uniformly as regards teaching strategies. In fact, what was realised was that the school system was functioning in a vicious circle. Since all students were labelled as profoundly impaired, which meant to most of the teachers and principals that they could not hear or be trained to talk, compounded by their not using hearing aids, there was no emphasis on auditory training and speech training. Due to this reason, it was generally thought that audiograms were not of any use, except for showing the inspector. This lack of importance given to hearing assessment perpetuated the culture of labelling all as propoundly hearing impaired and using uniform teaching strategies.

In the two aided schools, (No. 4 & 18) where an audiologist was appointed, and assessment done at intervals, auditory training was monitored by audiograms taken twice or thrice a year, and majority of the students wore hearing aids. In fact, "appropriate assessment of hearing sensitivity, the diagnosis of the cause of the problem (whether sensori-neural or conductive) and awareness of the frequencies of sound which the child can respond to at what degree of loudness, are all basic to deciding the teaching strategies - involving speech training and language development". (Pollack, 1985). The principals and teachers (majority of them) seemed to be ignorant of such crucial facts in the education of hearing impaired.

The pure tone audiometry (see appendix No.2) generally carried out in the schools depends on the child's ability to understand the instructions given to him and his reaction to it. This demands a few initial sessions to make the child familiar with the situation so that the test result becomes as reliable as possible. Majority of the schools did not consider such points, but carried out the assessment in one sitting itself, whereby reliable results could be difficult to obtain. In fact these problems were rooted in the basic callous attitude to the process of assessment and lack of importance given to audiograms as such.

The practice of assessing the student's hearing sensitivity in just one session and labelling most of them as profoundly or severely impaired, and equating this audiometric deafness to functional deafness was the general practice in most of the schools, whereas reliable audiograms could be got only in

two or three sittings with the audiologist. Moreover, even if the audiological assessment showed that a child could not hear, this could not be equated with functional deafness, as the child's hearing always improved with training to hear wearing hearing aid. In fact this labelling all children as profoundly impaired, in just one ritualistic session was the starting point of the self-fulfilling prophecy of the teachers, i.e. the teachers beginning their teaching with very low expectations about the child's speech development labelling them as 'profoundly impaired' who 'could not hear', a climate was created in which the role of auditory system in communication and hearing was de-emphasised. The resultant effect was that children gradually learned to behave according to the patterns and characteristics of a deaf child fulfilling the prophecy of the teachers.

4.1.3.4.

The Use and Monitoring of Hearing Aids

The model proposes that as soon as the hearing assessment is thoroughly done, each child has to be fitted with suitable hearing aids and that its functioning has to be effectively monitored for best results, including checking whether the battery is live and if the ear mould is blocked. Auditory training has been greatly emphasised in the model for which the regular use of group hearing sets has been proposed.

To study the attitude towards the usefulness of hearing aid and the procurement and use of hearing aids,

responses from all 25 principals and the selected 130 teachers, (covering all schools) were collected through semi-structured interview schedule. Responses of selected students (750) and parents (250) covering all schools were collected through questionnaires.

Study of use of personal hearing aid (PHA) has been presented first, followed by group hearing sets (GHS).

i) PHA : The sequence of presentation is as follows :

- responses of principals and teachers
- responses of students
- observations by the investigator
- Summary

ii) GHS : The sequence of presentation is as follows

- responses of teachers
- observations by the investigator
- summary

iii) Interpretations

4.1.3.4.1.

Use and Monitoring of Personal Hearing Aid (PHA)

4.1.3.4.1.1.

Responses of Principals (25) and Teachers (130)

Use of PHA

Only 17 principals (68%) had been procuring personal hearing aids and out of 17 principals (68%) who had procured

PHA, it was stated by only 10 (40%) that they encouraged the students to wear them, although they met with little success.

It was expressed by 7 principals (28%) and 116 teachers (81%) covering 23 schools (92%) that most of their students (70-90%) were profoundly impaired from birth, due to which hearing aids could not be of much help and that due to this reason, they did not insist on the use of PHA by students.

Awareness about Residual Hearing

It was stated by 24 principals (96%) and 114 teachers (81% covering 23 schools (92%) that they did not believe that most of the hearing impaired had residual (usable) hearing. They thought that most of them could not hear at all, as most of them were born deaf and were brought up in a silent world at home; and that because of this there was little that the school could do. It was stated by one principal (School No. 4) and 16 teachers (13%) covering 2 schools (No.4,18) that they believed in usable hearing of hearing impaired and that they tried to make students wear PHA, always.

Percentage of students wearing PHA

69 teachers (53%) covering 15 schools (60%) (out of 25 in the sample)	did not have anyone wearing PHA.
61 teachers (47%) covering 10 schools (40%) (No. 1, 3, 4, 8, 9, 15, 16, 18, 20 & 23)	had atleast a few students in their class wearing PHA.
13 teachers (10%) covering 2 schools (No. 4 and 18)	had 70 - 80% students wearing PHA.
26 teachers (20%) covering 4 schools (16%) (No. 9, 15, 16 and 23)	had 30-40% wearing PHA.
22 teachers (17%) covering 4 schools (16%) (No. 2, 11, 12, 20)	had less than 20% students wearing PHA.

Reasons for low percentage of students wearing PHA :

Only 2 schools (No. 4 & 18) had 70-80% students wearing PHA. All the other 23 schools (92%) had less than 50%. All the 117 teachers (90%) of the 23 schools gave the same reasons as :-

"75-90% of the students were profoundly impaired and PHA was not of much help. Students removed aids because they did not like to wear them".

"Many students damaged them".

Apart from all these, 62 teachers (48%) covering 12 schools (48%) gave the additional reason of poverty. One teacher remarked that when children had no clothes to wear they could not be expected to think of PHA.

Another teacher commented that hearing aid couldn't

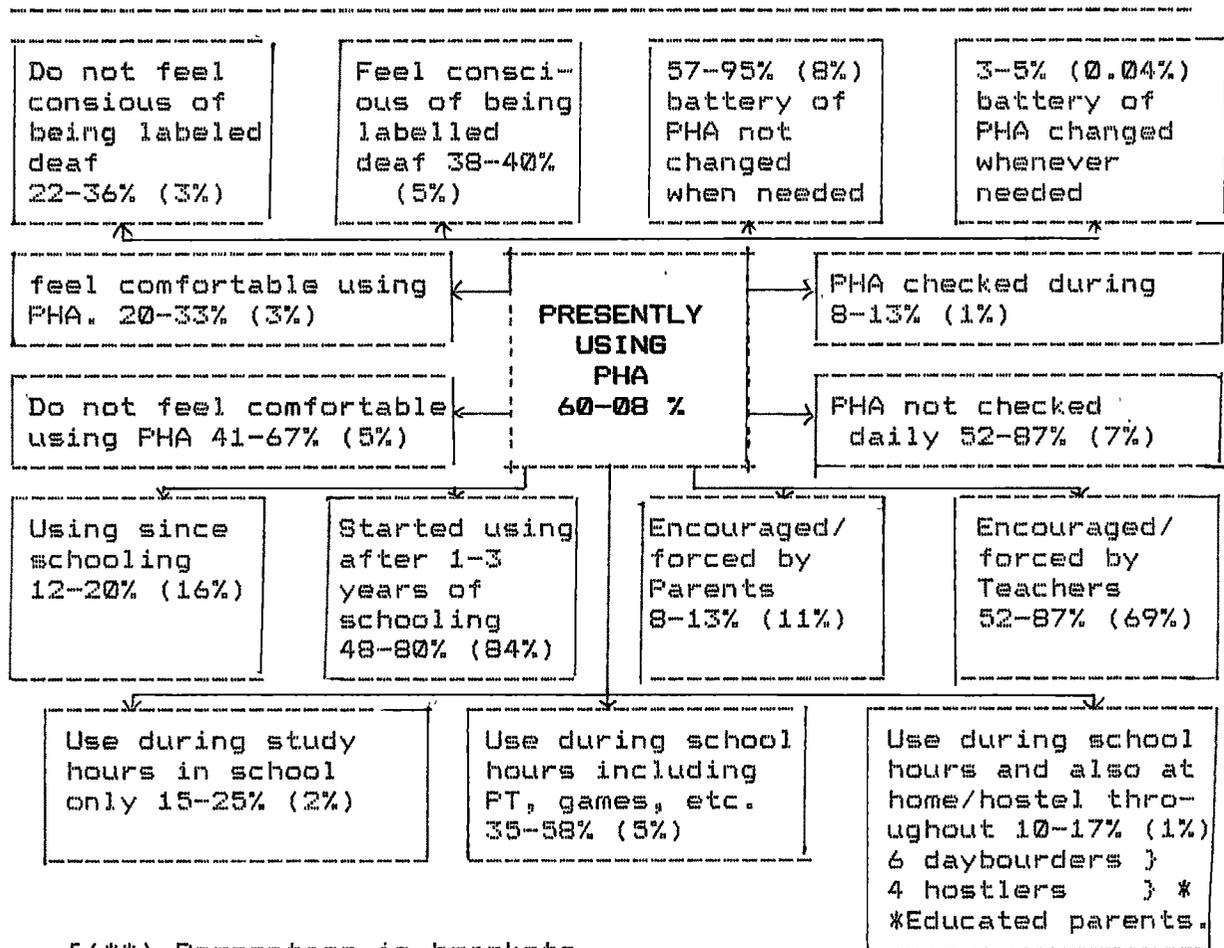
help these students who could not hear at all, but it could help only those who were hard of hearing.

4.1.3.4.1.2.

Responses of students

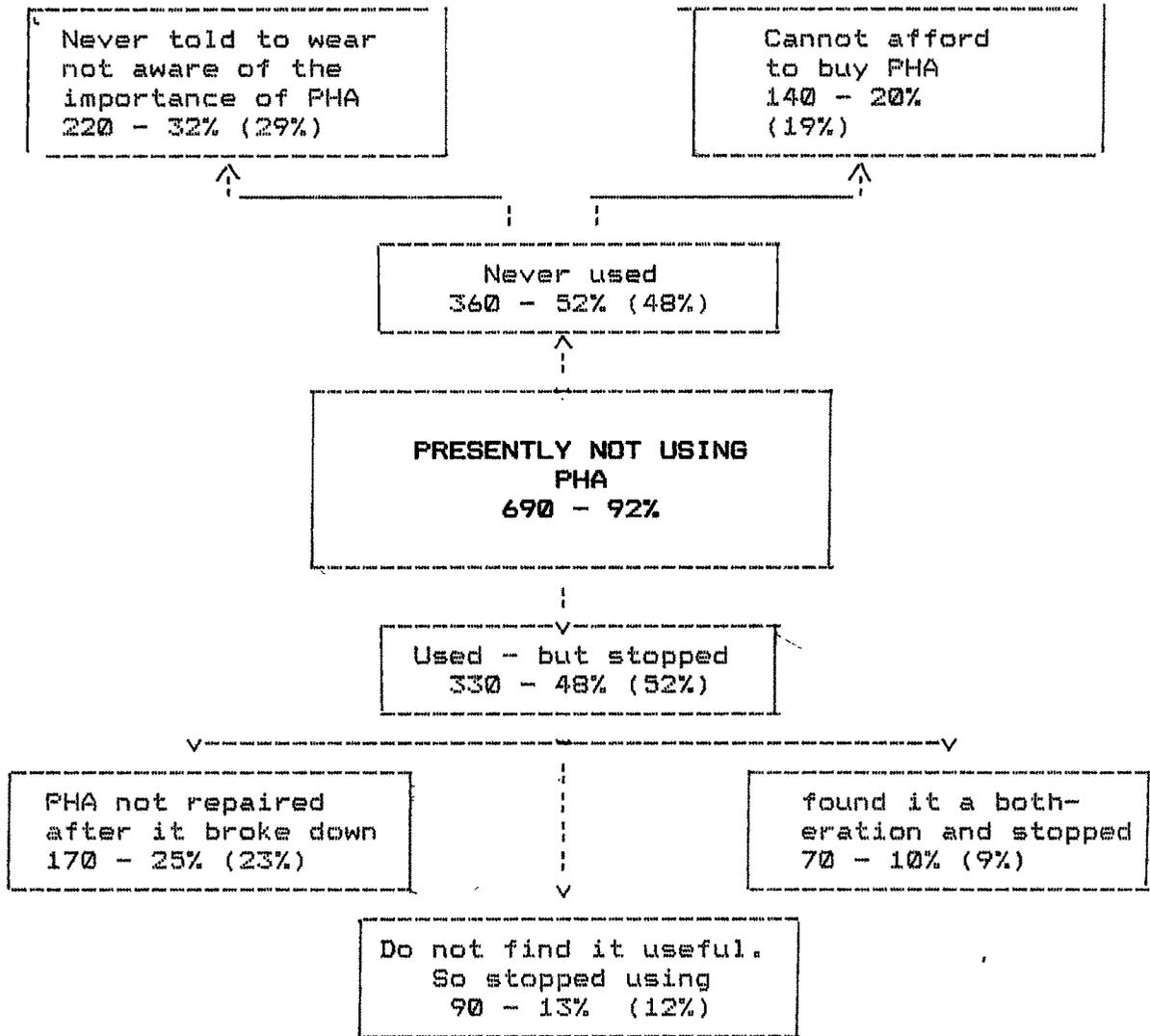
Since the responses of students were varied they are presented in a chart form so that all responses can be read at one go.

Students' Responses Regarding Use of PHA (750 Students)



[(**) Percentage in brackets indicate percentage in the total sample of 750]

(Chart contd.)



[percentage in brackets indicates percentage in the total sample of 750]

* Out of 10 - 6 dayboarders with educated parents and 4 hostlers.

4.1.3.4.1.3.

Observation Carried Out By the Investigator

Seven classes were observed in each of the 25 schools, and out of the 25, 8 schools had KG classes as well. So, an extra 2 classes (KG I & II) were observed in these schools. Thus, a total of 191 classes were observed across all the 25 schools. Observation regarding use and monitoring of PHA in the different classes are presented in the following paragraphs :-

Percentage of students wearing PHA

Only 25 classes (13%) covering 6 schools (24%) (No. 1, 4, 16, 18, 20 & 23) had atleast a few students wearing PHA.

Ten classes (5%) covering 4 schools (16%) - (No. 1, 16, 20 & 23) had 1 - 3 students (11% - 21%) wearing PHA.

Fifteen classes (8%) covering 2 schools - (No. 4 & 18) had 10 - 12 students (67% - 80%) wearing PHA.

Condition of PHA

- * No class was observed with PHA of all students in working condition. All 25 classes had some cases with some problem with PHA.
- * All 25 classes had atleast one problem case with weak battery.
- * Twelve classes (6%) had the added problem of PHA not switched on and blocked earmoulds.

* Seven classes (4%), had apart from the above mentioned problems, a PHA making 'squeal' noise as it was not adjusted.

* Four classes (12%) had the above problems and also the problem of dead battery.

Teacher's attention to the Problems of PHA

Out of 25 classes that had students with PHA with some problems, only in 7 classes covering 2 schools (4 & 18) did the teacher attend to the problems of the PHA (like switching on the battery that was not switched on, adjusting the knob to stop the squeaking noise, and replacing the dead battery).

Students' Reaction to the Problems of PHA

In none of the cases were the students observed to be aware of the problems of the PHA. None of them in any way brought it into the notice of the teacher that their PHA was not working and that they needed help.

Summary of findings

1. Out of the 191 classes observed in 25 schools, 166 classes (87%) did not have a single student wearing PHA. Even in the 25 classes (13%) observed to be having students wearing PHA, only two or three had PHA. That is, only 15 classes (8%) had a majority of students wearing PHA. But even in these 25 classes where a few to majority were seen to wear PHA, the use of PHA was not optimal because all

classes had atleast some cases with problems of PHA. It is a point to be emphasised that not a single class had all PHA in working condition. All classes had problems like weak or dead battery, PHA not switched on, PHA making squeaking noise due to want of proper adjustment. In majority of these classes (18/25) teachers seemed to be not alert to these problems, and no student of any of the classes realized any problem with the PHA, nor did they bring it to the notice of the teachers.

It is a point to be noted that in 76% of the schools (19/25) not a single student had PHA. The three government schools were included in this category. The rest of the 16 schools were aided.

The 6 schools which had students using PHA, had relatively less of rural population, and more of educated parents (No.1, 4, 16, 18, 20 & 23). A more or less congruent picture emerged from responses of students.

1. Out of 750 students 690 did not have PHA (92%), of whom 360 (52%), had never used a PHA, the reasons being ignorance (31%) and poverty (20%).
2. Out of 690 students, 330 (48%) had used PHA before and had stopped, reasons being :
 - (i) not repaired after it broke down (25%),
 - (ii) usefulness not felt (93%), and
 - (iii) stopped because it was irritating to wear (10%).

3. Out of 750, only 60 (8%) were using PHA. Among these, only 12 (20%) started using it since schooling and the rest 48 (80%) started using after 1-3 years of schooling.
4. Fifteen (25%) wore them during study hours only, 35 (58%) wore them all through school hours, and only 10 (17%) wore them in school and at hostel/home, 6 of these students were day boarders and had educated parents.
5. In fact, out of the 60 students who wore PHA, 48 (80%) were dayboarders, had both parents educated atleast upto SSC, and were from the salaried group.

Situation in one of the government schools was shocking :-

The principal was unaware of the schemes of the government to procure hearing aids, and stated that he did not have any PHA, contrary to which it was revealed later by a teacher that they had around 50 PHAs lying in the office which were not used.

It is an important observation that 7 principals (41% of those 17 principals who procured PHA) did not insist on using PHA - which was congruent with observations of poor percentage of students wearing PHA.

Precisely, there was a great discrepancy in the system with regard to the use and monitoring of personal hearing aids and group hearing sets. The fact that 70% of the schools had none wearing PHA; and that out of the 32 teachers who had GHS in the class, 10 had all of them out of order, showed the lack of

importance given to residual hearing and amplification in auditory training, which reinforced the prejudice that the children could not hear and could not be trained to speak. The two schools (No. 4 & 18) that were different from the rest of the schools had all GHS in working condition and majority of their students used PHA. These two schools were thus close to the model.

4.1.3.4.2.

Use of Group Hearing Sets (GHS)

4.1.3.4.2.1

Reponse of Teachers (130)

32 teachers (25%) covering 20 schools (80%) had GHS in their class, but only 8 (6%) among these covering 2 schools (8% - No. 4 & 18) had all GHS working, 14 (11%) had atleast one working and 10 (7%) had all out of order. 98 teachers (75%) covering all 25 schools did not have any GHS.

Usefulness of GHS

It was revealed by 8 (6%) teachers covering 2 schools (No. 4 & 18) that they found the GHS useful to train the students to listen and speak, to train reading, and that they used it regularly. These teachers had all of them in order. The other 24 teachers (18%) covering 18 schools (72%) stated that students did not like to wear them and that they tried to remove them as soon as it was worn, due to which they were used sparingly. Hence, these teachers admitted that they could not say confidently about the usefulness.

4.1.3.4.2.2.

Observations (191 classes)

Out of 191 classes observed Only 48 classes (25%) covering 20 schools (80%) had GHS, but 143 classes (75%) covering all 25 schools did not have, which meant that every school had classes without GHS. In each school, lower classes 1, 2, and 3 had GHS, as speech training was a subject in these classes (GHS was used to magnify the teacher's speech simultaneously to all students, without allowing the unnecessary sounds being magnified, unlike PHA). Of the 48 classes observed to be having GHS covering 2 schools (No. 4 & 18) had all sets working and 36 covering 18 schools (72%) did not. Out of these 36, 21 classes covering 7 schools (28%) had atleast one set working whereas 15 classes had none in working condition, covering 11 schools (44%).

Use of GHS

In all 23 classes, (12%), covering 9 schools (36%) which had GHS in working conditions, the GHS was used. In 12 classes (6%) covering 2 schools (No. 4 & 18) GHS was used during the full period, and students were encouraged to wear it even when they tried to remove them.

In the other 11 classes (8%), covering 7 schools (28%) students often removed the GHS, and did not wear it throughout one period (No. 1, 8, 9, 15, 16, 20, 23 & 25).

Interpretations

The underlying principle of using hearing aids whether

personal or group hearing aid) is that almost all hearing impaired have some residual hearing which can be used by amplifying auditory stimuli. But 96% of the principals and 87% of the teachers believed that almost all of the students could not hear at all. This fact explains the state of affairs regarding the use of hearing aids in the schools.

Teachers were unaware of the fact that just using the aid did not ensure a child's hearing, and that daily check of the aid before school work started, training the child to monitor the functioning of the aid and above all, providing interesting auditory stimuli to motivate the student to listen were all crucial for successful learning. Lack of knowledge of such aspects led 78% of teachers (whose students used PHA) and 77% of teachers (who had GHS) to be not sure of their usefulness. 11 classes (out of 23 which had GHS in working condition), not using GHS continuously throughout a period, also showed the negligent attitude of teachers to amplification. This attitude was also evident from the fact that although 68% principals procured PHA, only 40% encouraged students to wear, and only 6 (24%) schools were observed to have students wearing PHA!

4.1.3.5.

Development of Communication Abilities

The deprivation caused by a severe hearing loss adversely affects the communication of a person, thereby narrowing down his/her social experiences, limiting information and social contacts, and causing a total basic organismic deprivation. Thus, learning through hearing should become the central focus in any habilitative programme for the hearing impaired, to ensure independent participation in the hearing world to the fullest extent possible, considering the abilities of the child.

Development of communication abilities is what education of the hearing impaired is all about and was studied in depth by the investigator.

As proposed in the model, making the students ready to be integrated into the hearing world is the main goal of schooling of the hearing impaired, which logically means that development of communication abilities is the pivotal task in the education of these children.

Curriculum

The first three years of schooling (5 in case of schools with K G classes) were devoted to development of language and communication abilities. Separate periods for communication-skill development (Viz. Speech reading and speech were allotted in these classes, apart from language classes. But in higher

classes i.e. from Std. IV to X, (regular Ist to VIIth) such special period allocation was absent and the philosophy was that once the basic skill training was imparted in the lower classes, such specialized training was not required and that these skills should be integrated into teaching in general. Due to this difference, study of communication skill training in classes KG to III, and IVth to Xth (as separate from language teaching) has been presented separately.

Responses were collected from 25 principals, and 130 teachers through interviews, and from 250 parents and 750 students through questionnaires. In order to test the expressive and receptive skills of the students, the researcher carried out a few tests in selected schools and among selected sample of students. Apart from these a total of 416 observations were carried out totally in 191 classes across the 25 schools under study. Observations were carried out as per the framework. The following table No. 14 gives the schedule of observations carried out in the schools.

Table No. 14

Number of Preiods and Classes Observed

Standard	No. of periods observed in each school	No. of classes observed in each school	Total No. of periods observed in 25 schools	Total No. of classes observed in 25 schools
KG (only in 8 schools)	2	2	16	16
I	4	1	100	25
II	2	1	50	25
III	2	1	50	25
IV } }				
VI } }				
VII } }				
VIII } }	8	4	200	100
IX } }				
X } }				
Total No. of Periods observed -			416	
Total No. of Classes observed -			191	

Responses of principals are presented first, followed by those of teachers and students. Observation of the researcher are presented next in two sections i) In 1st, IInd and IIIrd standards ii) observations in IVth to Xth standards. These presentations are followed by the detailed account of the tests carried out to test the communication skill among the students. Interpretations are given after presentation of the study of teaching of language, which follows that of development

of communication abilities.

4.1.3.5.1.

Response of Principals (25)

As many as 80% of the principals admitted that speech training was stressed only in KG and 1st to IIIrd standards. All the principals admitted that their students could not speak clearly giving reasons of profound hearing loss and neglect of hearing aids.

A summary of responses is presented in a tabular form.

Response	Percentage of Response
Speech Training	
Stress on speech training in all classes	20 (1,4,16,18,23)
Stressed only in KG and I-II-III classes not in higher classes	80
Reasons	
1. Speech training not in the syllabus from IVth class onwards	32 (5,6,7,8,10,14,22,21)
2. Majority of Students could not hear, could not speak even with great degree of efforts.	36
3. No specific answer	12
Stress on Speech	
1. Speech not stressed as expression of students, because most of the students were profoundly hearing impaired and manual mode was inevitable.	52

Table Cont's..

2. Encouraged speech + manual mode and discouraged manual mode used without speech	48	(1,4,2,3,4,16 18,,20,23,24, 8,9)
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Reasons for low percentage of students who could speak

Most of the students came from very poor families, parents were uneducated, hence hearing loss detected late (age of 5, & 6) were late to join school, did not wear hearing aid. 100

Sign Language

Sign language used was not standardized. 100
Standardization of sign language necessary. 20 (1,2,3,8,9)

Not sure of standardization, fear of complete neglect of speech. 8

Awareness of Indian Sign Language

Aware of the Indian sing Lanaguae 8 (4,8)

Not aware 92

4.1.3.5.2.

Response of Teachers

As communication skills, namely speech, speechreading, were taught in K G and 1st, II, and IIIrd standards, teachers from these standards and teachers from the higher classess-IVth to Xth responded differently to the questions on these aspects. Hence these response are presented separately.

1. Responses of 50 teachers of KG to IIIrd standard.
2. Responses of 80 teachers experienced in teaching from IVth

to Xth standards.

Responses of Teachers (50) (of KG to IIIrd Standards)

Although it was stated by all teachers that listening skill and speechreading were trained as unitary modalities, only 8% of teachers revealed that listening skill was trained by use of different sounds. 92% of the teachers believed that most of the students could not be helped by using hearing aids and hence could not be helped to listen and speak.

A summary of responses is given in a tabular form below :--

Response of Teachers (50) KG to III)

Response	Percentage of Response	Percentage of Schools covered
Auditory Training and Speech Reading		
1. Listening skill and speechreading trained first as unitary modality	100	100
2. Listening to vowels, consonants, words and sentences in the syllabus, (Not any other sound) in the periods scheduled for this along with speechreading	92	96
3. Listening skill trained by using different sounds (mechanically and manually produced)	8	8 (4,8)
Residual Hearing		
All students, had some residual hearing which could be used by wearing hearing aid.	8	8 (4,8)
Most of the students had no hearing at all, and could not be helped by using hearing aid.	92	96

Hearing aids were useful only to those who were partially hearing.	24	32
Speech Training		
Imparted only during the scheduled periods, only text matter used for speech training, not functional speech.	88	96
Speech training, stressed in all periods and functional speech given importance.	12	8 (4,18)
Use of group hearing set		
Used only in the period of speech	36	36
Used in periods of speech and language. (others did not have group hearing set)	8	8 (4,8)
Use of speech trainer		
Used sometimes.	10	8 (4,18)
Never used, as most of the students were profoundly impaired, and speech trainer would not be of much help (Other schools did not have speech trainers)	64	64
Speechreading skill of students		
Students could not speech read an unfamiliar person's speech	100	100
Speech Intelligibility		
Speech of most of the students was unintelligible to an outsider.	100	100
Sign Language		
Sign language used, but not a standardized one, but is learnt through interactions with students.	100	100

Responses of 80 Teachers of Standards IVth to Xth

These responses are presented in a detailed way due to differences in responses.

Mode of Communication.

It was stated by all the 80 teachers that they used speech assisted by gestures, signs and written mode during teaching and that they encouraged students to give the answers orally rather than through gestures and signs and that despite their efforts students tended to use only signs and gestures.

As many as 76 teachers (95%) covering 23 schools (92%) reported that none gave answers orally in the class, and the other 4 teachers (5%) covering 2 schools (No. 4,18) stated that a few students (one or two) attempted to answer orally, although with difficulty and was unintelligible to an outsider. Reasons given by the teachers for poor speech of the students were congruent with those given by principals presented already.

Speech Training

To the question whether oral mode of interaction of students between themselves and with the teacher was emphasised in all periods and whether speech correction was done whenever required, as less as 6 teachers (8%) of 2 schools (No. 4,18) responded in the affirmative and the rest of 74 teachers (92%) covering the other 23 (92%) schools stated that speech was not emphasised during teaching, as syllabus could not be completed if time was spent on speech training. It was also opined by them

that as speech training was imparted during the first 3 years, it was not so essential in the higher classes.

A teacher from school No. 13 observed that if speech was given so much time, then there would not be enough time for 'education'.

Seventy eight teachers (97%) covering as many as 24 schools (96%) observed that they gave more emphasis on comprehension of the students, by using all possible modes including speech and drawing, rather than using only oral mode.

A teacher from School No. 2 expressed the view that students should know what is to be communicated before communicating.

It was stated by 2 teachers (3%) covering 1 school (No. 18) that oral expression and comprehension were both emphasised.

Reasons for Inadequate Emphasis on Speech Development

The stand explicated by 76 teachers (95%) covering as many as 22 schools (88%) was that aims of education of hearing impaired students were developing functional literacy and expertise in a suitable vocation so that the students could earn a living, that most of the students came from poor families for whom education was only an incidental benefit besides the great relief from free lodging and boarding, and that for such aims communication ability was not essential.

Sign Language

It was stated by all 80 teachers that their students were not trained to use sign language, as there was no standard sign language in Gujarat, and that the signs which were used, got evolved arbitrarily over a period of time, and were used by teachers and students. All the 80 teachers were in favour of standardizing the sign language.

4.1.3.5.3.

Responses of Students

Responses of students reinforced those of teachers and principals. 85% of the students could not speak clearly, 89% used manual mode in the class, and none used to speak, although 71% of them found it difficult to communicate to a hearing impaired friend from a different region, due to difference in system of signs used by him/her.

A summary of responses is given in a tabular form below.

Responses of Students (750)

Response	Percentage of Response	Percentage of Schools covered
Speech Intelligibility		
Could not speak as clearly as could be understood by a new person.	85	60
New person could understand what was spoken.	2	4
No response	13	
Interaction in the class		
Showed gestures and signs, speech not practised while interacting in the class.	89	84
Trained to speak while interacting in the class.	11	16 (4,18, 16,23)
Speech correction		
Done in the class	11	16 (4,18, 16,23)
No speech and no speech correction.	55	76
No response.	34	
Attitude to oral mode.		
1. Did not like to speak.	100	100
2. Manual communication was much easier.	85	100
3. Did not give any reason.	15	16

Table Cont's..

Manual Mode

a) Found it difficult to communicate with a new hearing impaired student from a different region as signs used were different.	71	100
b) No response.	29	100

Speechreading

1. Could not speechread a new person's speech.	81	100
2. No response.	19	32

4.1.3.5.4.

Observation of Development of Communication Abilities

As has been already stated, communication skills viz. speechreading and speech were trained only in KG to Std.III, as subjects. In higher classes IVth to Xth (regular Ist to VIIth) communication skills were supposed to be integrated in the curriculum without scheduled periods. Hence observation was carried out specifically in the scheduled periods in the lower classes (KG to IIIrd) and in different subject periods in higher classes to study the extent of training in communication skills imparted. These observations are presented separately due to the difference in the underlying principle.

Observations in the standards I, II and III are presented first, with a tabular representation of these alongwith observations in KG, followed by those in standards IVth to Xth.

4.1.3.5.4.1.

Observation of Development of Communication Skills in Standards I, II, and III

The investigator observed 4 periods in Ist standard, and 2 periods each in IInd and IIrd standards, making a total of 8 observations in each of the 25 schools. Thus, on the whole 200 observations were made across the 25 schools.

Speech and Speechreading

Speech and speechreading were taught separately as two subjects in Standards I, II, and III in all schools (25) under

study. Auditory training was regarded as part of speech training and hence was not taught as a separate subject.

In Standards I, II and III, both individual speech training and group speech training were carried out in all 25 schools.

Individual Speech Training

Each student was individually made to utter vowels and consonants, followed by words, seeing the teacher's lip movements, feeling chest and throat of the teacher (vibrotactile sensation), by listening to the sound of the teacher, and by seeing the facial movements of self in a mirror placed in front of the student. Sense of vision, sense of touch and sense of hearing -- all the three modalities were observed to be used simultaneously in 23 schools (92%) where most of the students did not wear hearing aids. In 2 schools (No. 4,18) where most of the students wore hearing aids, sense of hearing was trained to be used as a unitary mode and also along with sense of vision and vibrotactility.

Group Speech Training

Out of the 75 classes observed in (Standards I, II and III) across the 25 schools, only 21 classes (28%) covering 7 schools had at least one group hearing set (GHS) in working condition, and these were observed to be used during speech training period only in 6 classes, covering 2 schools. While using GHS, the teacher spoke through her/his microphone and these

utterances were heard by the students through their earphone connected to the teacher's microphone.

In all classes it was observed that sense of vision and sense of hearing were used simultaneously, and that the teachers used signs and gestures for every utterance they made, and that student's comprehension was tested by their response through signs and gestures, but not through speech.

Rhythm of Speech

In 16 observations (8%) covering 2 schools (No. 4,18) it was seen that the students were trained to speak in rhythm, with emphasis on timing of words and their voicing, so that the meanings were expressed fully.

eg. " Your dress / is colourful"

Slight pause in between 'dress' and 'is', showing the rhythm with the teacher's arm in a nice, graceful movement while speaking.

(This was essential because hearing impaired generally tended to speak all words at a stretch with no rhythm, as they did not hear their own speech well)

Students' Response to Auditory Training

In 24 observations (12%) covering 3 schools (No. 4,16,18) it was observed that listening to sound was trained as unitary modality, (avoiding the possibility of speechreading, by covering the teacher's mouth) and that in 8 observations in one school (No. 4) it was seen that students attempted to respond

by listening.

Listening skill was not trained as a unitary mode in the other 176 observations (88%) in 22 schools (88%) but was trained as a mode clubbed with vibrotactile and visual modes.

Training to Discriminate Sound

In 16 cases (8%) covering 2 schools 7 (No. 4, 18) students were trained to discriminate between different sounds produced manually or mechanically (tape recorder). This was not observed in the other 23 schools (92%).

Speechreading

In all observations it was seen that teachers 'spoke silently to train the students to speechread, in the periods of speechreading. In only 16 observations (8%) covering 2 schools (No. 4,18) was it seen that casual speech (conversational) was used to train speechreading. In all other observations, set pattern of training was observed. (The teacher saying commands like 'bring the book', 'bring the chalk', etc., or saying the names of students or things which the students were asked to write on the board, etc.)

Speech Training

In 184 observations (92%) covering 23 schools (92%) speech training was restricted to words and sentences of the text and functional speech or conversation was not observed.

In 16 observations (8%) covering 2 schools (No. 4,18)

conversations between the teacher and students regarding the day's events, about scenes on the road while coming to school, scenes in the hostel etc. were carried on in speech training periods.

Instilling Interest to Listen

In all 192 observations (96% covering 24 schools) students were not provided with any motivating experience in order to develop interest in them to listen.

In one school (No. 4) where 8 observations were carried out, teachers were seen to produce sounds of animal along with oral description of the animal and visuals (pictures) of the same. They also sang songs and danced along with the students all of which helped to develop interest in the children to listen.

In all the other 24 schools, students seemed to be indifferent, did not respond to any speech, and those students who wore PHA, tried to remove them.

Use of Speech Trainer

In no class was a speech trainer seen to be used during speech training although 18 (72%) schools had one or more than one speech trainers.

Synthetic/Analytic Method

In 197 observations (96%), covering 24 schools speech training started with consonants and vowels proceeding to words

and sentences, which was essentially analytic method.

In 8 observations covering one school (No. 4), speech training started with words and sentences in conversational way, with subsequent emphasis on the respective consonants and vowels, in these words and sentences.

Concept of 'Speech' in schools

What was conceived as speech in 23 schools (92%) was uttering the words and sentences of the text book -- as this was the limited curriculum for speech training followed in all these schools. Hence, in as many as 184 observations (92%) carried out in these 23 schools, the teachers reported that their students could 'speak' and made them utter the words and sentences repeatedly done in the periods of speech training. Functional speech did not form a point of emphasis in any of these schools to the extent that in none of these schools could anyone answer simple questions asked by the investigator like 'what is your name', 'which is your village', 'what is your mother's name', etc.

Summary of observation is presented in a tabular form along with observations in KG classes. (one observation each in KG I & II, in each of the 8 schools that had KG, making a total of 16 observations.

8

**Observations of Development of Communication Abilities In
KG, and Classes I, II & III**

Observations	Percentage of observations	Percentage of schools covered (with the identifi- cation number of schools)
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Rhythm of Speech

Students trained to speak in rhythm	8	8 (4,18)
(Not observed in other schools)	25 (KG)	25 (4,18)

Auditory Training

1. Trained as a unitary modality	12	12 (4,16,18)
(Not observed in other schools)	25 (KG)	25 (4,18)
2. Students responded by only listening	4	4 (4)
(Not observed in other schools)	13 (KG)	25 (4,18)
3. Students trained to discriminate between different sounds produced manually and mechanically (taped sounds)	8	8 (4,18)
(Not observed in any other school)	13 (KG)	13 (4)

Speechreading

1. Only textual matter used for training speechreading skill.	92 75 (KG)	92 75 (1,2,3, 16,20,23)
2. Casual speech used for training speechreading skill.	8 25 (KG)	8 (4,18) 25 (4,18)

Table Cont's...>

Speech Training

Restricted to textual matter	92 75 (KG)	92 75 (1,2,3, 16,20,23)
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Conversation carried out to train the students to speak	8 25(KG)	8(4,18) 25 (4,18)
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Use of Speech Trainer

(Not observed in any)

Method of Teaching

Started with vowels & consonants proceeding to sentences.	92 75 (KG)	92 75 (1,2,3, 16,20,23)
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Started with sentences in conversational way later emphasising consonants and vowels	8 25 (KG)	8(4,18) 25 (4,18)
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Concept of Speech

Speech conceived as pronunciation - or utterances of vowels and consonants, words, and sentences of the text.	92 75 (KG)	92 75 (1,2,3, 16,20,23)
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Speech conceived as casual conversation - functional speech	8 25 (KG)	8(4,18) 25 (4,18)
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4.1.3.5.4.2.

Observation of Communication Skills in Classes IV to X

In higher classes, (Std.IV to X - regular I to VII) the philosophy was that communication abilities of students should be trained in all periods, and hence no specific periods were allotted for these. Thus different subject periods were observed in the standards offered in the 25 schools, and communication - skill training in these periods was studied.

Two periods each of Gujarati, Maths, Science and Social Studies were observed by the investigator in each school, making 8 observations (covering 4 classes) in one school, and a total of 200 observations in all 25 schools. As the classes offered in different schools were different, available classes were observed.

Mode of Communication by Teachers

Only in 16 observations, (8%) covering 2 schools (No. 4,18), was the teacher observed to use speech as the predominant mode of communication along with signs and gestures and written mode.

In 128 observations, (64%) covering 16 schools (64%), although speech was used, the emphasis was on gestures and signs.

In the other 56 observations (28%) covering 7 schools (28%) (No. 5,6,7, 10,13,14,22) speech was not used as a mode of communication.

Mode of communication by students

In 184 observations (92%) covering 23 schools students predominantly used signs and gestures.

In 16 observations (8%) covering 2 schools (No. 4,18) students used speech as a mode of responding to the teacher, alongwith gestures, signs and written mode, although their speech was not intelligible to the investigator.

In all the observations, it was seen that between themselves, students communicated only by showing signs and gestures.

General Principle of Communication

In 184 observations (92%) covering (23 shcools) (92%) where students communicated only through gestures and signs and where teachers communicated through either or both speech and gestures, the principle followed was that students be helped to comprehend through all ways suitable to them, and be allowed to express in whichever mode they wanted. In other words, oral mode as a receptive and expressive mode was not emphasised in these 23 schools.

In 16 observations, (2 schools, No. 8,14) where students attempted to speak, and where teachers emphasised on speech while communicating to the students, the principle was that speech be an important part of receptive and expressive modes.

Observations in classes IV to X have been summarised in the following presentation.

Observation of Development of Communication Abilities in Classes IVth to Xth

Response	Percentage of Responses	Percentage of schools Covered.
Mode of Communication by Teachers		
1. Speech-predominant mode	8	8(4,18)
2. Speech with signs and gestures - speech de-emphasised.	64	64
3. Speech Not used	28	28(5,6,7,10,13,14,22)
Mode of communication by Students		
1. Signs and gestures - predominantly used while interacting with teachers	92	92
2. Speech also used though not clear with manual mode (while interacting with teachers).	8	8(4,18)
3. No speech used when students interacted among themselves.	100	100
Main Emphasis		
1. Oral mode as a receptive and expressive mode not emphasised	92	92
2. Speech emphasised as a receptive and expressive mode.	8	8(4,18)

Problems with Sign Language

The predominant mode of comprehension of students was manual i.e. use of signs and gestures by the teacher in majority of observations. The fact that sign language used was not a scientifically evolved one corresponding to the complexities of Gujarati language, led to many pitfalls in the communication process. Some of the observations are presented in the following paragraphs :--

- i) Same signs were used to express two different words :
e.g. next and tomorrow
flow and river
sea and pond
- ii) Same teacher used different signs to express the same word at different times :-
e.g. Teacher
all together
travel
- iii) Same words were expressed differently in different schools.
e.g. days of a week
colours
fruits
vegetables.
- iv) Complex Gujarati grammar was very difficult to be expressed completely through unscientific signs in vogue :
e.g. Function words like conjunctions propositions etc were

not signed.

For Example :-

'Once upon a time there lived a king called Akbar who was very popular',

This was expressed through signs as

'a king -- Akbar -- popular'.

Only the content words were signed. There seemed to be more of omissions than expressions, when ideas were conveyed through manual mode in majority of the classes.

v) Different shades of meaning could not be communicated effectively :-

e.g. In a social studies class, 'gutter water' had to be signed. The sign for water used generally showed potable water, which could not be used to sign gutter water.

vi) When emphasis had to be expressed, or when certain meanings had to be asserted, signs failed, which was possible in spoken language by rhythm and intonations.

e.g. When a teacher wanted to stress 'angry' in the sentence,

'The angry father hit the child',

he simply failed to do so using signs.

vii) Intentions of sentences, whether it be a question, an exclamation, surprise, command, or cynicism, could not be expressed.

viii) Emotionality in a sentence could not be expressed, whether it be sympathy, love, tenderness, or anger.

x) Signs caused ambiguities, and ideas were misinterpreted many times.

e.g. To express -

'there is an island in the river' -

the teacher showed the sign of 'flowing' for 'river' - and

it was understood as -

'the island has been overflowed'

Similarly.

'We have made a new roof'

was expressed with roof signed as house, and it was

understood as

'we have made a new house'.

Tests administered in class Xth (regular VIIth) of 14 schools to study the communication skills, are presented in the following section along with results and interpretations.

Only Xth standard (regular VIIth) students were selected for the test on the principle that the communication skill be tested after maximum exposure to the school system; Only 14 schools offered Xth standard and hence Xth standard students of only these 14 schools were selected for the testing. These tests are presented in the following section.

4.1.3.5.5.

Tests to study the Receptive and Expressive Skills Of Communication of Students

(See appendix No. 13, 14, 15 for these tests)

Objectives of the Tests

Objectives of administering the tests were :-

- To study the speechreading skill
- To study the intelligibility of speech
- To study the preference for oral mode of expression.
- To study the comprehension through oral mode.
- To study the comprehension when oral mode was assisted by signs and gestures.
- To study the comprehension when oral mode was assisted by signs - gestures and written expression.

Administration

The Gujarati translation of the tests were used for the study. Students were explained in detail before administering the tests about what they had to do. Administering of the tests was done by the respective teachers to avoid the effect of unfamiliarity with the investigator or of the limitation of the investigator in the specialized system of communication in vogue in these schools.

All the students of Xth standard present were selected for the study. The total number came to 118.



4.1.3.5.5.1.

Test to Study Speechreading Skill

The students were instructed that they had to see the lip movements of the teacher and understand the question and that they could give answer by writing.

The teacher asked the questions silently taking care about the speed of utterance of each word, and ensuring that each student could see the face of the teacher properly. All questions were uttered thrice to help the students in speech reading. Enough time was given after each question so that everyone could answer.

The criterion of assessing the answers was whether the student could speechread and understand the questions.

The questions and percentage of correct responses are presented in the following page.

Questions and Responses of Test of Speechreading

Questions	No. of students who could speech read	percentage
1. How do you come to the school ?	28	24
2. Can you understand what I am saying ?	33	28
3. What work does your mother do ?	35	30
4. What is the name of your village ?	28	24
5. What is your surname ?	37	31
6. Do you like to study ?	25	21
7. Which festival do you like the best ?	22	19
8. Which is the food item that you like the best ?	29	25
9. Do you like to see Gurba ?	31	26
10. Do you dance during Gurba ?	29	25

The results are self explanatory. More than 65% of the students could not speechread such simple questions and that too when their own teacher asked them, then what to speak of speechreading a stranger's questions ! All the schools had more or less the same. Percentage of result and hence each school's result is not separately presented.

4.1.3.5.5.2.

Test to Study the Intelligibility of Speech

Procedure :--

The teacher was asked to write down the questions on the board and to explain the question in the modes that students understood, to ensure complete comprehension by students, and then students were asked to answer orally. If the investigator could understand what the speaker wanted to convey, he/she was judged to have intelligible speech, even if all the words were not understood.

The questions and responses are presented in the following section.

Questions and Responses To Test of Intelligibility of Speech

Questions	No. of students who answered clearly	No. of students whose answer was not clear.	No. of students who did not attempt.
1. Which game do you like the best ?	48 (41%)	43 (19%)	27 (23%)
2. What problem do you have when you go to buy something from the market ?	22 (19%)	66 (56%)	30 (25%)
3. How do you face the situation when you have any problem while doing shopping ?	18 (15%)	70 (59%)	30 (25%)
4. what will you do if you see a sick person lying on the road ?	17 (14%)	66 (56%)	35 (30%)
5. What according to you is the most difficult problem of being unable to hear well ?	35 (30%)	58 (49%)	25 (21%)

Among the 14 schools, 2 schools, (No. 4,18) which had majority of the students wearing PHA, and where there was emphasis on listening and speech of the students, performed well. One of the schools (No. 4) was represented by 7 students among whom speech of 6 was intelligible and in the other school (No18) speech of 5 among 8 was intelligible. This was better than performance of all the other schools, all of which had less than 50% with intelligible speech (according to the test). These schools did not have any of the students wearing PHA (in Xth class).

4.1.3.5.5.3.

Test to Study the Preference for Oral Mode

All the students were asked to give (in whichever mode they liked) 5-8 sentences about celebration of their festival last year (Diwali, X-mas, Id or whichever). The question was written on the board and explained by the teacher. It was seen that only 6 students (8%) tried to utter a few words along with gestures while responding, and these words were absolutely unintelligible. These 6 students were from the 2 schools (No. 4,18) which emphasised speech training in their curriculum, and these students also had PHA. The fact that their speech was far better intelligible in the previous set of question - answers, could be because in those, the investigator had an idea of what to expect as answer and in this case most of it was new information.

All the other students adhered to manual mode, and to make the matter clear, tried writing in their book, but speech was not attempted at all - most of these students did not wear PHA.

The results pointed to the fact that given a chance, students preferred to stick to sign language rather than spoken language.

4.1.3.5.5.4.

Test to Study the Comprehension of Students when Oral Mode is used

Procedure :--

The teacher was requested to ask the following questions without any gestures or signs or written support and students were asked to answer in any mode they liked. All the students answered by showing gestures and by writing on paper. The criterion for assessment was whether they had understood the question or not, which could be judged from the type of answers.

Questions and responses are given in the following section :-

**Questions and Responses of Test of Comprehension
of Oral Communication**

Questions	No. of students who un- derstand the question.	Percentage
1. Have you studied in any other school ?	24	20
2. At what age did you join this school ?	28	24
3. Have you gone out of Gujarat ?	28	24
4. Have you failed in any class ?	24	20
5. In which subject do you get the highest marks generally ?	19	16
6. Is your house in a town or a village ?	32	27
7. In which subject do you get the least marks generally ?	33	27
8. Do you read your text books ?	18	15
9. Do you understand what hearing people speak to you ?	24	20
10. What do you feel when you do not understand ?	33	28

The poor performance of this test supported the observations regarding the lack of stress in oral mode of communication, rooted in the inadequate auditory training in lower classes. All the students uniformly did poorly in the test of comprehension of speech, unlike in the test of speech, where students of 2 schools (No. 4,18) did better than their counterparts in the other schools.

4.1.3.5.5.5.

Test to Study Comprehension of Students when Oral and Manual Modes are Used

Procedure :--

The same set of questions (test No. 4.1.3.5.5.4.) were put by the teacher by coupling the uttering of the questions with gestures and signs. (The questions are not repeated here). Students were asked to answer in any mode they liked. All the students answered by showing gestures and/or signs, and also by writing. The criterion for assessment was whether they had understood the question or not, which could be judged from the type of answers.

Results of Test of Comprehension of Oral + Manual mode

	No. of students who understood the question	Percentage	Percentage when only oral mode was used (in the previous test)
1.	60	51	20
2.	61	52	24
3.	76	64	24
4.	66	56	20
5.	19	67	16
6.	81	69	27
7.	76	64	28
8.	74	63	15
9.	68	58	20
10.	63	53	28

The results obviously showed that by supporting the oral mode with manual mode students' comprehension improved to a considerable extent. The results were uniform among all the schools.

4.1.3.5.5.6.

Test to Study Comprehension of Students by using Oral, Manual and Written Modes :--

Procedure :--

The same set of question (test No. 4.1.3.5.5.4.) asked in the previous tests was repeated with written mode supporting

the oral and manual mode. (The content words were written on the board). Procedure remained the same as regards the rest of the modalities.

Response to Test of comprehension of Oral, Manual and Written communication :

	No. of students who understood the question	Percentage of students who understood	Percentage of students who understood oral + manual mode	Percentage of students who understood oral mode
1.	84	71	51	20
2.	76	64	52	24
3.	76	64	64	24
4.	84	71	56	20
5.	94	80	67	16
6.	98	83	69	27
7.	89	75	64	28
8.	86	73	63	15
9.	89	75	58	20
10.	89	75	53	28

The results clearly showed a good degree of improvement in the number of students who comprehended the questions when all the three modes were used. Here again the results were uniform in all the schools, with only slight variations.

The results of the tests of receptive and expressive skills of communication helped to draw the following conclusions:

1. The speechreading ability was generally poor among students of all schools.
2. Intelligibility of speech was generally poor - except in 2 schools (4,18) where most of the students wore PHA and where speech training was emphasised.
3. When given a choice, all students generally preferred manual mode, although students of the 2 schools (4,18) which emphasised speech and use of PHA by students, did attempt to speak alongwith manual mode.
4. The number of students who comprehended what was told to them increased when oral mode was supplemented with manual mode, which again increased by supporting with written mode. These differences were also uniform in all the schools.

All these results supported the observations made already by the investigator and the inferences drawn therein :--

1. Lack of emphasis on auditory training and speech training which affected language development and hence speech reading also.
2. The vital problem of de-emphasising the use of hearing aids.
3. Excessive dependence on manual mode.

The findings on development of communication skills

are followed by those on language teaching in the schools. Interpretations are presented after the section on teaching of language, because language development and communication skill development are closely interlinked.

4.1.3.6.

Development of Language

As far as the pedagogy is concerned, language should be integrated with the child's total development. It is an intrinsic part of his daily life, and should be practised, enlarged upon, and developed throughout his total school experience.

One of the basic percepts in the teaching of language to hearing impaired is that, the sense of vision should be fully exploited to compensate for the defective sense of hearing. This importance of visual sense does not mean an over-emphasis on sign language and other manual modes. The point is that the child should feel and see and experience before language pertaining to these themes are to be learnt.

As has been mentioned under curriculum, the classes KG to IIIrd followed a specially prepared syllabus for Gujarati (see appendix No. 19 for this special syllabus). Apart from Gujarati language, the basics of Hindi and English are also taught. But the class in which these are started differ from place to place and so also the content matter. For the present study, only Gujarati teaching was studied by the investigator.

Teaching of language and development of communication skill are mutually dependent processes that go on simultaneously in the curricular transaction of the schools. But, as these two aspects were separately scheduled in the syllabus of lower classes KG to Std. III (regular KG) and were later integrated in language classes from IVth to Xth (regular 1st to VIIth) they had to be studied separately, and hence language teaching has been presented separately. The discussions in the foregoing section of 'Development of Communication Abilities', decide the effectiveness of language teaching to a great extent and have been referred to briefly wherever necessary. For details, the foregoing section is to be perused, with reference to the points discussed in this section on language teaching.

Language teaching was studied by observing classes in all 25 schools and by interviewing teachers of the schools using a semi-structured interview schedule.

To enrich the findings, few tests were carried out, which were constructed and administered by the investigator. The purpose of these tests was essentially to study the extent to which students could read, write and comprehend Gujarati.

Out of 130 teachers who were interviewed 100 teachers answered questions of language teaching as they were experienced in teaching language.

The following order has been adhered to, in the presentation of findings.

- Observations of Language Teaching in KG classes
- Sample of observations
 - K G I
 - K G II
- Observations of Language Teaching in I, II and III.
- Sample of observations
 - Class II
 - Class III
 - Class VIII
- Language Teaching in higher classes - observations
 - Prose
 - Grammar & composition
- Sample of Observations.
 - Class IV - Grammar
 - Class VII - Prose
- Response of Teachers of Class I,II, III.
- Response of Teachers of Class IV to X.
- Tests to study language abilities
- Interpretative discussions.

Observations of Language Teaching

Schools of hearing impaired followed a specially prepared course of language in classes I, II, and III, essentially meant to develop vocabulary and basic linguistic structures which would make the students ready for the course of regular schools. A vocabulary of 3500 words was the target set to be achieved by the course of these 3 years, before starting 1st standard syllabus of regular schools.

In the schools with KG classes (8 only) the course outlined for the 3 years were spread out across the 5 years (2 years of KG + 3 years).

As only 8 schools had KG classes, observations of KG classes and standards I, II, III, (Common to all 25 schools under study) are presented separately.

Language teaching in classes IV to Xth (regular 1st to VIIth) was based on the text books of the regular schools of the state and are presented separately.

K G Classes :-

8 schools, (32%), (No. 1,2,3,4,16,18,20,23) (all aided) offered K G Classes. One period of observation each in KG I and II was carried out in each of the school making a total of 16 observations.

Standards I, II and III

Standards I, II and III had special curriculum, and 4 observations (2 in class I, 1 each in II & III) were carried out in each of the 25 schools making a total of 100 observations.

Standards IV to X (Regular 1st to VII)

As upgrading was at different stages in different schools, classes offered differed from V to X across 25 schools studied. Only 14 schools (56%) offered classes upto Xth (regular VIIth) and 3 schools (12%) had SSC programme. Hence observations in this section were carried out in the classes

available. From each school one prose and one grammar period were observed, making a total of 25 prose and 25 grammar observations.

+Number of Observations of Language Teaching

Class	No. of periods in each class	Total Number of periods in 25 schools.	
K G I	1	8 (only 8 schools had K G	} 16 observations
K G II	1	8 (---do---)	
Class I	2	50	} 100 observations
Class II	1	25	
Class III	1	25	
From class IVth to Xth (regular)	Grammar/ composition	1 25	} 50 observations
1st to VIIth	Prose	1 25	
Total			: 166 observations

4.1.3.6.1.

Observations of Language classes in K.G.

Only 8 schools had KG classes, (No. 1,2,3,4,16,18, 20,23) (32% of Sample). A total of 16 observations were carried out in these 8 schools totally.

The aim of language classes in KG classes was vocabulary development. Curriculum of KG I and II had specific set of vowels and consonants followed by words and sentences formed from these. The vowels taught in KG I were अ, आ, ई, ए, उ, ओ and in KG II were ऐ, औ, ए, औ. The consonants were प, त्त in KG I and प, त्त, र, ल, ल in KG II.

These were decided according to difficulty level of pronouncing these vowels and consonants, and was uniformly followed in all schools.

Use of visual aids was observed in only 10 classes (63%) covering 4 schools (No. 4,16,18,23). They were all charts showing the pictures of vegetables, fruits, animals, birds, family members, etc. Things in the classroom were shown to build up vocabulary on the names of these.

The common observation except in 2 schools (25%) (No. 4,18) was that pronunciation of these words was not trained. This also had direct relation to general lack of adequate auditory training and speech training given in these schools and the fact that most of the students did not use PHA (personal hearing aid).

In 2 schools (4,18) students were made to speak out the word individually although the clarity was poor. In the other 6 schools (No. 1,2,3,16,20,23) the name of the thing or person, or small sentences like 'give me a toy' etc. were written on black board (visual was shown along with this, wherever needed) and

'then students were made to write down these on their slate and made to say the word or sentence in chorus, with no emphasis on right pronunciation or clarity.

The sentences that were commonly observed in all schools were -

- Sentences starting with 'give me.....'

e.g. 'give me a book'

'give me chalk'

or

- Sentences starting with 'bring me.....'

e.g. 'bring me water.....'

'bring me your slate'.....

All schools had a routine of utilizing the first 5-10 minutes daily for what they called diary. During this exercise they would learn -

- the day and date of that day
- of the previous day
- of the following day.
- the weather.
- Number of students present
- Number of students absent
- Names of students present and absent and the total number.
- the main news of the day (simplified version)

The teacher said all these and explained them with help of gestures and signs and later wrote them on the black board.

Students imitated the teacher showing gestures and signs. But none of the students attempted to 'speak'. Students' understanding was evaluated only through the signs they showed.

In 2 schools (4,18), students were made to say whatever was written down on the board, individually.

It was observed in these two schools that teacher engaged in conversations with the students asking them questions like.

'What did you eat in the morning ?'

'What did you see on your way to school ?'

'what did your rikshaw uncle tell you today?'

'Is it hot today?' etc.,

Students were encouraged to speak. Whatever incomplete words were uttered by students were seized by the teacher, put into complete sentence, repeated by the teacher and written on the board. Thus a 'mirror' was provided to the student about their own responses, by the teacher doing a double part - viz. that of asking the question and of answering the question. It was reported by the teacher that a record of such 'conversations' was maintained and used as reading material for each student.

Small simplified versions of stories was a method of teaching new words to the students as observed in 2 schools (4,18), Stories written down on charts with visuals were used ('Fox and the Crow', Rabbit and the Tortoise', Lion and the Rabbit', 'Two Friends') The teachers were observed to dramatise

the story by voice control and mimiking. The new words were written on the board and students were made to say these individually.

It was reported by the teachers of these schools (4,18) that a week's teaching was planned two weeks in advance along with the relevant teaching aids, and that a record of the plans and the activities was maintained by teachers.

A sample each of observation done in KG I and II is presented in the following section. Observations as recorded in the class have been presented with Gujarati translated into English (put into brackets). Blackboard work has been presented on the right side of the page.

K G I

No. of Students	14
No. of students wearing hearing aid	4
Group hearing aid	Not used

Teacher recorded attendance of all students. 12 students responded by speechreading (responded when teacher told their names silently facing them) and 2 students responded by listening.

Teacher wrote on the board.

(Today is 22nd
Today is Friday,
Yesterday was Thursday
Tomorrow will be Saturday.
14 students are present
in the class today.
Today, it is not cold).

— આજે ૨૨મી તારીખ છે.
— આજે શુક્રવાર છે.
— ગઇ કાલે ગુરુવાર હતી.
— આવતીકાલે શનિવાર થશે.
— આજે વર્ગમાં ૧૪ બાળકો
હાજર છે.
— આજે ઠંડી નથી.

Teacher asked the students to read each sentence. (They read together, but nothing was clear). Teacher explained the words with gestures and signs. Students also imitated these. Teacher then, elicited names of fruits and vegetables from students and most of the students responded by showing gestures and signs, where as some wrote on the slate and showed.

Teacher wrote them on the black board.

Fruits	Vegetables.
Apple	Potato
Orange	Onion
Grapes	Cabbage
Mango	Brinjal
Chikku	Cauliflower

ફળ	શાક
સફરજન	બટાકા
નારંગી	કુંભાળી
ગ્રાપી	કોબીજ
કેરી	રીંગાણા
ચીકુ	કુલાવર

Teacher once again showed signs of all these and made the students imitate and later made them write on the slate.

(The use of visuals was conspicuously absent and the lack of encouragement given to the students to speak was clearly evident.)

No. of Students	12
No. of students wearing hearing aid	10

Teacher took the roll call. Those students who were not able to listen and respond, were helped to lipread and answer. Out of 12 present 8 students could answer. Teacher had called out the names from between so that the order was changed. Then one student came into the class. When teacher asked him the reason he said his rickshaw dashed against a cyclist. Conversation that went on between the teacher and the student (Ajay) is presented below.

Teacher : "अजय, डीम भौडुं थयु?"

(Ajay, why are you late ?)

Ajay : "रिक्शा, साईडल....."

(Showed signs for collision)

[Rickshaw -- cycle -- (unclear)]

Teacher : "रस्तामां रिक्शा साईडलवाला जीडे अथसाई?"
"तो, तेथी भौडुं थयु?"

(Rickshaw dashed with a cyclist on the way,

So, you became late ?)

The boy was made to say this, his speech was reasonably intelligible. Teacher said this to the whole class and wrote the full sentence on the black board. The whole period was spent

4.1.3.6.2.

Observation of Language classes in Standards I to III, and of Prose lessons in Standards IV to X

From the section of standards I,II and III, 2 periods from standard I, 1 period each from II and III, making 4 observations in each of the 25 schools were carried out. The total observations covering all the 25 schools came to 100. One period of prose lesson from the higher classes (IV-X) was carried out in each of the 25 schools, making 25 observations. These observations have been presented together in the following section. Observations of 'lower' class (I,II, III) are presented first with observations in 'higher' classes.

Reading

Only in 8 observations (8%) covering 2 schools (No. 4,18) of lower classes and 2 (8%) of higher classes, was the students made to read the matter aloud, and their pronunciations were corrected by the teacher.

Explanations

In 84 observations (84%) covering 21 schools (84%) (of lower classes) and 18 observations (72%) of higher classes covering 18 schools (72%) word meanings, including the grammatical structures involved were explained. But in 16 observations (16%) of lower classes covering 4 schools (No.6,7,10, and 14) and 7 observations (28%) of higher classes covering 7 schools, prepositions and articles, remained unexplained.

Comprehension of Students

In 92 observations (92%) of lower classes and 23 observations (92%) of higher classes covering 23 schools evaluation of the students' comprehension was done on the basis of their responses through gestures and signs and written matter (on the board).

Basic Method of Teaching

In 92 observations (92%) of lower classes and 23 observations (92%) of higher classes covering 23 schools the steps involved in teaching were :-

- Writing down the matter on the blackboard.
- Explanation of the meanings with simpler words, opposite meanings, and drawings.
- Giving a summary of meanings of a paragraph.
- Evaluating the comprehension of the paragraph through students' manual mode of expression.

In 8 observations (8%) of lower classes and 2 observations (8%) of higher classes covering 2 schools (No. 4,18) the steps involved constituted a conversation style whereby themes of the text were dealt through conversations relating to the students' experiences wherever possible (eg. fever, guest, mother etc.).

Teacher's Ability to catch on the Events in the classes

In 8 observations (8%) of lower classes, and 2 observations (8%) of higher classes covering 2 schools (8%) No. 4,18) teacher was seen to build up vocabulary of the students through events that occurred in the class.

These events were :-

- A bird flew into one of the classes
- One of the children started crying as she was ill.
- A plane flew past the area with roaring sound

In these classes the teacher was sensitive enough to attract children's attention to these events and to build up vocabulary on these.

Repeated exercise with new words

In 32 observations (32%) of lower classes covering 8 schools and 7 observations (28%) of higher classes covering 7 schools new words were explained by using them in different sentences to explain the fine shades of meanings, which were constructed by the teacher in majority of the cases, with no participation by the students..

In the other 68 observations (68%) covering 17 schools inadequacy of explanation and practice to use in sentences was clearly seen.

Polarity of Meaning

In all observations, a word meaning was explained giving opposite meanings as well (eg. fat x thin., short x long etc.)

Students' sentence construction

In 8 observations (8%) in lower classes and 2 observations (8%) in higher classes covering 2 schools (No. 4,18) students were encouraged to give their own sentences during exercise with new words, whereas in the other observations, teachers themselves gave sentences.

Building on Conversation (Seizing Method)

In 8 observations (8%) of lower classes covering 2 schools (No. 4,18) and 1 observation (4%) in higher classes of one school (No. 4,) where language teaching included conversations, teachers caught on the faintest, incomplete utterances of the students and clothed them with language. Such conversation were put into speech balloons on the board and students were made to read these. These were also recorded in the diaries of students.

In the other 92 observations (92%) of lower classes covering 23 schools and 24 observations (96%) of higher classes covering 24 schools, language teaching was essentially content based, with no stress on language as a vehicle of communication.

Rhythm and Accent

In 8 observations (8%) of lower classes, covering 2 schools (No. 4,18) and one observation (4%) in 1 school (No. 4) of higher classes, rhythm and accent were considered important while speaking (both by teachers and students). While reading a lesson, students were trained to keep rhythm and to give accentuation wherever needed.

E.g. Mother gave/me a present.

The mad dog/bit the child.

Pause after 'gave' and 'dog', was emphasised and the lined words were accentuated, with equal pause

'Mother' (pause) 'gave me' (pause) 'a present',

rather than reading as

Mothergave --- mea ---- present' or

The ----- maddog ---- bitthe child,

Such emphasis on rhythm and accentuation was not observed in the other cases, neither when the teacher spoke, nor when the students spoke, (although rarely).

Repeated Exercises of Matching Visuals and Verbal Representations

In 24 observations (24%) of lower classes covering 6 schools (No. 1,3,4,8,16,18) and 5 observations (20%) of higher classes covering 5 schools (No. 1,4,8,16,18) students were made to match drawing and names/sentences done on the board repeatedly :--

- e.g. 1. Visuals showing certain action and sentences naming these actions.
- Crying
 - Dancing
 - Laughing.
2. Visuals of vegetables and their names.

Diary Maintenance

In 8 observations (8%) of lower classes and 2 observations (8%) of higher classes covering 2 schools (4,18) it was seen that a diary was maintained for each child to record the new words learned in a day, in order to help him/her to revise at home/hostel. Conversations between the teacher and the student were also recorded and used as reading matter.

Auditory Training and Speech Training

No efforts to train the students to listen to the teacher and respond, and to answer the questions orally were observed. The mode of communication of the students was manual, speech was not the predominant mode used by teachers and students comprehended teacher's speech through speechreading in 92 observations (92%) of lower classes and 23 observations (92%) of higher classes in 23 schools.

Attempts at auditory training and speech training were observed in 8 observations (8%) of lower classes and 2 observations (8%) of higher classes covering 2 schools (No. 4,18), where one teacher adhered to only speech at times to see

whether the students were listening; and they were encouraged to speak rather than show gestures. (But speech was unclear)

Sample of Observations

One observation each done in standards II and III, and VIII is presented in the following sections as samples.

Observations recorded during classroom interaction are presented as such. English translation of Gujarati is provided in bracket after every expression in Gujarati. Number of students wearing personal hearing aid, and whether or not group hearing set/sets were used has been presented in a box before presenting the observations.

Standard II

No. of students	17
Students with hearing aid	8
Group hearing sets	Not working

Tr. asked the students about the previous day's lesson.

Tr. (through speech and gestures)

'લૂછી છે.'	(Wiping)
'કાપી છે.'	(Cutting)
'કાંચી છે.'	(combing)
'સાફી છે.'	(Sweeping)

Tr. wrote these on the board. (Students showed signs for each of the verbs, but did not speak)

Tr. hung charts one by one which showed pictures of

- a) a boy wiping the board with a duster.
- b) a tailor cutting the cloth with scissors.
- c) a girl combing her hair.
- d) a lady sweeping the floor.

Tr. asked the students, (with gestures and signs) to write sentence for each of the picture.

Corresponding sentences expected were, (from the text)

- a) રમેશ ડસ્તરથી પાઠિયું લૂછે છે.
(Ramesh is wiping the board with a duster)
- b) વેણીલાલ કાપડ વીતરે છે.
(Venilal is cutting the cloth with scissors)
- c) મીના કાંસકાથી વાળ ઓળે છે.
(Meena is combing hair with a comb)
- d) સવિતા સુપરણીથી કચરો વાળે છે.
(Savita is brooming with the broomstick)

Four students came to the board one by one and wrote the corresponding sentences.

- a) રમેશ ડસ્તર પાઠિયું લૂછ.
- b) વણીલાલ કાપડ વીતર છે.
- c) મીના વાળ ઓળે છે.
- d) સવિતા કચરો વાળે.

(Propositions were missed and there were spelling mistakes)

Tr. pointed out the spelling mistakes and the words omitted, and rewrote the sentences on the black board.

Propositions were not explained

(e.g with the duster)

Tr. "કોણ ડસ્ટરથી પાટિયું લૂછી છે?"
(Who is wiping the board with duster?)

Students (2) came and wrote

"રમેશ" (Ramesh)

Tr. "રમેશ શાનાથી પાટિયું લૂછી છે?"
(with what is Ramesh wiping the board?)

Three students wrote.....

'ડસ્ટર' and not 'ડસ્ટરથી' (only 'duster' not 'with' duster)

Tr. Corrected, rewrote the sentence

ડસ્ટરથી (with duster)

(Tr. did not explain the reason)

Tr. રમેશ ડસ્ટરથી શું લૂછી છે?

("what is Ramesh wiping with the duster?")

(Students did not seem to follow. None attempted)

Tr. wrote : (Ramesh is wiping the board with duster)

રમેશ ડસ્ટર્સી
પાટિયું લૂંછે છે.

(Similar exercise was followed for all sentences)

Generally teachers was asking questions only to a few students. Four students seemed to be totally uninvolved in the class.

Students were not made to speak, or pronounce any word from the board.

Explanations regarding case, or verb formation according to gender, were inadequate.

Standard III (Blackboard work is written on the right side)

No. of students	14
No. of students wearing PIA	Nil
Group hearing sets	not used

Tr. - asked a few questions to the students on cow.

- whether they had seen a cow

- whether they liked to drink milk. (all with gestures and signs)

(Students responded by showing gestures

of milk, horns, tail, etc. all seemed to
be interested)

Tr. Hung a chart showing a cow.

(students were busy showing gestures of horn and
tail of cow)

Tr. wrote on the board.

(this is a cow) अरु गाय छै.

Children also imitated these gestures.

Children were made to say the sentence together

(No speech correction)

Next sentence was written on the board.

(The cow has a tail)

(the same procedure was followed as for the first
sentence)

The case 'गायन' (गाय को' in Hindi)

(literally - 'for the cow'), was neglected

Tr. asked whether students had seen another
animal with horn, showing gestures for 'another'
'horn', 'animal' and 'seen' and by writing the
words 'another' on the board.

गीरु

Students responded by showing gestures and teacher
wrote these names on the board - donkey and goat.

अडरी अरु
गईसी

Tr. wrote the next sentence on the board. The
cow has four legs

गायन अरु
पग छै.

Tr. explained with gestures as in the previous
--- sentence.

Tr. asked the students the number of legs that
human beings had. Children showed the sign
for two.

The other sentences were done in the same way as
explained above

The cow has two ears

ગાયને બે કાન છે.

The cow has four breasts

ગાયને ચાર આંચા છે.

The cow has two eyes

ગાયને બે આંખો છે.

The cow has one stomach

ગાયને એક પેટ છે.

The cow has one mouth.

ગાયને એક મોં છે.

Students were not made to read the 'sentence, nor were
they asked to say anything more about the cow that they knew.
Only sentences from text were taken.

This observation was an example of how structured
language teaching was, how the wealth of experiences of the
students was ignored and how adherence to the text could deprive
the children of self-expression.

Class VIII

No. of students in the class	9
No. of students with hearing aid.	none
Group hearing aid	not used

બીજા માટે આંબી.

(Mango Tree for others)

Teacher started the class asking whether everyone had eaten mangoes. Most of the children started showing the gesture of eating mangoes. Then teacher pointed to the title and asked if they knew what આંબી was (Mango tree). Students started showing signs of mango and tree. Most of them knew. Then teacher also explained the meanings of બીજા માટે (for others) using gestures. Then she wrote on the board.

સાધુ - "કેમ બાપા, શું ચાલે છે?"

(Sanyasi - Heh - old man, what is on?)

ડોસી - "આ જરી ઝાડ વાલું છું."

(Old Man - I am planting this sapling)

સાધુ - "ઝાડ વાલો છો? શાનું ઝાડ?"

(Sa: Planting a tree? of what?)

(O.M: Look! it's of mango tree)

ડોસો - "આંબાનો રોપ છે. જુઓને!"

(Sa: I am seeing. But shall I ask you something?)

સાધુ - "ત્રેઉં ઘું, તો પહા ઝેડ વાત પૂછું?"

(O.M: Ask. why one? Ask hundreds of questions!)

ડોસો - "પૂછીને. ઝેડ શું કરવા, સી વાત, પૂછીને!"

(Sa: How old are you?)

સાધુ - "કેટલા વર્ષ થયાં તમને?"

(O.M: Must be eighty - ninety. Who bothers to count?)

ડોસો - "થયાં હશે એંશી-નેવું. કીણ ગહવા બેકું છે?"

(Sa: How many more years will you live?)

સાધુ - "હજ કેટલાં વરસ જીવશો એમ લાગે છે?"

(O.M: Even if I live two - three years more, it will be enough)

ડોસો - "બી-ત્રણ વરસ કાકું લીધે ઘણું"

(Sa: Then, when will these mangoes be ready and when will you eat them?)

સાધુ - "તો આંબાને કેરી બેસરી ક્યારેને તમે એ ખાશો ક્યારે?"

Teacher started with explaining who a સાધુ (Yogi) was - with the help of the visual in the text, through speech and gestures, and then the old man -- ડોસો was explained. She explained to them that the lesson was a conversation between the two persons. In the first sentence, explaining શું ચાલે છે? which literally meant - "what is walking?" was difficult

as it was not used in its literal meaning. Students tended to take the meaning as 'walking' (They showed signs for 'walking!'). Teacher explained that it did not mean 'walk' but meant 'what is on'?

Visual in the text used to explain words like sapling (Sapling) 'જરી ઝાડ' (planting) 'વાવું છું' and (Plant). 'રોપ'.

The phrase "કોણ ગણવા બેઠું છે?" which literally meant "who is sitting to count?" was difficult to be explained. Teacher in many ways explained that it meant 'who counts' only. She also explained the meaning of "કેટલાં વરસ થયાં તમને?" literally meant "how many years are gone" as "તમારી શું ઉંમર થઈ?" (what is your age?) She explained this asking the students (three or four) their age through speech and gestures. Students answered manually (showing the number). The phrase "કેરી બેસશે" which literally meant 'mangoes will sit' needed elaborate explanation. Teacher gave the meaning as "કેરી લાગશે." (mangoes will be formed).

This is an example to prove the failure of an arbitrarily developed system of signs and gestures to communicate different shades of meanings.

4.1.3.6.3.

Observation of Teaching of Grammar in Higher Classes - IVth to Xth (regular Ist to VIIth)

Twenty five periods of observations of grammar/ composition (1 in each school) making a total of 25 observations were carried out.

In all 24 observations (96%) (24 schools) grammar was taught by the constructive method - defining the concept - explaining with examples and eliciting more examples from students. No situation or, say, a story, was narrated to explain abstract concepts (abstract nouns, etc.).

In one observation (No. 4) teacher gave examples first and helped the students to discover for themselves the concept that was focussed and then explained it with more examples. For eg: in order to explain the noun 'honesty' a small story was narrated using visuals and through dramatization by the teacher.

In 4 schools (16%) visuals were used (mostly charts)

1. Charts to show different actions (verbs)
2. Charts to show how verbs corresponded with subject (gender, number) (Charts with only writing)
3. Charts with pictures to show prepositions - in - on, under - behind - inside.
4. Charts to show conversation in 'speech balloons', to teach pronouns.

In these 4 schools repeated exercises were given and also non-examples were explained to make the concepts thorough. In the other 21 schools such activities were not seen.

Students seemed to be more involved and active in 6 schools (No. 4,16,3,18,23,20). They gave examples (though incomplete) wherever asked and were enthusiastic to give more and more. In these 6 schools whenever students gave wrong examples, the teacher did explain why they were wrong giving correct answers.

In the other 19 schools (76%) students' participation was nil, they were only writing down whatever was written on the blackboard.

In the 5 composition classes observed, students were not trained to write on their own. They were made to write whatever was given by the teacher. The compositions observed were on :-

1. गिडल (Garden)
2. शिखल (school)
3. खीरक (Food)
4. एकाग्रि (hospital)
5. गोरु (cow)

In two classes teacher tried to elicit words from students with little success, which was not observed in the other schools.

Sample of Observations

One observation is presented as a sample in the following section, with English translations of Gujarati sentences put into brackets.

Class IV	
No. of students	21
No. of students wearing hearing aid.	16
Group hearing sets	not used

(PRONOUN)

Teacher wrote the title on the black board and told the students that they would study pronouns in that period. She explained that pronouns were used instead of nouns., (using gestures and signs) emphasising 'instead of'. Then she called a student, Madan and told him to ask a question to Arvind, another student.

Madan : (with unclear speech and gestures)

"(unclear) રૂં સરિ... (unclear)"

Tr. wrote this on the black board.

મદન : "તમે રૂં સરિ છો?"

"What are you doing?" (Madan ?

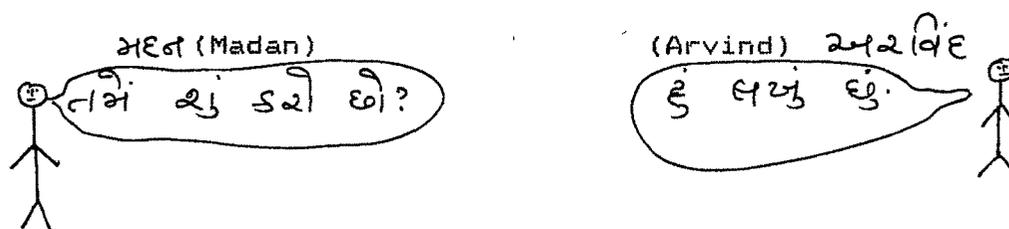
Tr. asked Arvind to answer.

Arvind : " હું લખું છું." (Unclear)

'I am writing'.

Tr. wrote this on the board.

Then Tr. wrote both these sentences in 'speech balloons'.



(What are you doing) (I am writing)

Then Tr. explained that 'I' by Arvind was used for himself and 'you' by Madan was used instead of Arvind. 3 more of such conversations were elicited (partly) from students and filled in the speech balloons. This was followed by explanations and that 'I' and 'you' were pronouns. Students were asked to say the word - Pronoun.

Towards the end the blackboard work was copied by the students. This was an example of teaching grammar with participation of students, by the use of speech balloons.

Responses of teachers collected through interviews are presented in the following section :-

4.1.3.6.4.

Response of Teachers

Out of 130 teachers interviewed for various aspects under study, 100 teachers answered questions on language teaching as 30 teachers had no experience in the area. The hundred teachers who responded had experience of teaching in lower primary classes (upto Vth) (upto regular IIIrd) and also higher primary classes (Vth to Xth) (regular IVth to VIIth).

Responses of the teachers and observations were by and large congruent and hence only a few points have been presented with respect to the aspects discussed in the interviews, with number of teachers who responded, the number of schools covered by these teachers and percentages of these numbers.

Training to Read the Lesson

It was stated by 84 teachers (84%) of 23 schools that they did not make the students read the lesson because they were all profoundly impaired, did not wear hearing aid and hence were not good at listening and speaking. They had to be totally dependent on sign language and lip reading.

It was stated by as less as 16 teachers (16%) of 2 schools (No. 4,18) that they did give training to read the lesson although students did not generally like it nor did they do it satisfactorily. A lot of efforts had to be put in and yet their reading was not clear.

Only 4 teachers (of school No. 4) stated that they

wrote down sentences of a lesson on chart paper, cut them so that each piece had one sentence and asked the students to read and arrange them in order. This, they stated, helped the teachers to know if the students had understood what they had read.

Receptive Reading

When asked whether students could read and understand very simple things fresh, without taking any help from others, it was stated by all that none could read and comprehend without help.

Composition writing

It was reported by as many as 96 teachers (96%) (of 24 schools) that their students could not write compositions or letters on their own and that each composition and letter was written down on the black board by the teachers, for the students to copy down.

Only 4 teachers (4%) (of School No. 4 stated that their students were trained to write simple sentences on their own which were corrected by the teachers. It was revealed by these teachers that students could not write even simple sentences without grammatical errors.

Multiple Meanings of Words

Six teachers (6%) covering 6 schools (24%) expressed a common problem while teaching the students that words which looked same, but had different meanings, confused the students.

For Example -

गायने चार पां होय छे.

(The cow has four legs)

प्रभाजिन सखस गाय छे.

(Prabhaben sings well)

In the first sentence 'गाय' means cow and in the second sentence it is a verb which means 'to sing'.

Another example

'२१' (leave)(Holiday) and '२१' (king)

Reasons for De-emphasis on Reading, Speech and Self-expression of Students

On asking about the reasons for de-emphasis on reading skills, composition writing by students by themselves and speech of the students, 76 teachers (76%) covering 19 schools gave the following reasons :--

- Most students sought admission in the school after they were 6-7 years old.
- Most of the students came from low classes of the society where parents were absolutely callous and non-cooperative with the children.
- Most of them did not wear hearing aid.
- Most of them could not hear at all.

These problems made the task of training them to listen and comprehend speech, to speak, to write original sentences (without parroting) and to read and understand, all extremely difficult.

Above all these, the goal of most of the students was to either join family business (a shop, a canteen, etc.) or work as a tailor, carpenter, etc., after taking vocational training. Only a very few wanted to join SSC programme. Hence what they

wanted was only a basic knowledge to read and write Gujarati and nothing more, precisely, just enough to earn their bread which they could achieve even if they could not speak.

Maintenance of Diary

It was revealed by 21 teachers (21%) covering 7 schools (No. 1,3,4,8,16,18,23) that a diary was maintained by them for each student in which the new words and sentences learned in a week were written by the teacher for revision at home/hostel.

Lesson Plan

It was stated by 12 teachers (12%) covering 3 schools (No. 3,16,23) that monthly lesson plans with a rough outline for a month's teaching work was prepared by them.

It was reported by 8 teachers (8%) covering 2 schools (No. 18,4) that weekly plans along with visual aids were prepared by them.

Examination

It was stated by 92 teachers (92%) covering 23 schools that only those exercises repeatedly done in the class were asked in the examination as even a change in the order of words confused the students.

Eight teachers (8%) covering 2 schools (No. 4,18) stated that although they largely stuck to the practised patterns, minor changes did not create much of a problem generally.

Need for Training

It was strongly opined by all teachers that language teaching with hearing impaired was a rather difficult task, that inputs from the teacher education programmes were insufficient, and that relevant training should be organized by means of refresher courses.

Time Constraint

It was expressed by all teachers that insufficiency of time for adequate exercises in language was strongly felt.

4.1.3.6.5.

Tests Carried out to Study Language Abilities

In order to study the language abilities, only Xth standard students were chosen (regular VIIth) on the principle that language abilities are difficult to achieve and hence be tested after maximum exposure to the school inputs. Only 14 schools (No. 2,3,4,8,11,12,15,16,18,19,20,23,24,25) had tenth standard (regular VIIth). The number of students varied from 5 to 12 in different schools. In all, 118 students were included for the test covering 14 schools. The tests included :-

- Test of reading
(only intelligibility of reading)
- Test of reading and understanding
(Comprehension of what was read)
- Test of comprehension of written matter (a story).

Ist Phase - without help from teacher

IIInd phase - with help from teacher.

(explanation of the story by the teacher through speech and signs, and drawing on board).

4.1.3.6.5.1.

Test of Reading and Comprehension

The test was conducted to study the reading skill and also the comprehension by reading. In order to have a gradation of difficulty levels 5-8 lines from texts of standards I to VII were selected (See appendix No. 16 for these lines).

Clarity of Reading :-

According to the criterion - whether or not the investigator could make out the gist of what was being read by the student, by only listening to him/her, the student's reading was judged as intelligible or non-intelligible.

Comprehension by the students :-

According to the criterion - whether or not the student could get the overall meaning of the lines, the student's comprehension was judged as YES or NO.

Procedure

In each Xth class, students were called one by one and made to read the matter of Std. Ist.

In the first phase only reading per se was judged and

in the second phase, students were asked to express what they read, by written mode, gestures and signs according to their choice of preference.

The same procedure was followed for matter of Std. IInd, IIIrd, IVth, Vth, VIth and VIIth.

The results are presented in following table. :-

TABLE NO. 15

Number of Students Who Could Read Clearly

School	No. of students who gave the test	No. of students who could read the matter of						
		I	II	III	IV	V	VI	VII
4	8	6	6	6	5	4	2	2
18	10	6	5	6	5	3	2	2
3	5	2	2	2	1	--	--	--
2	12	7	8	7	4	2	--	--
8	9	4	4	4	3	--	--	--
11	7	3	3	4	2	--	--	--
12	10	5	4	3	--	--	--	--
15	8	3	2	2	--	1	--	--
16	9	4	2	3	--	--	--	--
19	10	4	4	2	--	--	--	--
25	6	3	3	1	--	--	--	--
20	5	2	2	--	--	--	--	--
23	8	3	2	1	--	--	--	--
24	11	4	3	2	--	--	--	--
Total	118	56	50	43	20	10	4	4
Percentage		47	42	36	17	8	3	3

Table No. 16

Number of Students Who Could Understand What Was Read

School	No. of students who gave the test	No. of students who could read and understand the matter of						
		I	II	III	IV	V	VI	VII
4	8	8	8	8	6	6	5	6
18	10	6	5	5	5	6	5	6
3	5	5	5	5	4	3	3	3
2	12	10	8	7	6	6	5	8
8	9	6	6	5	4	4	3	5
11	7	4	3	3	2	2	2	5
12	10	4	5	4	4	3	2	4
15	8	3	3	3	2	1	1	4
16	9	7	6	6	6	5	4	6
19	10	7	7	7	6	6	5	6
25	6	5	4	4	3	3	3	3
20	5	4	3	3	2	2	2	2
23	8	7	7	6	6	5	5	5
24	11	7	7	6	6	6	6	6
Total	118	85	17	73	62	58	51	69
Percentage		72	65	62	53	49	43	58

Results of Test of Reading and Comprehension

It is obvious from the table 16 that intelligibility of reading generally decreased as difficulty level increased from standard I to VII, to the extent that 47% of the students could read standard I text, and only 3% could read standard VII text book. School No. 4 and 18 were relatively better in the group. The other observations in these 2 schools that could probably support these findings were :-

1. There was emphasis on the use of residual hearing by use of hearing aid.
2. 75% of the students wore hearing aid, and they were checked by the teacher daily.
3. There was emphasis on auditory training and speech training.
4. Students were trained to read the lessons in the class, and whatever was written on the board was also read aloud by the students with speech correction done by the teacher.
5. Students were encouraged to tell the answers in the class rather than only 'show' the answers.

Table 16 showing the comprehension of students very strikingly gave a better result as compared to reading. Whereas 72% students could read and understand class I text, only 58% could understand class VII. This showed a gradual decrease in comprehension as the difficulty level increased. But the percentage improved to 58% from 45% in case of VIIth text. A quite logical explanation given by the teachers was that, students were doing VIIth text (inXth) currently and hence the

recency factor caused a better performance as compared to the text matter of previous 6 years.

Here too, the first 2 schools showed comparatively better performance. The observations in these schools given under results of reading, hold good as probable explanation in the case of comprehension also.

4.1.3.6.5.2.

Written Responses to a Comprehension Passage

In the previous test, text books were the source of the matter to be understood. In this test, a story (Birbal's Khichdi) was used in simplified version. Five questions were added at the end of the passage to which students were expected to respond by writing.

Procedure

Phase I :-

The story was written down on the black board by the teacher and students were asked to read and understand on their own and answer the questions.

Phase II :-

Teacher was asked to read and explain the story (as she/he usually did for teaching a lesson) giving word meanings, and small drawings to make the story clear to the students. With this help, students were asked to write the answers on their own.

THE STORY

BIRBAL'S KHICHDI

There was a king named Akbar, who was very popular, intelligent and also clever. His minister was Birbal who was known for his smartness and ability to give quick answers to any question.

Once, Akbar declared that he would give hundred gold coins to any person who would stand naked in the pond near the palace for a whole night. A very old and poor man did as told by the king because he wanted to get the gold coins. Next day morning when Akbar asked the old man how he managed to stand naked in the cold water, he said that he spent the night looking at the lamp lit in the palace far away. Hearing this the king refused to give the gold coins, saying that the old man got heat from the lamp in the palace.

The old man was disappointed and walked home. On his way, he met Birbal, and narrated the whole story. Birbal consoled him and took him home. Later, Birbal invited Akbar and his courtiers for dinner. Akbar and courtiers arrived at Birbal's house for dinner, but even after waiting for a long time, food was not served, and Birbal did not show up either. Then Akbar himself went inside to see Birbal.

Akbar saw that Birbal had hung a pot of Khichdi up and was trying to cook it by fire burning down. Seeing this he asked

Birbal what foolish thing he was doing, how fire from such a distance could give enough heat to cook food hung so high. To this, Birbal said that if light from palace could give heat to a man standing far away in the pond then why could not khichdi be cooked by fire so much closer. With this, the king realized his mistake. He soon called for the old man and gave him the hundred gold coins.

[Gujarati version of the story is in Appendix No. 17]

The responses of students are presented in Table No. 17.

Table No. 17

Student Responses to Birbal's Khichdi

(Frequency and percentage %)

Students' responses	Without Help					With Help				
	** Question Number **									
	1	2	3	4	5	1	2	3	4	5
Correct Answer	110 (93)	23 (19)	9 (8)	9 (8)	7 (6)	--	23 (19)	9 (8)	9 (8)	9 (8)
Sentence lifted as such from the passage	0	45 (38)	41 (35)	48 (41)	--	--	55 (47)	54 (46)	60 (51)	--
Wrong Answer	8 (7)	34 (29)	48 (41)	41 (35)	72 (61)	--	29 (25)	40 (34)	31 (26)	82 (69)
Not attempted	0	16 (14)	20 (16)	20 (16)	39 (33)	--	12 (10)	15 (13)	17 (14)	29 (25)
Total	118 (100)	118	118	118	118	--	118	118	118	118

* Percentage in brackets

** Questions of Birbal's Khichdi

1. Who was Birbal ?
2. What was the task for which Akbar announced hundred gold coins ?
3. Why did Akbar not give prize to the old man ?
4. Why was the Khichdi taking so long to be cooked ?
5. Was Birbal really foolish ?

Analysis of the Answers

Answer to the first question, 'who was Birbal ?' was the easiest of the five questions asked, the answer being directly given. Students had to only copy it without making any changes whatsoever and most of them (93%) had done it well.

Analysing all the responses, it was found that number of correct answers reduced as the difficulty level of the questions increased. The number reduced to 19%, to 8% and 6% ; for question numbers 2nd, 3rd & 4th, 5th respectively. The fact that the percentage of students who copied the full sentences as answer was around 50% in all the 4 answers showed that 50% of students comprehended the story but did not have sufficient skill to bring about the semantical changes to answer the questions precisely. This essentially reflected the poor linguistic competency of the students. From the responses in the second phase ie. after teacher's explanation, it was clear that teacher's explanation helped more students to understand the story, and more to attempt answering, but did not bring about changes in the number of students who gave correct answer except in the case of the 5th answer (was Birbal really foolish).

Comparing the performance of students of the schools, School No. 4, 18, were different from the others. Their students performed fairly well, and the performance of students of the other 12 schools was more or less similar.

Interpretations of the Results of the Tests

Students were not adequately exposed to the use of language either in spoken form or in written form, so that they would discover the rules of language for themselves and would learn to use these rules themselves. Students were not trained to read and understand or express themselves freely using simple sentences, be it spoken or written. They had been trained to parrot written form by cramming up. Language learning had been basically by cramming the content and structure forgetting the fundamental principle that language was a tool of expression and thinking. These drawbacks were evident from the high percentage of students who copied the sentences in full as answers to questions without making any changes, and from the number who gave wrong answers to very simple questions.

The two schools (No. 4,18) students of which performed fairly well, were different in many ways from the other schools, with respect to the following aspects.

1. Emphasised conversation as a method of language acquisition.
2. Used appropriate teaching aids effectively.
3. Emphasised auditory training with amplification of residual hearing.
4. Speech, speech training and language were all integrated in the curriculum.

These principles and practices of the two schools (No.

4,18) helped the students to develop linguistic competence fairly better than what was possible in the other schools where no hearing aids were used, and where speech training and auditory training found no place in the curriculum from IVth standard onwards.

Interpretative Discussions on the Basis of the Findings of Language Teaching and Development of Communication Abilities

Interpretative discussions have been presented, keeping the proposed model as the reference point. From the conceptual framework presented in the context of communication skills/language development, it can clearly be delineated that the following are absolutely crucial for language/communication skill development of the hearing impaired.

1. Early detection and diagnosis.
2. Procurement of hearing aids, training to use them as soon as the impairment is diagnosed, and effective monitoring of the aid.
3. Constant oral interaction with the child by people close to him/her.
4. Formal training to start as early as possible.

The findings described in the previous sections clearly revealed that the intervention by the school started on a set of children who were already disadvantaged in many ways.

- they were mostly above six and seven years when they sought admission
- their parents were unaware of their role and brought up their children in a world of silence, till they admitted them in schools.

Apart from the above mentioned problems, the low objectives set for the hearing impaired, added to the tremendous

damage caused to these children. It was understood from the responses of principals and teachers that they all (majority of them) under-estimated the children saying that after all they could not hear and talk, none wanted to appear for SSC examination, their joining the school was not out of interest in education, but was only for functional literacy, and that vocational training was more pertinent in their context. Some of them also reported that most of the children came from very poor families and had very low aspirations for which it was not worth the efforts to develop speech ability in them, adding that communication by gestures and signs was much easier and convenient to them (the students).

These constitute the backdrop in which language teaching and learning took place in majority of the schools, where the basic indispensable -- absolutely crucial prerequisites were not fulfilled.

The interpretation and assessment have been presented under the following heads :---

1. Audiological Assessment - A Ritual
2. Uniform Labelling
3. Ignorance of Residual Hearing and Indifference to Procurement and use of PHA
4. Auditory Training
5. Speech Training and Speechreading

The development of communication among hearing impaired

is founded on audiological assessment, and amplification of residual hearing. Hence, these two points are also briefly touched upon here although they have been already discussed in detail. (Audiological Assessment and Labelling have been elaborately discussed under Assessment of Hearing Sensitivity'. Pages 206 - 211 and, Residual hearing and as Use of Hearing Aids under 'Use and Monitoring of Hearing Aids. Pages 211 - 223.

Audiological Assessment -- A Ritual

Only two schools (No. 4,18) were assessed 'satisfactory' in the context of audiological assessment where assessment was done at regular intervals and auditory inputs were geared according to the assessment. In majority of the schools (23) - principal and teachers were indifferent to assessment of hearing.

Uniform Labelling

Situation in 23 schools was assessed as poor, where all students were uniformly labelled as profoundly impaired. They were left to suffer the artificially created 'inevitable consequence of dumbness'. Two schools (No. 4,18) had satisfactory situation where such labelling did not happen and where instruction was observed to be matched according to hearing sensitivity assessed at intervals.

Ignorance of Residual Hearing and Indifference to Procurement and use of Personal Hearing Aids

In these aspects again, all the 23 schools were assessed poor and school No.4 and 18 as satisfactory. In all 23

schools, principals and teachers believed that students could not hear at all, and hence were indifferent to use of PHA by students. In 2 schools (4,18) majority of the students wore PHA, and the principals and teachers were convinced that students had some residual hearing and that hearing aids were useful.

Auditory Training

23 Schools, where students were trained to speak by giving inputs through visual and tactile sense modalities, totally de-emphasising sense of hearing (which obviously led to the neglect of functional speech), the situation was assessed poor. In fact, auditory training was totally lacking in these schools.

In school No. 4 and 18 efforts were put forth atleast in KG to IIIrd standard to train the students to listen and perceive sound, and in higher classes students were spoken to, and encouraged to answer questions orally by listening to oral mode of the teachers. These schools were assessed as satisfactory.

Speech Training and Speechreading

Speech training and speechreading were not conceived and practised as basic skills to be developed in the hearing impaired, by facilitating this training to permeate into all periods and classes so that they became an integral part of the curriculum as proposed in the model. Instead, the school system had a truncated approach to speech and speechreading skills

whereby they were reduced to isolated subjects limited to the curriculum of standards upto III, and were narrowly practised as uttering and speechreading of vowels and consonants leading to sentences, all prescribed in the syllabus. There was no emphasis on the wealth of experiences of the students or their expression through casual conversation. In fact functional speech did not find a place in the curriculum, conveniently justifying this drawback by labelling majority of students as profoundly hearing impaired who could not hear and could not be trained to converse.

Actually in practice, what was attempted in the name of speech training in lower classes (in 23 schools) was training oral mode through visual and vibro-tactile senses, de-emphasising the sense of hearing. Moreover, the structured approach to speech training resulting in learning to utter consonants and vowels in isolation, led to poor articulation in running speech, making it difficult for the students to string together the isolated vowel and consonant speech production in functional speech. It is pertinent to remember that although 18 schools had speech trainers, in no observation was it seen to be used.

The Receptive Mode

The two modalities by which the students comprehended what was conveyed to them were speech reading and seeing the signs and gestures of the teacher. But observations, discussions and tests conducted revealed that these two modalities had many limitations.

The speechreading efficiency of the students was apparently poor (from observations, supported by tests conducted in Xth and from what teachers reported). Teachers seemed to be ignorant of the fact that, to be efficient in speechreading they had to have adequate language input and speech. And that a child with reasonable articulation skills are in a better position than poorer speakers to appreciate the significance of movements associated with speech of others. ["Myklebust (1960) has reported a positive correlation between speech production and speech reading ability" - [Ling, 1976].

Even if they were proficient in speech reading, visual feed back or speech reception through visual mode, by no means is a perfect substitute for normal hearing ; It is generally known among educators of the deaf that "lip movemnts are often ambiguous and that not more than 40 percent of them can be precisely identified." (Pollack, 1985).

"One British study found that the average deaf person within a decade of practice was no better at speechreading than hearing person picked off the street." (Dolnick, 1993).

This explains to a great extent why the students' language and speech were poorly developed, in a system which emphasised learning through visual perception rather than auditory pathway.

Manual Mode of Communication

The majority of the schools (92%) adhered to signs and gestures along with pictorial narrations, written matter and some speech for teaching the students. Speech was in low key, and gestures and signs won over the oral mode. Sign language used, being unscientifically evolved and non-standardized had a hoard of inherent pitfalls.

These points are briefly mentioned as under :-

- i) the students missed the rhythm and accent helpful in comprehending the meanings fully.
- ii) missed subtleties of meanings.
- iii) Constantly received incomplete messages.
- iv) missed the fundamental rules of grammar.
- v) missed the intentionality and emotionality in language.
- vi) were victimized due to misrepresentation of ideas and ambiguous messages. (due to unstandardized system in vogue).

The tragic situation in the majority of the schools where students had no speech ability, was rooted in this deprivation of linguistic structure by way of mutilated communication that they received through manual mode. Thus, the situation of majority of the schools was that :-

- Students could neither speak nor did they have mastery over a standard sign language, to express themselves properly.
- They were proficient neither in speechreading nor in

listening to comprehend what was spoken to them.

- They always missed a lot of information when sign language was used by teachers.

It was only in two schools (No. 4,18) where majority of the students wore hearing aid, that speech of the students was also emphasised so that there was less of overadherence to manual mode compared to the other schools.

Method of Teaching

The method of teaching followed in the schools except Nos. 4 and 18 was structured viz. learning started with grammatically limited forms, to be extended later, on more and more increasingly complex forms which relying on the ability of the children to construct and to follow learnt analogies, gave these children direction to build language forms according to learnt models. In this method, sentences were understood to be formed of categories of parts of speech (noun, verb, etc.), vocabulary was broken up for the children in lists of words, and sentences were broken up in an associate way using words as bricks.

The words were detached from the sentences in long paradigmatic lists - verb charts, adjective charts, adverb, charts, etc. The damage caused was that the global intuitive grasping of relations in language did not get a place in the curricular transactions ever.

In two schools (4,18) language development was based on functional speech in a natural way where sentence was regarded as the unit of conversation.

Lack of Conversation

Conversation as a method of communication skill and language development was observed in only two schools (No. 4 and 18). In all the other 23 schools speech meant parroting the text matter. This de-emphasis of functional speech training, suppressed the self-expression, both oral and written of the students, to a great extent.

Reading and Writing

Reading practice was virtually absent except in two schools (No. 4 and 18) where the textual matter, and conversations in the class were used as reading material.

Written expression was limited to reproducing what the teachers wrote, in most of the schools. Original writing by the students was found to be a far cry.

Thus the principle of sufficient frequency of language use and hence sufficient exposure to spoken and written language (conversation and reading) were absolutely de-emphasised in the curriculum. These can be traced back to the problems discussed earlier - children being late starters, being uniformly labelled without adequate assessment, not wearing hearing aid, and lack of auditory training and speech training.

Thus the students were victimized to the extent that they were neither exposed to spoken language nor trained to acquire language skills to read and understand written matter. They were trained to parrot the content of language text in writing, but lacked linguistic competence to express themselves fairly in writing. These conclusions were well supported by the analysis of results of test conducted in the schools. Precisely, the teachers focused on language form and meaning virtually ignoring the functional aspects of communication. They emphasised the discrete skill of phonology, syntax, and semantics, forgetting the role communication plays in the learning of language, that is pragmatics. They, in fact, emphasised teaching of language, rather than facilitating language. Only two schools were comparable to the proposed model with reference to development of communication skills and linguistic competence, where philosophy and practice included use of hearing aids to exploit residual hearing, thorough assessment of hearing sensitivity, audiotry training, and speech training in lower classes, and emphasis on oral mode both as receptive and expressive modes of students of all classes with teaching methods based on functional speech.

Research findings indicate that development of linguistic competence among hearing impaired is a rather hairsplitting task even in situations of the developed countries with more advanced facilities like special equipments, individualized instruction, parental training, early detection and intervention conducive to the process of language

acquisition. With the problems in the school system of Gujarat, both extraneous and intraneous to the system, it is quite evident that it is a long hard tread ahead.

4.1.3.7.

General Aspects of Teaching

Before presenting the findings of general aspects of teaching, the backdrop of the schools which have been already presented in the foregoing sections is briefly presented :-

Among 25 schools, in 19 schools (76%) none had a hearing aid, and 143 classes (75%) covering all 25 schools, (out of 191 classes observed) did not have group hearing sets. In 88% of observations carried out in standards I, II and III where speech and speech reading were taught as subjects, students were taught to speak by training through visual and vibro-tactile sense modalities de-emphasising the sense of hearing. These problems were coupled with lack of importance given to preparing and maintaining audiograms by 92% of principals, and the teachers' lack of awareness of degree of hearing sensitivity of each student which resulted in uniform labelling of all students as 'profoundly impaired.'

It is in such a system of schools that teaching-learning has to be analysed.

General aspects of teaching drawn from studying the transactions in different classes of all the schools and interpretations are presented on the basis of 416 observations done in the 191 classes across 25 schools.

Major Findings and Interpretations

The vital issue observed was, that teachers tended

to 'prove' that being deaf meant dumb too'. Labelling the students as profoundly hearing impaired, and setting low objectives for these students reinforced the communication problems of the students and subsequently their overall development. Due to the teaching strategies adhered to, in majority of the schools, the students progressively acquired dumbness.

The policy of maintaining a teacher-pupil ratio of 1:10-12 is based on the principle that the hearing impaired need individual attention which arise from their deficient hearing sensitivity. Compared to the strength of classes in regular schools, this ratio was observed to be favourable for giving individual attention to the students. But, this was not the practice in most of the schools observed. The variation even in hearing ability and speech ability was not considered while teaching.

Another major shortcoming observed was the conspicuous absence of teaching aids. Teachers (90%) seemed to forget the basic principle that, as the sense of hearing was defective, the unimpaired sense of vision should be best utilized by using teaching aids. For majority of the teachers, using the sense of vision, only meant adhering to sign language depriving the students of auditory input thus causing the atrophy of their oral skills.

Majority of the teachers followed the same sequence of steps in teaching, and students were not trained to interact in the classroom. Thus the vital principle of eliciting students'

participation essential for effective learning was neglected.

What emerged from all the above points is that the students' potential was underestimated, and labelling them all as difficult cases to be trained to listen and speak, strategies used for teaching rendered them more and more handicapped. In fact, there was no difference in teaching as compared to that in regular schools, except that teachers used manual mode also and that students did not speak. The special needs of hearing impaired students were not taken care while teaching and individual attention absolutely inevitable in the case of these children was not observed in majority of the classes.

4.1.3.8.

Evaluation of Academic Achievement .

Responses of all the 25 principals and of selected teachers (130) regarding the procedure of evaluation followed in the schools were collected through interviews.

Sample of question papers were matched against the class work of students.

The researcher also got a chance to observe one period of class test each in 3 schools, which was incidental, and did add to the information collected.

4.1.3.8.1.

Responses of Principals and Teachers

From the responses of principals it was understood

that majority of the schools, (20) had only two examinations -- Half-yearly, before Diwali Vacation and final examination in April.

Five schools had additional examination in each term (mid-term examination). The first was in August and second in January, which meant that these schools had 4 examinations in all.

It was stated by all the principals that they spent one to two weeks before mid-term and half-yearly examinations and three to four weeks before annual examination only for revision.

From the responses of teachers more details were understood.

116 Teachers (89%) (covering 23 schools) stated that out of the questions given in the text book, only very few were taught to these children. Similarly, in lessons, difficult portions were all omitted while teaching. Most of the students did not use hearing aid and could not hear at all (according to the teachers) and hence they depended heavily on visual memory and memory of writing, due to which, most of the answers done in the class were by hearted by writing down many times, and that these problems restricted their grasping and recall power, demanding very low difficulty level in examinations.

It was revealed by one Maths teacher that even if the numbers were changed the students could not do.

A language (Gujarati) teacher expressed that even if the order of words in the questions was changed the students could not do. For e.g. Instead of :
"why did Ram hit Raju? ", If the question was :
"What was the reason for Ram to hit Raju ? "
The students could not write the answer.

All the 116 (89%) teachers stated that a question bank with the answers was prepared a month before exams and that these answers were repeatedly done in the class making the students write them down. It was also stated that this was the only way to make them ready for the exam. Questions for the exams were always selected from the question bank only. Despite all these efforts(!), the performance was unsatisfactory, according to the opinions of most of the teachers..

All these teachers admitted that the students (majority of them) could not write an answer on his/her own, and that they made mistakes in the ordering of sentences, in gender - verb correspondence, in tenses, in case, and omitted functional words like preposition, conjunction, cases, and also made a number of spelling mistakes.

Language teachers also observed that the essays done in higher classes VII, IX and X and passage writing in classes V, VI, VII, were all repeatedly done in the class many times and the same were asked for the examination.

Five Maths teachers stated that the portions found

difficult for the students were omitted while teaching, and that for examination, portions which the teacher felt was not understood by majority of students, were also omitted. (e.g. percentages, profit & loss) Even after such screening, the students found it difficult to do the sums if the numbers were changed. Moreover, it was stated by these teachers that statement sums were generally difficult for them even when the same sums were asked.

From the observations of the three periods of class tests, the following were recorded. :-

- the teacher had to explain the questions through gestures before the students started answering. Even after this, many students had doubts which were clarified by the teacher through gestures (Class VIII - Social Science).
- in one observation, which was test in Maths, the teacher explained the sum in full detail, and finally even said what the operation was. (It was simple multiplication, in class V).

On studying the question bank of Gujarati and Science (Class X regular VII) of 15 schools, it was realized that answers that could not be completed in more than 2 or 3 sentences were omitted in 12 schools, both in Gujarati and Science, and the sentences were made as simple as possible with only one verb and avoiding conjunctions as far as possible. In comparison, the questions and answers of regular VIIth standard students

contained items at recall, recognition and also application level, apart from the inclusion of answers that ran into 6 to 8 sentences in both Gujarati and Science.

Matching the examination papers with the class work of students, supported the statements of the teachers. The examination questions were all taken from the question bank. In the two schools, where teachers said that changes were done in the examinations, very negligible changes like change of a few sentences in grammar were observed. But they were similar to those in the question bank to a large extent. It was also observed that, difficult lessons were omitted, and out of these, screening was once again done while selecting lessons for examination.

The objective of schooling of hearing impaired, as proposed in the model is to mainstream the students as and when they are equipped with the plus curriculum skills and definitely after the SSC course. In order to achieve this objective, right from the 1st standard (after the 5 years of pre-school education) the evaluation procedure should be at par with that followed in the regular schools including all difficulty levels as in these schools. But the findings of the study on evaluation procedure were contrary to what is proposed in the model.

Reasons for such pattern of examination with very low difficulty level questions

On discussing with teachers, it was opined by 18 teachers (14%) covering 10 schools that the hearing impaired

students could not be expected to perform like hearing students, and that their abilities were limited for reasons which were out of the control of the teachers like -

- Starting schooling late
- Not wearing hearing aid.
- Indifference of parents.

25 teachers (19%) covering 8 schools (other than the above 10) expressed the stand that after all what the students wanted was functional literacy and vocational training to manage their life, with their limitations, and there was no point in making them do things that they could not do.

Interpretations

The findings precisely pointed to the inadequate language development of the students in the schools, rooted in factors within the system like lack of emphasis on use of hearing aids, auditory training and speech, lack of use of audiovisual aids while teaching, and lack of stress on functional speech and conversation, which limited the self-expression of students (These points have been presented already in the foregoing sections on language development and communication ability development). Students were trained to parrot what was taught in the class by seeing, repeatedly writing and memorizing. This deprived them of acquiring language skills. Hence evaluation procedure was based on the principle that it should be at minimum difficulty levels.

The problem of low expectations for the hearing impaired and seeing them as subnormal compared to hearing children, was clearly decodable from the opinions of 33% of teachers covering 18 schools (72%).

Thus, the teaching method and evaluation procedure mutually reciprocated to perpetuate the culture of 'dumbness' in the schools.

4.1.3.9.

Mainstreaming

Mainstreaming has been proposed as the main goal of schooling of hearing impaired. It has been proposed at three different levels after completion of pre school education, at the stage of completion of a standard beyond pre-education or definitely after completing the SSC programme, according to the potential of a student.

With this background, the extent of achievement of this goal, and perception on this function were studied from responses of teachers and principals collected through interviews.

4.1.3.9.1.

Responses of Principals

23 principals (92%) were unaware of the national policy and the principle of mainstreaming. They said that in the existing situation, mainstreaming of students of these special schools was impossible. The reasons (repeatedly mentioned in responses to the other queries) were --

1. Communication skills were not satisfactorily developed because,
 - i) majority of them joined school late.
 - ii) majority of them did not wear hearing aid and were profoundly hearing impaired.
 - iii) parents were ignorant and indifferent.
2. Parents did not want their children to go to regular schools as these special schools with hostel facility, free of cost was apparently more suited to their needs.
3. Regular schools were not yet prepared to take impaired children.

Two principals (of school No. 4,18) gave different responses. They stated that with dedicated work on assessment of hearing sensitivity, auditory training with use and monitoring of hearing aids, and with subsequent speech training, mainstreaming was possible, though a challenging task. One of the principals (of school No. 4) had more to add - It was stated by her that mainstreaming was started as an experiment in 1983-84 in her school. Realizing the importance of mother's training in this context, a programme of training the mothers, essentially in communication modes was also started. Her project was described by her as 'successful' and 'encouraging'. She had been training 4 students on basic academic skills along with their mothers' training and had been mainstreaming 4 students per year on an average, with the number going upto 35 till 1992.

The other principal (of school No. 18 which had regular school also run in the same area) stated that they also had the regular routine of mainstreaming work and that since the year 1980, they had been mainstreaming 2-3 students on an average in a year after initial training, the period of which depended on the student's potential. The number of mainstreamed students had reached upto 35 by 1991.

4.1.3.9.2.

Responses of Teachers

It was stated by 123 teachers (95%), covering 24 schools (96%) that mainstreaming was impossible. Their view was that as it was being difficult to develop basic communication skills among these students, they would not be able to cope with the situation in a regular class with a large number of students.

It was expressed by 48 of these, (37%) covering 9 schools (36%) that most of the students were profoundly hearing impaired and that mainstreaming was possible only for partially hearing.

The others, 75 (58%) covering 13 schools (52%) said that with the majority of students not wearing hearing aid and being unable to hear anything, only functional literacy could be expected of them, and that mainstreaming was absolutely out of reach.

Seven teachers (5%) of one school (No. 4) said that with hard work of teachers along with mothers' training, mainstreaming

was possible and that they were successfully doing it since 1983

- 84.

From the responses of teachers and principals in the context, it was clear that mainstreaming as a regular programme of the special schools of hearing impaired was too far a cry in Gujarat. Apart from the inherent unfavourable factors extraneous to the school system, viz. late detection of hearing impairment and late schooling of students and indifference of parents, basic problems, (already discussed in earlier sections) yet unresolved were --

- Lack of awareness of residual hearing and its utilization.
- Lack of awareness of usefulness of hearing aids.
- Labelling of all as profoundly impaired without proper assessment.
- Low-set objectives for these 'profoundly impaired' children.

Unless these attitudes and practices were mended, and the ignorance wiped out, mainstreaming could not be thought of.

Mainstreaming was out of the scheme of planning and organization of the school system except in the case of 2 schools. When made aware of mainstreaming, the principals and teachers tended to brush it aside as an absolutely impossible endeavour, and were not ready to attempt it at all.

4.1.3.10.

SSC Programme

The schools for the hearing impaired, like any school should offer all ten years of schooling to make students ready for SSC examination and should be able to mainstream the students for higher studies. But it was realized at the outset of the study that only 14 schools (52%) offered classes upto Xth (regular VIIth) and out of these only 3 schools (12%) had SSC Programme.

Till 1991, it was only school No. 2 that had classes run for SSC examination. For starting SSC Programme, a school had to get special sanction from Social Defence Department which depended on factors like : -

- Number of years of existence of the school.
- Experience of teachers.
- Infrastructural facilities.
- Strength.

In 1991-92 two more schools got sanction (No. 4 and 18) for starting the SSC Programme.

The Programme

School No. 2 that had started SSC programme since 1982 had fixed 12-15 as the number of students of one batch. But according to records, on an average only 5-8 students had been attending the course, which meant around 33% to 53% utilization.

After passing Xth standard (regular VIIth) the students were taught the syllabus of standard VIII, IX and X of regular schools in a time period of 2 years.

In schools No. 4 and 18, the course being newly started number of students was high (12,10, respectively). In school No. 18, selection on the basis of marks of the students had to be carried out for the course, and students who had completed the Xth (regular VIIth) course 3 or 4 years before were also taken, as was the case in school No. 4.

Data Collected from the three schools are presented in the following section.

School No. 2

From this school, on an average 7-8 students had been appearing for SSC exams, since 1982. According to the records, 64 students had appeared for the SSC exam so far since '82 (Not considering the repeaters), and 20 students had cleared at first attempt (31%).

From the record of past 5 years (87-91), in all, 64 attempted (including repeaters) and 21 passed (33%). Excluding repeaters 36 appeared and 12 cleared (33%).

School No. 4

In the year 1991, this school got the sanction from Social Defence to start SSC Programme. 12 students were getting ready to appear for SSC exam of 1993.

School No. 18

In the year 1992 this school got sanction and 10 students were undergoing training to appear for SSC exam of 1994.

The very fact that most of the schools were graded only upto VII, and that only 3 schools prepared students for SSC exam indicated the inadequate development of education system of hearing impaired in the state. Moreover the fact that around only 30% of students cleared the SSC exam (School No. 2) on an average further pointed towards the need for improvements in the system, including committed efforts to fulfil the criteria for upgrading and also to improve the quality of instruction so as to help all the students pass the SSC examination.

4.1.3.11.

Functioning of Hostel

According to the data collected, 2477 students out of total strength of 3590, (of all 25 schools of the sample) were hostlers (69%).

Hostel life is specially significant in the education of hearing impaired. It has to be an extension of school life and be a wholly supportive set-up to the school system where the students get exposed to way of living, and learning. The most significant principle is that the students be exposed to a 'speaking environment' so that the language development that goes on in the school gets strengthened in the hostel. This implies that the hostel wardens and other helps in the hostel

have a consequential role to play, in the development of the students apart from giving them emotional security.

It was with these contentions as proposed in the model that functioning of hostel was studied.

Hostel functioning was studied from, the responses of hostel wardens (24), observations carried out by the investigator, (4-5 days in each hostel) and from responses of hostlers (660).

Important Findings

- Majority of the wardens were not trained or formally oriented about the nature of hearing impaired and had a laid-back attitude to their responsibilities of providing an environment of speech, and giving emotional security and assurance by regular counselling.
- In 5 schools, basic necessities of a hostel were not fulfilled like a separate building, and sanitation facilities.
- Even small children were made to do difficult chores which were beyond their potential and the children were not happy, in 17 (71%) of the hostels.
- There was no contact with parents, in any of the hostels.
- Free hours of the children were not utilized in productive ways in majority of hostels. (22- 97%).
- Situation in hostels of government schools (13%) was much

below acceptable limits. Apart from the lack of infrastructural facilities, was the acute unclean conditions of the rooms, and bathroom/toilets. The clothes of the children were unclean too.

Interpretations

The fundamental principle proposed in the model based on which the study of hostel environment was carried out was, that a hearing impaired depends heavily on inputs from the environment for language development, and that the optimum condition for successful language development is a continuous and affectionate relationship between the people (of immediate environment) and the child. This implies that hostel and school should work as coordinated and mutually supporting systems to facilitate the development of hearing impaired children.

From talks with principals and wardens, and the observations made, it was revealed that hostel functioned as a place for lodging the children as in any school, and that there was no awareness about the special needs of hearing impaired.

Residual hearing that each hearing impaired had which could be exploited by providing amplification and auditory stimulation received absolutely no attention, in majority of the hostels. The principle that hearing impaired should be immersed in an environment of speech thus was totally neglected. What the hostel environment did to the hearing impaired children was to reinforce their communication problems by adhering to sign language.

The wardens (majority being not specially qualified and trained) were not aware of the role of a care taker of hearing impaired, and as a counsellor of children and parents. The general attitude towards the children was not conducive to their emotional security and personality development.

The fact that link with parents of the hostlers was much below optimum, called for enhanced efforts from the part of the wardens to take up the responsibility of giving love and care to the children, especially the young ones. Such awareness was not observed among majority of the wardens and other attendants serving the children.

The conclusion arrived at, by the researcher was that the hostel environment did not provide the conducive climate essential for the development of the hearing impaired children, and thus was much below expected standards as proposed in the model. The discrepancies identified were, the de-emphasis of the role of hostel staff in the development of the hearing impaired, and thus the lack of specialized training for the hostel wardens, and the problem, as identified in other aspects studied, of shirking away from the challenges justifying this behaviour by saying that it was very difficult to improve the situation. Thus the hostel system, far from being supportive to the school system was found to be akin to any other hostel not rising beyond the functioning of providing food and shelter, ignoring the special needs of the hearing impaired.

4.1.3.12.

Guidance and Counselling

Students and parents need guidance and counselling at different stages of education of the former. Students need it regularly during each year at the time of mainstreaming and at the stage of planning future course of action, and also while confronting any specific problem. Parents need guidance at the time of admission, after each examination result declared, while deciding on mainstreaming and at the time of deciding about future course. The role of a teacher as a counsellor thus assumes a great significance, as proposed in the model.

Guidance and counselling of students has been presented first followed by that of parents.

4.1.3..12.1.

Guidance and Counselling of Students

The fact that 2477 out of 3590 (69%) students were hostlers and that they were away from home, highlighted the importance of guidance and counselling programme of the school.

Guidance and counselling of students was studied from responses of all 25 principals and the selected 130 teachers collected through interviews.

Responses of principals, are presented followed by those of teachers.

A) Responses of Principals (25)

It was stated by 17 (68%) principals that no counselling was carried out, except attempts at passifying the children when they were upset about something or were homesick, etc., and in the context of vocational guidance it was stated that they did not know about the details of VRC-s of the state, nor did they do any vocational counselling.

It was stated by 6 principals (24%) (of school No. 3,4,16,18,11,12,) that vocational guidance was a regular practice of their school for students of standard X giving details of VRC-s of the state. These were the schools that ran vocational courses. The rest of the 2 principals did not have any specific response (No. 3,4,16,18,11,12,).

B) Response of Teachers

It was admitted by 102 teachers (88%), covering 19 schools (76%) that counselling students was not done in their schools, and that time was not sufficient for such 'extra work'!

When asked about vocational guidance, it was reported by 24 teachers (11%) covering 3 schools (12%) (No. 4, 16, & 18) that all the details of VRC-s were provided to help the students choose from the different vocations. Rest of the teachers of the sample 106 (89%) covering 22 schools (88%) did not know the details of VRC-s and VRC - at Baroda being a recently started one was not known to 42% of the sample of teachers. It was stated by 89% of the teachers of 22 schools (88%) that no vocational guidance was provided by them.

It was stated by all the teachers of the sample that importance of vocational guidance, and details of VRC-s were not part of the inputs in the teacher educational programme.

To conclude, majority of the schools were far away from the model proposed in which guidance and counselling including general aspects and vocational aspects, are highly placed in the school programme.

4.1.3.12.2.

Guidance of Parents

Guidance of parents was studied from responses of selected teachers (130) and all the principals (25) collected through interviews.

Responses of Principals (25) and Teachers (130)

It was stated by 19 principals (76%) and 95 teachers (73%) that parent - teacher meetings were organized once a term. The number of meetings was given as twice a year by 6 (24%) principals and 35 teachers (27%). The average percentage of parents who attended such meetings during the years 1986-1991 was reported as negligible.

It was observed by all principals and teachers that most of the parents were illiterate, or were from lower rung of the society who lived on daily wages. It was stated that these parents admitted their children because education, and lodging-boarding was all free, and not because they had high regard for education of their children, and that due to such reasons they did not consider it important to be in touch with the school or to attend parent-teacher meetings.

When the question of solution to enhance parental involvement was put, 5 principals (20%) opined that the parents dumped their children essentially to get rid of their botheration, in which situation it was extremely difficult to involve the parents in any way. In order to develop regard for education and a positive attitude to the schooling of the children, it was suggested by these principals that nominal fees be collected from the parents.

22 principals (88%) and 95 teachers (73%) did not consider parental involvement important at all as most of the parents were uneducated and ignorant, difficult to interact with, which reduced any possibility of their contribution to the improvements of the school programme in any way.

Summary of Findings and Interpretations

There was a considerable degree of convergence in the responses of principals and teachers regarding aspects of guidance of parents. The common responses of majority of principals and teachers regarding the difficulty of providing guidance to the parents were :-

- Most of the parents were from the low socio-economic groups.
- Most of the parents admitted their children in schools because education and lodging-boarding were free and not because they were interested in education per se.
- The attitude of most of the parents was that school was a place where they could dump their child/children and be free of any botheration.
- Due to the above reasons it was difficult to get the parents to attend parent teacher meeting organized by the school.
- Only very few parents attended such meetings.
- Even among those parents who attended, only a negligible percentage was receptive to guidance provided, whereas majority of the parents were indifferent and remained ignorant of their role, in the child's development.
- Even if the parents wanted to do something, due to their economic conditions and lack of education, they could not contribute much.

As far as parents' responses were concerned the difficulty was that many of them had not responded to the

questions. From whatever responses had been collected the major findings were that : -

- they did not find it very important to meet the teachers and did not find it very useful.
- they were not sure of what to speak during such meetings.
- they did not find time to go to the school.

From the above findings it could be concluded that parents who should ideally become functional components of the system of rehabilitation of the hearing impaired, were not taking any interest due to different reasons. Education was not a primary concern as most of them were uneducated and had very low expectations about their children. Moreover, their priorities lay outside education and development of their hearing impaired.

The fact that most of the students were hostlers reduced the link between the parents and the school to a great extent and helped to perpetuate the indifferent attitude of parents, which reinforced the short comings of the school system. The strategies adopted by the schools to force the parents to maintain a contact with the schools were ineffective and needed a thorough appraisal. The school system seemed to de-emphasise the role of parents in the development of the child.

Precisely, the scenario of the schools with regard to parental involvement, very emphatically proposed in the model, was far from satisfactory.

4.1.3.13.

Pre-Vocational Training

Pre-vocational training was provided in most of the schools of the state for hearing impaired. The term 'pre-vocational' is used to delineate it from the advanced vocational course of 2 years duration, conducted in 5 schools of the state.

The underlying principle of vocational training of hearing impaired is that even if the students did not go for higher education they should be trained in some vocation which would help them to earn a living, without or with advanced training. This principle, is comparable to Gandhiji's principle of basic education and SUPW (socially useful productive work) of the regular schools. But the difference is that in case of hearing impaired, the stress on vocational training is much more in comparison, as opportunities for higher education are much lesser (only 14 schools had classes upto regular VII and only 3 schools had SSC programme).

See appendix No. 18 for different vocations provided in different schools.

Interviews with selected teachers (130) covering 25 schools, collection of data from office using information schedule were carried out to study the pre-vocational training in different schools.

The findings from interviews with teachers are presented followed by interpretations.

One government school (No. 21) and 3 aided schools (No. 5,6,4) did not have a teacher for vocational training and hence no pre-vocational training was run in these 4 schools. The government school had classes upto Vth (regular IInd) and the other 3 aided schools had classes upto IVth, Vth and VII respectively.

Two government schools (No. 10,14) and three aided schools (No. 8,9,4) offered training for drawing like any other school.

The rest of the 16 schools (64%) had different vocations, the most common being tailoring, embroidery and knitting.

Two government schools had material resources for starting carpentry, tailoring and one school also had a printing press, which was 'getting rusted', as stated by one of the teachers. The problem as reported by the teachers was that government did not sanction posts for starting vocational training.

In all schools the pre-vocational training started from the Vth standard. In those schools which had knitting and embroidery along with tailoring, the former was exclusively run for girl students.

Four schools (No. 3,4,11,18,) organized annual exhibitions of products made by the students and the returns of such exhibitions were taken by the trust for benefits of the school.

Follow up :-

Keeping the objective of vocational training of hearing impaired, follow-up work of the students who pass Xth standard is proposed in the model as an important responsibility of the school. The follow-up activity meant guidance and counselling of students (according to their performance over 6 years) and other necessary back-up for joining advanced vocational training or to practice a vocation to stand on one's own leg. With this in mind the teachers were contacted. When asked about guidance and counselling of students and parents it was reported by all teachers of 12 schools, that no such guidance and counselling was provided as a part of regular school programme although when students approached with doubts they were helped; and that parents were not counselled in any way. Teachers of 5 schools (2,4,12,16,18) reported that guidance and counselling was provided to the students with regard to the choice of vocations and employment.

Ten schools had maintained follow-up register. The data from these records are presented in table no. 18.

Table No. 18

No. of Students who Opted for Vocational Training and who Started Earning after Xth std. During 1986-1991 (10 Schools)

School Number	No. of students who passed X		No. of Students who opted for Vocational Training				No. of students who started earning			
	Boys	Girls	Boys	P.C*	Girls	P.C.	Boys	P.C.	Girls	P.C.
2	22	15	9	41	2	13	3	14	1	7
3	22	14	9	41	1	7	4	18	-	-
4	17	13	8	47	1	8	6	35	1	8
12	38	19	15	39	6	32	15	39	3	16
15	15	8	3	20	-	-	4	27	1	13
16	12	11	3	25	1	9	3	25	1	9
18	15	10	6	40	1	10	5	33	1	10
20	14	10	3	21	-	-	1	7	-	-
23	17	13	4	24	2	15	4	24	2	15
24	14	12	2	14	-	-	3	21	-	-
Total	[180	125]	62	34%	14	11%	48	26%	10	8%
<-----Average----->										

* P C -- Percentage

Five schools (No. 2,4,12,16,18) had advanced vocational training centre attached to the school. Hence these schools had a higher percentage of students opting for vocational training (41,47,39,25,40 respectively for boys and 13,8,32,9,10 respectively for girls). School No. 3 had a reasonably high percentage of boys (41%) opting for vocational training though

there was no advanced vocational training centre in the school, because there was school No. 16 within 50 Kms. which offered this course. School No. 12 had separate girls' and boys' schools in the same campus with a common vocational training centre. This was the reason for the relatively larger number of students who passed Xth standard (boys + girls), and who opted for vocational training (39% boys and 32% girls).

On the whole, the relative number of girls who opted for vocational training was very meagre. From discussion with the teachers, it was understood that parents of girls had no intention of seeing their daughter self-reliant but only wanted to get them married. This also explained the very negligible number who started earning.

Out of the students who started earning, majority of them as reported by the teachers, started working as either a tailor, or joined their parents in business (provision store, tea stall, pan shop).

Out of 227 students who passed Xth standard from 10 schools during the 5 year-period of 1986-1991, 74 boys (27%) and 16 girls (6%) had opted to take up advanced vocational training. The lack of confidence of students and lack of awareness of the parents regarding the usefulness of the course were reported by the teachers as the reasons for the low percentage of students going for advanced course in vocational training.

These findings point to the fact that the students did not exploit the opportunities available to them, due to various

reasons including ignorance of both students and parents which the school system perceived to be outside their control. The case of girls was much worse than that of boys and reflected the general biased attitude prevalent in the society to girls.

As found from the study, 4 schools did not have any vocational training offered, and 5 schools had only drawing offered. This showed the lack of importance given to vocational training. It is essential that all schools had teachers for vocational training and that children got trained in some vocation or the other according to their age and potential.

The fact that 7 schools, out of 17 that had pre-vocational training (28% of the sample) did not carry on follow up activity, showed their lack of involvement with the student's development. It was admitted by teachers of these 7 schools that they did not have information about the students after they passed Xth standard (regular VIIth) and that no guidance and counselling was provided to students or parents by them.

Only when guidance and counselling during the years of schooling is coupled with follow-up activity with regard to practice of any vocation, can vocational training provided in the schools be effective in serving any purpose for the hearing impaired.

To conclude, majority of the schools were far removed from the model proposed.

4.1.3.14.

Advanced Vocational Training

Data was collected through interviews with 2 personnel from each of the 5 schools that offered advanced vocational training, through interviews with 2 teachers from each of the 5 schools with which these centres of vocational training were affiliated, and by referring to the records of these 5 schools.

Data collected through interviews of personnel and by referring to records, are presented under relevant titles.

Schools Offering the Course

Only 5 schools (20%) offered this course, of advanced training in vocations. School No. 2,4,16,(11, and 12) and 18. School No. 11 and 12 were two separate schools one for boys and the other for girls run in the same campus with one centre for advanced vocational training.

4.1.3.14.1.

Responses of the Personnel

The course of advanced vocational training was for 2 years, extended to 3 years if the trainees were found to be in need of extra training. The trainees were certified by the Dept. of Special Education, with a Diploma in Technical Education. They were exempted from the written test of the examination which other regular students had to pass in order to get the diploma. The objective of the schools was to help the hearing impaired get settled with a job in an institution or to help them for

self-employment.

The courses offered in the different schools are presented in the following table.

Table No. 19

Courses Offered in the Centres of Advanced Vocational Training of 5 schools

School No. 2	School No. 4	School No. 16	School No. 11, 12	School No. 18
1. Tailoring	1. Tailoring	1. Tailoring	1. Composing & Binding	1. Composing & Binding.
2. Composing Printing	2. Composing Printing	2. Composing Printing	2. Tailoring	2. Tailoring
3. Binding	3. Binding	3. Beautician course	3. Screen printing	3. Diamond cutting & Polishing
4. Weaving	4. Knitting		4. Plastic lamination	4. Carpentry
	5. Embroidery		5. Carpentry	5. Box Making
	6. Photography		6. Typing	6. Mechanical Engineering
	7. Electro plating		7. Box making	7. Electric work
	8. Carpentry			8. Cane work
	9. Motor rewinding			
	10. Commercial painting			
	11. Caliper Training.			

Criteria of Admission

The criteria of admission followed in all the schools were that the student should be hearing impaired and should be aged between 14 and 40. Each student was to produce a certificate of a medical practitioner to show that he/she was hearing impaired. Education was not a criterion for admission.

Assessemnt to Decide the Vocation

The interest of the person, the region to which he/she belonged and the corresponding vocation of use were considered for deciding the vocation. Moreover, physical, mental and educational status of the students was also considered.

Stipend

Depending on the economic conditions of the candidate he/she was given stipend ranging from 50 to 225. This was not uniform in the different schools.

Hostel facility

Hostel facility was free for the students, but stipend given to the hostlers was less, varied from 50 to 125.

Funds

The vocational training centres were funded by the state government, and were also helped by the Vocational Rehabilitation Centre which was under Ministry of Labour. Apart from these, depending on the financial status of the trust,

different schools were financed by the respective trusts. Hence the number of vocations, the infrastructural facilities, and amount of stipend were found to differ across the 5 schools.

Annual Exhibition cum Sale of Products :-

All the 5 schools had the routine of annual exhibition of products of the vocational centres and the proceedings were absorbed into the trust funds. These 5 schools (according to the concerned personnel) made annual profit of 100-150% on an average, and the common products were files, gum pads, handicrafts, note books, etc.

Commercial work

Business deals in the open market were also taken up in these centres (like - uniforms, notices, boxes, binding works, clothes, embroidery on sarees, etc.) and the proceedings were utilized by the trust.

4.1.3.14.2.

Utilization of the Facilities of the Centre

In order to study the degree of utilization of the centre, the details of the trainees for the years 86-91 were collected. These are presented in the following pages. :-

Table No. 20

Percentage of Seats Filled up in the Centres of Advanced Vocational training

School No.	*Pc. of seats utilized 1986-91		Pc. of seats filled by students of the same sch.		Pc. of seats filled by students of other schools		Pc. of seats filled by candidates who are uneducated		Pc. of trainees absorbed in the centre		Pc. of trainee rehabilitated outside	
	G	*B	G	B	G	B	G	B	G	B	G	B
2	3	78	1	15	1	25	1	38	-	10	-	38
4	4	88	1	22	1	21	2	45	-	22	-	48
16	-	68	-	18	-	19	-	31	-	-	-	25
11/12	10	90	4	32	1	21	5	37	-	19	1	39
18	2	82	-	20	-	28	2	34	-	23	-	43

*Pc. : Percentage.
 **G : Girls
 ***B : Boys

The vocations opted by girls during 1986-1991

1. School No. 2 : Training & Binding
2. School No. 4 : Tailoring, Binding, Knitting, & Embroidery.
3. School No. 16 : Tailoring, Beautician's course.
4. School No. 11/12 : Tailoring.
5. School No. 18 : Tailoring, Diamond cutting and Polishing.

The average of percentages of trainees who utilized the benefit of bank loan (at the rate of 5% interest) for self employment, during 1986-91

1.	School No. 2	10%
2.	School No. 4	12%
3.	School No. 16	Nil
4.	School No. 11/12	13%
5.	School No. 18	13%

No girl in any of the centres had taken bank loan.

The following points emerge from the data :--

- i. Utilization of the training provided by boys was 68 to 90% and by girls was very poor-2 to 10%.
- ii) Utilization of seats by students of the schools that ran the centre, was generally poor 15% to 42% in the case of boys, and 1% to 4% in the case of girls.
- iii) 21% to 45% of the seats were filled up by male candidates and 30% to 100% by female candidates and both groups were adults who were not educated.
- iv) Percentage of trainees rehabilitated (either by absorbing in the centre or by helping to be employed outside) in the 5 years (1986-91) was poor, ranging from 25% to 48% and absolutely negligible in case of girls.
- v) The percentage of trainees who utilized the benefit of getting bank loan for self employment was not encouraging. (0-13%)

Interpretations

As education was not an eligibility criterion for admission in the vocational training course, 31% to 51% of the seats were filled up by candidates who were outsiders, who were adults, generally uneducated. The fact that one could get admission for vocational training even without education de-emphasised the value of education. At the same time, the percentage of seats utilized by students of the schools which ran the course, and the percentage of trainees taking bank loans were very poor, showing the lack of awareness about the benefits of vocational training among the parents and students and called for more effective guidance and counselling of students and parents by school teachers and principal. In both school and vocational centre, special care was required in the matter of girls as they were seen to be too few in number in availing the facilities provided.

As proposed in the model, every school for hearing impaired should have an advanced vocational training centre to help the students to the maximum extent possible. The fact that only 5 schools ran such a course indicated the need for further effort to be put forth in this direction so that more and more students got chance to be trained in vocations.

To conclude, the vital issue that emerged was the lack of adequate utilization of even the available facilities in the vocational training centre by students of the schools for the hearing impaired, due to factors inherent in the system and also

with the students and their families.

What emerged as a comprehensive profile of the schools was a system that reinforced the deficient hearing sense of the children by making them 'dumb' neither capable of relating with the larger society nor capable of earning their own bread.

It is clearly delineable from the presentation of findings and interpretative discussions on the schools presented in the foregoing sections that 2 schools were close to the model in many aspects. These were schools No. 4 and 18. The following section is devoted to presentation of a profile of school No. 4. The salient features have been presented under relevant headings.

4.1.4.

Profile of School No. 4

4.1.4.1.

Background

The school was started in 1960 as a private institution by a trust. It had a strength of 16 students, 12 boys and 4 girls. Government sanction and grant-in-aid came in 1970.

It had completed 30 years of functioning during the year of data collection (1991-92) and had a strength of 286 (190 hostlers + 96 dayboarders).

The steady growth of strength of students is evident from the following table.

4.1.4.1.1.

Strength of School No. 4 (1960-91)

Table No. 21

YEAR	STRENGTH
60-61	16
61-62	33
62-63	45
63-64	60
64-65	60
65-66	64
66-67	82
67-68	76
68-69	72
69-70	73
70-71	83
71-72	87
72-73	84
73-74	83
74-75	87
75-76	91
76-77	113
77-78	108
78-79	99
79-80	125
80-81	143
81-82	165
82-83	191

YEAR	STRENGTH
82-84	198
84-85	216
85-86	218
86-87	230
87-88	231
88-89	287
89-90	244
90-91	286

4.1.4.1.2

Strength in each class during 1990-91 is shown in the following table.

Table No. 22

Strength in Each Class (School no. 4) (During 1990-91)

CLASS	TOTAL
KG IA	16
IB	17
KG IIA	14
IIB	13
I A	12
I B	14
II A	12
II B	14
III A	13
III B	12
IV A	10
IV B	12
IV C	10
V A	9
V B	11
VI A	13
VII A	11
VII B	8
VIII	13
IX	13
X	11
NEW SBC	12

Standards from KG to Xth (upto regular VIIth) were offered, and new SSC programme was started in 1990 with 12 students. The school had 84% of students from rural background and 40% of students with educated parents. ('educated' denotes atleast one parent educated upto VIIth)

4.1.4.2.

Enrolment and Drop-out

Tale No. 23

Enrolment and Drop-out of Five Years -(School no. 4) (1986 to 1991)

Year	Strength in the beginning of the year	New admission	Total Drop-out of the year	PC of Drop-Out
1986-87	230	31	25	9
1987-88	231	37	26	10
1988-89	287	28	30	6
1989-90	279	35	20	10
1990-91	286	37	32	9

* PC : Percentage.

4.1.4.3.

Retention of Xth Std. Students

Table No. 24

Retention of Xth Standard Students of 1991 (School No. 4) (Traced back to 1982)

Year	No. of students at the beginning of the year	No. of students who dropped out.
1982	25	4
1983	21	2
1984	19	1
1985	18	2
1986	16	1
1987	15	2
1988	13	2
1989	11	1
1990	10	2
1991	8	--

Retention was 8/25 --32%. Of the 25 students who got admitted in 1982, 20 were rural, had uneducated parents and 4 were rural, but had educated parents (educated upto VIith)

4.1.4.4.

Resources

There were 21 teachers in the school, all qualified with a diploma in education of Deaf from either of the two teacher education centres of the state, apart from graduation or

post-graduation. 5 teachers looked after pre-vocational training, and a librarian was in charge of the library.

There was an audiologist appointed to carry out audiometry and speech therapy. Also, an ENT Specialist was available whenever required.

There were 3 hostel wardens to take care of the hostlers.

Advanced Vocational Training Centre was managed by 12 personnel.

Apart from these, there were 12 helps in the hostel, including cook and attendants, and 9 helps in the school including peons and sweeper.

As there were adequate number of teachers, teacher - pupil ratio was maintained at 1:13-14.

The school building was constructed with absorbing rough surfaces taking care of the special conditions necessary for the hearing impaired. There were adequate number of classrooms, an audiology room, a library and an ear-mould clinic. Hostel building was spacious and built along with the school building. Also the school had a spacious play ground for the children.

All classes had the required wooden furniture suitable for fitting the group hearing sets. There were in-built cupboards in each class to keep books and personal hearing aids,

teaching aids etc. All classes had soft boards on all the three sides for fixing visual aids, apart from the wall to wall blackboard. Besides these, there were models, flash cards, charts, maps, globes, number games and other visual aids in the school.

Personal Hearing Aids (PHA) were procured for 90% of the students, and around 65-70% of them were used during the year of data collection 1991-92. Procurement of PHA for the newly admitted students was a regular programme of the school.

Group hearing aids were present in all lower classes upto standard IVth. Efforts to mobilize funds for purchasing more sets were going on.

Loop-conduction system was present in the common hall where prayer was conducted every day.

There were audiometer and speech trainer in the audiology room, handled mostly by the audiologist and occasionally by the teachers. Apart from this the school had TV-VCR and an overhead projector (OHP).

There were picture books, and simple reading books for children and books and journals concerning education of the hearing impaired for reference of teachers.

The school received grants from the government as did all the other 21 aided schools. Apart from this, other sources of funds were voluntary organizations and individual donors and the trust. Annual expenditure was well covered by these funds.

4.1.4.5.

Functional Aspects.

The number of students given admission was controlled, so as to maintain the maximum number of students in a class at 13-14. The upper age limit for admission to KG-I was restricted to 4 years. A medical certificate showing that the child was hearing impaired and that he/she did not have any other handicap was demanded for admitting the child. Hearing sensitivity of each newly admitted child was assessed after one or two sittings with the audiologist within one month of admission.

The principal and teachers believed that most of their students had some residual hearing which could be exploited by amplifying the auditory stimuli and hence every child was fitted with personal hearing aid after assessment of his/her hearing was finalized. At this juncture, parents of dayboarders were given orientation with regard to use and monitoring of these aids. Teachers started a day's class after checking the hearing aids of each child and ensuring that each one was functioning. Batteries were changed too, if needed. Group Hearing Sets were regularly used by the teachers in classes wherever they were present.

The basic philosophy regarding mode of communication followed in the school was that students be should trained to listen and understand, and to communicate to others by speaking. There was more stress on developing listening skill for comprehension than on developing speaking ability. Auditory training was scheduled as a part of the curriculum in KG

classes and standards Ist, IInd and IIIrd. Later on, the emphasis on auditory training reduced although this school put in more efforts to train the students to listen than, as compared to other schools.

In the first year, the children were provided with different kinds of sounds - made interesting by use of visuals alongwith dramatization. The objective was to instil interest in the children to listen, and to make them realize that this exercise was worth the effort. They were not forced to speak till the end of the year but were trained to say Aa.... Eee.... Ooo... so that they could listen to their own voice. Rhythm was greatly emphasised when teachers spoke, right from the first year, with pauses at appropriate places and voice modulations. These were reinforced by gesturs by the teacher to express emphasis.

Individualized instruction for developing speech and speech reading skills was carried out. The difference from the other schools was that the method followed was synthetic as against analytic method followed in other schools. In the first year students learned words, and sentences with 2 words by imitating teacher's utterances. Subsequently, the consonants and vowels of these words were analysed and the students were trained to say these clearly. Thus the consonants and vowels of the syllabus was all covered. In the second year and there after, functional speech was stressed i.e. students and teachers indulged in conversations and built up language from these.

These conversations were both natural and artificially created. Unfortunately, the emphasis on speech and speechreading got reduced in higher classes (IVth to Xth)

A van Uden's method of 'Maternal Reflective Method' was followed in the lower classes (KG to IIIrd) in language teaching and communication skill development (This method has been presented in the model).

A prominent feature of language teaching in the lower classes was that stories with attractive visuals worked on charts were commonly used as teaching aids. Many times, the textual matter itself was written on chart paper with visuals to make them more easily comprehensible. In higher classes, language teaching became more and more text book based.

A diary was maintained for students from KG I to Std. III in which conversations that went on in the class were recorded and were later used as reading material. Thus, children were given reading practice regularly.

Use of audiovisual aids to teach any subject was a salient feature of the school. There were charts permanently hung in each class, eg: chart of vegetables, fruits, different types of food, a scene at a park, zoo - railway station, different verbs, adjectives, etc. Preparing fresh visuals was a regular routine of the school with involvement of students as well.

Students generally attempted to speak out rather than

show the answers in the classes. They were helped by teachers by seizing their utterances and repeating in full sentences. Generally, the students were involved in the classes and hence, the classes were more lively as compared to those of other schools.

Since 1983-84, mainstreaming was started as an experiment in the school. Students, after being equipped with basic academic skills were mainstreamed into regular schools. By 1991, 35 students had been mainstreamed with an average of 4 students getting mainstreamed every year.

Sanction for SSC Programme was obtained in 1990 and in the academic year 1990-91, a batch of 12 students started attending the course, to appear for the SSC exam of 1992.

The school had its own internal competitions in painting, dance, games and sports. Annual Day Celebrations and Annual Sports were also organised each year. Students of the school participated in inter-school meets for sports and cultural competitions whenever held in the state. Besides these, Independence Day, Republic Day, Rakshabandhan, and Makarsankranti were celebrated.

Pre-vocational and Advanced Vocational Training were imparted. The pre-vocational course for students from Std. Vth to Xth (regular IInd to VIIth) offered tailoring, knitting & embroidery, carpentry and drawing-painting. In the advanced training centre, courses offered were tailoring, embroidery, knitting, painting, photography, electroplating, carpentry, motor

rewinding and commercial painting. So far 21 trainees had been rehabilitated with self-employment and 65 had been employed in institutions. A follow-up register was maintained by the centre to keep track of the trainees.

The school was run under the able leadership of a principal who put in dedicated efforts to supervise and improve all activities of the school. The lesson plans of the teachers were checked regularly, their teaching was supervised with tips given whenever required, and the playground activities and cultural activities were also closely monitored, by the principal.

Teacher Education Centre

A Teacher Education Centre was run along with the school in the same campus, where senior staff members of the school conducted classes apart from visiting faculties from outside. With an objective of facilitating the endeavour of mainstreaming more successful, mothers also were trained in the centre. The main focus of the programme was development of communication skills, as far as mothers were concerned. Till 1990-91, 120 were trained in this centre among whom 35 were mothers.

Academic Endeavours

The school hosted All Gujarat Education Seminar for Revision of Syllabus of Hearing Impaired. It was represented in the Seminar of Indian Sign Language in 1990, and also in the

workshop for Teachers of the Hearing Impaired, 1989, organized by Ali Yavar Jung National Institute for the Hearing Handicapped. In general, the school had been in close contact with AYJNIHH and had been participating in academic activities organized at this institute.

Special Services

The School had a special clinic where ear moulds were prepared. Ear moulds are the snug fittings in the ears into which the hearing aids get inserted. These were made for students of the school as well as for those from outside. The school also had an Audio Speech Clinic where assessment of hearing and subsequent guidance for procuring hearing aids was carried out, not only to students of the school but also to outsiders.

It is clear from the foregoing presentation that the school had many activities going on, all geared to the development of the hearing impaired. All these were possible due to committed efforts by all the staff members under the leadership and guidance of the principal. Mobilization of financial resources was an important endeavour carried out in the institution on which depended the success of other activities. As has been stated in the model, education of the hearing impaired is not an easy task and compromising on funds can be done only at the cost of quality of education. Apart from the funds and availability of all resources, what is essential is dedication and perseverance, which were integral part of the

personality of the members of School No.4

4.1.4.6.

Discrepancies

Although the school was close to the model in many ways there were a few areas wherein discrepancies were observed. These are presented below :-

The stress on oral mode of communication of students reduced gradually from IVth to Xth standard. The time spent on auditory training, speech and speech reading training also got reduced gradually in these standards.

The school system failed to involve parents adequately in the school activities, irrespective of whether they were local or parents of hostlers. They failed to formulate effective alternate strategies to motivate the parents to come for parent - teacher meetings. Thus guidance of parents also remained out of the agenda, as in any other school.

Awareness regarding the role of teacher as a counsellor was not ingrained into the system. Hence, neither general counselling nor vocational guidance was carried out effectively.

Hostel functioned as in any other school, with no coordination of activities with the school. There were no efforts by the hostel staff to provide a 'talking' environment to the hostlers, and no care was taken to help the students to use and monitor the hearing aids.

To conclude, with whatever shortcomings the school had, it had many positive aspects to be emulated by the other schools. It is pertinent to add here that this school was assessed as one of the best in the country by a survey team deputed from the centre, under the leadership of Sr.Rita Mary (Principal -- Little Flower Convent for the Deaf, Madras).

So far, objective No. II - critical appraisal of structural and functional aspects of the schools has been presented. Next section presents the findings and interpretations pertaining to objective No. III.

4.2.

Objective No. III

Adequacy of Functioning of Supportive Organizations -- Teacher Education Centres and Vocational Rehabilitation Centres of Gujarat

The main focus of the present study being the school system catering to the needs of the hearing impaired, TEC-s and VRC-s were studied from the perspective of the school system, that is, to what extent the TEC-s and VRC-s were supportive to the school system. In other words, the attempt was to study the extent of adequacy of the teacher education system in grooming teachers for the education of the hearing impaired and to study how successful the VRC-s were in furthering the vocational rehabilitative measures of the school system, by way of rehabilitating the students of the school.

4.2.1.

Teacher Education Centres (TEC-s)

There were two teacher education' centres in Gujarat for teachers of the hearing impaired. These two are referred to as TEC-I and TEC-II in the report.

The TEC-s were studied from the responses of 5 teacher educators, and 10 teacher trainees from each TEC, and of 130 teachers of the 25 schools across the state who were trained from either of the TEC-s. Among these 130 teachers interviewed, 105 were trained from TEC-I and 25 were trained from TEC-II.

Apart from these responses, the course outline of both the centres was studied. See appendix No. 23,24 for the course - outlines.

Responses of the teacher trainees undergoing the course and those of teachers working in the schools who were trained from either TEC-I or II, were very similar to each other and hence are not presented separately. Differences were delineable between teachers and trainees of TEC-I and II and so responses are presented under TEC-I and II separately for each aspect studied.

Responses of teacher educators were different from those of teacher trainees and teachers and hence are presented separately under TEC-I and II respectively.

4.2.1.1.

Auditory Training

Auditory training being a cardinal aspect was included both in the theory inputs and practicum. But differences gathered, in the emphasis given in TEC-I and II are presented below : -

TEC-I Responses of Teacher Educators

It was stated by all teacher educators that residual hearing was emphasised in the curriculum, and that hearing as a unitary sense modality was stressed in the practicum.

Response of Teachers and Teacher Trainees

The concept of residual hearing was not emphasised in the theory inputs. All the 105 teachers and the 10 teacher trainees interviewed stated that profoundly hearing impaired, with a loss of 90 db and more were stone deaf and could not hear at all, and hence could not be helped by hearing aids. On probing it was understood that residual hearing as a concept was not given importance in the teacher education curriculum.

In the practical training, auditory training was imparted as one of the modalities of understanding conveyed messages, along with sense of vision and sense of touch. But sense of hearing as a unitary modality was not stressed.

TEC-II

Responses of Teacher Educators

It was stated by the teacher educators of TEC II that the theory inputs of the curriculum included the importance of residual hearing of the hearing impaired and so also the need to exploit this residual hearing by the use of hearing aids. The principle of listening and comprehension of sound and speech as basic to speech production and language development was emphasised in the practical training. In fact, providing the students with interesting sounds in KG I in order to create an interest in them to listen, formed one of the basic practice inputs. Thus auditory training per se got due importance in the theory and practice inputs of the curriculum. These were reiterated by the teachers who got trained from this centre and

also by the teacher trainees undergoing the course.

4.2.1.2.

Hearing Aids

TEC -- I

1) Response of Teacher Educators

It was stated by all the teacher educators(5) that theory inputs on hearing aids were given and that due to lack of time enough practical lessons on hearing aids was not given.

2) Responses of Teachers and Teacher Trainees

It was stated by the 10 trainees and 105 teachers that theory inputs included personal and group hearing aids - different types and their parts with mechanism of functioning. It was revealed by all that theory and practice inputs on technical know-how of the machines were not imparted. It was also reported by all the 105 teachers and trainees that the syllabus followed being an old one, did not include modern hearing aids.

TEC - II

1) Responses of the Teacher Educators :-

It was stated by the 5 teacher educators that apart from the theory inputs on hearing aids practice on use and monitoring of hearing aids (both personal and group) were given. It was also stated that minor mechanical errors were also explained to the teacher trainees with lessons on repairing these.

2) Response of Teachers and Teacher Trainees :-

It was stated by all the teacher trainees and 25 teachers that apart from the theory inputs on hearing aids, the usefulness of hearing aids to all hearing impaired, practice to help students to wear the aids, and to monitor their functioning was imparted. It was stated by the 25 teachers that practice inputs to repair the aids when, 'not very severe' problems arose, were also provided which they thought were inadequate.

4.2.1.3.

Audiometer

TEC - I

1) Responses of Teacher Educators

It was reported by the 5 teacher educators that both theory and practical inputs on audiometry were provided as it was a cardinal aspect of education of the hearing.

2) Responses of Teachers and Teacher Trainees

It was stated by all 105 teachers trained from this centre and the trainees that theory inputs for the parts of audiometer and their functioning were inadequate, and that practical training to use the audiometer, and to interpret an audiogram was virtually absent. The justification given was that generally teachers did not have to test the hearing of their students, but this was done by ENT Specialist in the locality.

TEC - I

1) Responses of Teachers, Teacher Trainees and Teacher Educators

The 25 teachers trained from this centre, the 10 teacher trainees, and the 5 teacher educators reported that they had theory inputs on audiometer given by an audiologist and practice to prepare audiograms using the audiometer only 2-3 times which they thought was not sufficient.

4.2.1.4.

Speech Trainer

TEC - I

1) Responses of Teacher Educators

It was stated by teacher educators that theory and practice inputs were imparted regarding speech trainer.

2) Responses of Teachers and Teacher Trainees

It was stated by all the 10 teacher trainees that they only had one class of theory lessons about speech trainer, with no practice of using it. Out of the 105 teachers trained from TEC-I, 62 (59%) stated that they had no practice to use a speech trainer, although theory class was taken. The other 43 teachers (41%) stated that they had one class where teachers showed them how speech trainer was used.

TEC - II

1) Responses of Teacher Educators

It was stated by all the teacher educators that practice and theory inputs regarding speech trainer were given and that more practical lessons with different students was needed which was not done due to lack of time.

2) Responses of Teachers and Teacher Trainees.

It was reported by the 25 teachers and 10 teacher trainees that they had theory inputs regarding speech trainer and a practice of one or two sessions of using the same, which

they admitted was not sufficient to enable them to use it confidently in real situations.

4.2.1.5.

Teaching of Language

Both the centres had theory and practicum in language teaching, as language teaching was the most emphasised paper in the curriculum, with more inputs as compared to other subjects. As the responses of teacher educators, teachers and teacher trainees were congruent, these are presented under respective TEC-s.

TEC - I

Phonetics of Gujarati language formed the core of theory inputs. Technique of teaching was a structured analytic one starting from vowels, followed with consonants and simple to complex words and sentences made from these. The teacher educators gave demonstration lessons in schools and the student teachers got practice in the classrooms as well.

TEC - II

As stated by the teachers, (25) 10 teacher trainees and 5 teacher educators, the theory inputs essentially was phonetics of Gujarati language. Practicum differed drastically from TEC-I. Teaching of language was based on Maternal Reflective Method, put forward by A van Uden. It was expressed by the teachers and teacher trainees that the practical lessons were far from sufficient.

4.2.1.6.

Teaching Methods

TEC-II

Response of Teachers, Teacher Trainees and Teacher Educators

It was stated by the 25 teachers trained from TEC-II and to teacher trainees that use of audiovisual aids was emphasised in the curriculum. Audioaids used to instil interest among KG children to listen, and other aids to be used in all classes across all subjects were important aspects discussed and practised in the course. Charts depicting small stories in order to teach abstract concepts was a method trained with a great degree of enthusiasm at TEC-II, as reported by the teachers and trainees.

Responses of the teacher educators were congruent with those of teachers and trainees.

TEC-I

1) Responses of Teachers and Teacher Trainees :

It was reported by the 25 teachers trained from TEC-I and the teacher trainees that audio-visual aids as such were not stressed in the course, but that instant drawings on the blackboard was specially given to be practised by the student teachers, as an aid to teaching.

Response of the teacher educators was congruent with that of teachers and trainees.

4.2.1.7.

Psychology

TEC -- I

Responses of Teachers, Teacher Trainees and Teacher Educators

It was stated by teachers and teacher trainees that the syllabus followed was that of XIIth standard with basics of psychology of the hearing impaired. It was reported by all the 105 teachers and 10 trainees that periods devoted to psychology of the deaf were one or two which were very insufficient to understand the hearing impaired students. Guidance and counselling did not find a place in the curriculum either as theory inputs or as practice inputs, which also meant that details of the vocational training centres were not included which were essential for teachers to function as vocational counsellor.

TEC -- II

Responses of Teacher Educators, Teachers and Teacher Trainees

Theory inputs, apart from the course included in TEC-I, had the nature of the hearing impaired and the special needs demanded by their peculiarities. Guidance and counselling was not included in this centre also.

4.2.1.8.

Philosophy of Mode of Communication

Mode of communication trained at both TEC-s was purely oral. The respondents of TEC-I and TEC-II stated that during

their teaching practice session, they taught through oral mode, as manual mode was unknown to them then, and that this posed a severe problem because students were used to signs and gestures and could not respond to oral mode, the added problem being lack of use of hearing aids. The philosophy of both the centres was that the hearing impaired should be taught through oral mode and hence sign language was not a part of the training programme.

When asked about the sign language in vogue in the state, which was against the philosophy of the teacher education programme, the teacher educators could not contribute constructively. It was agreed by them that as signs and gestures were prevalent in the state, and were different in different parts there was an urgent need of standardizing the system to ease communication.

4.2.1.9.

Practical Training

Both TEC-I and II imparted more than 70% of practical inputs in teaching of language and speech, and the rest of the lessons was devoted to teaching of other subjects. It was stated by all 130 teachers and 20 trainees (both the centres together) that lessons in teaching language were inadequate especially teaching of grammar, and that demonstration lessons by teacher educators or good teachers of schools were not sufficient either. This they stated, created problems when they started teaching in the schools.

It was reported by teachers trained from TEC-I that

teaching of parts of speech was an extremely difficult task for which no training was imparted in the teacher education course. Another aspect that was not covered was training to read.

Teachers and teacher trainees of TEC-II reported that they were trained to teach parts of speech specifically through short stories (wherever relevant) written down on charts along with visuals. Regarding training to read, the inputs included, making a diary of conversations that went on in the class daily and using this as reading material (A van Uden's method - A van Uden, 1977).

4.2.1.10.

Suggestions

It was suggested by teachers and trainees trained from TEC-I that technical know-how regarding the different equipments used in the schools, viz. audiometer, speech trainer, and hearing aids (personal and group) was to be imparted in theory classes and more number of periods of practical training was to be imparted in using these. It was strongly opined by all the respondents from both the TEC-s that weightage given for practice teaching should be increased. Language teaching, especially grammar teaching they stated, needed drastic revision in methods as they did feel handicapped in real classrooms. It was also opined by them that more demonstration classes by senior teachers, observation of good lessons in different schools were all necessary.

It was opined by 38 teachers (36%) who had been

teachers of mathematics, that there were no theory or practice inputs specific to mathematics teaching in the teacher education course (of either TEC-I or II) which was a great shortcoming. It was stated by them that while teaching they did come across different problems, to solve which, teaching of Mathematics should be an important part of the curriculum of both TEC-s.

4.2.1.11.

Summary and Suggestions.

Summary has been presented on the basis of data collected from the teachers of the schools teacher trainees and teacher educators and also based on the 416 observations of classroom teaching carried out across the 25 schools under study.

Many of the discrepancies that emerged from the scenario of school system were found to emerge from the lack of inputs in the teacher education curriculum of the TEC-s of the state and although the curriculum of TEC-II was found to be more updated than that of TEC-I, areas that needed changes were delineable clearly.

The curriculum at TEC-I needed a thorough revision to suit to the demands of the hearing impaired with regard to both theory and practicum. The syllabus evolved on the basis of general B.Ed. course needed a drastic departure in the aspect of practice teaching, because teaching hearing impaired students is a fresh experience a student teacher would be exposed to, in the course. Methods of teaching different subjects with special focus on language and Mathematics, needed a further scrutiny,

adopting modern trends from syllabus of other colleges. The syllabus followed at Ali Yavar Jung National Institute for the Hearing Handicapped, Bombay could be a point of reference.

Equipments are an important part of educational system of hearing impaired. Therefore, adequate knowledge regarding the functioning of all the equipments viz., audiometer, speech trainer, personal and group hearing aids, was to be given emphasis in the theory and practice inputs, of TEC-I.

Educational psychology with reference to hearing impaired remained a neglected area in the syllabus, which demanded a thorough revamping with inclusion of role of teachers as counsellor of students, especially as vocational counsellor. This also meant addition of adequate inputs regarding the state scenario of vocational rehabilitation of the disabled in general and hearing impaired in specific, in the curriculum of both the centres.

In tune with the national policy of mainstreaming the disabled after equipping them with basic academic skills, the teacher education curriculum needed to cover the responsibilities of a teacher of hearing impaired to help each child to be mainstreamed. Criteria to be fulfilled before a child could be mainstreamed needed to be scrutinized before being incorporated in the curriculum, especially in TEC-I.

In order to mainstream a hearing impaired child in a general school, the general school principal and the concerned teachers have to be oriented after making them ready for the

challenging task. The student herself/himself needed help to be mainstreamed and the peer group in the general class needed orientation to accept a hearing impaired in their class. It was essential that these inputs be an integral part of the curriculum of teacher education programmes.

The role of a teacher of hearing impaired as a resource person, is at two levels i) to help a child and his/ her teacher after mainstreaming the student into a regular school ii) to give guidance to teachers of regular schools to identify hearing impaired in their classes and to tackle the problems as far as possible. Both these aspects should be important subtopics under 'Role of a Teacher' in the curriculum of both the centres augmented with field experience.

Role of the teacher as a community worker was a neglected area in the curriculum of both the centres. A teacher education programme should include inputs regarding the role of a teacher to help his/her community people to identify problems in hearing among their young children and to take scientific measures without wasting time.

Basically, the teacher education programme had been developed with general B.Ed. programme as the reference point and this perspective itself needed a change. A thorough revamping of the curriculum, especially of TEC-I in consultation with the syllabi of different centres of the country, which would keep the specific demands of the hearing impaired in focus from all angles, and would equip the teachers with the necessary

competencies to facilitate the integration of the hearing impaired into the hearing world, was urgently required.

The second part of objective No. III, study of vocational rehabilitation centres, is presented in the following section.

4.2.2.

Vocational Rehabilitation Centres (VRC -s)

1) Background

Vocational rehabilitation centres (VRC-s) are organizations under Ministry of Labour, established by the central government as a part of National Employment Service in co-operation with special employment exchanges for handicapped persons.

With every 5 year - plan, 1 or 2 or even 4 or 5 VRC-s are added in different regions depending on the

- funds available
- total number of handicapped in the region
- total number of industries of the state, and
- the responses of the state government

So far 17 such centres, covering 16 states had been started, the last centre to be started (17th) happened to be in Baroda, (1987) which is exclusively for women, the first of its kind in the country. The objectives of these centres are :--

- i) evaluation of the potentials of the handicapped.
- ii) vocational rehabilitation of the handicapped to make them self-reliant.
- iii) to let the society be aware that the handicapped are not vocationally handicapped and are capable of many competent vocations.
- iv) to co-ordinate the services of all rehabilitation

centres.

- v) to bring societal awakening with regard to rehabilitation services by making the services more widespread and successful.
- vi) to find out suitable vocations for the handicapped.

Criteria for Admission

- i) Age range -- 14 - 45
- ii) 40% of disability (in case of hearing impaired, 70 db hearing loss). certified by a Civil Surgeon.

Programme of Evaluation

In order to help the handicapped get the maximum benefit, a thorough assessment was carried out over a period of a month. The different types of assessment done were :-

- assessment of socio - economic aspects.
- assessment of physical abilities.
- psychological assessment to see intelligence, interest, aptitude, motor coordination, and personality characteristics.
- Vocational assessment to see potential in doing work, work tolerance, work behaviour, personal skills.

Period of Training and Stipend

Period of training was 1 year, during which each trainee was given a stipend of 170 per month if they were day boarders.

Hostel Facility

Hostel facility was provided to the trainees. There was only accommodation, but no food was given in the hostels. Hence stipend for hotlers was 240 per month.

Evaluation

VRC training was a totally non-formal one and there was no examination as such. But monthly and quarterly assessments were done for each trainee and if the instructor was not satisfied the trainees were asked to continue for more time.

Bank Loans

Bank loans upto 6000/-, with an interest of 4% were given to the trainees with help from VRC

Steps Towards Rehabilitation

- i) Distribution of equipments for helping better functioning. (Hearing aids, in case of hearing impaired).
- ii) Discussion and guidance along with family members, group activites, and help to get into social organizations, for social rehabilitation.
- iii) Development of skill and expertise in work through vocational skill training.
- iv) Provision of admission in I.T.I., apprentice training in institutions, informal training in vocations.
- v) Recommendations for jobs in government offices.

- vi) Help for self employment, by arranging funds.

Purpose of the Study

There were two VRC-s in the state, hereafter referred to as VRC-I and VRC-II both of which were included in the study. VRC-I was established in 1978 and VRC-II in 1987. Schools for the hearing impaired being the main focus of the present study, the two VRC-s were studied with the following objectives :-

- to study the adequacy of functioning of these VRC-s to support the school system with reference to -
 - i) guidance of school students by VRC - personnel for joining training in VRC-s.
 - ii) Other measures taken by the VRC-s to encourage school students to join VRC-s.
 - iii) Percentage of enrolment of school students in VRC-s.
 - iv) Percentage of school students rehabilitated through VRC-s.

Data for the study of VRC-s was collected from training personnel, trainees of VRC-s and from principals and teachers of schools through interviews. Records of the centres were referred to collect data regarding enrolment and drop-out. The period of 5 years 86-87 to 90-91 were covered under the study.

The data from VRC-I and VRC-II are presented separately as there were more differences than similarities.

4.2.2.1.

VRC-I

Vocations Offered

The vocations offered were -

1. Tailoring 'T'
2. Carpentry 'C'
3. Armature Coil Winding 'AcW'
4. Refrigeration 'R'
5. Hand composing and book binding 'HB'
6. Commercial (typing and shorthand)
7. Radio/TV
8. Electronic
9. Auto Repairing

In these, the first 6 were skill suited for the hearing impaired and the sixth one was only for those who had passed SSC (commercial). But training in refrigeration was not offered in the year of data collection.

Responses of Training Personnel.

The personnel for 5 vocations (No. 1,2,3,5,6 above) were contacted for the study. The following data was collected from their responses.

Armature Coil Winding (ACW) was the most sought after trade, by the hearing impaired, and had been constantly so since the past few years (Since 1988).

They all stated that the number of students who came after Xth class had been always low, and that most of the students were either drop-outs after one or two years of schooling or were uneducated, and were above 20-22. They also reported that girl candidates were always very few in comparison to boys.

Guidance of the trainees, in order to discourage them from dropping out was done regularly as a routine, but despite that many hearing impaired trainees did drop-out.

The personnel of VRC -I stated that they had contact programmes with the schools for the handicapped of the state, apart from their camps held every year in different villages to enlighten the people regarding openings for handicapped through VRC-s.

The contact programme they reported, was arranged thus - the personnel would go to the different schools of the state and hold meetings with teachers and principal of the school updating them with the programmes at VRC-s when any new course was introduced or when any new policy was started, in order to encourage more enrolment from students. They added that every year they also visited the school to directly talk to the students about the VRC programme and inspire them to take admission after Xth class. This guidance programme scheduled during December-March of each year in the schools for hearing impaired, they reported, was done with the help of teachers who

used to make the students understand through manual mode.

Even with all these, they observed that the percentage of students who joined from school was meagre. They also added that the teachers and principals could do a more effective guidance and encouragement regarding this because they were in constant contact and could convince the students more easily, which was nearly impossible for the VRC people in one meeting.

Data Collected from Records

Data from records is presented in the following table.

Table No. 25

Percentage of Hearing Impaired Trainees at Different Stages

(VRC-I)

Year	INTAKE			DROP-OUT		Trainees who completed training		Ut. of seats in trng.	Trainees in job (out of those at intake)	
	M	F	T	M(P.C)	F(P.C)	M(P.C)	F(PC)		M(P.C)	F(P.C)
'87	94	9	103	56(60%)	7 (78%)	38(40%)	2 (22%)	31%	10(11%)	2(22%)
'88	57	9	66	28(50%)	9(100%)	29(51%)	0	22%	6(11%)	-----
'89	55	4	59	16(29%)	3(75%)	39(71%)	1(25%)	31%	13(24%)	-----
'90	69	23	92	24(35%)	9(39%)	45(65%)	14(61%)	45%	14(20%)	-----
'91	36	12	48	14(39%)	8(17%)	22(61%)	4(33%)	25%	11(31%)	-----
T	311	57	368	138(44%)	36(63%)	173(56%)	21(37%)	30%	54(17%)	2(4%)

Ut. : Utilization.

Trng. : Training.

M : Male

F : Female

P.C. : Percentage.

T : Total

(Utilization of seats in training : calculated against 130 seats kept aside as maximum number of seats for hearing impaired in the centre for the different vocations)

Tatble No. 26

Number of Fresh School Leavers at Intake Stage and Number of Uneducated and Early Drop-outs (VRC-I)

Year	Intake		Number of fresh school leavers				Uneducated trainees		Early Drop-out (before completing IV)		
	M	F	M	P.C.	F	P.C.	M	F	M	F	
1987	94	9	11	24	2	22	46	35	6	48	1
1988	57	9	8	14	3	33	47	29	5	20	1
1989	55	4	4	7	0	--	7	39	4	12	--
1990	69	23	6	9	9	40	49	43	12	20	2
1991	36	12	2	6	1	8	14	22	8	12	3
T	311	57	31	10%	15	26%	38%	168 (54%)	35 (62%)	112 (36%)	7 (12%)

M : Male
 F : Female
 P.C. : Percentage.
 T : Total

4.2.2.2.

V R C -- II

VRC-II exclusively for women started functioning only in 1988, and being for only women, was, 'yet to catch up momentum', according to the superintendent.

The Vocations offered

The Vocations offered :-

1. Cutting and Tailoring
2. Radio/TV (Repair)
3. Diamond cutting & Polishing
4. Commercial (Stenography, Typewriting)

Only 1st and 3rd trades were meant for hearing impaired girls.

Responses of Personnel

The teacher for cutting and tailoring and also the superintendent were contacted for studying about the VRC.

The basic problem they reported was that being only for women, the number of trainees who joined the centre had always remained much lesser than the seats available.

They observed that societal stigma against women was the reason for such a problem, that parents of girls generally did not want to send their daughter for such training courses, nor did they want them to be earning members of the family.

Regarding their strategies to encourage girl students, it was reported that they did not have any special programmes other than what VRC-I personnel reported (i.e. direct personal contact with students of schools and also staff members). Out of the few trainees who joined, a few were fresh school leavers.

Drop-out cases were also reported by the personnel, stages at which drop-outs occurred included i) during evaluation and ii) during training. They reported that guidance and counselling did not have much impact on these girls or their parents, and that many times they did not even come to the centre when called for such discussion sessions.

The personnel expressed hope that in due time situation would improve and that it was too early to assess the effectiveness of the functioning of the centre which was still in its infancy.

Among the vocations, training in diamond cutting and polishing was given in Tulsidas and Co. which was close to the VRC-II as such facility was not present in the VRC.

Data collected from records are presented in the following tables : -

Table No. 27

Number of Hearing Impaired Students Joining VRC-II, from Schools

Year	Total Intake	No. of fresh school leavers (2 years after passing VIII, IX, X or SSC).	P.C	No. of students uneducated or early drop-outs
1987	Nil	2 - after VIII } } 4	9	6-uneducated
1988	14	2 - after X }		4-early drop-out after IIIrd Std.
1989	4	None	--	4-uneducated
1990	7	2 after VIII - 2	29%	3-uneducated 2-drop-outs after II Std.
1991	22	4 - after VIII } 2 - after X } 6	27%	8-uneducated 5-drop-outs after II Std.
Total	47	Total	12 26%	3-drop-outs after III Std.

21 uneducated (total) === 45 %

14 early drop-outs === 30 %

Table No. 28

Data of Intake, Drop-out and Rehabilitation of Hearing Impaired during 1986-91 in V R C -- II

Year	INTAKE		DROP-OUT			REHABILITATION				
	1	2	3	4	5	6	7	8	9	10
'86-87	Nil	---								
'87-88	14	47	5	2	1	8	57	6	2 (Diamond cutting)	6/30 20%
'88-89	4	13	1	-	-	1	25	3	1 (Tailoring)	3/30, 10%
'89-90	7	23	2	1	-	3	43	4	1 (Diamond cutting)	4/30 13%
'90-91	22	73	4	3	4	11	50	11	4 (Diamond cutting)	11/30 37%
Total	47		12 (26%)	6 (13%)	5 (11%)	23 (49%)		24 (51%)	8 (17%)	24(51%) (40% of those who got training)

Column No. 1 (Intake) Heading : Number.

Column No. 2 (Intake) Heading : Percentage against total of 30 seats for hearing impaired.

column No. 3 (Drop-out) Heading: During Evaluation

column No. 4 (Drop-out) Heading: After Evaluation.

column No. 5 (Drop-out) Heading: During Training

column No. 6 (Drop-out) Heading: Total

column No. 7 (Drop-out) Heading: Percentage

column No. 8 (Reh.) Heading : Trainees who completed training.

column No. 9 (Reh.) Heading : Trainees who got employed through VRC

column No. 10 (Reh.)Heading : Utilization of seats for training

Table No. 29

Number of Trainees Employed who were Educated upto Atleast VII
(School Leavers) (total of 5 years) <VRC - I & II>

In VRC I		In VRC II	
54 males	}	8	were employed
	}		were employed
2 females	}		
20/54	}	2/8	were school leavers
males	}		(25%)
	}		(37%)

The major points that emerge from the data are :-

- Very low percentage of school leavers were enrolled in both the centres. 14% to 49% in VRC-I amounting to 38% of total enrolment of 5 years, 0 to 29% in VRC II, amounting to 26% of total enrolment of 5 years.
- Heavy drop-out - 44% in male and 63% in female in VRC-I and 49% in VRC-II totally during the 5 years.
- Low percent of trainees who got employed through VRC, 11% to 31% - amounting to 17% of total enrolment of 5 years in VRC-I, 1% to 4% - amounting to 17% of total enrolment of 5 years in VRC-II.
- Out of the trainees employed in both the VRC-s the percent of school leavers was again low. (37% and 25%)

Response of Teachers and Principals of Schools

Contrary to the claims of VRC-personnel, 90 teachers (70%) and 13 principals (52%) of 13 schools reported that VRC personnel did not come to meet the students of the school nor the staff, but that they only contacted through post regarding time of admission and varieties of courses every year as a reminder to the school, and that whenever any new programme or course was introduced, this was intimated also. These 13 schools were far from the VRC - I.

It was reported by 40 teachers (30%) and their principals (12) (48%) covering 12 schools (48%) that their schools (close to the place of VRC-I) were visited by VRC personnel to give guidance and counselling to the students and also to meet the staff in this connection.

28 teachers (22%) covering 4 schools (16%) (closer to VRC-II than other schools) stated that VRC personnel from VRC-II had visited them once during 1989, 1990 and 1991, in order to encourage students to join their training courses and also to make the staff familiar with the programmes, as the VRC had started only in 1987.

Regarding guidance and counselling given by the teachers and principal themselves to encourage students to join VRC, teachers of 2 government schools (No. 10,21) reported that they did not do this as most of their students were around the age of 10-12 (classes upto regular Vth only). It was stated by

98 teachers (75%) of 14 schools (64%) that had classes upto Xth, and another that had classes upto IX, that VRC - programmes were included in their guidance programme along with SSC programme. Only 3 principals (12%) and 24 teachers (11%) covering 3 schools reported that details about VRC-I & II were also included in the guidance programme. They observed that in spite of such guidance, during the past 5 years (86-91), not more than 10-12% of students (out of those who were aged 14 or more) opted to join VRC-s. Reasons given by them were

- majority of students came from poor families of rural background and had uneducated parents due to which they could not be easily convinced about the advantages of vocational training centres and that they always had a sense of fear and doubt about such training centres.

It was stated by the principals and teachers that students who discontinued studies midway did not join VRC training course. The few who joined were all those who passed Xth (regular VII).

Interpretations

Schools for the hearing impaired being the focus of study, the objective of studying the VRC-s was to find out the adequacy of VRC-s as a supportive system of the school system. The stand taken by the researcher is that the hearing impaired be given opportunities to develop their potential to the maximum, pursuing education even after school level. Vocational education

is not seen as the only possible way of earning one's bread for the hearing impaired, but is seen as one of the alternatives, not depriving the capable students of going for higher education.

As found from the study of schools, very low percentage of students opted for SSC programme after passing the Xth (regular VIIth) (9% to 32% across the 14 schools that offered grades upto regular VIIth). On the basis of this data, expectation of students' enrolment in VRC-s was obviously high when the VRC-s were studied. But the findings were contrary to this expectation.

The data from the records brought out the vital point that the school students did not utilize the facilities provided in the VRC-s adequately. From the responses of the VRC personnel, school staff and beneficiaries, it emerged that adequate stress was not given on vocational guidance in the schools and that the VRC-personnel did not give enough importance to coordinate with school system. As education was not a criterion for VRC admission, school did not become an important field for VRC, to encourage students to participate. They were more involved with community extension work to encourage enrolment from villagers who were mostly uneducated. The low percentage of students at intake stage and also at the stage of employment through VRC brought to light the inadequate utilization by school students.

VRC-II, exclusively for women, did not take any special steps to encourage girl students from schools to join VRC and did not visit schools that were away from their place of location which kept majority of the schools in the dark as to the activities of this VRC. In fact being only for girls they had better potentials for development of girls which were being unused due to inadequate measures to encourage enrolment.

To conclude, the vocational rehabilitation centres were far from being supportive to school system, with a meagre percentage of school leaving students joining these centres. In effect the majority of the hearing impaired neither went for higher education nor for vocational training.

Thus, analysing the data of schools, Teacher Education Centres, and Vocational Rehabilitation Centres, what emerged was a rather pathetic state of affairs, with the students neither educated upto SSC, nor rehabilitated. The school system could not help the students develop language and communication abilities, many of the discrepancies set in from the Teacher Education Centres. Vocational Rehabilitation Centres did not take pains to rehabilitate the school children effectively. Thus, both the TEC-s and VRC-s failed to be supportive systems to the school system.

The major findings of the study have been presented in the next chapter - Chapter V - Summary.