

THE BLIND CAN SEE

**A Report on the Government of India
Institutions for the Blind at Dehradun from
January, 1950 to March, 1961**



**MINISTRY OF EDUCATION
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PREFACE

The establishment of the Training Centre for the Adult Blind in January, 1950 at Dehradun represented the first tangible step taken by the Central Government to provide training facilities for the blind. The advent of this institution was responsible for giving birth to the concept of a National Institute for the Blind.

The primary object of the National Institute for the Blind is to attempt to provide a comprehensive and integrated service for the blind. Although, like many other countries we have no dependable statistics, the number of blind persons in the country is believed to be very large and only an insignificant fraction of our blind population has access to educational and training facilities. It will, therefore, not be possible for this Institute to serve all blind persons. Nevertheless, it is necessary to build up an efficient institute to function as a demonstration project. By building up a sound tradition of effective and useful service to the blind at all stages of their development, this institute could become the fore-runner of similar institutions in other parts of the country.

It is heartening to note that the example of this Centre is already beginning to be emulated. The Government of Punjab have decided to establish a Training Centre for the Adult Blind in the near future. It is most likely that other State Governments will also establish similar institutions.

The present volume tells the story of the progress made in the last 10 years or so in building up a National Centre for the Blind. The training Centre for the Adult Blind was followed by the Central Braille Press, the workshop for the manufacture of Braille Appliances, the Women's Section of the Training Centre and the Model School for Blind Children. During the Third Plan period is to be added a National Braille Library and existing institutions have to be considerably developed

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before they can be expected to function as model projects. Funds have been provided in the Third Plan for this purpose and the assistance of international agencies is also being sought.

We hope that the National Centre for the Blind will begin to function effectively by the end of the Third Plan period. Its effectiveness will be judged by the extent to which it serves as a beacon-light to dwellers in the world of darkness.

I trust that this little volume will not only give useful information to all those interested in the education and training of the blind but it will also serve to awaken a keener consciousness of the need to educate and train the blind to a life of usefulness to the community and of interest to themselves.

NEW DELHI,
November 15, 1961.

PREM KIRPAL,
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CHAPTER I

INTRODUCTION

During the past 11 years, the Government of India have been attempting to develop a set of institutions at Dehradun to provide an integrated service for the blind. The purpose of this Report is to tell the reader how these institutions came into being and what they are striving to achieve.

Organized attempts at educating the blind began in this country in 1887 with the establishment of the Sharpe Memorial School for the Blind at Amritsar. This school which was established by Christian missionaries was later shifted to Rajpur, Dehradun, where it continues to exist and is one of the few institutions for blind women and girls in the country.

1961—Its Importance

The year 1961 marks the 75th year of the commencement of modern services for the blind in India. It is, therefore, in the fitness of things to present this Report in 1961.

The year 1961 also marks the tenth anniversary of the evolution of Bharati Braille which replaced about eight Braille codes in use in the country before 1951. The adoption of Bharati Braille was an epoch-making event in the history of the education of the blind in this country because it ended the fifty-year old "battle of types". Today Bharati Braille is used in almost all the institutions for the blind. The Government of India have recently appointed a Committee to draw up a contracted Braille code for Hindi. It is hoped that contracted codes for the various regional languages will also be framed in the near future.

Every Cloud Has A Silver Lining

Wars are undoubtedly the most disastrous events in human history and yet in many countries the development of services for the blind was stimulated during the last two World Wars. Even the evolution of the Braille system which opened up the realm of knowledge to the blind was in a sense the result of war. Braille was a modified form of a system of military signals originally developed by Capt. Charles Barbier of the French Army towards the second quarter of the 19th century. In 1915, Sir Arthur Pierson, a blinded journalist, established St. Dunstan's Hostel for the war-blinded in the U. K. The object of this organisation was to train and resettle exservicemen blinded in the First World War. The establishment of this organisation turned a new leaf in the history of services for the blind in the United Kingdom. St. Dunstan's branches were later established in other Commonwealth countries.

Work for the blind was also stimulated in the United States and in several European countries during and after the two World Wars. On account of the acute shortage of manpower during World War II, several warring nations were obliged to employ blind persons in their national industries. The significant contribution made by the blind to the war industry led to the gradual recognition of the economic potentialities of the blind worker.

As a sequel to the success of blind workers in World War II, placement activity was intensified in many countries. Since satisfactory placement depends to a very large extent on the type of training facilities available, steps were taken by several countries to provide more effective training programmes for the blind. For instance, the Disabled Persons (Employment) Act, 1944, of the United Kingdom dealt specifically with the provision of suitable training facilities for the handicapped, including the blind.

Some of the advanced countries provide pensions for the aged or the needy blind. Generally speaking, a beginning in this direction was made by providing pensions to the war-blinded.

Early Plans for the Welfare of the Blind in India

Soon after the commencement of World War II, the Government of India invited Sir Clutha Mackenzie, himself a former St. Dunstan, to advise them on measures to be taken to promote the welfare of the blind in India. He was appointed as Adviser on Blindness to the Ministry of Health.

The Government of India also appointed a Joint Committee of the Central Advisory Boards of Education and Health charged with the task of investigating into the causes of blindness and of making recommendations for ameliorating the lot of the blind. This Committee submitted its Report in 1944. The Report suggested a number of useful measures for the prevention of blindness and for promoting the welfare of the blind. The Ministry of Education undertook work for the handicapped in pursuance of the recommendations of this Report. The "Report on Blindness in India" of the Joint Committee of the Central Advisory Boards of Education and Health represented India's first attempt at planning services for the blind.

St. Dunstan's Hostel—Its Inception

In July, 1943 was established St. Dunstan's Hostel for the Indian War-Blinded at Dehradun, which functioned as a branch of St. Dunstan's Hostel in the United Kingdom. It began functioning with an initial batch of six blinded ex-servicemen and at one time it had the maximum strength of 120 men.

The primary object of St. Dunstan's was to impart training to ex-servicemen blinded in World War II in cottage industries like weaving, chair-caning, basket-making and knitting with a view to providing them with an opportunity to augment their disability pensions.

By the end of 1949, St. Dunstan's had trained about 192 blind ex-servicemen. About thirty of the ex-servicemen who came to St. Dunstan's regained their sight as a result of the treatment they received from the various eminent eye specialists posted in the Military Hospital at Dehradun. About a dozen of the blinded ex-servicemen trained at St. Dunstan's suffered also from other serious disabilities. They were provided with prosthetic and other aids. For instance, one of the trainees had lost both his arms. With the aid of a special device, he was able to operate the radio and even to use a typewriter.

By the end of 1949, the majority of blinded ex-servicemen had completed their training. It was felt that the excellent facilities developed at this institution should be thrown open to all the adult blind in the country. Consequently, the Ministry of Education took over the St. Dunstan's Training Centre at Dehradun with effect from the 1st January, 1950. It was renamed as the Training Centre for the Adult Blind.

Other Institutions for the Blind in India

With three schools for the blind established before the close of the last century, by 1947 India had about 50 institutions for the blind in different parts of the country. The growth of services for the blind has been more rapid during the post-Independence era. This is evident from the fact that today there are 94 schools and training establishments for the blind with a total enrolment of about 4,000.

As in most other countries, voluntary agencies here play a vital role in the development and administration of services for the blind. The majority of institutions for the blind are run by voluntary organisations, but they are usually assisted by the State Governments concerned. The Ministry of Education and the Central Social Welfare Board have also been giving financial assistance to institutions for the blind, particularly for developmental projects. This year the Government of India have decided to liberalize their assistance to institutions for the handicapped. They will now pay 75% of the recurring and non-recurring expenditure on deserving developmental schemes of voluntary organizations instead of 60%.

The National Centre for the Blind

With the establishment of the Training Centre for the Adult Blind, the Government of India began to formulate plans for developing a comprehensive centre at Dehradun to provide an integrated service for the blind. They envisage a centre which could provide services commencing from education in early childhood to the provision of recreational material to the adult blind. Such a centre could not only provide a direct service to a limited number of blind persons but it could also serve as a demonstration project whose main value will be in encouraging the development of similar organizations throughout the country.

Considerable progress has already been made towards the establishment of the various units comprising the institute which will be known as the National Institute for the Blind. In the succeeding chapters will be described the institutions which have already been developed and their plans for the future.

CHAPTER II

TRAINING CENTRE FOR THE ADULT BLIND

MEN'S SECTION

Established in January, 1950, this Centre is today the largest institution for blind adults in the country. It imparts training in engineering and non-engineering trades to adult blind men and women from all parts of the country.

The Centre has accommodation for 150 men and 35 women. Particulars about the Women's Section are given in a separate section. All the trainees are provided free board, lodging, clothes and tuition.

The popularity of the Centre can be judged from the fact that on the 31st March, 1961, there were 293 men and 10 women on the waiting list.

Admission

Admission is open to the following two categories of blind persons:—

- (a) Persons between 18 and 40 years of age, who became blind not more than three years ago and who were attending an ordinary institution or were working before losing sight.
- (b) Persons between 18 and 40 years of age who became blind early in childhood or many years ago and have attended a school for the blind for not less than three years before the time of admission to the Centre.

Priority is given to candidates under category (a). Blinded ex-servicemen and employees of Government also receive priority and are admitted up to 50 years of age.

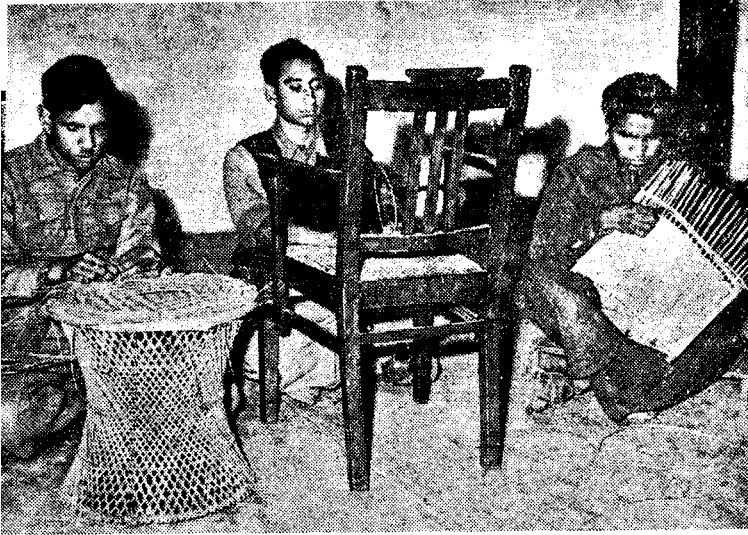
Curriculum

Vocational: This is primarily a vocational training centre. Its main purpose is to help the trainee towards economic independence. With this end in view, training is imparted in the following trades:—

- (i) Weaving.
- (ii) Chair-caning.
- (iii) Spinning.
- (iv) Plastic-moulding.
- (v) Candle-making.
- (vi) Mat-making.
- (vii) Cardentry.
- (viii) Light engineering including cycle repairing and assembling.

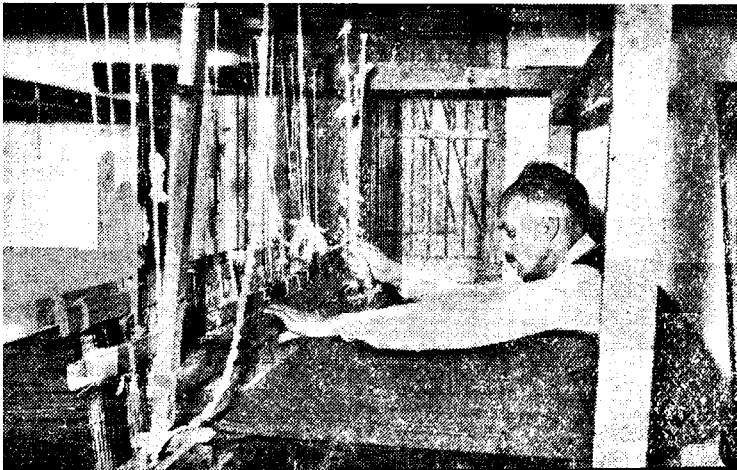
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Initially, the Centre imparted training only in cottage industries. Experience has shown, however, that blind persons trained in cottage industries alone cannot secure remunerative work. It was, therefore, decided to shift the emphasis from non-engineering to engineering trades which offer greater scope for employment.



Blind trainees at cane work

A trainee at blanket weaving



TRAINING CENTRE FOR THE ADULT BLIND

The following table shows the number of trainees trained by the Centre in each of the above trades since its inception:—

Name of trade	No. trained
Weaving	320
Chair-caring	384
Spinning	116
Plastic-moulding	97
Candle-making	106
Matt-making	3
Carpentry	3
Light engineering including cycle repairing and assembling	32

It should be noted here that in the above table, one trainee may be mentioned more than once since some of the trainees learn more than one trade. For detailed particulars about the number of trainees trained in the above grades year-wise, please see appendix 'A'.

Professional : One of the subjects taught in the Centre is Music. It is perhaps the most lucrative profession open to the blind in this country. The following table shows the successes achieved by the Training Centre year-wise :—

Year	Name of examination	No. who appeared in the examination	No. passed			
			1st Divn.	2nd Divn.	3rd Divn.	Total
<i>Vocal</i>						
1956-57 .	1st year . . . . .	..	..	..	..	..
	2nd year	11	2	9	..	11
	3rd year	2	..	2	..	2
	4th year	4	1	..	..	1
	6th year	1	..	1	..	1
1957-58 .	2nd year	7	2	4	1	7
	3rd year	8	3	4	1	8
	4th year	2	2	2
1958-59 .	2nd year	4	..	4	..	4
	3rd year	4	1	3	..	4
	4th year	6	1	5	..	6
	5th year	3	..	3	..	3
	6th year	2	2	2

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Year	Name of Examination	No. who appeared in the examination	No. Passed			
			1st Divn.	2nd Divn.	3rd Divn.	Total
1959-60 .	2nd year .	5	..	3	2	5
	3rd year .	2	..	2	..	2
	4th year .	2	1	1	..	2
	5th year .	2	..	2	..	2
	6th year .	2	..	2	..	2
1960-61 .	2nd year .	5	Results still awaited.			
	3rd year .	4				
	4th year .	2				
	5th year .	2				
	6th year .	1				
<i>Instrumental</i>						
1956-57 .	1st year .	4	..	4	..	4
	2nd year .	9	..	8	1	9
	3rd year .	1	..	1	..	1
	4th year .	1	..	1	..	1
	6th year .	2	..	2	..	2
1957-58 .	2nd year .	5	..	4	1	5
	3rd year .	1	..	1	..	1
	4th year .	7	..	6	1	7
	5th year .	4	2	1	1	4
	6th year .	1	1	..	..	1*
1958-59 .	2nd year .	15	2	13	..	15
	3rd year .	2	1	1	..	2
	4th year .	3	..	3	..	3
	5th year .	1	1	..	..	1
	6th year .	2	..	1	1	2
1959-60 .	2nd year .	4	..	4	..	4
	3rd year .	5	..	3	2	5
	4th year .	..	..	..	..	..
	5th year .	..	..	..	..	..
	6th year .	1	..	..	1	1*
1960-61 .	2nd year .	4	Result is still awaited.			
	3rd year .	7				
	4th year .	4				
	5th year .	2				
	6th year .	1				

*He topped the merit list.

TRAINING CENTRE FOR THE ADULT BLIND

Academic : Although the Centre is, by no means, an educational institution, every trainee is required to learn Braille as applied to Hindi or to his regional language. Trainees who have an adequate knowledge of English are taught typewriting and standard English Braille.

The following table shows the number of trainees trained in each of these subjects since 1950:—

Year	Bharati Braille	English Braille	Typing (English)
1949-50 . . . . .	..	..	..
1950-51	9	2	2
1951-52	7	6	5
1952-53	35	13	4
1953-54	34	20	7
1954-55	41	12	..
1955-56	56	17	..
1956-57	54	19	..
1957-58	61	23	..
1958-59	58	21	..
1959-60	63	25	..
1960-61	71	22	7
TOTAL	489	180	25

Braille Shorthand a successful profession for the blind



Stenography : Is a popular profession for the blind in some of the more advanced countries. This is also an important profession taught at the Training Centre for the Adult Blind. During the past 11 years, 7 trainees were trained as steno-typists.

Duration of Training

The duration of training varies according to the trade chosen. As a rule, however, no trainee is expected to stay at the Centre for more than about two years.

The period of training for the engineering trades is much shorter than for non-engineering trades like weaving and chair-caning.



Braille typewriting and Braille reading

Extra-Curricular Activities

The Centre places considerable emphasis on extra-curricular activities designed to foster a sense of independence and to encourage the trainees to occupy their leisure hours usefully.

The Centre has a whole-time Physical Education Instructor on its staff. Every trainee is expected to spend about an hour in vigorous out-door activity on every alternate day under the close supervision of the Physical Education Instructor.



Physical training, a regular feature of the Centre

Since the majority of trainees come from rural surroundings and the Centre has spacious grounds, an attempt is being made to encourage gardening. Plots have been allotted to a number of trainees.

Cultural programmes are periodically organized. These consist of musical concerts, debates and plays. Excursions to places of interest are a regular feature.

Radio listening is perhaps the most important form of recreation. The Centre has a spacious recreation hall where trainees enjoy listening to the radio and organizing other cultural or social activities.

Recreation Hall for men



Some of the trainees love playing indoor games like chess, draughts, cards and the like.

In order to encourage the trainees to learn to undertake a measure of responsibility, committees of trainees have been formed to take steps about the picnics and other activities to be organized by the Centre.

Food

The Centre attempts to provide a balanced diet for the trainees. They are given three meals in addition to tea in the morning and in the afternoon. A quarter seer of milk is provided to every trainee.



At meal time—Men's Section

The Centre has a whole-time catering Officer who, assisted by a Catering Committee of the trainees, supervises the catering arrangements and ensures that every trainee is given an adequate and wholesome diet.

Clothes

The Centre provides a set of cotton and warm clothing to every trainee. It is desirable, however, for the trainees to have some clothes of their own which they might use when they go on holidays.

Pocket Money

Every trainee is given pocket money of six rupees per month. The object is to provide training in the proper use of money.

'Trainee Instructors

Some of the outstanding trainees are appointed as trainee instructors in order to give them an opportunity of being trained as teachers. They are given an allowance of Rs. 8/- per month in addition to pocket money of Rs. 6 /- per month.

Sales

The Centre maintains a show-room where the products made by the trainees as well as the Sheltered Workshop, to which reference will be made presently, are kept for sale. Since its inception, the Centre earned, during the course of training, Rs.1,09,837 from the sale of products.

Particulars of the income received every year will be found in appendix 'B'.

'The Trainees

State-Wise Distribution: The Training Centre functions as an all-India institution and blind persons from all the States have been taking advantage of its facilities. The State-wise distribution of the trainees since 1950-51 given in appendix 'C' would show how progressively trainees from more and more States have been joining the Centre.

Background

It is interesting to know what the trainees were doing before coming to this Centre. An analysis of the records of the trainees who came to the Centre during 1960-61 reveals that 53 of them attended ordinary schools, 94 attended the special schools for the blind, 32 were employed and five were doing no work before joining the Centre.

Economic Status

The belief that blindness is prevalent among the lower economic strata of our society is strengthened by a study of the economic status of the parents/guardians of the trainees who came to the Centre during 1960-61. The study reveals that the income of the parents/guardians of 142 trainees was below Rs.100 per month and of eight trainees between Rs.101/- to Rs.200/- per month. The income of the parents/guardians of none of the trainees exceeded Rs. 200/- per month.

Causes of Blindness

The following table shows the causes of blindness of the trainees who came to the Centre during 1960-61 :—

Cause	Number
Congenital Cataract and complications	
Irritant Medicines	5
Dysentery	2
Effect of gas	2
Mal-nutrition	5
Retinitis Pigmentosa	6
Detachment of Retina	3
Optic Atrophy	10
Small Pox	28
Trachoma	24
Iridocyclitis	7
Pyrexia	10
Eale's disease	2
Glaucoma	2
Trauma	5
Ophthalmia	8
Causes not known	29
TOTAL	150

It will be observed that small pox was the largest known cause. The next largest cause of blindness was Trachoma. In 29 cases, the cause was not known.

The Trainees' Welfare Fund

This fund is built partly from donations from members of the public and partly from grants by the Government of India. Its object is to provide limited financial assistance to trainees on the completion of their training with a view to helping them to rehabilitate themselves. The fund is also utilised for providing them with a set of clothes when they leave the Centre.

TRAINING CENTRE FOR THE ADULT BLIND

Since 1951-52 when the fund was created, ex-trainees have been given assistance amounting to Rs.13,837.38. The following table shows the assistance given every year:—

Year	Amount given
1951-52	20.00
1952-53	163.62
1953-54	685.00
1954-55	954.56
1955-56	2155.44
1956-57	1635.00
1957-58	2584.06
1958-59	1078.81
1959-60	2985.84
1960-61	1575.05
TOTAL	13837.38

The late Smt. Banubhai Behramji Kanga, who died in Bombay about seven years ago, bequeathed a sum of about Rs.50,000 to the Centre for the welfare of the trainees and ex-trainees. With the consent of the executrix of the will of late Smt. Kanga, it is proposed to utilize the interest on this bequest for this purpose.

A proposal to constitute a Board under the Charitable Endowments Act, 1890 to administer the 'Trainees' Welfare Fund which would be formed with this bequest as the initial corpus is under consideration at present.

Health

The Centre has a whole-time medical officer on its staff. Apart from attending to the minor ailments of the trainees, the staff and their families, the medical officer carries out a routine medical check-up of every trainee once a quarter.

Sick trainees are kept in a separate ward maintained by the Centre. Serious cases are referred to the local civil hospital and the parents/guardians are informed in such cases.

The Staff

The Men's Section of the Centre has 71 members of the staff, of whom ten are blind. More particulars about the staff will be found in appendix 'D'.

 WOMEN'S SECTION

This Section was inaugurated by the Education Minister, Dr. K. L. Shrimah, on the 30th September, 1957. Initially it had accommodation for 20 trainees. The strength was raised to 35 during 1959-60.

Pending construction of additional buildings, the Women's Section is located in two hired buildings at a distance of four miles from the Men's Section. The rules of admission, the curriculum and the amenities provided to the women trainees are broadly the same as those for the men trainees. Some of the special features of the Women's Section are described in the following paragraphs.

Curriculum

The women are taught the following trades:—

Name of trade	Number already trained
Weaving	13
Winding	15
Knitting	15
Chair-caning	15
Spinning	14
Carpet-making	5

It should be noted that one trainee might be mentioned more than once in the above table because some of the trainees learn more than one trade.

In order to prepare the women trainees for a useful home life, training is also given in elementary domestic science. In addition, like men, the women trainees also learn Bharati Braille and Music. The following table shows the number of women trainees in these occupations:—

Braille

Subject	Number trained
Bharati Braille	12
Standard English Braille	2

TRAINING CENTRE FOR THE ADULT BLIND

Music

Year	Name of Examination	No. who appeared in the examination	No. passed				
			1st Divn.	2nd Divn.	3rd Divn.	Total	
<i>Vocal</i>							
1958-59	2nd year	3	1	1	1	3	
1959-60	3rd year	3	..	2	1	3	
1960-61	4th year	3	..	..	3	3
<i>Instrumental</i>							
1958-59	2nd year	1	1	..	..	1
1959-60	3rd year	2	..	1	1	2	
1960-61	4th year	1	..	..	1	1

It is significant that none of the women trainees of the Centre who took the various music examinations have so far failed.

Extra-Curricular Activities

Considerable emphasis is laid on physical training. The women trainees enjoy the rhythmical drill with lazims.

Women trainees at Lazim drill



Recreation Room—Women's Section

The Centre has a part-time dancing Instructor on the staff. Lessons in dancing foster independence in movement and correct posture. The importance of independence in movement for blind persons can hardly be over-emphasized.

Indoor games and radio listening are as popular among the women trainees as among the men.

The Trainees

State-wise Distribution : The following table shows the State-wise distribution of the 32 trainees who are at present in the Women's Section:—

Name of State	Number of Trainees
Uttar Pradesh	2
Bombay	1
Kerala	3
Madras	19
Punjab	2
Andhra	2
Madhya Pradesh	1
West Bengal	2
TOTAL	32

TRAINING CENTRE FOR THE ADULT BLIND

Background

An analysis of the background of the trainees who came to the Centre during 1960-61 reveals that 11 of them attended ordinary schools, 20 attended special schools for the blind and the remaining were employed before joining this Centre.

Economic Status

It is interesting to know that even in the Women's Section the income of the parents/guardians of none of the trainees exceeded Rs.200/- per month. The monthly income of parents/guardians of 28 trainees was below Rs.100/- and that of four trainees was between Rs.100/- to Rs.200/-.

The Staff

The Women's Section has 17 staff members, two of whom are blind. More particulars about the staff will be found in appendix 'E'.

Sales

The following table shows the income from the sale of products of articles made in the Women's Section so far each year :—

Year	Income
1957-58 . . . . .	..
1958-59	561
1959-60	1,590
1960-61	1,089
	3,240

Finance

The Government of India have spent Rs.24,11,695 on the Men's and Women's of Sections of this Training Centre since its inception in 1960. The following table shows the amount spent every year :—

Year	Amount
	Rs.
1949-50 (From 1-1-50 to 31-3-50)	21,669
1950-51	1,32,135
1951-52	1,73,649

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Year	Amount
	Rs.
1952-53	1,73,053
1953-54	2,20,477
1954-55	2,45,230
1955-56	2,25,756
1956-57	2,16,379
1957-58	2,21,050
1958-59	2,45,701
1959-60	2,50,564
1960-61	2,86,032
TOTAL	24,11,695

Sheltered Workshop

In June, 1954 was established a small Sheltered Workshop which functions as an adjunct to the Training Centre. The Sheltered Workshop employs four weavers and five chair-caners. Regular chair-caning work is provided by several local offices like the M.E.S., the Forest Research Institute, the Survey of India and so on.

The Objective

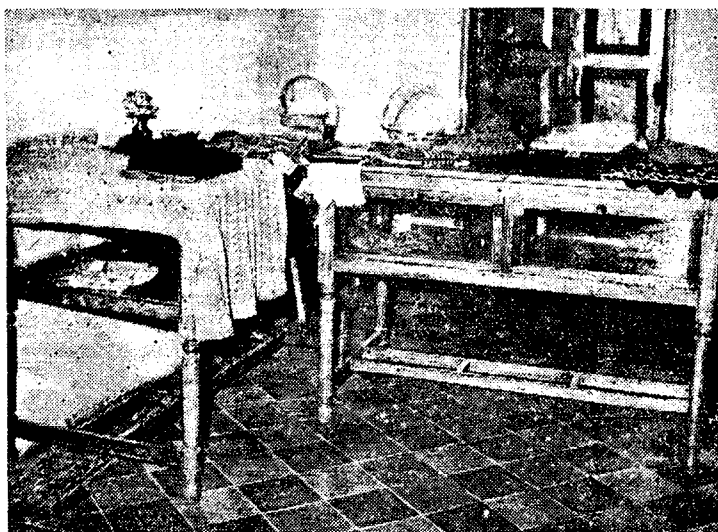
The main purpose of the Sheltered Workshop is to provide training in work under industrial conditions. It is not intended to be a permanent employing establishment. New rules for the administration of the Sheltered Workshop on these lines are at present under preparation.

Amenities

The workers are provided free furnished residential accommodation, light and electricity, a cook, a radio and free medical aid. While no cash subsidy is paid to them, they are, however, paid unemployment wages if, for any reason, work is not provided on any particular day or days.

Production

Since its inception, the Sheltered Workshop has produced woollen textiles of the value of Rs. 1,59,659.73 and during the same period has undertaken chair-caning work of the value of Rs. 41,184.60.



A few of the articles made by the women trainees

We indicate below the amount spent on the purchase of raw materials and the income derived from the sale of the products of the Workshop every year :—

Year	Cost of Pro- ducts		Sale Proceeds
	Rs.	Rs.	
1953-54	5,667.75	Nil	
1954-55	29,865.28	5,185.62	
1955-56	11,920.09	7,014.34	
1956-57	18,068.14	17,230.38	
1957-58	24,924.33	20,509.81	
1958-59	19,721.46	44,987.73	
1959-60	14,015.01	18,862.30	
1960-61	14,503.28	19,988.74	
	1,38,685.34	1,33,778.92	

Note: At the end of March, 1961 the value of the stock on hand of finished woollen goods was Rs. 70,377.35 and that of raw materials Rs. 5,148.02.

It will be observed that during 1958-59 the income from the sale of the products of the Sheltered Workshop was the highest. This was due to the Centre's participation in the "India 1958" Exhibition. It is possible that participation in similar exhibitions in the future will give the Centre an opportunity to popularize goods made by the blind. The sales at the 'India 1958' Exhibition also indicate the popularity and the high quality of the goods made by the workers of the Sheltered Workshop.

The Average Wage

During 1960-61, the average wage of a weaver in the Sheltered Workshop was Rs. 52.92 p.m. and that of a chair-caner was Rs. 54.00 p.m.

Subsidy

No cash subsidy is paid to the workers in this Workshop. Invisible subsidy is, however, paid by way of free furnished accommodation and other amenities provided to the workers. The following table shows the amount of invisible subsidy paid every year :—

Year	Amount of subsidy
	Rs.
1954-55	2,383.75
1955-56	3,883.53
1956-57	4,079.27
1957-58	3,483.07
1958-59	3,470.08
1959-60	3,268.71
1960-61	3,225.11

The Staff

The Sheltered Workshop has the following staff :—

Designation	No. of posts
Weaving Supervisor	1
Cook	1
Sweeper	1

TRAINING CENTRE FOR THE ADULT BLIND

In addition to the above staff, the Sheltered Workshop is under the overall supervision of the Superintendent and the Workshop Supervisor of the Centre.

Finance

Plans for the establishment of the Sheltered Workshop began to be made soon after the Training Centre was established. Some expenditure was incurred a few years before the Sheltered Workshop actually started functioning. The following table shows the expenditure incurred by the Government of India on the Sheltered Workshop including purchase of raw materials :—

Year	Expenditure incurred	Year	Expenditure incurred
	Rs.		Rs.
1950-51 . . .	2,024	1955-56 . . .	36,016
1951-52 . . .	642	1956-57 . . .	28,406
1952-53 . . .	600	1957-58 . . .	34,855
1953-54 . . .	7,184	1958-59 . . .	28,163
1954-55 . . .	31,316	1959-60 . . .	25,251
		1960-61 . . .	27,627
		TOTAL . . .	2,22,084

Plans for the Future

One of the major tasks to be undertaken during the coming years is to reorganise the training programme in the Centre. The process of shifting the emphasis from cottage industries to engineering trades has already been set in motion. It is hoped that this task will be completed during the next few years.

If suitable accommodation becomes available, the strength of the Women's Section will be raised from 35 to 50.

Provision has been made in the Third Plan for the establishment of an 'After-Care' Organisation. The main object of this organization will be to provide limited financial and technical assistance to ex-trainees who are found capable of establishing themselves in independent occupations.

Placements

The primary object of the training imparted at the Training Centre for Adult Blind, Dehradun, is to help the trainees to secure remunerative employment. After the Training Centre has been in existence for a little over three years, it became evident that it was virtually impossible to secure employment without the assistance of a specialised agency. Consequently, in July 1954, the Ministry of Education established at Madras a small Employment Office of the Training Centre for the Adult Blind. The main function of this office was to try to secure employment for the ex-trainees of the Dehradun Centre in ordinary industrial or commercial establishments.

Placements done by the Madras Employment Office

By 31st March, 1961 this Office has placed 137 ex-trainees of the Training Centre for the Adult Blind, Dehradun, in 18 different industries, including the Indian Telephone Industry Bangalore, Cycle Industry, Motor Industry, Metal-box Industry, Match-making Industry and so on.

The average monthly earnings of the blind workers, placed by the Madras Employment Office, varies between Rs. 30/- and Rs. 120/- per month, depending upon the occupation in which they are engaged. The following figures show the monthly average wage earned by some of the ex-trainees of the Training Centre in some representative industries :—

Name of the Industry	Average Monthly Earning
	Rs.
1. Cycle Industry	120
2. Motor Industry	93
3. Metal Box Industry	91
4. Telephone Industry	90
5. Textile Industry	87
6. Electrical Industry	85
7. Confectionery	82
8. Oil and Soap Industry	36
9. Ply-wood Industry	57
10. Fertiliser and Chemical Industry	56
11. Rubber Industry	55
12. Needle Industry	53
13. Match-making Industry	30

TRAINING CENTRE FOR THE ADULT BLIND

Apart from the placements by the Employment Office at Madras, the staff of the Dehradun Centre have been making every possible effort to place ex-trainees in suitable jobs throughout the country. For the past 11 years, the staff of the Centre was able to place 54 ex-trainees in the following occupations :—

Name of Occupation	No. of trainees placed
1. Craft Instructors	8
2. Principals/Headmasters of Institutions for the Blind	3
3. Sheltered Workshops	34
4. Braille/Music Instructors	9
	54

Thus, during the period under review, the Training Centre and the Employment Office at Madras were able to place 191 ex-trainees in gainful employment.

The blind ex-trainees of Dehradun are also being assisted in finding suitable employment by the Special Employment Office for the Physically Handicapped opened by the Government of India at Bombay in March, 1949 and at Delhi in March, 1961.

It is proposed to open 13 more Special Employment Offices for the Handicapped in the remaining 13 States during the Third Five Year Plan. The normal Employment Exchanges have also been instructed to assist handicapped adults including the blind in finding suitable employment.



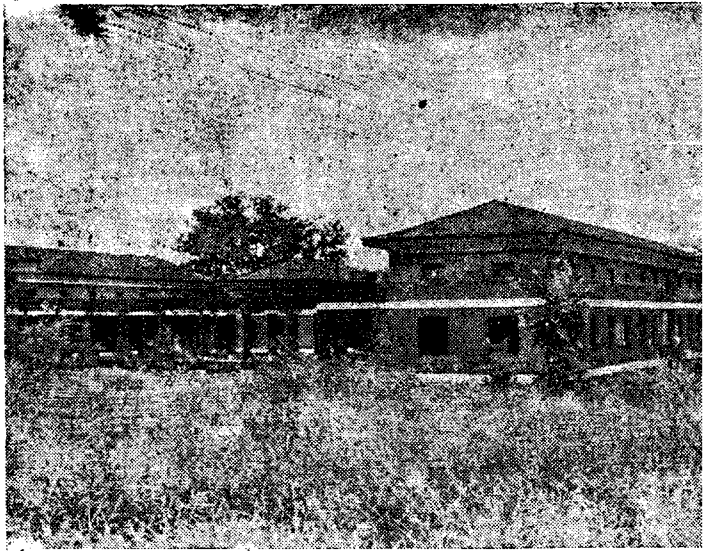
CHAPTER III

CENTRAL BRAILLE PRESS AND WORKSHOP FOR THE MANUFACTURE OF BRAILLE APPLIANCES

THE PRESS

In pursuance of the recommendations of the "Report on Blindness in India" submitted in 1944 by the Joint Committee of Central Advisory Boards of Education and Health, the Central Braille Press was established at Dehradun in April, 1951. The first Manager of the Press, Shri K. Bhattacharjee, was trained at the American Printing House for the Blind, Louisville, Kentucky, U.S.A.

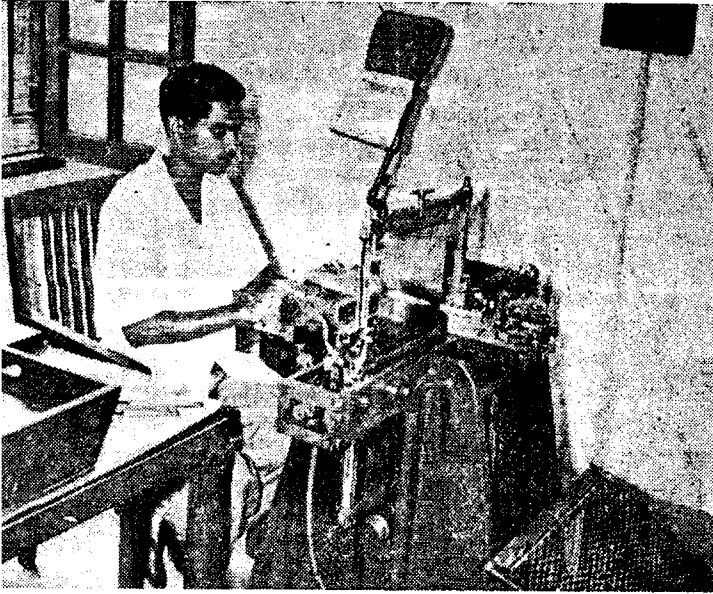
Initially, the Press was started in a few rooms in the Training Centre for the Adult Blind. In 1954, it moved to its new building constructed at a cost of Rs. 1,40,000.



The Central Braille Press, a new construction in the Body Guard Lines. Foreground earmarked for workshop buildings.

The Objective

The object of the Press is to produce Braille literature in Indian languages. Every possible effort is made to meet the demand for textbooks.

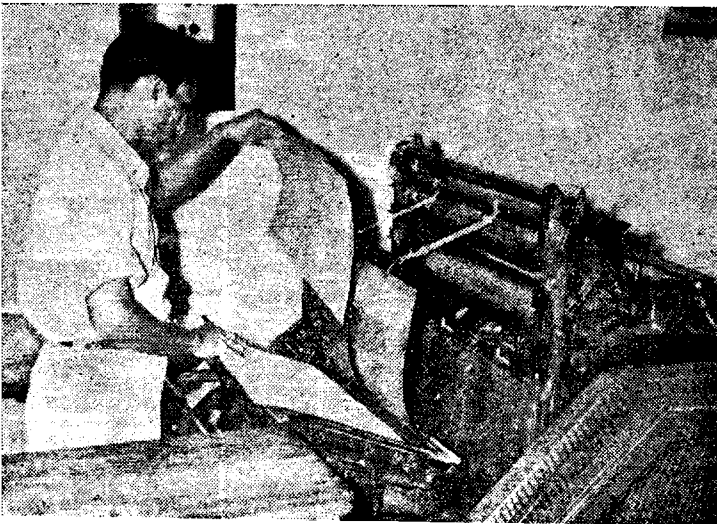


stereotype machine embosses the zinc plates for Braille printing

Production

The Press produced its first book early in 1952. Since then it has transcribed into Braille 107 titles; 33 of these titles have been reprinted.

Zinc plates in the printing machine embosses the reading material on Manila paper



CENTRAL BRAILLE PRESS AND WORKSHOP

During the last ten years, the Press has produced 27,449 volumes. The following table shows the total number of volumes produced during each year :—

Year	No. of Volumes Produced
1952-53	204
1953-54	1230
1954-55	2500
1955-56	2700
1956-57	2300
1957-58	2670
1958-59	5320
1959-60	4975
1960-61	5550
TOTAL	27449

Books in Regional Languages

Although the Press has been concentrating chiefly on the production of books in Hindi, it has so far produced books in Bengali, Gujarati Marathi, Panjabi, Tamil and Telugu in addition to English. The Bharati Braille Code is used for all these languages.

Periodicals

The Press brings out a quarterly journal in Hindi entitled "Alok". This journal consists of articles of general interest selected from good Hindi magazines and 250 copies of each issue are produced.

The Press also publishes a calendar for the blind every year.

The Price of Publications

The Braille publications of the Press are sold at a third of the cost of the material used in their production to blind individuals and institutions for the blind. During 1960-61, the average cost of the material used per Braille volume came to Rs. 2.50 and the average price charged per volume was Rs. 0.90 nP.

The Staff

The Central Braille Press has 22 staff members of whom two are blind. More particulars about the staff may be seen in Appendix "F".

Plans for the Future

At present, the Press has only two stereotype machines. The machines which were purchased about 11 years ago from the American Printing House for the Blind are beginning to wear out. Moreover, with only two machines, the Press is unable to cope effectively with the increasing demand of Braille literature. It is proposed, therefore, to add at least two more stereo type machines in the near future. These will either be bought or obtained from some international agency like the UNICEF.

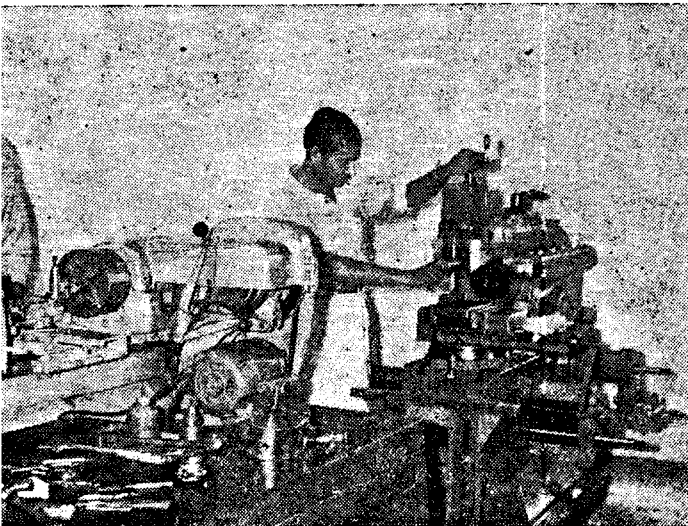
THE WORKSHOP

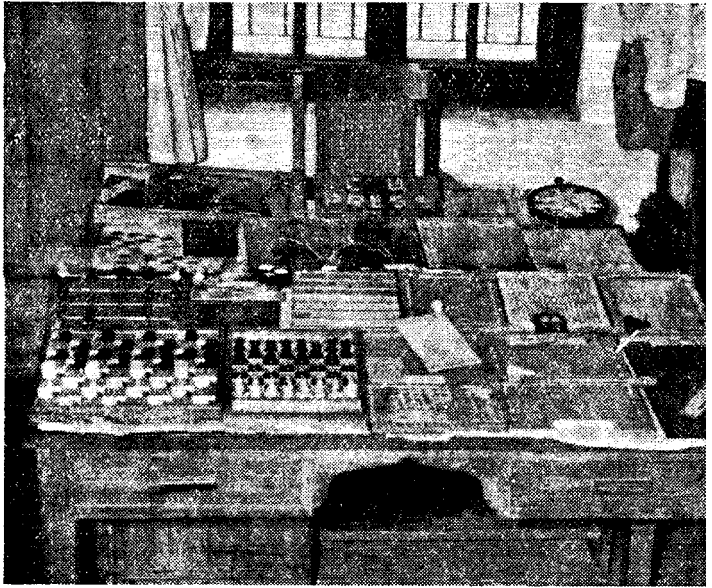
Until recently, one of the major problems in the education of the blind was the supply of special equipment. Until the beginning of 1954 when this Workshop was established, almost all Braille appliances had to be imported from abroad. The imported appliances are not only expensive but are also a drain on our foreign exchange resources.

The Objective

The object of this Workshop is to produce special appliances needed for the education and training of the blind. At present, however, the Workshop is able to produce only a limited range of appliances. It has already started producing the most essential appliances needed for the education of the blind, such as large and small Braille writing frames, pocket frames, arithmetic frames, spare styli, chess and draughts sets.

Machines in the Workshop manufacture Braille appliances





Finished products of the Workshop

Particulars of the appliances produced every year since its inception can be seen in appendix "G".

In addition, the Central Braille Press has been experimenting with the production of several other appliances such as mathematical demonstration boards, geometrical devices, hand-writing devices and so on. The production of a wider range of appliances could be accomplished when the Workshop is able to procure more machinery and is more fully developed.

The Price of Appliances

The price at which appliances made by the Workshop are sold to the blind individuals and institutions for the blind represents the cost of materials used in their production. A small margin is allowed to cover the market fluctuations. No overheads are charged from the customers.

Income from Sales

The popularity of the Braille books and appliances produced in the Central Braille Press and the attached Workshop for the manufacture of Braille appliances can be judged from the readiness with which Braille books and appliances are sold. The

THE BLIND CAN SEE

following table indicates the income from sale of books and appliances every year :—

Year	Income
	Rs.
1952-54	595.37
1954-55	4,709.12
1955-56	4,883.22
1956-57	4,825.53
1957-58	8,411.90
1958-59	12,164.60
1959-60	9,694.91
1960-61	8,713.69

Finance

In the following table the amounts spent by the Government of India on the Central Braille Press and the Workshop for the manufacture of Braille Appliances since 1952-53 are indicated:—

Year	Amount spent
	Rs.
1952-54	44,014
1954-55	44,592
1955-56	50,985
1956-57	51,346
1957-58	67,503
1958-59	72,501
1959-60	84,239
1960-61	95,459.88

The Staff

The Workshop has only six staff members. Particulars can be seen in Appendix "F". Unfortunately, the post of Mechanical Engineer has remained vacant but it is hoped that it will soon be possible to secure the services of a competent Mechanical Engineer to take charge of this work.

Plans for the Future

During 1960-61, the United Nations Technical Assistance Programme provided the services of an expert to advise the Government of India on the development of this Workshop. The expert suggested the purchase of a great deal of machinery which would accelerate the rate of production and improve the quality of the products. Steps are being taken to procure the necessary machinery as soon as possible.

A copy of the report submitted by Mr. Goetze, the expert can be seen at Appendix 'H'.

CHAPTER IV

MODEL SCHOOL FOR BLIND CHILDREN

This School was inaugurated on the 4th January, 1949. It was fitting to inaugurate this school on the 4th of January which is the birthday of Louis Braille, the author of the embossed system of reading and writing for the blind.

Initially, the School provided education up to the 4th class. The 5th class was introduced in July, 1960.

The School which has accommodation for 50 children provides free board, lodging, clothes and tuition to all children irrespective of their caste, creed or economic status.

Admission

Admission into the School is open to blind children between 7 and 12 years of age. The children are admitted after an interview by a Board consisting of the Principal and one other person. During the course of the interview, an attempt is made to administer such tests as are available with the object of ascertaining the intelligence, keenness, self-reliance and adaptability of the child.

Curriculum

Generally speaking, the School follows the curriculum prescribed by the U. P. Education Department for Primary schools. Special attention is, however, paid to certain aspects which will help the child in overcoming the limitations of blindness. For instance, occupational therapy replaces the teaching of the usual crafts taught in the Basic schools. The object of occupational therapy is to foster the development of basic manual skills. The occupational therapist teaches, among other things, chord-knotting, braid-weaving, prick-card sewing, knitting, fret-work and so on.

Hindi is the medium of instruction in the School. English is, however, taught from the beginning because a great deal of Braille literature is available in that language.

Music which is an excellent form of recreation for the blind is taught to every child. The teaching of this subject also sharpens the sense of hearing and helps in the development of rhythmic movements which are of considerable value to a child without vision.

The School places particular emphasis on "activities of daily living". Under this programme, the children are taught to feed, dress and bathe themselves, wash their own clothes and to undertake a variety of other activities which are necessary for independent living. Self-reliance is the watch-word of this School.

Extra-Curricular Activities

Extra-curricular activities form an essential part of the education in this School. The School has a full-time Physical Education Instructor on its staff. Every child spends about three-quarters of an hour in the morning and half an hour in the evening in active physical exercise.

Every Saturday afternoon, the School organises a cultural programme in which the children are given an opportunity for self-expression. This is done by story-telling, recitation, debating and so on.

Excursions to places of interest are a regular feature. Radio listening is popular among most of the children. Many children play indoor games like chess, dominoes, draughts and the like during their leisure hours.

Since the majority of the children come from rural surroundings, they are encouraged to undertake kitchen gardening—an activity which is gaining in popularity. Children take immense pride in contributing quantities of vegetables, however small, to the school mess.

Blind children at gardening, a favourite pastime



MODEL SCHOOL FOR BLIND CHILDREN

Food

The School attempts to provide a balanced diet. The children are given three meals in addition to tea, fruits or snacks in the afternoon.

The School provides a set of cotton and woollen clothes for every child. It will be an advantage, however, for parents to provide additional clothes.

The Medical Officer of the Training Centre for the Adult Blind visits the School on alternate days or whenever he is called upon to do so. An ophthalmologist visits the School once a month and examines the eyes of every child and wherever necessary prescribes curative or prophylactic treatment.

Sick children are isolated in a separate room maintained by the School. More serious cases are referred to the local civil hospital.

The School maintains a health card for every child and the parents are periodically informed of the state of health of their children.

The Pupils

On the 31st March, 1961, the School had 32 boys and 8 girls on the rolls. The following statement shows the State-wise distribution of these pupils —

Name of the State	No. of Children
Andhra Pradesh	2
Bihar	3
Delhi	2
Himachal Pradesh	1
Madhya Pradesh	1
Punjab	4
Uttar Pradesh	27
TOTAL	40

Causes of Blindness

An analysis of the causes of blindness of the pupils admitted into the School reveals that in 18 out of 40 cases, the cause was not known. The largest known cause was small-pox.

THE BLIND CAN SEE

The following statement indicates the causes of blindness of the pupils :—

Cause	Number
Small-pox	9
Meningitis	2
Trichoma	4
Ophthalmia	2
Mal-nutrition	1
Disease of Cornia	2
Pyrexia	2
Causes not known	18
TOTAL	40

Age of Onset of Blindness

A study of the information available with the school seems to point to the fact that a great deal of blindness occurs in infancy. 15 of the 40 pupils in the school were born blind and 13 became blind during the first year of their lives. The remaining 12 children also became blind before reaching the age of 7.

Economic Status

It is generally believed that blindness is the concomitant of poverty. This belief is, to a large extent, substantiated by a study of the economic status of the parents or guardians of the pupils admitted into this school. The following table shows the income groups to which these children belong :—

Up to Rs. 100	25
Between Rs. 101 to Rs. 200	10
Between Rs. 201 to Rs. 300	4
Between Rs. 301 to Rs. 400	1
TOTAL	40

Staff

On the 31st March, 1961, the School had 22 staff members. Particulars will be found in Appendix 'I'.

The Principal, one graduate teacher and the music teacher are themselves blind. The Principal and the graduate teacher have both been trained in the Perkins School for the Blind, Water-ton, Mass. (U. S. A.)

Physical Environments

Situated at the foot of the Himalayas, the School is surrounded by imposing hills and a quiet and serene atmosphere pervades the entire environment. The School is housed in a hired building with spacious grounds which afford the children ample opportunity for vigorous out-door activity.

The Aim

The primary purpose of this school is not merely to impart education on modern lines to a limited number of blind children but also to serve as a laboratory for the development of new methods and techniques of educating the blind children, particularly in the peculiar conditions prevailing in our country. As one of the units of the proposed National Institute, it also strives to encourage the development of similar institutions in other parts of India. It might also undertake the training of teachers of the blind after it is fully developed.

Plans for the Future

The School expects to have the 6th class in July, 1961. During the Third Plan period, we hope to develop this into a full-fledged Secondary School for the Blind with accommodation for 100 children. Side by side with quantitative expansion, every possible effort will be made to ensure the maximum qualitative improvement in the services provided by this school.

CHAPTER V

EPILOGUE

National Centre for the Blind—its Concept

We envisage that the National Institute for the Blind will provide an integrated service for the blind. This will become evident by a glance at the units of the National Institute for the Adult Blind. The Centre is expected to consist of the following:—

- (a) The Model School for Blind Children providing education up to the Secondary stage.
- (b) Training Centre for the Adult Blind providing training in engineering and non-engineering trades, with an After-Care Section to assist those who wish to establish themselves in independent occupations.
- (c) The Central Braille Press to produce textbooks and recreational material in Braille.
- (d) The Workshop for the Manufacture of Braille Appliances
- (e) The National Braille Library.
- (f) A training centre for teachers of the blind.

It will be seen that when all these institutions are fully developed, they will be able to provide a comprehensive service. Let us see how young Kamala who became blind at the age of three can be helped by the National Centre.

She can go to the Model School at the age of five where she can study up to the Matriculation standard. At the age of 18, she can go to the Women's Section of the Training Centre for the Adult Blind and be trained in either crafts, an engineering trade or as a steno-typist. After she leaves, she can either be helped by the After-Care Section of the National Centre to rehabilitate herself or one of the Special Employment Offices for the Physically Handicapped, which the Government of India proposes to establish in each State by the end of the Third Plan, can assist her in securing remunerative work. After she is placed, her intellectual and recreational needs can be partly met by the National Braille Library which will lend Braille books to blind readers free of cost throughout the country.

Progress made in Establishing the National Institute for the Blind

Four units of the National Centre for the Blind, namely, the Model School for Blind Children, the Training Centre for the Adult Blind, the Central Braille Press and the Workshop for the Manufacture of Braille Appliances have already been established. They have, however, to be considerably developed further.

For instance, today the Model School imparts education only up to the V class. It is to be developed into a full-fledged Secondary school. The process of shifting the emphasis from cottage industries to engineering trades is yet to be completed in the Training Centre for the Adult Blind. The production capacity of the Central Braille Press and the Workshop for the Manufacture of Braille Appliances has to be considerably developed.

Provision has been made in the Third Plan for the establishment of a National Braille Library. It is likely that a beginning for the establishment of this Library will be made during 1961-62.

With the establishment of the National Braille Library, the National Institute for the Blind will have been substantially completed. The completion of the National Institute for the Blind will be an important landmark in the history of the development of the services for the blind. Its main value will lie not in the provision of a comprehensive service to a limited number of blind persons but its becoming a model centre which could inspire the development of institutions in other parts of the country.

The Government of India have been attempting also to encourage the development of institutions of Regional importance for the blind by assisting suitable voluntary agencies and by offering assistance to the State Governments. For instance, the Government of India have given assistance to the Tata Agricultural Centre for the Blind established by the National Association for the Blind. This Centre is trying to train blind persons in the agricultural and rural occupations. Again, the Government of India have assisted the Orissa State Council for Child Welfare in the establishment of a new school for the blind in Orissa—a State which had no school for the blind in the past. It is hoped that during the Third Plan period, about sixteen new schools and training establishments for the blind would come into being in different parts of the country. During the Second Plan period, the Government of India offered 50% of the actual expenditure on schemes for the education and welfare of the handicapped included by the State Governments in their educational developmental programmes. The pattern of assistance to the States during the Third Plan period is likely to be decided in the near future.

We trust that with greater collaboration between State and voluntary effort, the pace of development in this field during the Plan period will be considerably accelerated. Let us hope that the blind can look forward to a better day after the end of the current Plan period.

APPENDIX 'A'

TRAINING CENTRE FOR THE ADULT BLIND (MEN'S SECTION)

Statement Showing the Number of Trainees Trained in Different Trades Year-wise

Year	Weaving	Chair caning	Spinning	Plastic-moulding	Candle-making	Met making	Carpentry	Light engineering including cycle repairing and assembling
1949-50	..	..	..	..	..	..	..	..
1950-51	7	7	3	..	..	..	..	..
1951-52	14	17	5	..	..	2	..	..
1952-53	35	38	16	15	..	1	..	..
1953-54	28	31	13	9	9	..	..	..
1954-55	34	37	17	13	17	..	..	..
1955-56	35	39	14	10	13	..	..	..
1956-57	29	40	11	16	16	..	..	..
1957-58	33	41	15	14	14	..	..	..
1958-59	34	44	9	11	11	..	..	..
1959-60	34	47	6	9	12	..	..	..
1960-61	37	43	7	..	14	..	3	32
TOTAL	320	384	116	97	106	3	3	32

APPENDIX 'B'

TRAINING CENTRE FOR THE ADULT BLIND

Income From the Sale of Products on the Training Side

Year	Income in Rupees
1949—50	907.00
1950—51	10,678.00
1951—52	5,841.00
1952—53	12,596.00
1953—54	11,038.00
1954—55	12,561.00
1955—56	13,040.00
1956—57	7,973.00
1957—58	5,726.00
1958—59	9,024.00
1959—60	10,124.00
1960—61	10,029.00
TOTAL	1,09,537.00

APPENDIX 'C'

State-wise Distribution of the Trainees of the Training Centre for the Adult Blind since 1949-50

Name of State	50-51	51-52	52-53	53-54	54-55	55-56	56-57	57-58	58-59	59-60	60-61
Andhra	..	..	..	1	1	1	2	3	8	8	8
Assam	..	..	..	1	1	..	..	..	..	1	1
Bihar	3	3	5	4	3	6	8	8	6	4	3
Delhi	3	3	6	5	4	4	5	5	9	3	4
Gujarat	..	..	..	..	..	..	..	..	..	3	..
Himachal Pradesh	..	..	..	1	1	1	..	3	3	2	2
Jammu & Kashmir	..	..	1	1	..	1	1	2	2	1	1
Kerala	..	..	..	..	..	2	1	5	5	5	7
Madhya Pradesh	3	5	3	6	5	5	5	9	2	3	2
Madras	7	10	10	3	25	17	12	16	25	43	48
Maharashtra (previously Bombay)	13	16	14	3	16	22	21	10	15	8	9
Mysore	..	..	2	4	..	3	7	5	6	17	18
Orissa	..	..	..	1	1	..	..	..	..	..	..

Name of State	50-51	51-52	52-53	53-54	54-55	55-56	56-57	57-58	58-59	59-60	60-61
Punjab	34	36	35	29	29	25	21	25	18	12	20
U.P.	28	38	40	49	37	35	42	40	24	22	21
Rajasthan . . . .	..	..	..	10	10	5	4	8	10	3	2
West Bengal	3	3	1	5	3	3	4	2	4	3	2
Hyderabad	1	1	1	1	1	1	Hydrabad became part of Andhra Pradesh.				
Saurashtra . . . .	..	..	1	4	6	6	Saurashtra became part of Bombay State				
Vindhya Pradesh . . . .	..	..	..	..	2	3	V. P. became part of Madhya Pradesh				
Nepal	1	2	..	..	..	1	2	2	..	2	2
East Africa . . . .	..	..	..	..	..	..	1	2	..	..	..
TOTAL	96	117	119	128	145	141	136	145	137	140	150

APPENDIX 'D'

Statement Showing the Details of Staff of the Training Centre for the Adult Blind, Dehradun

Men's Section

Designation	No. of posts
Superintendent	1
Dy. Superintendent	1
Accountant-cum-Head Clerk	1
Medical Officer	1
Catering Officer	1
Workshop Supervisor	1
Steno-typist	1
Senior Weaving Instructor	1
Weaving Instructor	1
Assistant Weaving Instructor	1
Warping Instructors	2
Bharati Braille Instructors	2
Braille Instructors	2
Braille Transcriber	1
Librarian	1
Typing Instructor	1
Music Instructors	3
Mat Instructor	1
Basket Instructor	1
Basket & Cane Instructor	1
Storekeeper (General)	1
Storekeeper (Technical)	1
Storekeeper (Workshop)	1
Head Mistri	1
Carpenter	1
Trimmers	2
Driver	1
Tailor	1

Designation	No. of Posts
Boot maker	1
Physical Education Instructor	1
Occupational Therapist	1
Lower Division Clerks	4
Messengers	3
Chowkidars	5
Cooks	4
Water Carriers	2
Malis	5
Head Mali	1
Ward Attendant	1
Head Sweeper	1
Sweepers	7
Ophthalmologist (Part-time)	1
TOTAL	71

APPENDIX 'E'

**Details of staff of the Training Centre for the Adult Blind,
Dehradun**

Women's Section

Designation	No. of posts
Matron of the Hostel	1
Domestic Science Teacher	1
Handicraft Teachers	2
Lady Weaving Teacher	1
Braille Instructor	1
Upper Division Clerk	1
Cooks	3
Water Carrier	1
Chowkidars	2
Sweeper	1
Tailor	1
Mali	1
Dance Instructor (Part-Time)	1
TOTAL	17

APPENDIX 'F'

Staff of the Central Braille Press and the Workshop for the Manufacture of Braille Appliances

Sl. No.	Designation	No. of Posts Filled in
<i>Press</i>		
1	Manager	1
2	Assistant Manager . . . . .	..
3	Braille Editor	1
4	Upper Division Clerk	1
5	Store-keeper	1
6	Stereotype Operators	4
7	Proof-Reader (Blind)	1
8	Proof Reader (Sighted) . . . . .	..
9	Machine Printer (Pressman) . . . . .	..
10	Book Binder Grade I	2
11	Book-Binder Grade II	4
12	Peons	2
13	Chowkidars	3
14	Mali	1
15	Sweeper	1
TOTAL .		22
<i>Workshop</i>		
1	Mechanical Engineer . . . . .	..
2	Mechanic-cum-Designer	1
3	Assistant Mechanics	2
4	Carpenters	2
5	Khalasi	1
TOTAL .		6

APPENDIX 'G'

Production at the Workshop for the Manufacture of Braille Appliances

Description	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61
Braille writing frame—large	257	165	158	241	407	270	204
Braille writing frame—small	110	119	155	162	265	186	..
Spare Styli	200	266	585	610	977	759	1,727
Pocket frames . . . .	..	..	..	183	63	129	249
Arithmetic frames . . . .	..	..	20	..	..	..	184
Chessboard with men . . . .	..	..	..	66	..	33	..
Draughtsboard with quoins . . . .	..	..	..	52	..	24	40

APPENDIX 'H'

MANUFACTURE OF BRAILLE AND OTHER APPLIANCES FOR THE BLIND IN INDIA

**Prepared for the Government of India by William E. Goetze
Appointed under the United Nations Programme of
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The Government of India has established its only Braille printing plant at Dehradun, which has been functioning since 1951. Three years later, the Central Braille Press incorporated with it a workshop for the manufacture of special appliances for the blind. The Press prints mostly textbooks in Braille editions in seven regional languages of India, in addition to English, for the use of about one hundred institutions for the blind throughout the country. The workshop concentrates on the manufacture of Braille Writing Frames (in two sizes), Pocket Aluminium Frames, Arithmetic Frames, Stylii, Chessboards and Draughtsboards complete with the quoins.

2. The Press is equipped with two Stereograph machines, one Nolan Proving Press, one Laureate Platen Press, and one Gitzcanner-Muller Wire-Stitcher, a Diamond Guillotine Papercutting machine and a Slitting and Scoring machine for the Binding. The two Stereograph machines are at present in a very worn-out state. In order to increase output, the Braille Press needs a set of two more Stereograph machines and another Platen Press of the same size as the one working. Because of the manual processes adopted in the binding of books, the bindery does not require any more large equipment immediately.

3. The workshop would seem to be working under cramped conditions, for it is not equipped with the minimum of machinery and precision equipment, or a ready stock of materials vitally needed for the manufacture of the appliances. The space is extremely limited. There is a plot of land to the north of the press building on which a separate machineshop could be conveniently erected. The Braille Press could thereby have a better planned workshop apart from the printing department. A forge, which is badly needed in a machineshop, is also lacking.

4. After a thorough study of the methods of operation, the amount of work required, and the working conditions in the Central Braille Press, I drew up a list of machinery and equipment which could perhaps be considered as the minimum requirements for the effective functioning of the workshop. The workshop vitally needs close at hand a ready stock of materials, such as metal sheets, plywood, brass rods, files, drill bits, tools, spings, high carbon steel, lubricants and heat-treating oil. (See list of machinery in Annexure).

5. With respect to the human resources of the Central Braille Press,—I found the staff highly rated among workers in general. The work, however, could be more coherent and more evenly divided if there were supervisors. At present, supervision is the responsibility of the executive head of the Press, which has a direct bearing on the planning of the whole project, which is important for its development. The workshop is entirely run by a group of mechanics and carpenters without a single foreman or engineer at the head. As the technical head and as the top level staff member in the machineshop, the manager has to straighten out and settle all problems which may arise.

6. The machineshop is rather understaffed. The number of carpenters and junior mechanics should be increased to help run the new machines to be installed, for die and tool making, and other allied operations. The workshop has one exceptionally good craftsman in Mr. Wasti Ram, the mechanic-cum-designer. It is largely due to his skill, ingenuity, zeal, and able distribution of apportioned

work to the junior operators, that the workshop has been able to produce so many appliances under limitations. The appliances are all of a high quality, and in spite of some of the unsatisfactory conditions, the rate of production has been quite reasonable.

7. The Braille Press of India with its workshop has been well established. To make it a real centre in India for the essential implements for the blind attention should be given to the following:—

- (1) More machinery and equipment: a list of machines and equipment will be found in the Annexure;
- (2) A good stock: the workshop and the press should have a good store, and for this, the head of the institution should be given the maximum independence in financial and purchase matters;
- (3) Increased labour: no factory can run efficiently with a limited number of workers, and with this kind of set-up, it is particularly necessary to avoid a shortage of working hands.
- (4) Systematic planning, development and management of the whole plant: this is perhaps one of the most important issues, for on this will depend the fulfilment of the entire objective. The Government of India, in contemplation of the whole project, had given the former Manager of the Press the responsibility of the planning, the building, and the organization of the institution, including the machinery and personnel. The pattern to be followed was that of the Braille Institute and Printing House of the U. S. A., where he had received specialized training. It is very important for the executive of the Press, the Manager, Mr. P. K. Sen, to be sent to the braille printing establishments in the United States to study the methods and machines in order to be able to run the Press properly in India. Rather than ask for foreign expert advice it would seem to be more effective, and economical, in my opinion, if the person who is to be responsible for the whole operation could be given technical training abroad, and then return to apply systematically his increased knowledge to the growing institution. The thoroughly trained executive could then carry out his programme with little interference from non-technical factors, which often play a major role in a smoothly operating plant.

8. I have noticed several experiments and plans worked out in the Braille Press to which serious consideration should be given. Especial attention should be given to the Hollow Stylus-Relief Guide and the inexpensive Braille typewriter. But here again there is the problem of proper equipment and materials.

9. The management of the Press should organize occasional tours of the different regions of India, in order to assess the requirements of the new institutions for the blind and to increase accordingly the activities in the Press and the workshop.

10. It was a pleasant surprise to see how skilled the Stereotype Operators were, particularly in their knowledge of several different Indian languages all of which have entirely different scripts. From the point of view of the varied kind of work the operators perform, their average turn-out of eight to ten plates in a six and a half hour day seems to be quite reasonable. Their work includes making spot-corrections after one reading of the embossed plate, and assisting the blind proofreader by holding the copy and making first reading and second reading corrections. For example, they work out a greater number of cells per zinc sheet than the operators of the Braille Institute of America. The accuracy in their work is remarkable. In comparison with the United States the working hours are longer and the plates are smaller.

11. With respect to the quality of binding in the Braille books, they are almost too nicely done. The Braille copies which are printed are usually not over two hundred and fifty copies for each title, which is because of the limited

reading populace and the low purchasing ability. It is therefore worthwhile to prepare the volumes so that they will last, for the purchasers obviously would like to preserve the books as long as possible. This is offered as the justification for the high standards of binding.

12. In view of the short duration of my mission in India it has not been possible for me to provide the Braille Press with many drawings which would be of use. I intend upon my return home to make some charts, drawings, and designs for the use of the Braille Press of India.

13. The Central Braille Press of the Government of India at Dehradun, India, has been doing admirable work, and his immense possibilities for future service to the cause of the blind in India.

ANNEXURE

List of Machinery and Equipment

I. Machinery Equipment and Tools :

- 1 Punch Press 9 ton, 1 Punch Press 16 ton capacity
- 1 Highspeed drill press 1/4 inch chuck
- 1 Milling machine, table longitudinal 31 inch, traverse 12 inch approx.
- 1 Vertical milling attachment, 1 milling machine vice
- 1 Dividing head
- 1 Surface grinder, table longitudinal 20 inch, traverse 8 inch approx.
- 1 Electric chuck (permanent) magnetic
- 1 Engine lathe 16" swing, 6' bed; 1 lathe 20" swing, 8' bed, three jaw chuck, four jaw chuck, taper attachment, draw collets 1/16" to 3/4"
- 1 Tool post grinder for lathe, 1/4 H. P. with a set of grinding wheels
- 1 Belt grinder
- 1 Portable forge, hammers, sledge hammers, set of tongs, 1 gas-welding unit
- 1 Sheet metal shear, with six inch knives (hand operated)
- 1 Power Hacksaw with 18" high speed blades fine and coarse 2 dozen of each.

II. Measuring Tools :

- 1 Layout surface plate 24 × 24"
- 1 Surface height gauge with Vernier graduation 18 inch
- 1 Precision square 12"—18", 18"—24"
- 1 Straight Edge 12", 24" (steel)
- 1 Set of micrometers 1", 2", 3"
- 1 Thickness feeler gauge
- 2 Thread gauges standard and fine thread
- 1 Micrometer depth gauge 1"
- 1 Dial indicator 0 to .175".

III. Hand Tools :

- 4 Sets twist drills 1 to 60" (high speed)
- 2 Sets alphabet drills (high speed)
- 1 Set cylindrical reamers 1/16" to 1" (high speed)
- 1 Set Morse taper reamers 0 to 6" (high speed)
- 1 Set machine screw-tap and dies 1/8" to 3/4" (Standard)

- 1 Set machine screw-tap and dies $1/8''$ to $3/4''$ (Fine)
- 1 Set adjustable reamers $1/4''$, $5/16''$, $3/8''$, $1/2''$, $5/8''$, $3/4''$
 High speed tool bits $1/4''$, $5/16''$, $3/8''$, 20 of each
- 1 Set of numbering punches 0 to 9, $1/8''$, $3/16''$
- 1 Set of lettering punches A to Z, $1/8''$, $3/16''$
- 1 Electric soldering iron 230 volts, 200 watt. Screwdrivers, adjustable wrenches, pliers, punches, chisels, assortment of files, set of socket wrenches.

IV. *Stock* :

Steel, round, flat, rectangular, die steel, brass, bronze bolts, screws, nuts, brass solder, soldering flux.



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APPENDIX 'I'
MODEL SCHOOL FOR/BLIND CHILDREN

List of Staff

Sl.No.	Designation	No. of posts
1	Principal	1
2	Graduate Teachers	3
3	K. G. Teacher	1
4	O. T. Teacher	1
5	Physical Education Instructor	1
6	Lady Superintendent	1
7	Catering Officer	1
8	Steno-typist	1
9	Typist	1
10	Music Teacher	1
11	Peon	1
12	Sweepers	2
13	Cooks	2
14	Ayas	2
15	Chowkidars	2
16	Mali	1
TOTAL		22

