

## ICT TRAINING FOR VISUALLY HANDICAPPED

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Shri Yahya H. Sapatwala, who is visually handicapped from birth, holds an M.A., (Master of Arts) and an M.Ed. He has been working as a lecturer in Experimental Work (Research) at District Institute of Education and Training, Vadodara (DIET) since 1999. He is also a visiting faculty at M.P. Bhoj Open University, Ambedkar Open University, and Gujarat University.

The computer has simplified several tasks; however, it is difficult for blind people to use digital technology. So how to make the computer accessible to the blind? To answer this question, Shri Sapatwala began to do some research on the subject. During this time, he had to go to Delhi for some training and there he learned that visually handicapped people could use computers with the help of special software. He himself is associated with Andhajan Mandal Ahmedabad. He spoke to Shri Ranchodbhai Soni, a teacher here who was also blind but could work with computers. Shri Soni trained Shri Sapatwala over six days and taught him how to use a computer.

Mr. Sapatwala then turned his attention to studying software in Gujarati and English which could help the blind to work on laptops. For this,

he studied the Gujarati-English keyboard to learn Microsoft Word, MS Excel, Power Point, etc. with the help of “Screen Reading Software” known as Non-Visual Desktop Access (NVDA). He started using what he had learned at DIET Vadodara.

Mr. Sapatwala frequently serves as an expert in various state-level training workshops organized by Gujarat Educational Research and Training Council Gandhinagar (GCERT). During such trainings, he noticed that other blind teachers in primary schools across the state had the same problem with the use of computer technology. He then submitted a proposal to the Director (GCERT), Gandhinagar that computer training should also be imparted to the blind teachers. This was conducted from October 2016 to March 2017.

The training is for 12 days, in two parts. In the first, the trainees are taught the basics of using assistive technologies to use the computer, and in the second, their doubts are clarified. Three institutions of the state having the necessary physical facilities and experts were selected to provide the residential training. These included: (1) Andhajan Mandal, Ahmedabad (2) Navchetan



ICT training session



DIET training center

Andhajan Mandal, Madhapar (Kutch) and (3) Andhajan School, Shivarimal (Dang). Teachers were sent in batches from the districts allotted to the institutes, 20 in each batch. A total of about 400 teachers affected by blindness received computer training.

Most of the trainers and experts were also visually handicapped. The training strategy was designed to give maximum opportunity to do practical work. Sometimes, several issues were also discussed through Skype connections among the three centres.

Since the screen reading software works through sound, headphones were installed with each computer to prevent noise in the room.

The training kit provided by the institute includes software as well as Braille literature:

#### 1. Braille literature

- Windows Short Cuts Key Commands for NVDA
- Gujarati Keyboard (Kakko)
- MS Office Short Cuts
- Gujarati Paragraphs for typing practice

#### 2. Software

- Gujarati Indic Input
- NVDA
- Add Ons

#### 3. Hardware

- 8 GB Pen Drive
- Headphone

#### 4. Tutorials

- Window 7
- NVDA
- MS Word

#### 5. Literature

- Poems and Prayers
- Stories for Children
- Bal Shrushti

The experiment was evaluated on the basis of a 42-question questionnaire which included the following three main points:

1. How did the teachers feel about not being able to use the computer?
2. What and how did they learn to use the computer during the training?
3. How will they incorporate their learning in the classroom?

The main findings were:

- The teachers were confident about their abilities to use the computer.
- After the training they were able to use the Internet, create their own Word, Excel or Power Point presentation.
- Some teachers implemented the use of computers in their classrooms
- Encouraged by the training, some enthusiastic trainee teachers also bought their own computers or laptops.
- Most importantly, they were recognized in their respective schools as computer-knowledgeable teachers. As a result of this training, some teachers came with the prior approval of the institute for more practice even during the holidays.

While the government considers this kind of training important, Shri Sapatwala feels it is imperative that such training be conducted every year.

Shri Sapatwala has been honoured by Rotary Club, Juhu (Bombay), the Giants Group of Bombay, GCERT, and has received the Dr. Jagdish Patel Award in 2013 and SRISTI SAMMAN in 2018.



#### QUESTIONS FOR TEACHERS

1. How can ICT be used for blind people?
2. What are the schemes developed by the government for blind children?
3. How can a blind children use a computer?

#### QUESTIONS FOR TRAINEES

1. What can be included in Braille literature?
2. What are the difficulties faced by blind teachers in teaching?
3. How can educational work be made easier for blind teachers?