

The coloured triangles on the top left corner and the embossed geometrical shapes indicate the level of each booklet.

- In each story all key characters and objects of the visuals are embossed, and selected visuals are given computerized texturing. This makes the visuals accessible to all children.
- The same texturing of visuals is maintained, both throughout a story and across stories, to reinforce tactile experiences.
- A black border on all four sides draws the focus to the text and the visual.
- In each story flashcards with key words reinforce the words through real images. These are displayed in a window on the same page.
- Arrows on the black border indicates the next page. This makes it easy for the child to navigate through the book.
- Green and red dots indicate the beginning and end of sentences. Increased space between lines in level 3 and 4 has been given to help the child move to the next line.
- A note for teachers and parents has been added (English and Hindi) at the end of each story booklet to help them facilitate early reading process in the classroom and at home.
- The print book is of size A4 with appropriate thick sheets (220 GSM) for easy handling by all children.
- The key visuals on each page are done in high resolution. This helps the child to focus on the important events of the story.
- Page gradation makes it easy for children to turn each page.
- Safe and durable binding ('wiro' binding) is used.



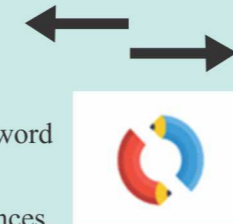
5.2 Features of the Digital Version

The digital version can be accessed on computers, laptops, mobile phones and tablets. The digital formats with the following features provide greater accessibility and a rich reading experience.

- At the beginning of each story an 'introductory note' is given in video format to arouse curiosity and to make reading interesting for children. This is also available in sign language.



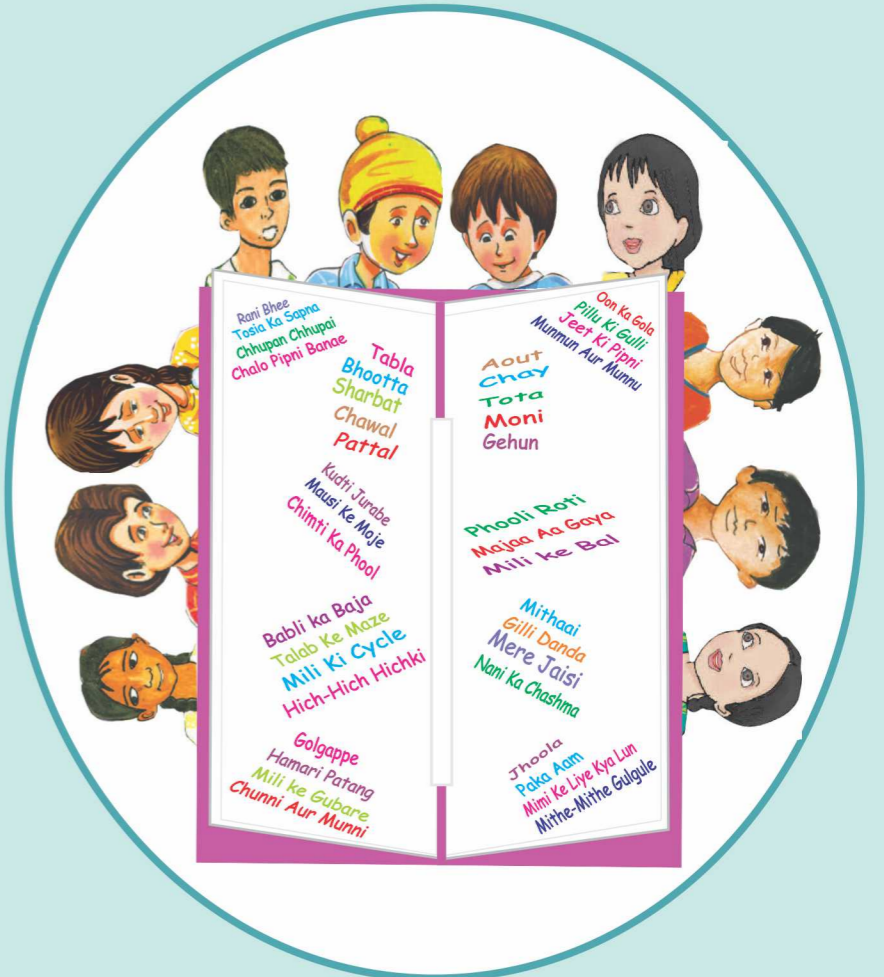
- The key visuals on each page are done in high resolution. This helps the child to focus on the important events of the story.
- The text and the background in each story are provided in a combination of three colours to enable the child to view the content according to his/her visual preference and need.
- A black border on all four sides draws the focus to the text and the visual.
- Arrows on the black border indicates the **next page**. This makes it easy for the child to navigate through the book.
- Each story has flash cards with key words to reinforce the word through real images.
- Green and red dots indicate the beginning and end of sentences. Increased space between lines in level 3 and 4 has been given to help the child move to the next line.
- A note for teachers and parents has been added (in English and Hindi) at the end of each story to help them facilitate early reading process in the classroom and at home.
- A friendly packaging helps children in making reading choices. Forty cover pages with titles of all booklets are displayed in a bookshelf.



विशेष आवश्यकता समूह शिक्षा विभाग
Department of Education of Groups with Special Needs

Barkhaa

A Reading Series for 'All'



All Children Read 'One Book' - True Inclusion



राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

Barkhaa

A Reading Series for 'All'

1. Overview of the Initiative

Since the past two decades the Department of Education of Groups with Special Needs (DEGSN) at NCERT has been working in the area of education of children with special needs (CWSN) and children belonging to socially disadvantaged groups including SCs, STs and Minorities. Implementation of an inclusive system of education has been at the heart of all its educational initiatives. For the first time the Department is preparing reading material for early graders that can be accessed by all children, including children with special needs in inclusive settings. The aim is to address the unique needs of children during the foundational years of development. The MHRD project 'Adapting the Barkhaa Series for Visually Challenged Children and other CWSN according to UDL' assigned to the Department endeavours to provide all young children equal access to reading, focusing extensively on children who are widely excluded due to their special needs.

2. About the original Barkhaa Series

The Barkhaa Series is a supplementary 'graded reading series', originally developed by the Department of Elementary Education (DEE) at NCERT. The Series was formulated with the objective of enabling children to develop healthy reading skills during the early years. Research indicates that focusing only on transacting the syllabus through prescribed textbooks leads to acquiring basic knowledge and factual information, but develops the habit and desire for reading only in a limited manner. Hence the need was realized to go beyond textbooks and highlight the significance of supplementary reading. The conceptual basis is that if children read stories with meaning and pleasure from the very beginning, they will learn to read well and enjoy the process, and grow up to be joyful readers. The Barkhaa Series, as a pedagogical tool, aims at helping the children of Classes I and II learn to read with meaning and to awaken in them the urge to read more.

The Barkhaa Series has forty stories spread across four levels (Level 1, Level 2, Level 3 and Level 4) and five themes (Relationships, Birds-Animals, Musical Instruments, Games and Toys, Around Us and Food). The stories have been knit around children's contexts and their everyday experiences. All the characters of Barkhaa are children of the intended readers' age. Every story in the Series revolves around a small event or thing that the children of this age-group find interesting and exciting. The number of sentences and the complexity of the plots increase as we move up across the levels. Lively illustrations are given on every page helping the child connect with the written text. The Barkhaa Series can be accessed at <http://www.ncert.nic.in/departments/nie/dee/publication/Barkha.html>.

3. The need to 'adapt' the Barkhaa Series

One of the key characteristics of inclusive education is the provision of a curriculum with teaching learning materials that are appropriate for each child and focus on the unique learning needs, characteristics, interests and strengths of children at different developmental levels. Children with learning disability, speech or language disorder, hearing or visual impairment, physical disability, autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), or any type of disability, often require special accommodations, modifications and adaptations in the teaching learning materials to access it meaningfully. Abiding by the ethos of inclusion, Barkhaa: A Reading Series for 'All' endeavours to bring about potential changes in the original Barkhaa Series according to the principles of Universal Design for Learning

(UDL). The aim is to attract children with disabilities to the reading process. The core objective is to respect the diverse reading needs and facilitate access of each child to the reading materials. Retaining the essence of the original Barkhaa, a number of additional features have been incorporated in the new version, so that 'all' children have full access to the stories which they can read together. Barkhaa: A Reading Series for 'All' aims to promote optimum participation in the reading process and initiate reading with meaning and pleasure for 'every' child in the early years.

UDL is a systematic approach to design learning activities and materials by customizing and making adjustments for individual needs. This flexible approach is in contrast with 'a single, one-size-fits-all' solution.

4. The Journey from 'Barkhaa Series' to 'Barkhaa: A Reading Series for 'All''

The journey from 'Barkhaa Series' to 'Barkhaa: A Reading Series for 'All' has been enriched by contributions from many professionals. The Department organized National level workshops in a continuum with a multidisciplinary team of 185 experts (National and State levels) invited from across the country, working in the fields of sensory, cognitive and loco motor disabilities covering visual and hearing impairment, autism, learning disability, intellectual disability, multiple disabilities and cerebral palsy. These workshops witnessed the participation of teacher educators, special educators, teachers working in special schools and inclusive schools, NCERT faculty, representatives from UNICEF and SSA, printers, professionals producing tactile material for children with visual impairment, CIET production team, IT experts, sign artist, sign vetting experts and audio artists, apart from the original team of writers and illustrators of the Barkhaa Series.



Two day pre-planning workshop
(21 to 22 July, 2015)



Three day workshop on adaptations for visually
challenged children (22 to 24 September, 2015)

Primarily these workshops aimed to adapt the content and illustrations of the original Barkhaa Series booklets in tactile, audio and other forms, making it accessible for children with disabilities according to UDL. These workshops also aimed to develop a handbook with guidelines, tips and suggestions for parents and teachers. The resource persons carried a pre-try out of the original Barkhaa Series in their respective institutions before attending the workshops. During the workshops the resource persons delineated the specific needs of various disability groups and accordingly suggested appropriate additional features in the Series, keeping in mind the principles of UDL. They also suggested that 'story introductions' be added to each story to awaken greater curiosity and interest among the children.

The data from these workshops was diligently analysed by the DEGSN team to formulate additional features and incorporate them in the adapted series. Forty 'story introductions' in regular and signed forms were video recorded in collaboration with CIET through a workshop mode. Inputs were obtained from sign and audio artists and sign vetting experts. The video films were incorporated in the introduction of the digital versions. A note for teachers and parents was developed in Hindi and English, for all the 40 booklets based on the feedback from the workshops. Consultation meetings were held with printers and digital experts to finalize the tactile diagrams and flash cards for the story booklets.



Three day workshop on adaptations for children with
intellectual disability, autism and learning
disability (7 to 9 October, 2015)



Three day workshop on adaptations for children with
hearing impairment, cerebral palsy and multiple
disabilities. (3 to 5 November, 2015)

Based on the analysed data of the workshops the identified agencies developed sample copies of *Barkhaa: A reading series for 'All'* in both print and digital forms. These sample copies were then field tested on CWSN from various institutions (inclusive schools, special schools, NGOs) in the cities of Jaipur, Jamshedpur, Delhi and Bhubaneswar. In this context, a one day capacity building workshop was also organized in each of these cities to orient the teachers and head teachers for the tryout exercise. The rich feedback thus availed from the children of these institutions were incorporated to develop the final version of *Barkhaa: A Reading Series for 'All'* in both print and digital mode.



Try out of print and digital versions of
Barkhaa: A Reading Series for 'All' in Jaipur,
Bhubaneswar, Jamshedpur and Delhi organised during
April to May 2016.

5. Barkhaa: A Reading Series for 'All'

Barkhaa: A Reading Series for 'All' is available in both print and digital forms on the lines of the original series. It also consists of forty story booklets across four levels and five themes covering the reading needs of all children at the primary level. The objective of promoting optimum participation in the process of reading for 'all' children during the early years is stimulated through additional features. The features in the printed story booklets and in the digital version are listed below.

5.1 Features of the Print Version

- The text is available in print and Braille on the same page. No additional page has been added to accommodate the Braille text. This makes the text accessible to all children. The Braille used is invisible and long lasting.

Invisible long
lasting Braille
Text

