

## **Evaluating the Outcomes of Inclusive Education: A Case Study from India**

**Sreekumari Amma B.**

**State Council of Educational Research and Training, Kerala, India**

### **Abstract**

The care and concern for individuals having disabilities has been a component of Indian heritage from time immemorial. As far as education of children with special needs is concerned, the transition from segregation to integration and now to inclusion has been slow but steady. In spite of resistance to changes, inclusive schooling is now gaining ground. This paper examines the recent successful integration of children with special needs as measured by their social and academic success.

### **Introduction**

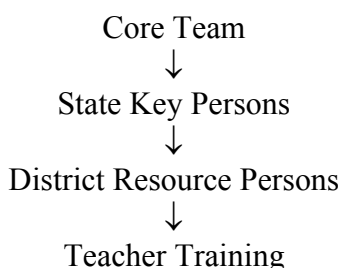
The Government of India implemented the Scheme of Integrated Education for the disabled in 1974 as a centrally sponsored scheme with 50% financial assistance to states to meet the special needs of children with disabilities. With the advent of the National Policy on Education in 1986, the scheme has been expanded and administrative cells have been established in most of the states.

Inclusive Education is about removing the barriers that exclude people from the education system. An inclusive education system ensures that all children in a given community, whatever their learning needs, speeds, age, gender, ethnic background, economic status, can be fully included in the mainstream system. This involves making some changes to the whole system and structures of education to enable this to happen (Save the Children, 2000).

More recently a number of steps have been initiated by the Government to promote the education of children with special needs in general schools. For example, the establishment of the International Centre for Special Needs Education at New Delhi in 2000 was a major initiative endorsing Inclusive Education. Similarly, the first Regional Workshop for the Assessment of Needs of Inclusive Education to assess the situation in the region was organised by Government of India through NCERT, with the support of UNESCO. Senior officials from Government of India, Professionals from Australia, Bhutan, Indonesia, Maldives, Nepal, and New Zealand, and representatives from UN bodies, participated in the workshop.

Teacher empowerment is of vital importance in developing awareness and attitude towards children with special needs (NCERT, 2000). With this objective in mind, the National Council of Educational Research and Training organised a national workshop during 2000 to develop training modules on Inclusive Education for teachers at the local level.

In Kerala, the most literate state in India, a core team has been constituted with experts in the field of education of children with special needs. The team provides training to state level key Resource Persons and at the district level these trainers form the District level trainers. Teacher training on Inclusive Education is organised with the help of these District Resource Persons. The overall approach can be summarized as follows:



At present 2534 children with special needs are studying in mainstream schools in Kerala.

### **The study**

Set within these national and state policy developments, this study had the following objectives:

- To study the curricular achievement of SEN children in inclusive education.
- To study the communication skills of hearing impaired children in inclusive schooling.
- To study the behavioral pattern of SEN children in inclusive environment
- To study the social skills of SEN children in inclusive setting.
- To identify the specific barriers that the school faces in giving effective inclusive education.
- To suggest strategies to provide effective inclusive education.

The study involved a case study approach. Case study is concerned with an in-depth investigation into an individual, group or collection of individuals which have similar attributes. It can be undertaken using a variety of data collection methodologies but is generally concerned with developing a detailed understanding of a particular institution, individual or phenomenon.

With this choice of methodology, the different aspects of inclusive education implemented in the Government Girls Model Higher Secondary School in Trivandrum district were selected for study. This Government school is one of the prestigious in the city and is situated hardly 1/2km away from St. Mary's Higher Secondary School and Kendriya Vidyalaya Pattom. It is a mixed school where boys can study up to Std VII. The classes range from pre-primary to +2 level. Out of 3463 children 707 are boys 2130 are girls. The school has its own building and has a strong parent teacher association, and a dedicated and energetic Principal. At the resource centre of the school seven resource teachers are working for children with special needs. This centre accommodates SEN children from the neighbouring schools as well. The teacher pupil ratio in a class is 1:40, with 1 or 2 children with special needs in each class

**Table I: Percentage Distribution of Children in the study**

<b>Impairment</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative percent</b>
<b>Hearing Impairment</b>	60	48.8	48.8	48.8
<b>Visual Impairment</b>	1	0.8	0.8	49.6
<b>Mental Retardation</b>	59	48.0	48.0	97.6
<b>Hyperactive</b>	2	1.6	1.6	99.2
<b>Autism</b>	1	0.8	0.8	100.0
<b>Total</b>	123	100.0	100.0	

The study surveyed the population of the school. Out of the total population of 3463 children in the school, 123 are children with special needs. The study examines the opinion and experiences of Principal of the School, resource room teachers, general teachers, students with and without disabilities and parents of children with special needs. This was done by observation of classrooms interactive interview with resource teachers and class teachers, and by talking with students. Unstructured interview were conducted with the school Principal and the parents of children with special needs.

The Principal of the school was contacted and requested her co-operation for the study. The key personnel in the resource room, the resource room teachers, general classroom teachers and students were interviewed. Observation of the classrooms during study hours and interval time also was done. Unstructured interviews were carried out with the parents of the children.

The information gathered can be categorised as follows:

1. Demographic data
2. Financial and academic support given to SEN children by Government.
3. Communication skills of hearing impaired children.
4. Academic achievement of SEN children
5. Behaviour pattern of SEN children
6. Special comments of resource teachers
7. Barriers in school for promoting inclusion

### **Demographic data**

Children with special needs from pre-primary to Std X formed the sample of the study. Since the school under study is mainly a girls' school, boys can study only up to Std. VII. Most of the boys completing Std IV, seek admission in some other schools so that they can continue their studies up to higher secondary level. The age of the children under study ranges from 3-17.

**Table II: Percentage Distribution of Age of the Students**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 3.00	1	0.8	0.8	0.8
3.50	1	0.8	0.8	1.6
4.00	2	1.6	1.6	3.3
5.00	1	0.8	0.8	4.1
6.00	5	4.1	4.1	8.1
7.00	9	7.3	7.3	15.4
8.00	5	4.1	4.1	19.5
9.00	11	8.9	8.9	28.5
10.00	25	20.3	20.3	48.8
11.00	13	10.6	10.6	59.3
12.00	14	11.4	11.4	70.7
13.00	11	8.9	8.9	79.7
14.00	7	5.7	5.7	85.4
15.00	6	4.9	4.9	90.2
16.00	8	6.5	6.5	96.7
17.00	4	3.3	3.3	100.0
Total	123	100.0	100.0	

The expected age for admission in pre primary is 3 and Std I is 5. The average age of children in the school is 9, whereas that of SEN children is 10.21. Even though there is not much difference in the average age of both the groups, statistically there is significant difference in the age of children with special needs and children without special needs. ( $Z=2.95$  for MR and  $Z = 2.05$  for HI) Since the Z value is greater than 1.96 at 5% significance level, the difference is significant. This means that children with hearing impairment and those who are intellectually challenged are in a higher age level compared to their classmates.

**Table III: Actual and Expected Age of Children Under Study**

Impairment	Actual age	Standard Deviation	N	Expected Age	Standard Deviation
HI	10.82	2.86	60	9.73	2.80
VI	10.94	3.55	56	9.33	2.99

### Financial and Academic Support

The medical check up of the students is done by the Department of Education through District Education Officers, with the help of the concerned departments of the Medical Colleges or District Hospitals. The travelling allowance to students and escorting teachers are paid by the department. On the basis of the medical report, the children who have a disability of 40% or above are given financial assistance and those who have less percentage of disability are given equipment. The equipment supplied is free of cost. There is no income limit for getting financial assistance. The financial assistance is given in cash and not in kind, as follows:

1. Books and stationery allowance - Rs.400/- per annum
2. Uniform allowance - Rs.200 /-per annum
3. Transport allowance- Rs. 500/- per annum
4. Escort allowance-Rs.750/-

## 5. Readers allowance- Rs.500/-

Specially qualified resource teachers are posted to this school for giving support to children with special needs, as well as to general class room teachers. There are 7 Resource Teachers in this school. They have got one year special training in hearing impairment or mental retardation as the case may be.

The degree of hearing loss is a variable that accounts for a considerable amount of variation in school placement decisions (Thomas 1992). The students under study are categorised as:

Mild - 24 – 40%, Moderate 41 – 55%, Severe - 56 – 70%, Profound 71 – 90%, Total-90<sup>+</sup>

Most of the children fall under the severe and profound categories. Only 6.5% of the students are in the mild category.

**Table IV: Percentage Distribution of Intensity of Impairment**

Intensity of impairment	Frequency	Percent	Valid percent	Cumulative Percent
Valid Mild	8	6.5	6.5	6.5
Moderate	20	16.3	16.3	22.8
Severe	36	29.3	29.3	52.0
Profound	50	40.7	40.7	92.7
Total loss	9	7.3	7.3	100.0
Total	123	100.0	100.0	

### Parental Status

**Table V: Percentage Distribution of Professional Level of Father**

Profession	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Gulf	11	8.9	12.9	12.9
Coolie	23	18.7	27.1	40.0
Business	16	13.0	18.8	58.8
Clerk	1	0.8	1.2	60.0
CBI	1	0.8	1.2	61.2
Engineer	1	0.8	1.2	62.4
Driver	5	4.1	5.9	68.2
Government. Employee	11	8.9	12.9	81.2
Security	1	0.8	1.2	82.4
Professor	1	0.8	1.2	83.5
Ex. Service	1	0.8	1.2	84.7
Contractor work	1	0.8	1.2	85.9
Carpenter	2	1.6	2.4	88.2
Agriculture	1	0.8	1.2	89.4
Bank	4	3.3	4.7	94.1
Sweeper	1	0.8	1.2	95.3

Electrician	1	0.8	1.2	96.5
Devasom Board	1	0.8	1.2	97.6
Private	1	0.8	1.2	98.8
Packing	1	0.8	1.2	100.0
Total	85	89.1	100.0	
Missing System	38	30.9		
Total	123	100.0		

From the analysis it was found that the majority of the parents (fathers) belong to low profile job groups. Nine percent of the parents (F) work abroad (Gulf countries) and 12.9% of them are Government employees.

**Table VI: Percentage Distribution of Professional Level of Mothers**

Profession	Frequency	Percent	Valid Percent	Cumulative Percent
Valid House wife	78	63.4	83.9	83.9
Typist	1	0.8	1.1	84.9
Government Employee	5	4.1	5.4	90.3
E.C.G technician	1	0.8	1.1	91.4
Business	1	0.8	1.1	92.5
Teacher	4	3.3	4.3	96.8
BHMS	1	0.8	1.1	97.8
Nurse	2	1.6	2.2	100.0
Total	93	75.6	100.0	
Missing System	30	24.4		
Total	123	100.0		

Mothers of most of the children are unemployed (83.9%). Eleven percent of them are government employees (typist 1.1%, teachers 4.3% and others 5.4%). One of the parents work as resource teacher in this school and another as general teacher. They play a vital role in the overall development of these children and in promoting inclusive education.

The role of parents in the curricular and co-curricular activities of the children is very crucial in the process of inclusive education. Their contact with the teachers in the daily activities of the children could bring a lot of improvement according to the opinion of the parents. Parents try to communicate orally with the hearing impaired children and help the children as per the directions of the resource teacher. The teachers could help the parents for visioning attainable academic and social goals for their children. The parents could accept the disability of their children and work towards strengthening the ability of the children.

The association of the parents of children with special needs formed in this school could initiate activities to strengthen the abilities of the children. They could

pressurise the Government for the appointment of specially qualified teachers to help children with special needs. The PTA gives special coaching to students on Computer Education, Drawing and Painting. These children compete with the general school children in drawing and painting competitions. One of the students could compete in the state level competition in painting and another in the athletics.

Teachers should inform the parents of the many avenues available to help the parent of a child with disability (Nielson, 2002). The parents of the school under study could get information about the Institute of Cognitive and Communicative Disorders where children could get the help of team of specialists-speech therapist, linguist, audiologist, psychologist and so on. Parents approach NISH (National Institute of Speech and Hearing) also for audiology and speech therapy.

### **Academic achievement**

The educational environment has a tremendous influence on students with disabilities as well as students without disabilities. In the process of including students with disabilities in the regular classroom, the teacher must convey positive feelings and a caring attitude towards them. The attitudes of the teacher will reflect in student's acceptability of disabled children amidst them. Creating a positive and comfortable environment is essential if the educational experience is to be successful and rewarding for all students.

The question of academic and social integration has been taken up in many studies. Menchel (1995) report that deaf and hard of hearing students who enrolled in regular four year programs interacted with their hearing peers in a great deal. The study also shows that their high school GPA's were well above average. They were also goal-oriented, highly motivated, committed and as mentioned, well integrated academically and socially.

The teachers rated the Mentally Retarded students as average and below average in the class room.

**Table VII: Percentage Distribution of Rating of Mentally Retarded Children**

<b>Rating</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Below Average	58	47.2	47.2	
Average	4	3.3	3.3	50.4

**Table VIII: Percentage Distribution of Rating of Hearing Impaired Children**

<b>Rating</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Poor	16	13.0	13.0	63.4
Average	24	19.5	19.5	82.9
Good	14	11.4	11.4	94.3
Very good	7	5.7	5.7	100.0
Total	123	100.0	100.0	

Forty seven percentage of the Intellectually Impaired students are marked as below average by the teachers when only 3.3% students are average.

At the same time 19.5% of the Hearing Impaired Students fall under the category of average. 11.4% are categorised as good and 57% stand under the label of very good.

The marks obtained by the children in the terminal examination were analysed.

**Table IX: Mean Score of Hearing Impaired Students and Mentally Retarded Students**

Position			Hearing Impaired Students			Mentally Retarded Students		
			Mean	Standard Deviation	Count	Mean	Standard Deviation	Count
Position	Below average	English	-	-	-	-	-	55
		Mala-yalam	-	-	-	22.51	10.17	55
		Maths	-	-	-	22.26	11.54	55
Position	Average	English	-	-	-	-	-	4
		Mala-yalam	-	-	-	40.33	2.52	4
		Maths	-	-	-	39	9.90	4
Position	Poor	English	10.50	1.00	16	-	-	-
		Mala-yalam	14.29	1.89	16	-	-	-
		Maths	15.57	5.74	16	-	-	-
Position	Average	English	23.60	9.03	24	-	-	-
		Mala-yalam	27.78	7.34	24	-	-	-
		Maths	23.78	9.16	24	-	-	-
Position	Good	English	25.33	10.03	13	-	-	-
		Mala-yalam	36.83	6.05	13	-	-	-
		Maths	36.50	6.95	13	-	-	-
Position	Very Good	English	37.50	17.68	7	-	-	-
		Mala-yalam	42.00	2.83	7	-	-	-
		Maths	45	4.24	7	-	-	-

**Table X Mean Score of Different Category of Children**

Category		Hearing Impaired Students			Mentally Retarded Students		
		Mean	Standard Deviation	Count	Mean	Standard Deviation	Count
Mild	English	-	-	1	-	-	7
	Malayalam	-	-	1	32.60	11.10	7
	Maths	-	-	1	29.40	12.95	7
Moderate	English	-	-	2	-	-	17
	Malayalam	-	-	2	22.81	11.69	17
	Maths	-	-	2	19.58	10.30	17
Severe	English	-	-	6	-	-	27
	Malayalam	-	-	6	22.04	9.74	27
	Maths	-	-	6	23.47	11.80	27
Profound	English	23.45	10.05	42	-	-	8
	Malayalam	29.00	9.23	42	24.00	10.58	8
	Maths	25.88	11.03	42	24.00	16.97	8
Total	English	22	13.63	9	-	-	-
	Malayalam	23.22	11.82	9	-	-	-
	Maths	25	12.79	9	-	-	-

The majority of hearing impaired children fall under profound group and intellectually deficient children fall under moderate and severe groups. Special question papers were given to these children up to Standard VII for evaluation. The average mark for English is 23.45 whereas in Malayalam it is 29.00 and in Maths 25.88. The average score is high for the mother tongue i.e., Malayalam.

With regard to Mentally Retarded students, the mean score (32.60) is high for the mild group, and more or less similar for moderate, severe and profound groups.

### **Communication Skills**

Teachers of the hearing impaired face virtually the continuous task of making judgements about their students' ability to use various methods of communication. Teachers must make broad decisions about which methods might best facilitate these students development and which school or program placement might best meet students needs (Merve & Desmond, 1996). The same is the case with mentally retarded children also. The teachers must make broad judgement of the students' capacity to communicate and try to build from there.

Parents and teachers of the school under study communicate orally with hearing impaired children. Sometimes the general teachers seek the help of resource teachers in understanding the speech of Hearing Impaired Children. Peers try to speak with the hearing impaired, but at times when they fail to communicate they show signs which are locally practised. The school adopts the policy of oralism.

### **Behaviour Pattern**

The students feel free as any other children in the school in all the activities. The Hearing Impaired Students interact with other children during intervals. But some of them show a tendency to meet and play with hearing impaired children in other classes. During lunch time mentally retarded children come to the resource room and have their lunch with the teachers. It is understood that they prefer to have lunch in very neat surroundings and with the resource teachers. The resource teachers opined that the self biting tendency of Ananthu in Std.II has been considerably reduced and now he began to write in the note book. The hiding tendency of Narayan, a class II student, has also changed. The hyper active behaviour shown by Afeek and Maya Manoj in Std IV, Binu Sasidharan and Gopika Gopan both Class-II students have been reduced and they started to attend the classes. Nayana Madhu, Class IV student who always laughs in the class could control her behaviour. Gadha.V of Std.VI who cries unnecessarily has changed her tendency now. Indu Parvathy, Std.X who always bites her hair has stopped it now. Over talkativeness of a Std.I student has been reduced. Salivation of a Class IV child has been reduced and eating skill has been developed. The stubborn nature of an autistic child has been reduced.

### **Special Comments of Resource Teachers**

The following comments are a summary of what was said by resource teachers:

- The performance of children who are integrated earlier are better in studies and co-curricular activities than children who got admission in a later stage.
- One hearing impaired child in Std.VI got first place in sports in the school level competition.
- Another hearing impaired child got the meritorious scholarship for Lower Secondary School students.
- Neethu.M.S, a hearing impaired child-Std VI could come first in the painting competition conducted by the school authorities.
- In Class IX, out of 50 students only 7 students passed in the terminal examination in Mathematics, of which two are hearing impaired.
- Two students who have come from special school for hearing impaired (Std.V &VI) show progress in academics.

- Two students (Mentally Retarded) have shown remarkable improvement in speech. Another developed toilet control after joining the school. (K.G.Student)
- A Down Syndrome Girl in Std.I showed rapid improvement in communication.
- Two students started answering questions and started writing in the sentence form.
- There is improvement in the handwriting of two students and another child in Std.VI could read the questions and answer himself.
- Five intellectually challenged students of Std.VIII started learning general syllabus.

### **Barriers in School**

These include:

- Some of the general teachers are reluctant to take responsibility and entrust the duty to the Resource Teacher.
- During interval time and lunch break most of the children are in the resource room.
- The number of children under each resource teacher is large and hence do not get sufficient attention.
- Resource teachers do not have multicategory training.

### **Suggestions**

The following suggestions are proposed:

- Periodic in-service training to general teachers is highly necessary for successful inclusion.
- The resource teachers as well as the general teachers should be aware of the duties and responsibilities.
- The effectiveness of the academic as well as non-academic performances of children may be affected due to the lack of sufficient number of resource teachers. The teacher student ratio is 1:8 while resource teachers are taking care of children in the ratio 1:17.
- There should be variety of choices for children to opt subjects to suit their capabilities instead of difficult subjects/languages.
- All pre-service teacher training courses should include the education of these children as one paper for study.
- Media (Television & Print) should be utilised for promoting the idea of inclusive education.
- Teachers should be encouraged to do Action Research.
- Periodic Seminars will enhance the knowledge of the teachers and will act as a motivation for innovative methods.
- Peer sensitisation is a positive approach towards inclusive education.

### **Conclusion**

Inclusive Education emphasises that ALL children can learn according to his/her pace, talent and environment provided appropriate strategies are used and unending motivation is provided. Regular contact of teachers with parents can help a lot in the scholastic as well as non-scholastic progress of the child. Parents, siblings, peers and teachers are the major partners in the education of children with special needs.

## References

- Allen, T. E. (1992). Sub group differences in educational placement for deaf and hard of hearing students. *American Annals of the Deaf*, 137, 381-388.
- Hyde, B. M., & Power, J. D. (1996). Teachers' ratings of the communication abilities of their deaf students. *American Annals of the Deaf*, 141, 5-10.
- Lorenz, S. (2002). *First steps in inclusion*. London: David Fulton.
- Menchel, D. (1995). *Some characteristics of Main streamed hard of hearing students in Swedish Universities*. n.p.
- National Council of Educational Research and Training (NCERT). (2000). *First regional workshop*. n.p.
- Nielson, L. B. (2002). *Brief reference of student disabilities*. n.p.: Corwin Press.
- Save the Children. (2000). *Inclusive education: Some questions and answers*. n.p.

