

STUDY OF STATUS OF MANPOWER IN SPECIAL  
SCHOOLS FOR CHILDREN WITH HEARING  
IMPAIRMENT IN MYSORE

*UjJayakumari (D.K)*  
**Registration No. 07MSED06**

A dissertation Submitted in part fulfilment for the degree of  
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ALL INDIA INSTITUTE OF SPEECH AND HEARING  
MANASAGANGOTHRI, MYSORE - 570 006

APRIL 2008

*Dedicated to*

*My Father-in-law,  
Husband  
& Sujali*

## **Certificate**

This is to certify that this dissertation entitled 'Study of Status Manpower in Special Schools for Children with Hearing Impairment in Mysore' is a bonafide work in part fulfilment for the degree of Master of Special Education (Hearing Impairment) of the student (Registration No. 07MSED06). This has been carried out under the guidance of a faculty of this institute and has not been submitted earlier to any other University for the award of any other diploma or degree.

  
**Dr. Vijaya Lakshmi Basavaraj**

**Director**

Mysore  
April, 2008

All India Institute of Speech & Hearing  
Manasagangothri, Mysore - 570 006

## Certificate

This is to certify that this dissertation entitled 'Study of Status Manpower in Special Schools for Children with Hearing Impairment in Mysore' has been prepared under my supervision and guidance. It is also certified that this dissertation has not been submitted earlier to any other university for the award of any degree or diploma.



**Dr. G. Malar**

Guide

Lecturer in Special Education

All India Institute of Speech & Hearing

Manasagangothri, Mysore - 570 006

Mysore  
April, 2008

## **Declaration**

This is to certify that this Dissertation entitled 'Study of Status Manpower in Special Schools for Children with Hearing Impairment in Mysore' is the result of my own study and has not been submitted earlier to any other university for the award of any degree diploma.

Mysore  
April, 2008

**Register No. (07MSED06)**  
All India Institute of Speech & Hearing  
Manasagangothri, Mysore - 570 006

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# Chapter I

## INTRODUCTION

Education is the back bone of a progressive nation. And the strength of the educational system in turn largely depends upon the quality and dedication of its teachers. The worth of the future citizens lies in the hands of the teachers, who are moulding them. It has been reported that teachers have a major role in the educational development, whether they approach their work actively or passively (Commonwealth Conference, 1974). According Kothari Commission's Report (1966), school is the most important factor in the transformation of individuals into worthwhile Citizens and it is said that the destiny of our nation is being shaped in the classroom. The level and quality of students' achievements depends greatly on teaching-learning activities provided by teachers in the classroom. Thus teachers occupy the pivotal position in all-round development of school children.

### **The Need for Educators**

A teacher is an embodiment knowledge and personification of reality. It is said that *as is the teacher, so is the child*. In the words of our former president Dr. S. Radhakrishnan, "The teacher acts as a pivot for the transmission of intellectual traditions from generation to

generation and helps to keep the lamp of civilization burning". Teachers are saviours of the society and redeemers of the race. A Teacher is one who paves the path from the darkness of ignorance to the light of knowledge. He is custodian of national culture.

Teachers are the axis of our educational system. Therefore destiny of any system of education is directly linked with them. They are dynamic forces of the educational system. The educational system without a teacher is just like a body without the soul, a skeleton without flesh and blood, and a shadow without substance.

### **The Special Need for Special Educators**

Among the general milieu of school going children, there is a special group of children with special needs. These children may have some differential abilities and additional needs because of the presence of disabilities like hearing impairment (HI). Special education is the instruction designed for such students who have special learning needs arising out of presence of disabilities like hearing impairment. In order to help these children learn effectively, the educational process needs to be modified in certain aspects like, developing / adapting special curricular content, adopting special instructional methods, using special instructional materials and most importantly employing special trained staff (Ysseldyke & Algozzine, 1990).

Some of the students with special needs may have difficulty learning in regular classrooms; hence they need to be educated in a separate special school. They need special attention to help them master additional skills to reach their full potential in school. So many a times, the process of educating children with disabilities like hearing impairment takes place in special schools away from the regular school. In such special schools for children with HI, the service of specially trained staff is essential in order to identify their special learning needs and meet them adequately (Panda, 1997).

Because, unlike usual learners, learners with HI face some specific problems in the learning process. They may not be able to follow most of the teaching-learning activities happening in the classrooms, as they are primarily based on oral or written communication. Deficiency in language development is one of the major fall-outs of hearing impairment. This in turn leads to serious educational handicaps as it affects perception and learning of language symbols which act as facilitating factors for thinking as well as acquisition and utilisation of knowledge (Rama, 1989 & Freeman et al, 1981). Learners with hearing impairment may also face social and psychological problems in the learning environment.

An educator who has received conventional teacher education may not be capable of understanding these special learning needs and cater to them effectively. Hence, in an educational setting with learners with HI, there is need for specially trained teachers who are

able to realise the implications of hearing impairment in the learning process, understand the special educational needs of learners with HI, and who possess knowledge and skills necessary to meet these needs effectively.

### **Role of Educators**

In the process of moulding the future of the children under their care, educators or teachers have 2 significant roles to play. They are the basic and professional roles, which are as follows:

- ***Basic role of the teacher:***

The first and foremost role of teachers is that of a leader. They have to organise their students into well knit groups, showing the way and influencing and guiding them in their thinking, activities and conduct. This implies having adequate control as well as exercising appropriate authority.

The second basic role of teachers is to treat all children with objectivity and fairness. The teachers are also expected to be effective socialisers. They represent the adults' society and their task is to propagate and promote the social norms and ideals in the learners. As social engineers the teachers can socialize and humanize the young by their qualities. It is also the basic role of the teachers to act as an agent of morality and moral development of children. Their own behaviour should be exemplary.

- *Professional role of the teacher.*

A profession implies a significant social service which members must perform with a sense of commitment and dedication. These days, teachers are eager to call their occupation as a profession like law and medicine. This implies that while they adopt a philosophical view of their job, there are certain legitimate norms, professional rules and regulation that they are follow in their practice. More importantly, they should view their profession as a growing and dynamic science, where they are to employ systematic and progressive ideas and skills in the process of executing the job of teaching the young.

The primary professional role of teachers is to educate their wards so as to enable them to lead lives of better quality and become better individuals. Through this act of nurturing better citizens, teachers essentially are nation builders. And they become the torch bearers of the human race.

To conclude, the performance of students and the quality of education depends upon the effectiveness or quality of teachers. Without teachers even the best system of education is bound to fail. Ultimately, the future of the whole mankind depends on the teachers (Joshi, 1984; Goyal and Aggarwal, 1984; Patel, 1993 and Rajamany, 1993)



## **The Special Roles of Special Educators**

Education is the process of learning and changing of the learner for the better as a result of schooling and other experiences. Along with this, the process of special education involves providing some additional supports to the learners with special needs, so as to help them overcome the difficulties posed by the disability, and achieve the maximum possible potential for learning. As mentioned earlier, students who cannot hear may have ensuing problems in communicating, using language effectively, and academic learning, as well as in psychological and social facets of their lives. The education provided to them should be catering to all these special needs that arise out of their disability.

Therefore, apart from the regular roles to be played by any educator, special educators catering to children with hearing impairment, have some additional responsibilities to bear (Sharma & Jangira, 1988), like

- Helping in early identification of hearing loss and related problems in the students.
- Referring students with hearing impairment for appropriate aural-oral rehabilitation, or other appropriate rehabilitation processes as well as fitment of necessary assistive devices.

- Using appropriate communication processes and strategies to facilitate language development in the students with hearing impairment.
- Employing appropriate techniques, methods and materials so as to stimulate meaningful learning in the students with hearing impairment.
- Facilitating better psychological and social skill development in the students with hearing impairment by extending necessary counselling, guidance and opportunities for social interaction.

### **Status of Manpower in the Field of Special Education**

According to statistics there are around 20-30 million (2 to 3 crores) of children with disabilities in India. Of these approximately 17% of have difficulties in hearing (NSSO, 2002). So we can assume that there are 42, 50,000 children with hearing impairment in need of appropriate special educational services. However, it is doubtful whether there are adequate trained staff to meet their needs.

- *Lack in Quantity:*

It is reported that there are some 900 special schools serving children with hearing impairment (Mani, 2003). In these schools, ideally, there should be one specially trained teacher for every 8 and not more than 12 children with hearing impairment (Sharma &

Jangira, 1988). In face of this demand, there are around 25 and 50 institutions registered with RCI, which were offering B.Ed (HI) and DSE (HI) courses, respectively. This implies that approximately a maximum of 1,500 special educators could be trained every year. Plans are also being made, by RCI to train more than 2,500 special educators every year through the distance mode to meet the demand for trained teachers of adults and children with special needs (including all type of disabilities). However, these numbers are found to be inadequate in meeting the existing needs in the field, as it is reported that only around 5% of the children with special needs in school going age receive necessary education services (NCPEDP, 2007).

### *Lack of Quality*

Teachers providing special education to learners with hearing impairment are required to have various skills and knowledge, in order to provide individualised educational training to meet their special learning needs. However, in practice it is questionable whether current courses to train special educators, prepare them to function effectively in the special educational programmes (Myreddy and Narayan, 2000). Right now, the lack in terms of required number of trained teachers is so great that not much attention or effort has been spent on researching or rectifying the

However, before extending training and support to help special educators upgrade the quality of their services, it is necessary to know the nature of their difficulties and needs. Only then appropriate programmes could be planned and implemented to help them. As mentioned earlier, the magnitude of the problem in terms of insufficient number of available teachers has prevented adequate attention being paid to researching or redressing the quality of manpower.

### **Aim of the Study**

In this scenario, this study proposes to achieve the following *objectives*:

1. Investigate and profile the quality of manpower and the nature of teaching processes undertaken by them in the schools for children with hearing impairment in Mysore.
2. Investigate the impact of the above aspects on the learning, as well as behavioural outcomes in the students with hearing impairment.
3. Investigate the impact of staff related administration/management procedures and facilities at the schools on the quality of manpower and teaching processes.
4. Put forward suggestions for improving the existing situation.

Researches suggest that students learn more from experienced teachers (those with more than 5 year of experience) than they do from less experienced teachers (NCES, 2000a; Rivkin, Hanushek and Kain, 1998; Murnane and Phillips, 1981). The benefits of experience, however, appear to level off after 5 years (Darling-Hammond, 2000). At the same time, there are also researches (NCES, 2000b) which propose that less experienced teachers are generally more likely than more experienced teachers to learn new skills and try using them.

### *Ability to Adapt Lessons to Suit Special Learning Needs*

The ability to adapt the instructional process in order to suit and meet the special learning needs of children with disabilities has been identified by Fimian (1978) and Kelly, et al. (1979) as one of the most essential attributes of a special educator. There are several ways of doing it, the most common methods for adaptation that could be used with children with hearing impairment, include simplification of the content in terms of language, length and complexity of the concepts involved, and make necessary adaptations in methods and materials (Smriti Swaroop, 2001; Yathiraj, 2007).

### *Use of Appropriate Instructional Strategies*

Several researches in the global, as well as Indian context have time and again emphasised that the major implication of hearing loss in children is its critical effects on the childhood development of

quality of services offered by the existing teachers in the field of special education for children with hearing impairment.

In order to make up for the deficit in quality and quantity among the special educators, RCI has come up with many innovative methods for manpower development like Continuing Rehabilitation Education (CRE), distance mode education and bridge course in order to train anew and/or capacitate in-service candidates. In this regard, in the context of special education for children with hearing impairment, RCI proactively collaborates with premier institutions of manpower development like AIISH, NIHH, MPBOU, as well as grass root service delivery organisations. All these efforts appear very encouraging, but much more has to be done to solve the vast need for trained manpower in the field of special education in India (Singh, 2004).

### **Need for the Study**

In this situation, if the quality special educational services are to be taken to all children with hearing impairment of school-going age, the immediate need is capacity building in special educators, so that they can understand and meet the special educational needs of the children. This could be done effectively through pre-service teacher education courses, as well as periodic in-service training programmes for upgrading teacher quality (Mani, 2003; Narayan, Rao & Reddy, 1998).

However, before extending training and support to help special educators upgrade the quality of their services, it is necessary to know the nature of their difficulties and needs. Only then appropriate programmes could be planned and implemented to help them. As mentioned earlier, the magnitude of the problem in terms of insufficient number of available teachers has prevented adequate attention being paid to researching or redressing the quality of manpower.

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3. Investigate the impact of staff related administration/management procedures and facilities at the schools on the quality of manpower and teaching processes.
4. Put forward suggestions for improving the existing situation.

## **Research Design**

The present study was a survey type of research involving descriptive as well as causal-comparative investigation. As it was a survey undertaken with the primary intention of describing existing situations, no hypotheses had been proposed.



## **Chapter II**

### **REVIEW OF LITERATURE**

This study faced a major limitation in that even after extensive search of literature; the investigator was unable to come across adequate information on relevant information in the field of special education for children with hearing impairment. Hence, this study has heavily borrowed information from the field of mainstream education, as well as special education in general.

#### **Relationship between Teacher Quality & School Quality**

Earlier research suggests that school quality is tightly linked to teacher quality (NCES, 2000a). Rivkin, Hanushek and Kain (1998) have concluded in one study that teacher quality is the most important determinant of school quality. However, these researches are yet to determine the specific, observable factors that distinguish a good teacher from a bad teacher. And the same applies to field of special education also.

#### **Essential Qualities of Special Educators**

However, there have been attempts to describe the role of an teacher field of education for children with disabilities. Smith, Polloway, Patton and Dowdy (2001) describe that the role of an

educator dealing with exceptional children is multidimensional in nature, involving facets like *psychosocial* dimension related to maintenance of classroom climate that motivates learners to participate and learn; *physical* dimension related to management of the physical learning environment, accessibility, assistive technology; *instructional* dimension which involves scheduling, planning and implementing of lessons; *behavioural* dimension which is related to maintaining desirable behaviours in students; *procedural* dimension which is concerned with classroom rules and procedures in the learning environment; and *organisational* dimension which interpersonal relations in the work environment, participation in administrative matters, and involvement in professional development.

Some others (Fimian, 1978; Kelly, et al., 1979) have also tried to evaluate special educator quality. Their efforts include listing of essential qualities necessary in a special educator. Their list includes:

- Ability to understand the special needs of the child
- Knowledge and competency in the field
- Maintenance of physical learning environment and management of necessary assistive devices
- Organisational skills like scheduling and preparation for instruction
- Use of appropriate techniques and methods of instruction
- Use of appropriate teaching-learning materials

- Use of adaptation techniques to make appropriate changes to instructional method and materials to suit special learning needs
- Classroom management in terms of psychosocial climate and behavioural management
- Attitude, communication and interpersonal skills
- Participation in professional development activities
- Carrying out administrative related duties

There have been several focused researches on many of these attributes in the teacher and their influence on the learning process in students. Some major researches have been discussed in this chapter with special focus on special needs faced by *learners with hearing impairment*.

### ***Professional Knowledge, Competency & Qualifications***

Some researchers state that students tend to learn more from teachers with strong academic skills than they do from teachers with weak academic skills (Ballou, 1996; Ehrenberg and Brewer, 1995; Mosteller and Moynihan, 1972). While some others argue that teachers' education has less to do with how teachers perform in the classroom (Darling-Hammond, 1998).

### ***Professional Experience***

Researches suggest that students learn more from experienced teachers (those with more than 5 year of experience) than they do from less experienced teachers (NCES, 2000a; Rivkin, Hanushek and Kain, 1998; Murnane and Phillips, 1981). The benefits of experience, however, appear to level off after 5 years (Darling-Hammond, 2000). At the same time, there are also researches (NCES, 2000b) which propose that less experienced teachers are generally more likely than more experienced teachers to learn new skills and try using them.

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### ***Use of Appropriate Instructional Strategies***

Several researches in the global, as well as Indian context have time and again emphasised that the major implication of hearing loss in children is its critical effects on the childhood development of

cognitive (thinking) and linguistic (language) skills (Pollack, 1997; Stewart & Kluwin, 2001). These deficiencies in turn affect their academic ability, especially, for learning abstract concepts and in understanding verbal information. Therefore, these children need skilled teaching, if they are to overcome these deficits and learn successfully in classrooms. Skilled teaching would involve providing the children a lot of concrete and practical learning experiences, along with simultaneous focus on related language development through various natural and structured methods. More recently there are suggestions to involve fun in the learning process through play-way teaching-learning methods, so that the learners are motivated to learn with more interest and effectively (Yathiraj, 2007; Polloway, Patton & Serna, 2001; Moss, 1995).

### *Use of Appropriate Instructional Materials*

As children with hearing impairment have severe difficulty in understanding verbal information provided in classrooms, instruction in classroom has to be accompanied by multi-sensory and manipulative teaching aids. Multi-sensory aids provide information through more than one sense, like hearing along with seeing, touching, etc. These could be even simple models or real objects. Such aids compensate for the loss of information received through hearing sense. If the aids are manipulative, which the learner with hearing impairment can operate or carry out experiments with it, then

(s)he can understand the underlying concepts still better. In absence of multi-sensory or manipulative aids, the teacher of children with hearing impairment should at least ensure that some visuals are involved in the teaching-learning process (Yathiraj, 2007; Mohanlal, 2002).

Teaching-learning materials could be obtained in two ways. One would be the readymade materials available in the market. Some of these like laboratory equipments are inevitable, and generally they may save time and effort of the teachers. However, they may not always suit the contextual needs of the teaching-learning process (Bose, 1997). On the other hand there are teacher-made aids, which the teacher could design and create to suit the specific needs in her classroom and make the teaching-learning process varied, interesting and effective (Singh, 2008).

### *Use of Appropriate Evaluation Procedures*

Evaluation is said to be the concluding component of the teaching-learning process that gives feedback of its success and failure. However, it is increasingly seen as an ongoing process that gives feedback to the teacher as well as learner of whether the teaching-learning process is taking place in the right direction, and presenting with expected results.

Research states that hearing loss in children affects their ability to learn and apply learnt knowledge usefully (MacDougall, 2007).

Hence, if evaluation process is to be meaningful it should include not only written tests, but also practical tasks. This will help in obtaining a realistic picture of the learners' abilities and insufficiencies, and make arrangements for catering to them in future (Stewart & Kluwin, 2001). Educators also opine that whatever be the nature of the evaluation activity, it should aim to test the learners' ability to acquire knowledge, comprehend the concepts taught, apply this understanding in daily life and acquire and use practical skills related to the field of learning (Sunder, 2007).

### ***Psycho-Social and Behaviour Management***

According to researchers, because of hearing impairment children may be restricted in their communication and this in turn might prevent them from participating enthusiastically and meaningfully in classroom activities (MacDougall, 2007). Or display difficult behaviours in the classroom. Teachers handling children with hearing impairment need to know how to make use of appropriate reinforcements to strengthen desirable behaviours / wean undesirable behaviours in their wards. In this regards, positive reinforcements are generally preferred over negative reinforcements. They should also be aware of means of encouraging all students' participation in class, and maintain good classroom climate (Polloway, Patton and Serna, 2001).

## **Influence of Teacher Quality on Student Achievement**

As one of the major aims of this study was to investigate the influence of teacher quality on student outcomes, literature related to the topic were reviewed. There were reports from mainstream education that school quality is tightly linked to teacher quality (NCES, 2000a). And that teacher quality is the most important determinant of learner outcomes in terms of academic achievement (Rivking, Hanushek & Kain, 1998). According to Hanushek (1992), the estimated difference in annual achievement growth between having a good and having a bad teacher can be more than one grade-level equivalent in test performance.

## **Influence of Teacher Quality on Student Achievement**

Another major aim of the study was to investigate the influence of staff management practices in the schools, opportunities for professional development and other work place facilities on the teacher quality. Again researches in this context were found to be carried out mostly in educational mainstream. There were reports that state that facilities provided to staff in terms of pay-scales, opportunities for further professional development, and facilities offered in the work place seemed to influence teacher quality and determine organisational climate (Henk, Chen & Geis, 2000; Henk et



al., 1999). Remuneration is a strong administrative factor that influenced employee attrition in both mainstream and special educational fields (Hemke, et al., 1997; Murnane & Olsen, 1990).

Another important aspect of staff management was planning and disbursing workload. Effective workload management plays a very crucial role in the field of special education in increasing teacher efficiency and preventing teacher burnout. Swaim and Swaim (1999) have reported that excess workload handled by the teachers might severely hinder their ability to plan and prepare for instructions. And this in turn might affect the quality of their teaching. Research has also shown that assigning teachers to teach courses that they are not trained to teach has a negative effect on student achievement (Darling-Hammond, 2000; Goldhaber & Brewer, 1997; Monk & Kind, 1994). Proactive staff management that enabled employees to participate in high quality induction and professional development programmes lead to efficient professional practices (NCES, 2000)

The information base developed from the review of related literature was used in deciding the tools and procedures of the research, which have been discussed in the next chapter on method of the research.

## **Chapter III**

### **METHOD**

The present study was a survey research undertaken to find out the existing status of manpower in special schools for children with hearing impairment (HI) in Mysore. In order to determine the quality of the manpower, the study aimed to review several attributes of manpower in these special schools. An attempt was made to explain its relationship with causal conditions like facilities and opportunities made available to the staff in these schools, as well as outcomes in terms of with student learning, behaviour and post-school achievement.

#### **Participants**

As it was a survey type of research, all relevant people were included in the study as participants. There are four special schools for children with HI in Mysore. These schools had respectively, 10, 11, 10 and 10 teaching staff working in them. From among these appropriate participants candidates were identified using the inclusion and exclusion criteria which are as follows:

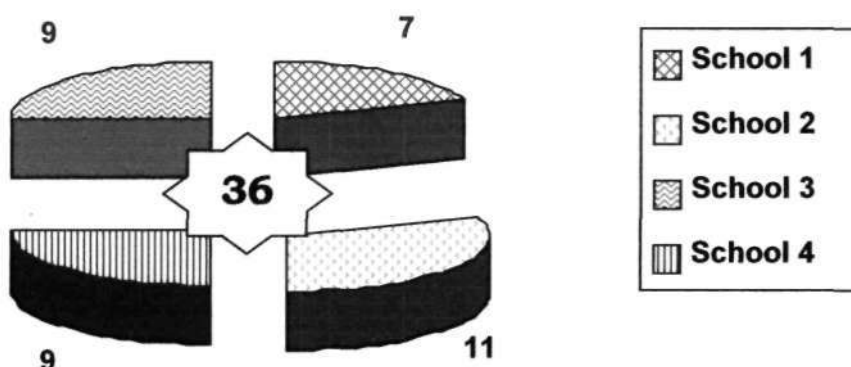
**Table 1:** Inclusion and Exclusion Criteria for Selecting Participants for the Study

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> <li>Teaching staff working in the school</li> </ul>	<ul style="list-style-type: none"> <li>Non-teaching and allied staff</li> <li>Volunteers working on ad hoc basis</li> </ul>

As 2 teachers in the first school were working on a temporary-basis, they were not included in the study. The head-teachers in the third and fourth schools opted out from participating in the study. Consequently, 7, 11, 9 and 9 special educators participated from the 4 schools respectively, and the total number of participants was 36.

The representation is presented below:

**Figure 1:** Representation of Participants from the Different schools

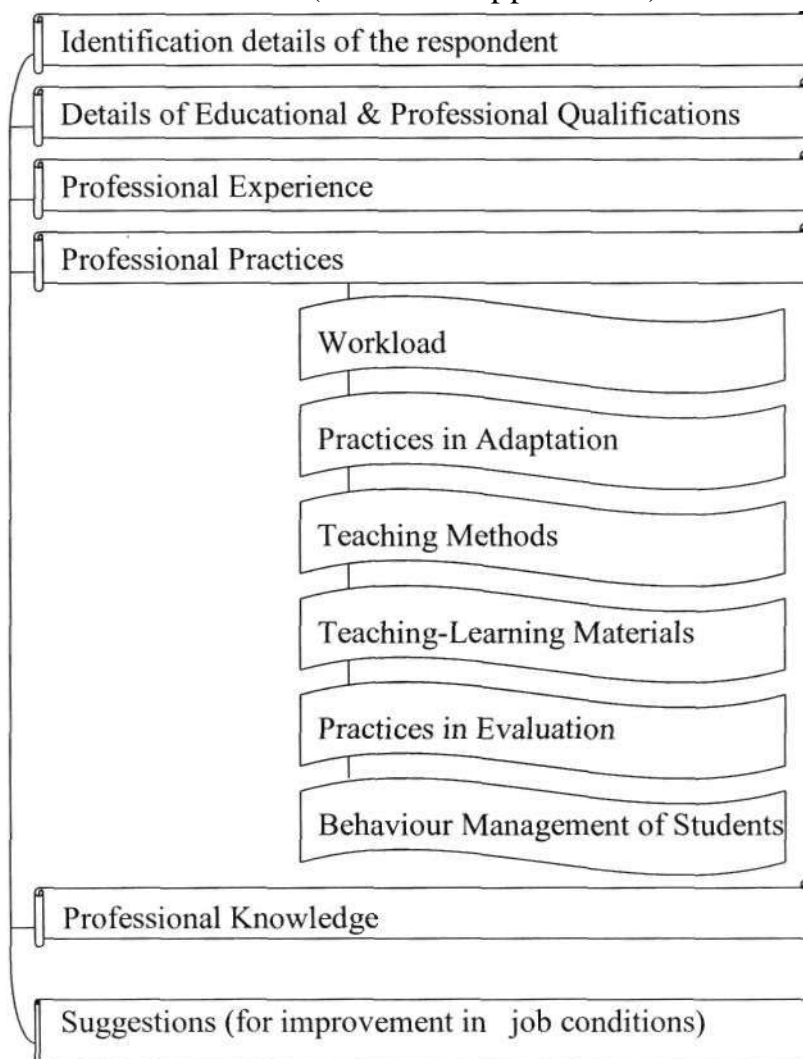


## Tools

### (a) *Questionnaires for Participant Teaching Staff*

For the purpose of collecting relevant data, the investigator developed a tool that included all major attributes that determine quality of teaching staff. Review of literature revealed that the major qualities to look for in a teacher were knowledge and competency in the profession, techniques and methods of instruction, use of

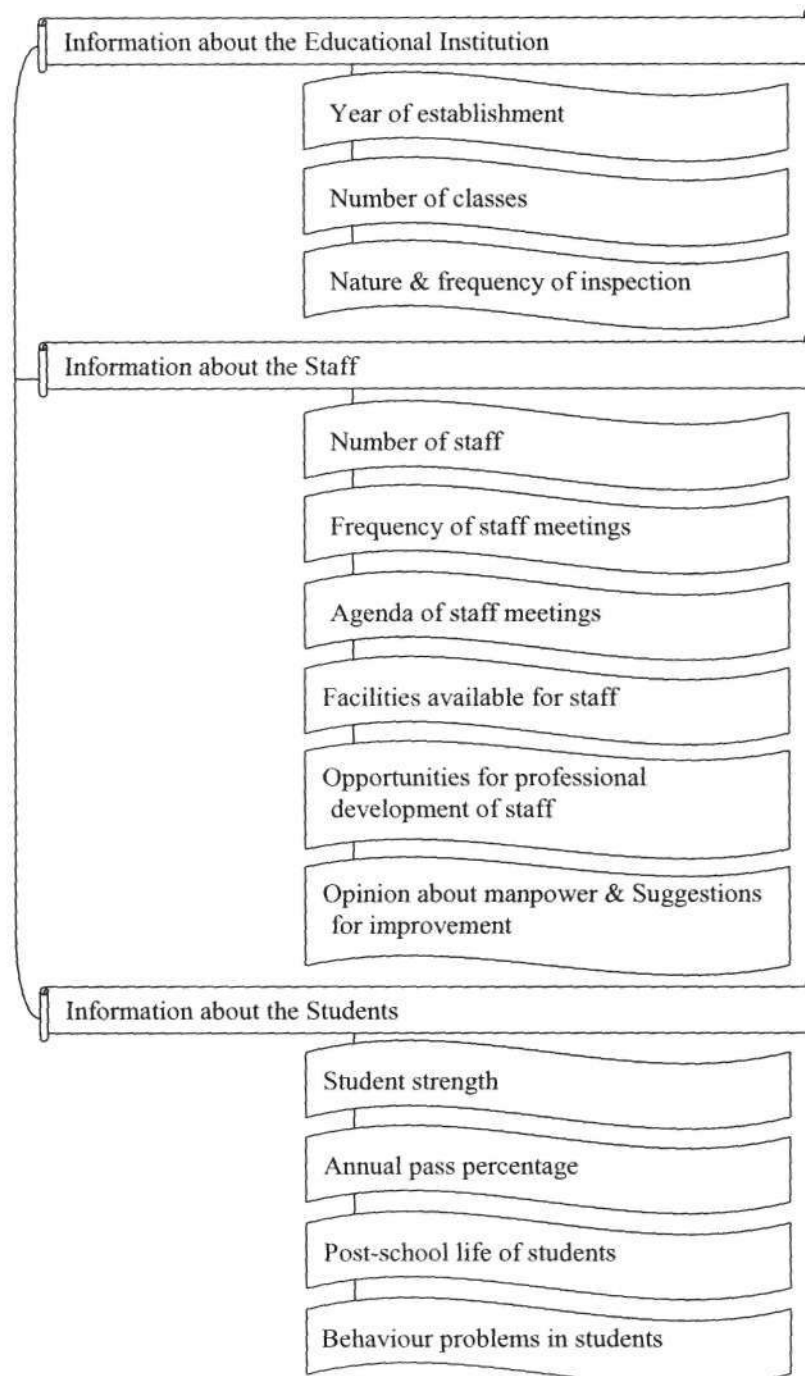
instructional materials, time scheduling, practical work, organisational skills, management and disciplining of students, use of reinforcements, interpersonal relations, and participation in professional developmental activities among others (Fimian, 1978 & Kelly et al., 1979). Along with these certain information related to staff management like workload distribution was also collected through the questionnaire for teachers. The investigator developed a questionnaire to collect information on these attributes from the participants of the study. Since, many of the participants were not fluent in English; a bilingual questionnaire (in the English and Kannada) was developed for the purpose. The layout of the questionnaire is as follows in (details in appendix 1):



(b) *Questionnaires for School Administrators*

For the purpose of collecting information from each of the schools under study on student and staff strength, learner attributes, staff management, etc.; a separate questionnaire had been developed by the investigator. For the ease of the respondents again this questionnaire was also bilingual (Kannada and English) in nature. The layout of the questionnaire is presented below (details in appendix

2):



## **Procedure**

The study was carried out through the following steps:

### **[a] Tool Development:**

- i. The required questionnaires were developed following review of relevant literature, and questions on major and relevant aspects related to teacher efficiency, and other related variables at school, were included.
  
- ii. The questionnaires were validated for the content by obtaining feedback from 2 educators and 3 master trainers in the field of special education. There was 100% agreement among the valuers on the different items presented in the sample proforma. However, they had made suggestions for reorganising related items in the questionnaires under relevant sub-categories; more detailed interrogation in respect to aspects like school inspection and student behaviours and participation; as well as clarifying certain ambiguous or unclear words / phrases used in the questionnaire. These suggestions were incorporated.

**[b] Data Collection:**

- iii. Survey of the local special schools in Mysore for children with HI were carried out to determine the prospective number of participants.
- iv. Permission was sought from the respective school administration for collection of data; and the questionnaires were distributed among the teaching staff and administrators in the schools with a brief introduction about the purpose of the research and procedures for filling the questionnaire..
- v. A week's time was provided to the participants to respond in writing at their convenience; and the investigator interacted meanwhile to clarify any doubts that they had.
- vi. The responses of the participants were collected and consolidated with respect to each school.
- vii. The compiled data were analysed using appropriate measures.

**Analysis**

As the current study was a survey type research conducted to report on the existing status of manpower in special schools for children with HI in Mysore, descriptive statistical measures were predominantly used in analysing the data.

[a] In summarising the teacher and teaching related aspects for each school;

i. Mean percentages were computed for quantitative data.

ii. Modes were worked out to represent qualitative data.

[b] Statistical tool for correlation was used in analysing relationship between;

iii. Teacher and teaching related aspects with student outcomes like pass percentage, behaviour problems and post-school life.

iv. Teacher performance with professional facilities and opportunities available at the school.



## Chapter IV

### RESULTS AND DISCUSSIONS

The present study was undertaken with the intention of reporting the current status of manpower in special schools for children with hearing impairment (HI) in Mysore. Further, the study also attempted to probe into the impact of various school variables on this status; and in turn weigh its relative influence on student outcomes; while exploring scope for further improvement in the existing conditions of manpower. In that way, this happened to be a *descriptive* as well as *causal-comparative research*. The data collected in terms of feedback from the teaching staff and administrators in these schools were compiled and reviewed using appropriate descriptive and correlation statistical measures. SPSS software version 10.0 was used to carry out the statistical analysis. The results have been presented and discussed in this chapter.

#### **Teacher Attributes**

##### *a. Educational & Professional Qualifications of Manpower*

As hearing impairment leads to severe educational difficulties in children, they need skilled teaching. For this teachers need to undergo specialist training which may be obtained after completing

pre-university (for diploma level) or university (for graduate level) courses.

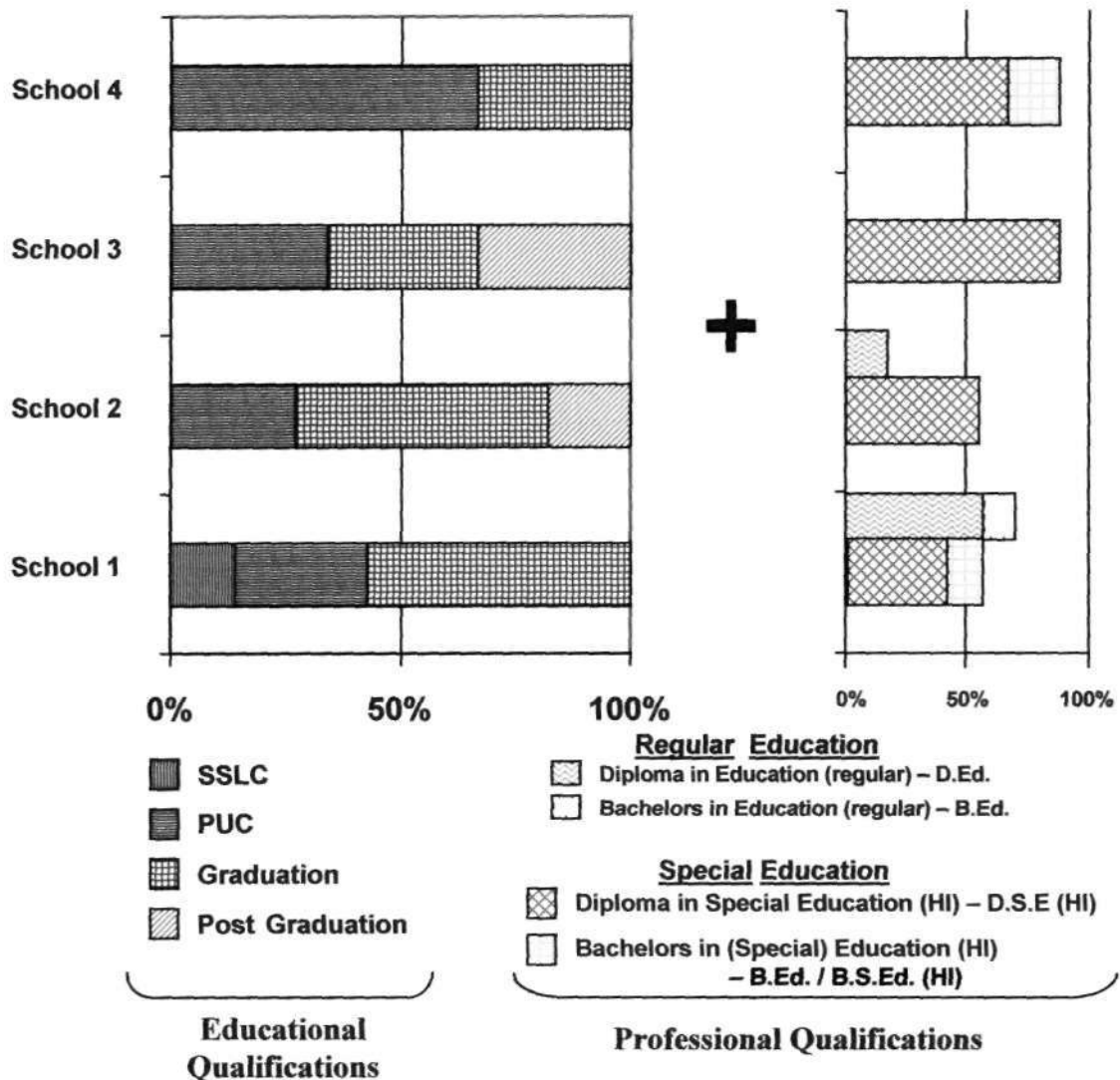
Through questionnaires, feedback was collected from the participant special educators about their general educational qualifications (like SSLC, PUC, graduation, post-graduation, etc.), professional qualification in mainstream education (like regular D.Ed., B.Ed., etc.), special educational qualifications like (B.Ed. (HI), DSE (HI), etc.), and others in co-curricular areas (craft, physical education, etc.). The following table carries related details:

**Table 2:** Educational and Professional Qualifications of the Manpower

<b>School</b>		<b>School 1</b>	<b>School 2</b>	<b>School 3</b>	<b>School 4</b>
<b>Educational Qualification</b>	<b>SSLC</b>	14%	nil	nil	nil
	<b>PUC</b>	29%	27%	34%	67%
	<b>Max Graduation</b>	57%	55%	33%	33%
	<b>Post-Graduation</b>	nil	18%	33%	nil
<b>Professional Qualification</b>	<b>Regular D.Ed.</b>	57%	18%	nil	nil
	<b>Regular B.Ed.</b>	14%	nil	nil	nil
	<b>DSE (HI)</b>	42%	54%	89%	67%
	<b>B.S.Ed. / B.Ed. (HI)</b>	14%	nil	nil	22%
	<b>Short term courses</b>	43%	nil	33%	11%
<b>Others</b>	<b>Craft</b>	nil	nil	nil	11%
	<b>Physical Education</b>	nil	9%	nil	nil
	<b>Computers</b>	nil	nil	11%	nil

According to the *National Council for Teacher Education* (2001), the minimum required qualification for teaching at primary level of schooling is PUC with Diploma in Education, while the RCI stipulates PUC with Diploma in Special Education (HI). Similarly, the minimum qualification required for teaching at secondary level of schooling is graduation with bachelors in the respective discipline of education (NCTE, 2001; RCI, 2003; RCI, 2005).

**Figure 2:** Educational & Professional Qualifications of the Manpower



*Figure: 2* is representation of the educational and professional qualifications of staff teaching in the four schools for children with hearing impairment in Mysore. In each of these schools there are 7 classes in the primary section and 3 classes in the secondary section. This implies that 70% of the teachers should have PUC with DSE (HI) qualification, and another 30% should have BA/BSc with B.Ed./B.S.Ed.(HI) qualification. From *Table: 2* and *Figure: 2*, it is evident that the staffs have necessary educational qualification in that more than 70% and 30% in each school have PUC and BA/BSc qualifications, respectively. However, in regards to professional qualifications, in the schools under study there seemed to be an obvious scarcity of staff specially trained to cater to the educational needs of children with hearing impairment.

Only two schools (*School 3 & 4*) had almost the required number of trained staff. *School 4* presented a better picture in that most teachers had appropriate special training (67% at primary level, 22% at secondary level and 11% in co-curricular areas). *School 3* was the second best in the scene, in that 89% of them have training in teaching at primary level and 11% in co-curricular areas. However, it was glaring that there were no trained teachers to teach at the secondary level. In *School 1*, half of the requirement for specially trained staff had been met (42% at primary level and 14% at secondary level), nevertheless the others had received professional training in regular education (57% and 14% respectively, at primary

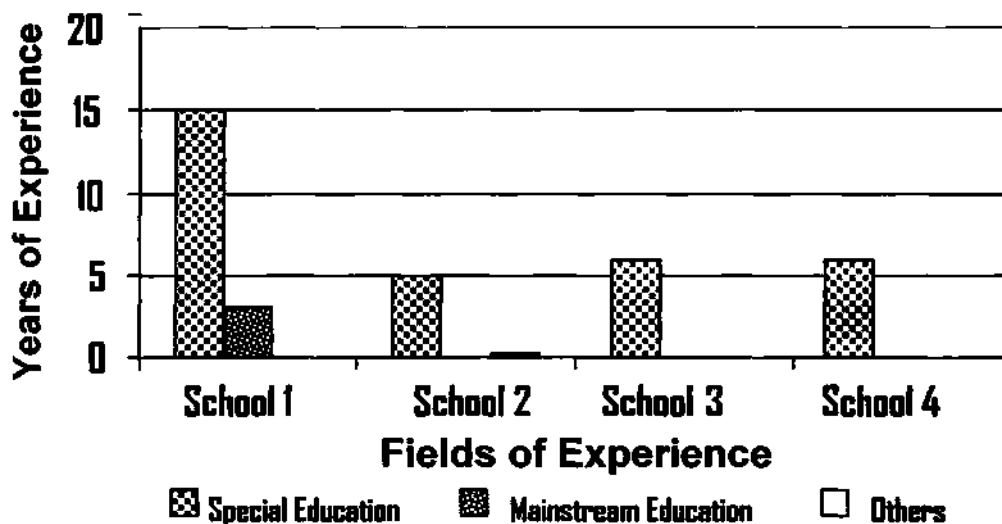
and secondary levels). *School 2* presented a poorer picture in that only 54% have training in special education and 18% in regular education and that too only in the primary level.

A lot has to be done to improve the knowledge and skill base of the staff from these schools in the field of special education. In this regard, the two schools with noticeable shortage were already seen sending their staff for short-term, in-service training (*School 1*: 43% 8B *School 2*: 33%), which is appreciable.

**b. Professional Experience**

Information on the mean average professional experience of the teaching staff in the four schools was calculated. Apart from experience in the special educational field, some staff seemed to come with teaching experience in mainstream educational also. Details are represented in *Figure: 3*.

**Figure 3: Professional Experience of the Manpower**



From *figure: 3*, it is clear that teachers of *School 1* came with considerable teaching experience with a mean average of 15 years, and some of them had additional experience of teaching in mainstream educational settings also (of around 3 years). Teachers of *Schools 2, 3* and *4* were found to have predominantly served in the field of special education only with an average experience of around 5 to 6 years. Research suggest that students learn more from experienced teachers, those with more than 5 year of experience than they do from less experienced teachers (NCES, 2000a; Rivkin, Hanushek and Kain, 1998; Murnane and Phillips, 1981). At the same time, there is also research (NCES, 2000b) which has reported that less experienced teachers are generally more likely than more experienced teachers to learn new skills and try using them. Hence, it could be assumed that teachers of the *first school* were more effective, while teachers of the other three schools would be more eager to learn and improve themselves professionally.

*c. Teacher-Practices related to Adaptation of Lessons for Students with Hearing Impairment*

The major implication of presence of hearing impairment in children is that it prevents them from developing necessary language skills. Language is very essential for learning and academic achievement, as in schools it happens to be the primary tool for imparting knowledge as well as evaluating the learner's acquisition of knowledge. Therefore for children with hearing impairment,

classroom learning becomes a challenging process because of their deficient language skills and consequent deprivations in learning experiences. In order to help these children, changes are made to the instructional methods and materials in order make the teaching-learning process accessible to them. This process is called as *adaptation*. The more common practices of adaptation for learners with hearing impairment include simplification of the content in terms of language, length and complexity of the concepts involved, and make necessary adaptations in methods and materials (Smriti Swaroop, 2001; Yathiraj, 2007). However, most often special educators also try to simplify the learning process by identifying important questions from the lessons for students with special needs to memorise and reproduce in the exams. This is a less desirable option that may make easy and help learners easily pass exams, but not in meaningful learning. *Table: 3* presents information on special educators' practices related to adaptation in the four schools under study.

**Table 3.** Adaptation of Lessons as Practised by the Manpower

<b>Details of Adaptation</b>	<b>School 1</b>	<b>School 2</b>	<b>School 3</b>	<b>School 4</b>
<b><i>Average Percentage of Staff Practising Adaptation of Lessons</i></b>	75%	100%	100%	100%
<b><i>Frequency of Adaptation of Lessons</i></b>	Sometimes	Sometimes	Often	Sometimes
<b><i>Commonly Used Strategy for Adaptation</i></b>	*M 1: 85% #M 2: 71% ~M 3 100% □M 4: 42% *M 5: 85%	*M 1: 36% #M 2: 72% ~M 3: 45% □M 4: 91% *M 5:100%	*M 1: 22% #M 2: 100% ~M 3: 63% □M 4: 66% *M 5: 100%	*M 1: 88% #M 2: 100% ~M 3: 88% □M 4: 22% *M 5: 100%

\*M 1: Method of selecting important questions to be learnt by the students

#M 2: Method of simplifying the language used in the lessons

~M 3: Method of simplifying the content in terms of length and complexity

M 4: Method of making changes in the instructional approach / method

\*M 5: Method of making changes in the teaching-learning materials

Survey of the details regarding the adaptation practices revealed a satisfying trend, in that all staff from all the schools under study, except *School 4*, were adapting lessons to suit special educational needs of learners with hearing impairment. However, the adequacy of this trend stands questionable when observing the frequency of these adaptation practices. Responses regarding the frequency of adaptation had been obtained on a 4-point rating scale of *Never / Sometimes / Often / Always*. The most frequent option (mode) in each school was considered to be representative of that school and was tabulated. And it is evident that except in *School 3*, the special educators in other schools only seldom practiced adaptation.

Concerning strategies used in adapting lessons, the options were not mutually exclusive. *Schools 1 & 4* revealed a high incidence of (85% and 88%, respectively) selecting important questions for students to learn, which should be discouraged in future. Teachers of the all the schools, especially *Schools 3 & 4* were found to have realised the language deficits in their students and make adaptations in terms of language. Adaptation in terms of complexity is a subjective matter that depends on the learning ability of students, information on which was not collected during this study. Hence, it could not be commented upon. *School 2* seems to be making comparatively less use of this strategy. But, at the same time the *School 2* seems to be making appropriate changes to the teaching



methods and aids more often (91% and 100%, respectively). This was followed by *School 3* (66 % and 100%, respectively), *School 1* (42 % and 85%, respectively) and *School 4* (22% and 100%, respectively) in that order.

*d) Teaching / Instructional Strategies Employed by the Manpower*

Hearing loss in children has far-reaching, critical effects on the childhood development of cognitive (thinking) and linguistic (language) skills (Pollack, 1997). These deficiencies in turn affect their academic ability, especially, for learning abstract concepts and in understanding verbal information. Therefore, these children need skilled teaching, if they are to overcome these deficits and learn effectively. The teaching-learning process should incorporate real, concrete and practical experiences related to the concepts to be learnt like by making use of demonstration, experimentation and play-way methods like role-play among others. As part of instruction, there should be simultaneous focus on related language development through various natural and structured methods (Yathiraj, 2007; Stewart & Kluwin, 2001; Polloway, Patton & Serna, 2001; Moss, 1995). *Figure: 4* represents the special teaching learning methods adopted by the special educators from the four special schools for children with hearing impairment in Mysore.

**Figure 4.** Teaching Methods Used by the Manpower

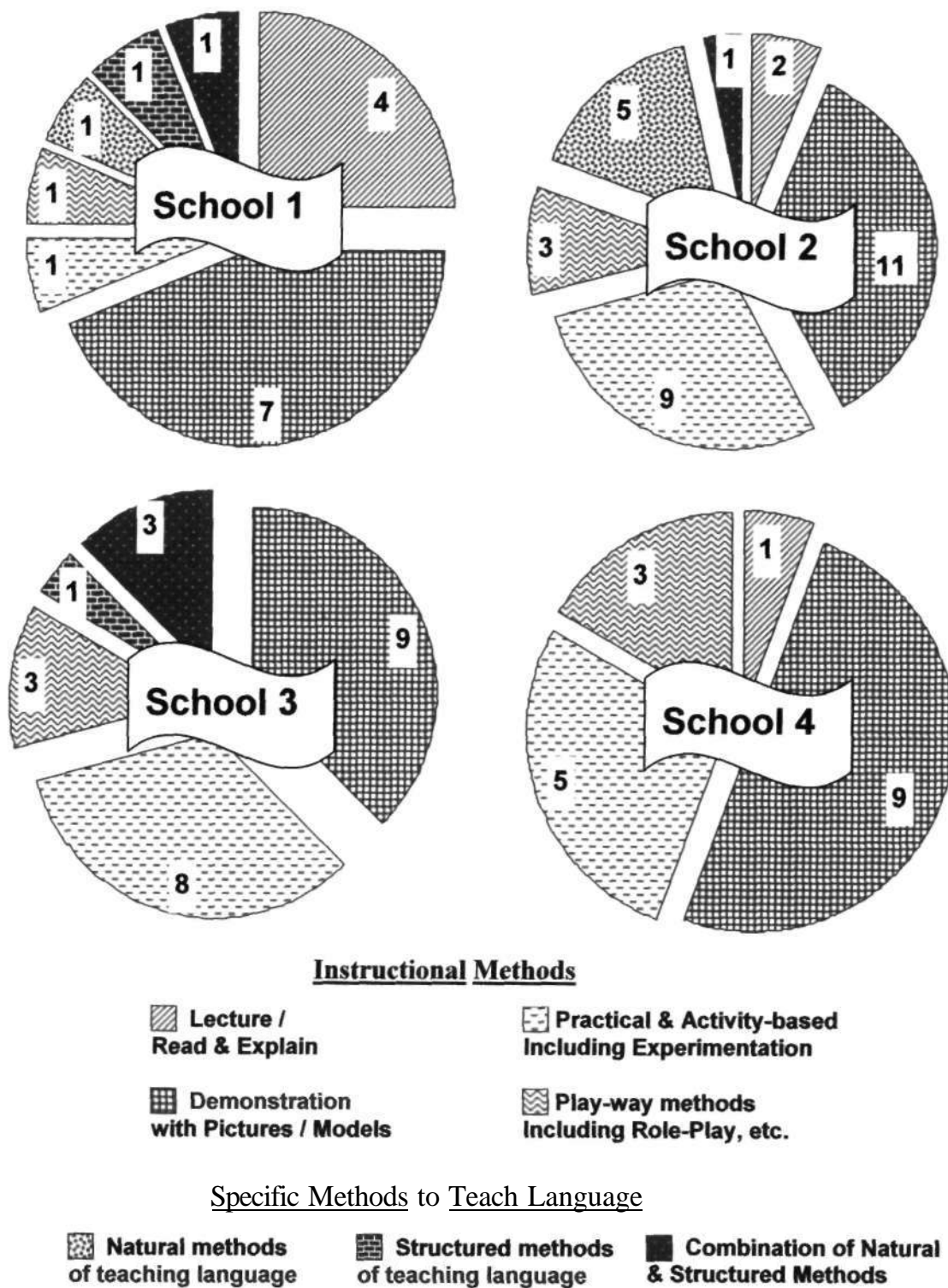


Figure: 4 gives an overview of the different types of instructional methods used in each school and the number of staff using each of the method. The choice of the strategies was not mutually exclusive.

*Schools 1, 2, 3 & 4* were found to be using more variety of methods, in that order.

Looking into the specific instructional methods being used, it is gratifying to note that all the four schools were giving due importance for providing concrete learning experiences to their students through demonstration activities using either visuals or models. It seems to be the method that is employed by maximum number of teachers in these schools (7, 11, 9 and 9 in *Schools 1, 2, 3 & 4* respectively). However, more than half of the teachers in *School 1* were found to be lecturing, or reading from textbook / blackboard and explaining to the students. This could not be considered as a very effective method as the language deficiency of students with hearing impairment prevents them from gaining knowledge through verbal information. On the other hand, it is appreciable that considerable number of teachers (9, 8 86 5, respectively) in *Schools 2, 3 & 4* are found extending the concrete learning experiences to practical activity-based learning also. Three teachers each in these schools were also found to be experimenting with play-way methods, which is again commendable.

Considering the simultaneous efforts taken by the special educators in ensuring related language development, it was glaring to note that none of the teachers in *School 4* have reported on using any of the natural, or structured, or combined methods for teaching language. Most of the teachers attending to simultaneous language development were from *School 2*. They were found using both natural

textbooks, copy books and blackboard. However, *School 4* was found to have relatively less use for these materials. Apart from this among the four special schools, *School 2* seems to be way ahead in using a variety of teaching aids and materials in helping the students with hearing impairment to learn better. It is also commendable that they were making considerable use of aids that allow for multi-sensory and hands-on learning like specimens and models (10 teachers) and visual materials (8 teachers). The teachers of the school were also found to be making a good attempt at involving more experimental materials and non-conventional materials like educational toys and play materials (4 teachers each).

Following *School 2*, *Schools 3 & 4* were found to be almost equally positioned in the range and use of diverse teaching aids and materials. However, among the two, *School 3* was found to have more use for multi-sensory and manipulative aids like visuals, models and specimens and experimental materials, over traditional aids like textbooks and blackboard. Whereas on the other hand teachers of *School 3* seemed to make considerable use of traditional aids compared to multi-sensory and manipulative aids. Nevertheless there is a commendable attempt by one of its teachers to make use of play-way teaching aids and materials in the instructional process.

Finally, *School 1* was found to have predominant use for traditional aids like text/copy books, and blackboards (6 and 7 teachers, respectively). The teachers were also found to have relatively

less use for multi-sensory teaching-learning materials like visual aids, specimens and models (2 and 1 teacher, respectively). And there was no report of use of non-conventional aids like educational toys or play-materials.

Further information was collected from the teachers regarding their choice of teaching-learning materials between ready-made and self-made materials. The responses are tabulated in *Table: 4*.

**Table 4.** Choice between Ready-made & Self-made Teaching Aids among the Manpower,

<b>Details of Adaptation</b>	<b>School 1</b>	<b>School 2</b>	<b>School 3</b>	<b>School 4</b>
<i>Ready-made Materials</i>	57%	45%	11%	nil
<i>Self-made Materials</i>	nil	45%	77%	100%
<i>No responses</i>	43%	10%	12%	nil

Among the four schools, teachers of *Schools 3 & 4* were found to be more inclined in making use of self-made teaching-learning materials. These materials provide more scope for creative and contextual use in the classroom. They are said to make the teaching-learning process varied, interesting and effective (Singh, 2008). Teachers of *School 2* revealed a balanced use of ready-made and self-made materials. The ready-made materials may be inevitable in certain learning contexts like laboratory experiments, and may come with assurance of standard quality and may save time and effort (Bose, 1997). Majority of the teachers in *School 1* showed a preference only for ready-made teaching-learning materials.

*Figure: 6* provides information about the number of staff making use of different kinds of evaluatory practices in the four different schools. The choices were not mutually exclusive. Except in *School 3* (44%), all other schools were found to be predominantly (86% in *School 1*; 82% in *School 2* & 100% in *School 4*) employing textbook-based written test. This may have been done with the view of preparing the learners to take school final exams which adhere to this norm. However, it was satisfying to note that all teachers in *School 2* include practical activities in the evaluation process. But, this mode of testing is only minimally used in the other schools (*School 1*: 29%; *School 3*: 22% and *School 4*: 33%). All schools were also found to be extensively and almost equally (86% to 90%) making using teacher-made tests. This provides scope for learner-centred and comprehensive evaluation. Keeping in view the language deficits of children, teachers of the all the schools, especially *Schools 2* & *3* (73% and 66%, respectively) were found incorporating oral testing also in their evaluation scheme.

Educators also opine that whatever be the nature of the evaluation activity, it should aim to test the learners' ability to acquire knowledge, comprehend the concepts taught, apply this understanding in daily life and acquire and use practical skills related to the field of learning (Sunder, 2007). It is stated that hearing loss in children affects their ability to learn and apply learnt knowledge usefully (MacDougall, 2007). In this backdrop, information was

collected from the participants about the inclusion of knowledge-, comprehension/understanding-, application- and skill-components in the blueprint of the teacher-made tests. The responses are presented in *Table: 5*.

**Table 5.** Component Aspects Included by the Manpower in the Teacher-made Tests

<b>Details of Teacher-made Test Components</b>	<b>Percentage of Teachers in</b>			
	<b>School 1</b>	<b>School 2</b>	<b>School 3</b>	<b>School 4</b>
<i>Comprises Knowledge</i>	100%	100%	100%	100%
<i>Comprises Comprehension</i>	71%	100%	100%	100%
<i>Comprises Application</i>	43%	100%	100%	100%
<i>Comprises Skills</i>	71%	100%	100%	100%

Except for *School 1*, special educators from all other special schools were found to be making comprehensive use of all components of evaluation in their tests. Teachers from *School 1* should specially focus on developing and testing the students' ability to apply the learnt knowledge by including questions / activities requiring reasoning and problem solving skills in their evaluation procedure.

**g) *Psycho-Social and Behaviour Management***

As a direct impact of hearing impairment, children may be restricted in their communication and this in turn might prevent from participating in classroom activities (MacDougall, 2007). Or display

difficult behaviours in the classroom. Information was sought from the participating special educators as to how they would deal with such problems in the classroom. They were specifically enquired whether they make use of appropriate reinforcements to strengthen desirable behaviours / wean undesirable behaviours, the common reinforcements they use, and the nature of the efforts made in order to encourage student participation in class. The results are tabulated in *Table: 6.*

**Table 6.** Psycho-Social and Behavioural Management by Manpower

<b>Details of Psycho-Social and Behaviour Management</b>	<b>School 1</b>	<b>School 2</b>	<b>School 3</b>	<b>School 4</b>
<i>Frequency of Focused Efforts towards Student Participation</i>	Always	Often	Always	Always
<i>Frequency of Behaviour Problems in Students</i>	Sometimes	Sometimes	Sometimes	Sometimes
<i>More Frequent Reinforcement used Reward vs. Punishment</i>	Reward	Reward	Reward	Reward

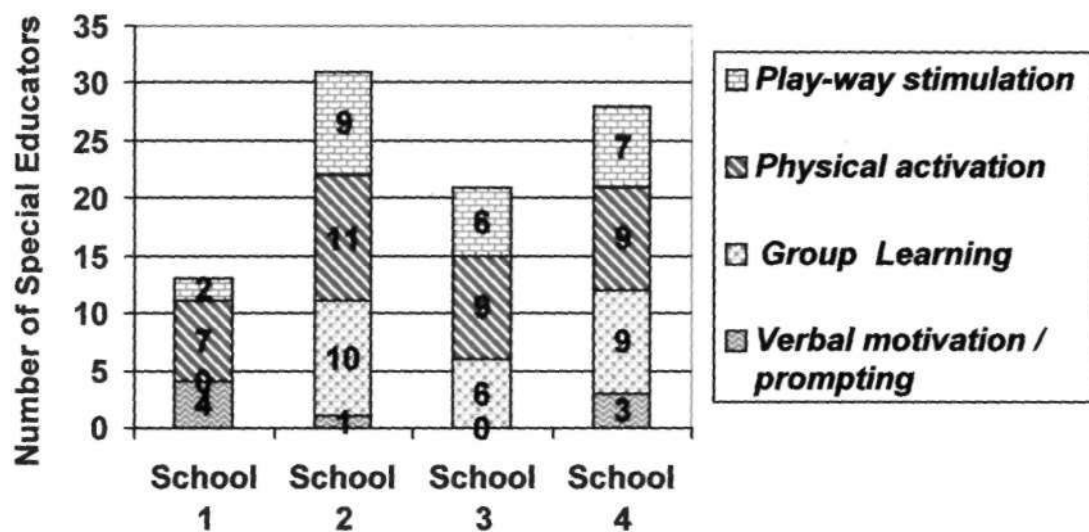
Psycho-social and behaviour management is one dimension of classroom management that focuses on classroom climate where the student is motivated to participate in the classroom activities and function optimally. It also involves enhancing desirable behaviours in the child while trying to dissuade undesirable ones (Stewart, Polloway, Patton & Dowdy, 2001). Responses for all the three criteria were collected on 4-point rating scale (Always / Often / Sometimes / Never). And the most frequent response (mode) was tabulated. From the results in the above table, it could be perceived that all the four schools expressly focused on ensuring student participation in



classroom activities; that the staff mostly used positive reinforcements in ensuring better classroom climate, and all this resulted in relatively less incidence of behavioural problems in the classroom.

The participant teachers were also asked describe the nature of the efforts taken to ensure student participation in teaching-learning and other classroom processes. They were permitted to mention More than one strategy. Details of their responses are described in *Figure: 7.*

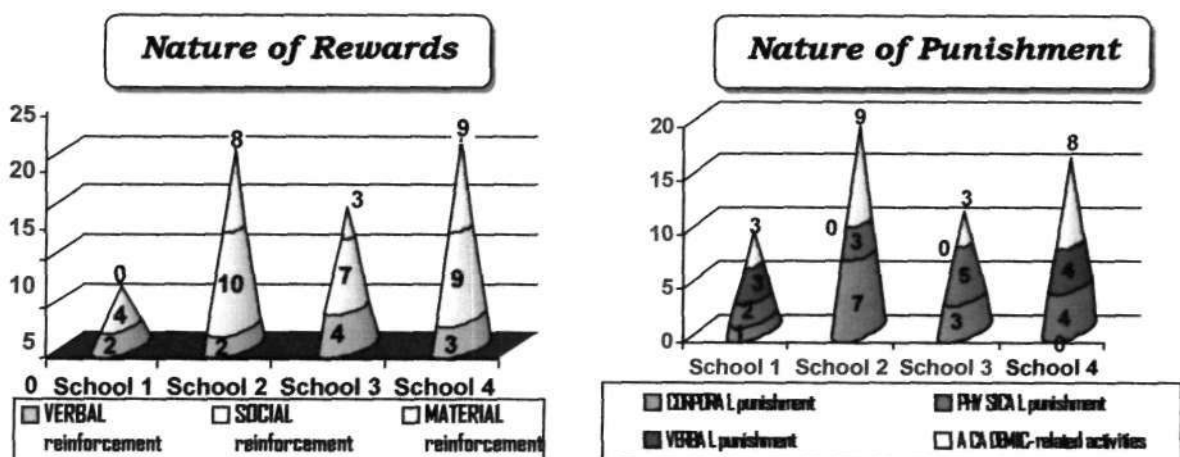
**Figure 7.** Activities Used by Manpower to Motivate Student Participation



The varied activities mentioned by the special educators (for the purpose of stimulating student participation) were grouped under categories of motivation/prompts provided through verbal expressions to encourage the learner to participate in the classroom activities; and physical activities that were organised to stimulate the learner to act. Then there were also group learning activities that were organised to encourage learners not only to respond to teachers' initiatives, but

also to interact with other learners; and play-way methods that ensure learners' interest in classroom activities beyond mere participation. The above figure presents the number of teachers (not mutually exclusive for the different strategies) using these different types of activities in their teaching process. Teachers in *School 1* did not consider group learning as means for classroom participation. This was an appreciable feature in other schools, and would help in encouraging teacher-student, student-student interaction, while also promoting self-learning in students. Teachers in *School 3* did not seem to be using much of verbal prompting. 100% employment of physical activation has been reported by the staff in all of these schools. The preference of physical over verbal stimulation may be because of the limitations usually found in verbal language of children with hearing impairment. It is also commendable that *Schools 2, 4* and *3*, in that order (81%, 78% and 67%, respectively) were making considerable use of play-way methods to stimulate student participation in classroom. This ensures involvement of the learners in the classroom processes beyond mere physical participation.

**Figure 8:** Nature of Rewards & Punishment Used by Manpower



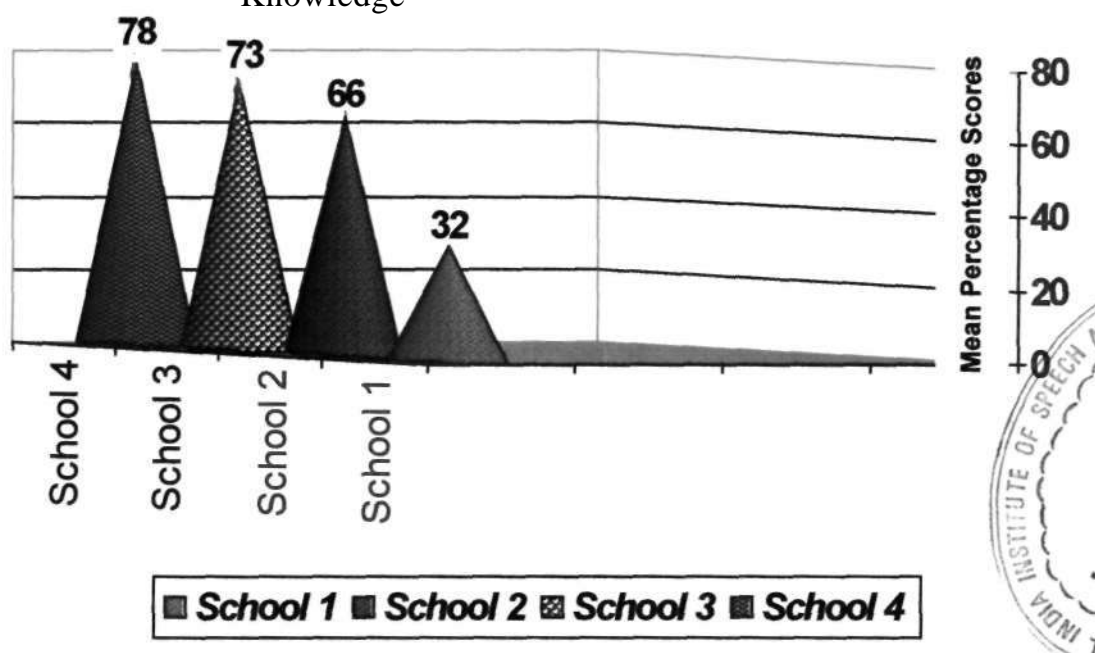
From the survey of the nature of rewards being commonly used by the teachers in the different schools, it was evident not many of them employ verbal reinforcement. This might have been due to the limitations in verbal communication skills in the learners with hearing impairment. Majority of them seemed to be using social reinforcements, which may act as stimulators for other children also. Some of the staff, especially those in *Schools 2 & 4* were found to be using material reinforcements extensively. These may have to be avoided as children grow old and mature.

With regards to punishment, it was surprising to note that considerable number of staff, especially in *School 2* were employing corporal punishments (like beating). It is laudable, special educators from *School 4* had done away with such practices. There is need for orientation about the ill-effects of such methods and need for avoiding them. Next to corporal punishment, physical punishment (like making children stand for long hours) were also found to be used extensively. Verbal feedback (like scolding, advising) were found to be of less use, and that too only in *Schools 1 & 4*. Teachers of all the four schools, (More than 80% in *Schools 2 & 4*) were found to be making use of academic-related activities (like imposition). This might be the most optimal method as it helps in weaning the unwanted behaviour, as well offer academic benefits.

**h) Professional Knowledge**

Research state that students tend to learn more from teachers with strong academic skills than they do from teachers with weak academic skills (Balllou, 1996; Ehrenberg and Brewer, 1994; Mosteller and Moynihan, 1972). Therefore, a brief objective type test was constructed by the investigator to check with participant teachers' knowledge about the special needs of children with hearing impairment, and ways for meeting them in the special school. This was annexed to the questionnaire distributed to them. Mean performances of the special educators from the various schools are presented in *Figure: 9*.

**Figure 9.** Performance of the Manpower on the Test for Professional Knowledge



*Figure: 9* represents the mean percentage of scores obtained by the special educators in the four special schools. Teachers from *School 4* seemed to have comparatively better awareness about special

needs of children with hearing impairment and means for catering to them. This may be due to the fact that all teachers come with appropriate qualification in the specialised area. They were followed by teachers from *Schools 3 & 2* with 73 % and 66% scores, respectively. They seemed to have fared relatively better, especially staff of *School 2* with some of them having received no formal professional training before entering their jobs. Staff of *School 1* was found to have relatively less awareness about special learning needs of children with hearing impairment in spite of majority of them coming with professional qualifications. This indicated that they might be in need of more in-service professional education and training.

*i) Job Satisfaction*

The questionnaire also included an item on the participants' observations about their job, and their suggestions for improving the working circumstances. However, many participants had left the question unanswered and the few responses received were also not direct. Hence, this criterion was not considered for analysis or discussion.

### **Student Outcomes**

Further investigation was carried out in order to have a realistic idea about the impact of the teacher adequacies on learning outcomes in children with hearing impairment. Schooling in the simplest terms

could be described as a process of systematic learning and changing for the better. For the purpose of this study, affirmative change in the students had been considered in terms of the students' academic performance at school (in the form of average pass percentage in the last 5 years in the school), behaviours (in terms of severity of problem behaviours) and success in post-school life (in terms of post-school educational / vocational options). The details were collected from administrators and are tabulated in *Table: 7*.

**Table 7.** Details of Student Outcomes

<b>Workload</b>	<b>School 1</b>	<b>School 2</b>	<b>School 3</b>	<b>School 4</b>
<i>Average Pass Percentage</i>	45%	100%	75%	100%
<i>Incidence of Behaviour Problems</i>	Severe	Nil	Severe	Mild
<i>Frequent Post-School Options</i>	•Technical Education/ Vocational Training	•Higher Education	•Technical Education	•Vocational training •Self-employment •Agriculture

***(a) Academic Performance of Students with Hearing Impairment in the Selected Schools***

*School 2 & 4* seemed to have a consistent outstanding record of 100% pass percentage in the last five years. And *School 3* follows with an appreciable mean pass percentage of 75%. *School 1* trails with an average pass percentage of 45% only.

***(b) Behavioural Management of Students with Hearing Impairment in the Selected Schools***

Regarding adequate socio-behavioural development in the learners with hearing impairment each of the school was graded based

Regarding adequate socio-behavioural development in the learners with hearing impairment each of the school was graded based on the severity of the behaviour problems reported among the learners. *School 1* reported nil incidence of behaviour problems, which seems to be unlikely among a residential group of 128 school going children. This needs further verification. *School 4* reported mild behavioural problems like distractiveness and homesickness among its wards. Where as children in *Schools 1 & 3* were reported to exhibit slightly more severe behaviour problems like temper tantrums and quarrelsomeness.

(c) ***Post-School Life of Students Hearing Impairment in the Selected Schools***

Information regarding the post-school life was also collected in order to determine whether the quality of education had implication in life after school, leading to better quality of life. Almost all students in *School 2* appeared to be pursuing with higher education, which could serve as an opening to higher rung jobs and better quality of life. Students from *Schools 2 & 3* seemed to opting for technical / vocational training that may turn them into profitable skilled labour. Along with this, students of *School 4* seemed to be also opting for unskilled labours like agriculture, which implied that the education received in school does not enhance job opportunities for them.

## **Staff Facilities & Working Conditions**

Research states that facilities provided to staff in terms of pay-scales, opportunities for further professional development, and facilities offered in the work place seem to influence teacher quality (Henk, Chen & Geis, 2000; Henk et al., 1999). Therefore in order to identify the possible factors that might lead to better teacher quality, information regarding workload of the teaching staff (in terms of number of students, classes and subjects handled); interaction of administration with teaching staff (in terms of frequency of staff meetings); supervision of staff services (in terms of frequency of inspection); working facilities available to staff in these schools (in terms % facilities available out of a list of essential facilities); and opportunities provided for further professional development (in terms of frequency) were collected from the administrators. Since majority of the four schools were private agencies, information regarding salary (which may be considered as a sensitive issue) was avoided.

(a) *Workload* which is a very crucial aspect of staff management is discussed first. The present research attempted to quantify the workload borne by the teaching staff in each of the schools in terms of average number of students, sessions and subjects handled by them. Details are presented in *Table:8*.



**Table 8:** Workload of the Manpower

<b>Workload</b>	<b>School 1</b>	<b>School 2</b>	<b>School 3</b>	<b>School 4</b>
<i>Average no. of Students / class</i>	14	12	10	10
<i>Average No. of Sessions / day</i>	5	5	6	7
<i>Average No. of Subjects taught</i>	3	3	3	3

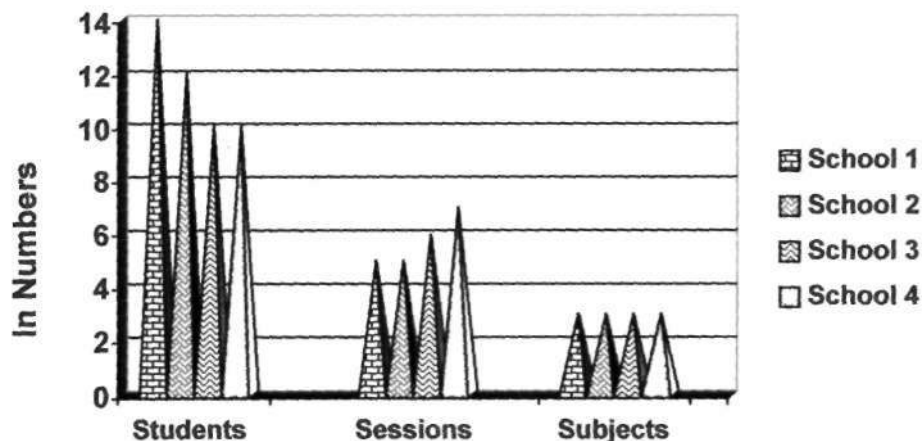
In regards to the first dimension of workload, that is, number of students with hearing impairment to be grouped for special education, the original official provisions in India (Premalata, 1985) state that a teacher of children with hearing impairment can handle on an average 8 to 10 students at a time (in a group). This criterion was found to be followed only in two of the schools, *School 3 & 4*. However, in practice, in face of shortage of manpower, the conditions are being relaxed to accommodate 12 students with hearing impairment under a special educator. In that case, *School 2* seemed to be stretching the human resources a little further. But, in *School 1* teachers were found to be handling 14 students on an average in a group. This was found to be in excess of the norms.

Concerning the average number of sessions handled by the teachers on a said day, *School 1 & 2* had a workload of 5 sessions for each teacher per day. This was found to adhere with the international workload norms for special school teachers. The workload of special school teachers averages around 18 hours per week (National Union of Teachers, 2001). This implies around 22 sessions (of 40 to 45

and 7 sessions per day, respectively. The excess sessions handled by the teachers might indicate that they have less time for planning and preparation. And this in turn might affect the quality of their teaching (Swaim & Swaim, 1999).

Finally, coming to the workload in terms of the number of subjects taught by the special educators, teachers from all the four schools were found to be handling 3 subjects each. In India, special education courses at diploma level prepare teacher-trainees to teach more than three school subjects, therefore their average subjects handled by the teachers in these special schools seems to be reasonable (RCI, 2003). However, at the graduate level candidates are found to specialise in methodology of teaching one subject apart from that of language instruction (RCI, 2005). In this background, if they happen to be handling more subjects than what they were trained for it might lead to depreciation of quality of teaching. Research shows that assigning teachers to teach subjects that they are not trained to teach has a negative effect on student achievement (Darling-Hammond, 2000; Goldhaber & Brewer, 1997; Monk & Kind, 1994).

**Figure 10.** Average Workload of the Manpower



From *Figure: 10*, it could be concluded that *School 1* should try to improve its teacher : student ratio; and *Schools 3 & 4* should try to reduce the average workload of teaching staff in terms of sessions handled per day. All schools should try to ensure that teachers teaching at secondary level teach only the curricular subjects that they are trained in.

(b) *Other details* of staff management like *frequency of staff meetings, professional supervision of staff, workplace facilities made available to staff* and *opportunities provided for professional development* have been presented in *Table: 9*.

**Table 9.** Staff Facilities & Working Conditions

<b>Workload</b>	<b>School 1</b>	<b>School 2</b>	<b>School 3</b>	<b>School 4</b>
<i>Frequency of Staff Meetings</i>	nil	Monthly	Twice-a-month	Monthly
<i>Frequency of Supervision of Staff</i>	Weekly (internal)	Twice-a-Year (external)	Twice-a-Year (external)	Twice-a-Year (external)
<i>Working facilities available to Staff</i>	100%	100%	80%	60%
<i>Opportunities for Professional Development (in terms of in-service trainings)</i>	1 or 2 times / year	As frequent as availability of opportunities	No Response	4 times / year

*Schools 2, 3 & 4* reported regular conduction of staff meetings, with slightly increased frequency in *School 3*, whereas such activities were non-functional in *School 2*. *Schools 2, 3 & 4* reported twice-a-year external supervision by appropriate government authorities, while *School 1* reported of weekly inspections within the school by

overseers at the school. *Schools 1 & 2* seemed to provide all essential facilities to the staff, while *Schools 3 & 4* provided only 80% and 60% of the essential services, respectively. It is to be mentioned that staff from these schools did not have basic facilities like separate staff room.

Other than the information mentioned in the table, the administrators were also questioned about their satisfaction about their teacher-employees. Irrespectively, heads of all four schools had expresses high satisfaction in their employees. There was enquiry also about the agenda for staff meetings, and administrators reported that all basic aspects like staff discipline, instructional practices, professional development staff, student development, and administrative related issues. *School 1* also reported of giving space for discussion of personal problems and issues faced by the staff members. Details of this aspect have not been tabled, but it was considered in evaluating the schools for staff management practices.

### **Relationship between Working Conditions/Facilities, Teacher Quality, and Student Outcomes**

The investigator made an effort to study the influence of nature of staff management & working conditions and facilities on teacher quality, and in turn influence of teacher quality on learner outcomes. As most of the data handled were qualitative in nature, a 4-point rating scale (Very good / Good / Fair / Poor) was used to grade the

schools on the different aspects that were under study. And consequently an overall rating in terms of *staff management & working conditions, teacher quality* and *learner outcomes* was done for each school depending on the more common rating received for the various items under each of the three categories. The overall ratings have been tabulated in *Table: 10*.

**Table 10.** Rating of the Schools

<b>Rating</b>	<b>School 1</b>	<b>School 2</b>	<b>School 3</b>	<b>School 4</b>
<i>Working Conditions / Facilities</i>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>
<i>Teacher Quality</i>	<b>4</b>	<b>1</b>	<b>2</b>	<b>3</b>
<i>Learner Outcomes</i>	<b>4</b>	<b>1</b>	<b>3</b>	<b>2</b>

1 - Very good; 2 - Good; 3 - Fair; 4 - Poor

This rating was subjected to correlation analysis using Spearman's rho non-parametric test, because of the limited number of samples. The results of the analysis are provided in *Table: 11*.

**Table 11.** Correlation of Teacher Quality with Working Conditions/Facilities and Student Outcomes

<i>Spearman's rank correlation coefficient</i>	<i>Working Conditions / Facilities</i>	<i>Learner Outcomes</i>
<i>Teacher Quality</i>	<b>0.775</b>	<b>0.800</b>

This has been a very rudimentary way of analysis without any standardised measures being used to evaluate or grade the schools on the different aspects. The data handled was also meagre. Nevertheless, it implies that quality of staff management related aspects like professional opportunities and facilities provided to the

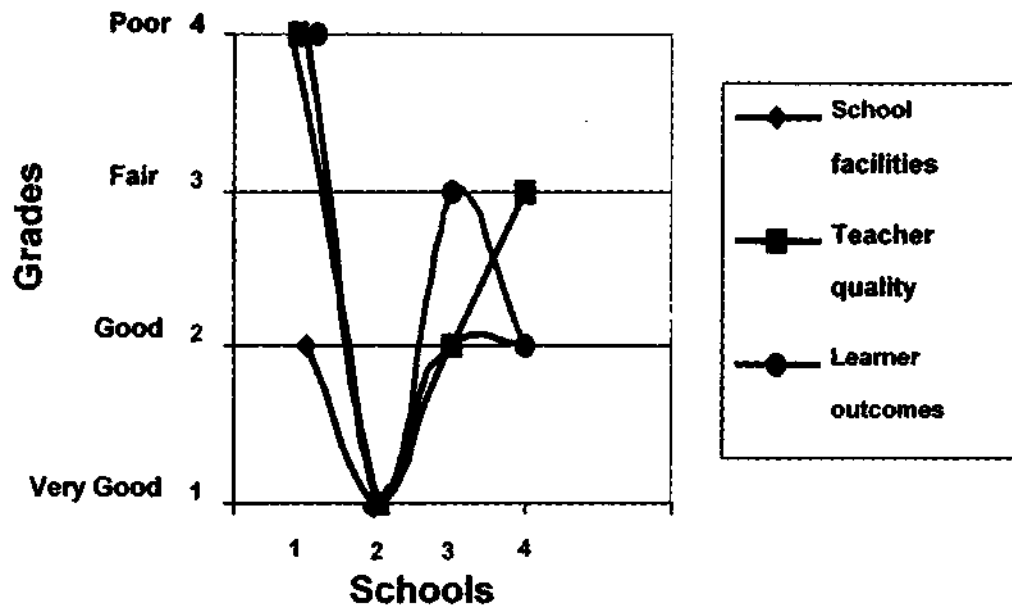
special educators at the work place have a positive and greater correlation (more than 77%) with the teacher quality. So it could be inferred that better staff management and working conditions had influenced them to function better. However, this relationship was not statistically significant. This finding draws parallel to similar findings in mainstream educational set-ups, which state that teacher quality is the most important determinant of learning quality in schools (Hanushek, 1992; Rivking, Hanushek & Kain, 1998).

The enhanced teacher quality in turn was found to have a strong (80%) and positive influence on student outcomes like better academic progress, behaviours and quality of post-school life, learners with hearing impairment for the better. However, again this influence was also not statistically significant. This finding is also being endorsed by prior researches which report that opportunities provided to staff for further professional development, and facilities have considerable influence on teacher quality (Henk, Chen & Geis, 2000; Henk et al., 1999)

All these indicate that in the special education scenario in the selected locale more efforts have to be directed to improve quality of teacher efforts, as well as strengthen its influence on learner outcomes. It has also evolved that better staff management practices and workplace conditions in these institutes is one way of ensuring better teacher quality. The *figure: 11* below represents the pattern of

correlation between the three aspects, namely *Teacher Quality*; *Student Outcomes*; and *Workplace conditions and Opportunities*.

**Figure 11.** Correlation between Working Conditions/Facilities, Student Outcomes and Teacher Quality



## **Chapter V**

### **SUMMARY AND CONCLUSIONS**

In the field of education for children with special needs including those with disabilities like hearing impairment, world over the contemporary thrust is on including them in mainstream schools. In spite of this the number of special schools serving children with hearing impairment is ever increasing (Mani, 2003). This is because several children with hearing impairment are prevented from gaining useful education from regular schools. Several reasons are behind this, like lack of preparation in necessary communication skills that are necessary to survive in a mainstream learning environment, late intervention, refusal by mainstream schools to admit them, lack of necessary familial and parental support, and socio economic problems among others. In the background of increased importance being placed on inclusive education, there is also a need to strengthen the quality of educational services delivered by the special schools for children with hearing impairment, so that the innumerable learners admitted to those schools do not miss on quality education. One major contributor to quality of education is the quality of teachers providing the education (Rivking, Hanushek & Kain, 1998). Hence, this research undertook to investigate the teacher quality in the special schools for children with hearing



impairment in Mysore. Along with investigation on teacher quality, the study also focused on related variables like staff management practices in the educational institutes that would influence teacher quality, and student outcomes that would in turn be influenced by teacher quality.

All the four special schools for children with hearing impairment in Mysore were covered in the study. The investigation involved collecting data related to teacher quality, staff management related issues like workplace conditions and facilities provided for the staff, and student outcomes; from the special educators and administrators of the four special schools in the selected locale of Mysore. For the purpose the investigator had compiled separate questionnaires for special educators and administrators. Essential criteria to be included in the questionnaire were decided following review of relevant literature and feedback from valuers from the field of special education. The data collected were compiled and analysed mostly employing descriptive statistical measures as this was predominantly a survey research. The analysis yielded the following major findings.

### **Major Findings**

1. In most of the schools surveyed there were marked deficit of trained staff. In some schools, the deficit accounted to nearly 50%. The deficit was in terms of lack of training in the field of

special education for hearing impairment, as well as training in appropriate levels (like for secondary education). This implies that in future, efforts need to be directed towards informing staff about opportunities for distance-mode training and education, as well as organising other measures for in-service up gradation of staff quality.

2. The second major finding was in terms for professional experience of the special educators under study. Earlier researches have specified that students learn better from teachers with at least a minimum of 5 years of experience (NCES, 2000a; Rivkin, Hanushek and Kain, 1998; Murnane and Phillips, 1981). In this regard the existing conditions in all four schools were satisfactory in that the average years of experience in all the four schools were not less than 5 years. In one of the schools (*School 1*) the average length of experience was as high as 15 years, however research also report that the benefits of experience appear to level off after 5 years (Darling-Hammond, 2000), and that younger may be more eager to learn and develop (NCES, 2000b).

3. The next major criterion taken up for evaluation of teacher quality was practices of adaptation of lessons to suit special educational needs of learners with hearing impairment. This is a defining factor in education for children with special needs. Though majority of teachers of all the four schools (100% in three of the

schools, and 75% in one of the *School 1*) reported practising adaptation of lessons, it was disturbing to find that except in one of the schools (*School 3*) this strategy was implemented seldom. And teachers were found to be in need of more orientation about employing appropriate methods for adaptation.

4. The special educators of the selected schools seemed to be well aware of the learning deficiencies in students with hearing impairment. That is, the inability to assimilate verbal and abstract information. In this regard all teachers from all the four special schools reported of employing concrete learning experiences through use of pictures, models and real objects. There was moderate involvement (14%, 81%, 89% & 56%, respectively in the four schools). Their teachers were also found exercising their innovativeness in teaching children with hearing impairment by including play-way methods like role play and others. At the same time, at least teachers of one of schools (*School 4*) were found to be in need of orientation about employing appropriate methods for simultaneous development of language skills as part of curricular education.

5. In regards to use of teaching-learning materials, special educators of the all the four schools reported predominant use of traditional aids like blackboard, textbooks, copybooks and other reading-writing materials, except in *School 4*. All special educators

reported considerable use of concrete teaching-learning materials like visuals and objects also, but the incidence was less in *School 1*. Teachers from at least 3 schools (*School 2, 3 & 4*) were found regularly using materials for practical activities like laboratory equipment. Teachers from 2 schools (*School 2 & 3*) were innovative enough to include educational toys and play materials also. It was also notable that even though all the schools had facilities like television, or computers they did not use them as an aid for teaching-learning. Apart from type of aids, majority of teachers from at least three schools reported considerable use of teacher-made aids, which could be taken as an indicator of contextual teaching.

Even though there was predominant use of traditional textbook-based written format for evaluation, teachers of all the four schools were also found to simultaneously make use of teacher-made tests and oral testing, both of which would be useful to learners with hearing impairment. At least all teacher of one school (*School 2*) reported of regular use of practical activities for evaluation purposes. Such measures would help in verifying meaningful learning in students with hearing impairment, hence may be followed by teachers of other schools also. Except in *School 1*, teachers in all the other schools had reported incorporation of all four essential components of evaluation, namely knowledge-, comprehension-, application-, and skill-based aspects.

7.                    Psycho-social and behaviour management in all the four special schools under study was reportedly satisfactory. As majority of the teachers reported of making focused efforts to ensure student participation in classroom processes, preferred use of positive reinforcement over negative reinforcements for behavioural management, and less incidence of behavioural problems in their classes.
  
8.                    The professional knowledge of the special educators included in the study was investigated using questionnaire on certain essential information related to education of children with hearing impairment. The mean percentage of the scores obtained by the teachers of the four schools were 32, 66, 73 & 78, respectively. Even though staff of three of the schools had performed relatively better, the results indicated that there was scope for further improvement.
  
9.                    Enquiries in the questionnaire (for special educators) related to job satisfaction and suggestions for improvement of working conditions were mostly left unanswered or with in appropriate answers that did not lead to any conclusions.
  
10.                  Using the above conclusions, each of the four schools was graded for teacher quality. Further information was availed from administrators (through a separate questionnaire) on student outcomes related to academic performance, problem behaviours and

post-school life; as well as management practices related to staff development and welfare. The schools were again graded for these two aspects namely, student outcome and working conditions / facilities provided to staff. The grades received by schools on these three aspects were correlated to see if teacher quality was influenced by staff management practices, and in turn if teacher quality influenced student outcomes. Statistical correlation procedure, Spearman's rho was employed for the purpose. Even though there was *no statistically significant relationship* between the three aspects, it was evident that

[a] Teacher quality was positively (up to 77%) influenced by staff management practices like providing better working conditions, and facilities for staff development.

[b] Teacher quality in turn was found to positively (up to 80%) influence better student outcomes.

Both these findings indicate that if quality of special education for children with hearing impairment is to be improved, the teacher quality in the special schools has to be improved. And if teacher quality has to be improved, they have to be provided with better workplace facilities and opportunities for professional development.

## **Limitations**

There were some major limitations faced in the process of carrying out the study which prevented a more comprehensive investigation.

1. The major limitation of the study was that the investigator made use of questionnaires for data collection on teacher quality instead of direct observation, because she was not familiar with the local medium of instruction used in these four special schools. This aspect prevented her from obtaining more authentic information.
2. Teacher quality comprises a wide range of aspects like psychosocial, behavioural, physical, instructional, procedural, and organisational management. However, this study covered only some of the key features like, psychosocial, behavioural, instructional and (to an extent) organisational dimensions (Smith, et al., 2001). This was because of limitation of time, and the restricted scope faced in use of questionnaires. As a result, a more comprehensive evaluation of teacher quality could not be carried out.
3. Even under the domains covered certain sensitive issues like those related to salary, job satisfaction, etc. were either not included by the investigator, or not answered by the participants. This again prevented the investigator from collecting all necessary information even in the areas selected for investigation.

In future, more focused research can be carried out by setting right all these limitations.

## **Implications**

The major implications of this study is that the information collected on teacher quality could lead to development of a comprehensive remedial programme for the special educators in the selected special schools for children with hearing impairment. This would help to resolve the deficiencies in teacher quality and ensure better educational services and learner outcomes in these schools in future. In this regard, the investigator puts forward the following suggestions:

1. As an initial measure, the special educators could be provided access to counselling, guidance and informational services regarding their professional development, resolving intra/interpersonal problems, especially like burnout, attrition, etc. Guidance and informational support should also be extended to resolving practical problems faced in their day-to-day professional activities.
2. Next, they should be provided with ample opportunities for in-service professional development. These may be either distance-mode



education, or periodic workshops or other types of training programmes. In case of extension programmes like workshops, then they should be planned and sequenced in such a way that the special educators receive training in all essential areas, and in a progressive manner.

3. Facilities should also be created for self-development of the staff by provision of informational materials in the form of journals, books and other electronic and multimedia information materials.
4. The special educators could also be enabled by provision of necessary assistive devices, as well as teaching-learning materials that would be necessary in the instruction of learners with hearing impairment.
5. Finally, initiative to network all teachers (both from segregated as well as inclusive educational set-ups) handling learners with hearing impairment and creating opportunities for them to share common problems faced in their profession and solutions evolved by them would serve as major means for up grading teacher quality.

Manpower training centres and philanthropic civic societies in the region could come together to implement these suggestions.

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# Appendices

**QUESTIONNAIRE FOR TEACHERS**

**1. Name**

**2. Gender**

**3. Age**

**4. Contact Address**

**5. Educational qualifications:**

Sl.No	Course of study	Name of the Institution / Board /University	Major subjects taken
1	SSC/SSLC		
2	Inter/ PUC		
3	Degree		
4	Post graduation		
5	Other special courses/ Technical courses		

**6. Professional experience:**

Post/Designation	Field	Experience (No. of years)	Name of the Institution



## 7. In-service training (including workshops/seminars):

Title of the programme	Date	Duration	Organization that conducted the programme

Please write in a few words the specific benefits of these programmes:

## 8. Professional practices

### i. Work Load:

a. Average Teacher: Student ratio handled:

b. Number of sessions / day handled:

c. Subjects taught:

### ii. Adaptation of Lessons

a. Do you adapt the lesson for your students with Hearing Impairment? Yes / No

b. If yes, how often: - Never / Sometimes / Often / Always  
(tick the appropriate)

c. How do you make lessons easy for the child? Mark the 3 most common methods used by you:

- By selecting important questions Yes / No
- By simplifying the language used in the lessons Yes / No

- By simplifying the content in terms of length / complexity Yes / No
- Using suitable methods Yes / No
- Using suitable teaching-learning aids Yes / No

### iii. Teaching Methods

a. Mark the 3 most common instructional methods used by you

- Lecture / read & Explain Yes / No
- Demonstration with pictures / models Yes / No
- Practical 8s Activity-based (Lab Experiments, etc.) Yes / No
- Play-way method Yes / No

b. Specific Methods that you use to teach language

- Natural methods of teaching language Yes / No
- Structured methods of teaching language Yes / No
- Combination of natural 85 structured approach Yes / No

c. If you are using any other method apart from the ones in the list above-mention listed below:

### iv. Teaching-Learning Material

a. Mark the 3 most common teaching learning materials used by you

- Textbook & Reading / Writing Materials
- Blackboard
- Visual Materials like Charts, Maps, and Flashcards
- Specimens & Models
- Experimental Materials including Laboratory equipments
- Technology-based aids like TV, audio and computers.
- Educational toys 85 Play materials

b. If you are using any other teaching learning material apart from the ones in the list above, mention below:

c. Which of these do you use more often?

Readymade /Teacher-made Low cost teaching-learning materials

v. Evaluation

a. Which type of evaluation pattern do you follow?

- Textbook-based Written Test Yes / No
- Oral Testing Yes / No
  
- Teacher-made Test Yes / No
- Practical activities Yes / No

b. If you are using any other evaluation method apart from those in the list, mention:

c. Does your evaluation involve:

- Knowledge based questions Yes / No
- Understanding based questions Yes / No
- Application based questions Yes / No
- Skill based questions Yes / No

vi. Psycho-Social Behaviour Management of Students

a. How often you actively make students participate in the classroom procedure?

Never/Sometimes/Often/Always

b. What methods do you use to encourage students participate in the classroom activities:

- " Verbal motivation Yes / No
- Physical activation Yes / No
- Group learning Yes / No
- Play-way stimulation Yes / No
- Any other (Please Mention) Yes / No

c. Do you face disciplinary problems with your students?

Never/Sometimes/Often/Always

d. Which do you use more often to encourage positive behaviour in children?

Reward / Punishment

e. Mention the 3 most common reinforcements you use:

f. Mention the 3 most common punishments you use:

vii. How do you generally feel about your work/job?

(Describe briefly in a few words)

- Do you have any suggestion to improve it? Yes / No
- If yes list your suggestions in simple words.

## 9. Professional knowledge:

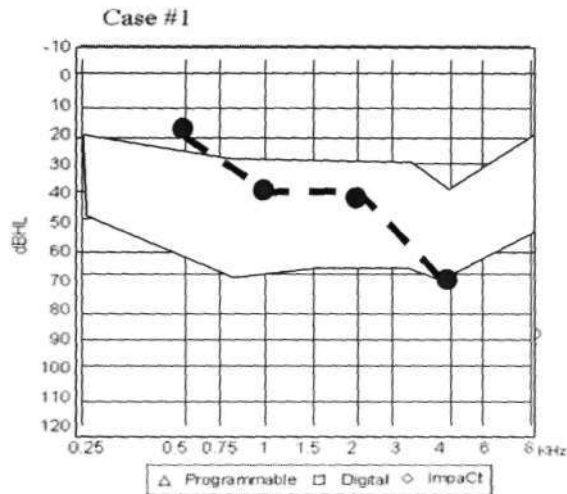
i. The PWD Act (1995) defines hearing impairment as a loss of \_\_\_\_\_dB or more in the better ear in the conversational range of frequencies.

ii. Sensory neural hearing loss is problem in the \_\_\_\_\_ear.

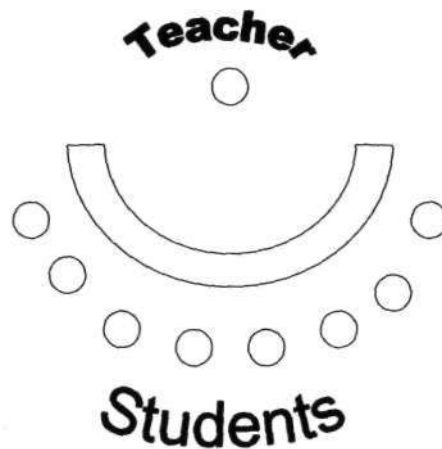
iii. Hearing aid helps children with hearing impairment ( )  
a. by increasing the volume of sound  
b. curing the hearing loss  
c. Making the ear better

iv. If children with hearing impairment in your class have ear discharge whom will you send /refer them to ( )  
a. ENT doctor  
b. Audiologist  
c. Speech language pathologist

- v. For a child with the below presented aided audiogram (that is hearing ability with hearing aid) will you use speech reading clues?



- vi. In the below presented seating arrangement in the classroom mark/ tick the appropriate where you will seat a child with poor hearing ability?



- vii. Write one suggestion to control noise in classroom:
- viii. Mention one typical behaviour of children with hearing impairment in classroom:
- ix. Why critical period is important for language acquisition?
- x. What type of concepts are difficult to teach to learners with hearing impairment?

## Appendix 2

### QUESTIONNAIRE FOR ADMINISTRATORS

#### **Information about the School:**

- i) When was the school started?
- ii) No. of classes (standard wise with sections):
- iii) How often does school inspection take place?
  - a. Official inspection from the Department of Education:
  - b. Official inspection from the Department of Social Welfare:
  - c. Inspection by the School Management-

#### **Information about the Staff:**

- iv) Number of staff
  - a. Teaching Staff:
  - b. Non-teaching Staff:
- v) How often do you conduct staff meeting?
- vi) Which of the following matters are covered in the staff meeting?
  - a. Maintaining staff discipline and Yes / No
  - b. Instructional practices Yes / No
  - c. Issues related to student development Yes / No
  - d. Upgrading knowledge and skills of staff Yes / No
  - e. Issues related to administration of the school Yes / No
  - f. Personal issues related to staff Yes / No
  - g. Mention any other apart from the ones in the list above:
- viii) Which of the following facilities for staff are available in your school?
  - a. Staff room (With washrooms) Yes /No
  - b. Teaching aids Yes/ No
  - c. Library / reference books Yes / No
  - d. Computers and internet facilities Yes/ No
  - e. Television and other recreation Yes/No
- viii) How often do you send teachers for attending in-service training?  
Less than once in a year / Once in a year / Twice a year / More than two times a year

- ix) Do you have collaboration / understanding with any organizations like AIISH for empowerment / training of teacher?
- x) What is your general opinion about staff in your school?  
Highly satisfactory / satisfactory / not satisfactory
- xi) Give three suggestions for further upgrading quality of staff in your school in future:

**Information about Students:**

xii) Student strength (class wise):

xiii) Pass percentage of out going students in the past 5 years:

2002-03	2003-04	2004-05	2005-06	2006-07

- xvi) Mark the 3 most common options your students settle in after school life
- a. Higher education ( )
  - b. Technical/ Vocational training ( )
  - c. Self employment ( )
  - d. Job (in private sector) ( )
  - e. Job (in government sector) ( )
  - f. Agriculture ( )
  - g. If any other, mention:
- xv) Mark the 3 most problems observed among your school students
- a. Absenteeism / Irregularity ( )
  - b. Temper tantrums ( )
  - c. In-attentiveness in classroom ( )
  - d. Uninterested ( )
  - e. Quarrelsome ( )
  - f. Homesick ( )
  - g. Loneliness / Isolation ( )
  - h. If any other, mention: