

Audio Resources:
Policy Perspectives,
Concept, Format and Scope



Policy Recommendations

- NEP 2020 stated in clause 23.6, “Teaching-learning eContent will continue to be developed by all states in all regional languages, as well as by the NCERT, CIET, CBSE, NIOS, and other bodies/ institutions, and will be uploaded onto the DIKSHA platform.”
- It is also emphasises on suitable integration of eContents into teaching-learning practices

Policy Recommendations

Content creation, digital repository, and dissemination: A digital repository of content including creation of coursework, Learning Games & Simulations, Augmented Reality and Virtual Reality will be developed, with a clear public system for ratings by users on effectiveness and quality. For fun based learning student-appropriate tools like apps, gamification of Indian art and culture, in multiple languages, with clear operating instructions, will also be created. A reliable backup mechanism for disseminating e-content to students will be provided.

The budget of 2023 also aims to promote a more equitable and inclusive education system across India. As a part of the Digital India Programme in the Budget, a large amount has been allocated for the development of the eContent to promote digital literacy across the country.



Role of Audio Resources in Education

- Improve accessibility by catering to diverse learning style and accommodating learners with visual impairments.
- Incorporating audio resources engages multiple senses, promoting multisensory learning.
- It supports comprehension by providing auditory cues, intonations and emphasis of key concepts
- Offer flexibility and portability allowing learners to access educational content anytime and anywhere
- Supports in interactive and engaging element to the learning process

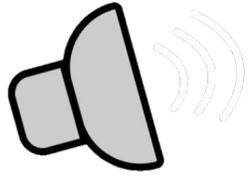


Role of Audio Resources in Education

- Supports in differentiations and personalization
- Facilitate collaborative learning through group discussion, audio based projects or shared podcasts
- Supports learners from early childhood education to the adult learning environment, to retain the concepts and more information as well as make it easier for them to focus their attention.



Audio Resources



01

Broadcasts

02

Streaming
Audios



04

Audio
discs



03

Podcasts



05

Audio Books





Audio Resources

Policy Perspectives-Concept, Format and Scope

Role of Akashvani a mass medium in education.



Prasar Bharati

- Akashvani- India's Public Service Broadcaster, the Radio vertical of Prasar Bharati (since its formation) has been serving to inform, educate and entertain its audiences since its inception, living up to its motto – 'Bahujan Hitaya : Bahujan Sukhaya'.

- One of the largest broadcasting organisations in the world in terms of the number of languages of broadcast and the spectrum of socio-economic and cultural diversity it serves, AIR's home service comprises of 501 Broadcasting centres located across the country, covering nearly 90% of the country's area and 98.00 % of the total population. Terrestrially, AIR originates programming in 23 languages and 179 dialect.

- AIR Broadcast Coverage (as per installed capacity)
 - By Primary Grade Signal (MW+FM)
 - By Area (%) 90.00%
 - By Population (%) 98.00%



Akashvani – The Network

Present status with details of infrastructure, Sections and Working

- Broadcasting Centres 501
 - (a) Stations with Studios 229
 - (i) Local Radio Stations (LRS) 92
 - (ii) Community Radio Stations (CRS) 4
 - (iii) Stations with Studios other than LRS & CRS 133
 - (b) Relay Centres (Incl.207 Nos. of 100 W FM Relay Centres) 272
 - (c) AIR Stations having FM Transmitter (s) 485
 - (d) Vividh Bharati Centres 41
- Regional News Unit (RNU) 46
- AIR's DTH Channels 48
- Live streaming of AIR Channels 291



External Services Division

□ All India Radio entered the realm of external broadcasting shortly after the outbreak of II World War on 1st October, 1939-when it started a service in Pashtu for listeners across- what was then the country's North West Frontier.

□ Today, The External Services Division of All India Radio is originating services in

1 SINDHI

2 BANGLA

3 NEPALI

4 URDU

5 CHINESE

6 TIBETAN

8 DARI

9 PASHTO

10 BALUCHI



FM (Frequency Modulation) Service

- ❑ AIR runs 25 FM Rainbow channels and 5 FM Gold channels
- ❑ AIR launched FM Rainbow channel on 1st February 1993 when radio listening was on decline especially in big cities. Noise free FM transmission effectively captured its audience especially youth.
- ❑ The announcer was replaced by Radio Jockey and primarily Film music based entertainment with a fast-paced and informal presentation style gained popularity with the new listener profile.
- ❑ The programme content of FM Rainbow is presented in a vivacious and contemporary style and highly popular with the urban youth which commands impressive listening and pride of place amidst the mosaic of channels.
- ❑ FM Gold Channel which came on air on 1st Sept. 2001 provides round the clock service and presents popular film music while keeping its listeners updated with current affairs and News on the hour.

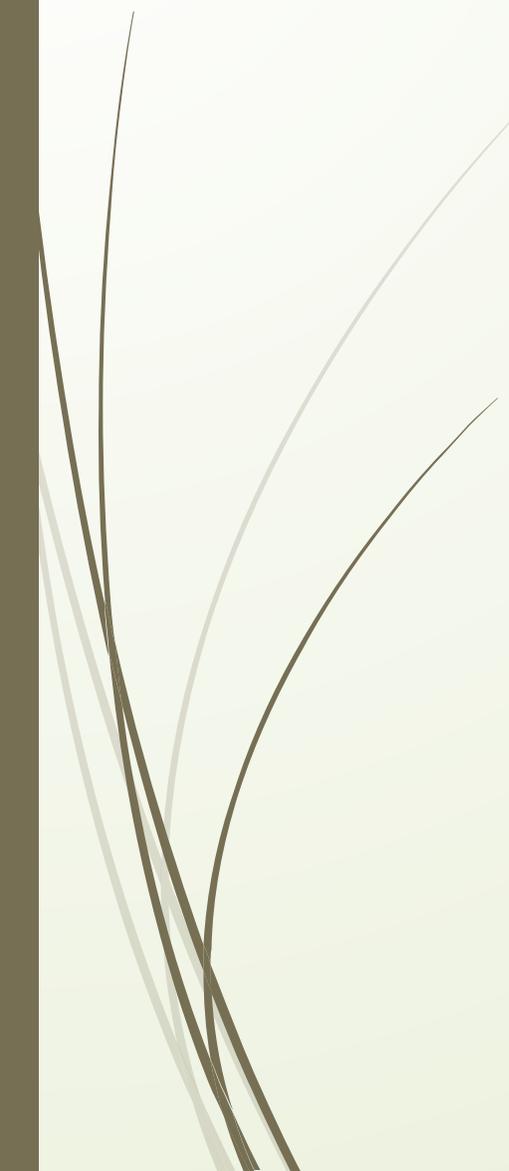


Vividh Bharati National Service

- The Vividh Bharati Service of All India Radio was conceptualized in 1957 to meet the competition offered by Radio Ceylon.
 - It established itself as a popular channel in the country.
 - Some popular programmes of Vividh Bharati are 'SANGEET SARITA', 'BHULE BISRE GEET', 'HAWA MAHAL', 'JAIMALA', 'INSE MILIYE' and 'CHHAYA GEET'
- 



Archive Services

- AIR preserves the cultural and intellectual wealth of the country in its Archive – recordings of eminent musicians, men and women of letters, political figures, intellectuals, leaders, statesmen and luminaries in various walks of life and is an important national resource for historians, scholars, music enthusiasts and others.
 - AIR releases rare archival recordings from time to time for public access and is available online too.
- 



News Service Division

- The News Services Division (NSD) of All India Radio disseminates news and news based programmes to listeners in India and abroad.
- It broadcasts over 607 bulletins in 92 languages & dialects every day, while adhering to highest professional ethics & standards in Radio broadcasting
- All India Radio's 46 Regional News Units (RNUs) play a vital role in catering to the information needs of the people with a regional flavour and furthers its grassroots reach.
- Example of an educative programme- “Manthan- Faislon Kaa” a talk show (09.12.2019) to run special interviews discussing important legislation like Citizenship Amendment Act and other initiatives of government. Some of the key topics covered in 114 episodes included Major Cabinet decisions, Containment of COVID-19, Initiatives to speed up development in J&K. Arms Amendment Bill and Personal Data Protection Bill, Schemes to stimulate economic activities, Swachh Bharat Abhiyan etc



Major programmes by Akashvani

- National Programme of Drama
 - National Programme of Features (Hindi and English)
 - National Science Programme (Hindi and English)
 - National Programme of Music
 - National Programme of Regional, Light and Folk Music
 - Health & Family Welfare
 - Farm and Home
- 



National Programme of Magazines

- ❑ **Sahitya Bharati** is a radio literary magazine programme covering all 23 Indian languages and includes literature's modern trends, contemporary issues along with their creative writings and criticism too.
- ❑ **Sanskriti Bharati** is a cultural magazine programme devoted to Indian composite culture. This programme is broadcast every second Wednesday of the month.
- ❑ **Chitra Bharati** programme is devoted to Indian cinema, its trends in art, and creativity and modern issues in Indian cinema industry. This programme is produced by Vivith Bharati Service AIR, Mumbai.
- ❑ **Vigyan Bharati** science magazine programme is broadcast every 4th Wednesday. This programme is devoted to science related subject to create scientific temperament among Society.
- ❑ **Yuva Bharati** contains Youth related issues, their achievements, aspirations and needs. This programme is broadcast every 5th Wednesday of the month.



Mission and objectives of the Prasar Bharati Corporation as laid out in the Prasar Bharati Act, 1990

- To uphold the unity and integrity of the country and the values enshrined in the Constitution.
- To safeguard the citizen's right to be informed freely, truthfully and objectively on all matters of public interest, national or international, and to present a fair and balanced flow of information including contrasting views without advocating any opinion or ideology of its own.
- To promote national integration.
- **To pay special attention to the fields of education and spread of literacy, agriculture, rural development, environment, health & family welfare and science & technology.**
- **To create awareness about women's issues and take special steps to protect the interests of children, aged and other vulnerable sections of the society.**
- **To provide adequate coverage to diverse cultures, sports and games and youth affairs.**
- **To promote social justice, safeguarding the rights of working classes, minorities and tribal communities.**
- To promote research and expand broadcasting faculties & development in broadcast technology.



Live Coverage by Akashvani-examples

- Live broadcast of the Presentation of the Union Budget in the Lok Sabha by the Union Finance Minister.
- **Live broadcast of the National Film Awards function.**
- Hon'ble President's broadcast to the Nation on the Eve of Independence Day.
- **Live broadcast of Flag Hoisting Ceremony and Address to the Nation by Hon'ble Prime Minister from the ramparts of Red Fort, Delhi on 15th August.**
- Live broadcast of the special function on 'Public Service Broadcasting Day' on 12th November from premises of Broadcasting House to commemorate the Anniversary of Mahatma Gandhi's visit to Broadcasting House.
- **Live broadcast of the Inaugural and Closing Ceremonies of International Film Festival of India at Panaji, Goa.**
- Live broadcast of the Republic Day pageant on 26th January



Educational Broadcasts

- Educational Broadcasts Radio has been used in different formats for educational purposes around the world for highly diversified audiences located across broad geographical expanses – all at a low per cent production cost. Its ability to bridge the literacy barrier was seen early enough.
- Radio has been used in different formats for educational purposes in Indian sub-continent for highly diversified audiences located across broad geographical expanses.
- Akashvani has always supplemented to the pedagogical teaching.
- Akashvani plays the role of a catalyst in the socioeconomic development of the nation.



School Broadcast Service

- The educational objectives of the school broadcasting service in Akashvani were to build programmes around topics which will be useful in widening the mental horizon of the students, and with respect to these aspects of the school subjects which cannot be adequately dealt with in an average school because of lack of time, resources, personnel etc. thus the main aims of the educational programme were to widen the horizon and to enrich the life of students by new experience (Kuppuswamy, 1976).
- 



Children's Programme

- Programmes for children were put on Sunday mornings. As they gained “popularity”, it became a regular feature in almost all stations across the country. The innovation in the characters children’s programmes were stock characters addressed as Bhayya (brother) and Didi (sister) along with other participating children and the compere (anchor of the programme). These participants represent the listeners to whom the programme was addressed.
- 



Other Educational Programmes

- ❑ Radio in Higher Education Distance education began with its broadcasts complementing the lesson unit of Correspondence Course.
- ❑ Sanskrit Lessons was first introduced from 21 stations of AIR in November 1966
- ❑ A novel design of half-hour tri-weekly service entitled University of the AIR was introduced in Delhi to supplement and reinforce the Correspondence Course of the Delhi University for B.A. Degree (Pass) students.
- ❑ Hindi lessons broadcast in the southern A.I.R. Stations from Trivandrum, Vijayawada, and Imphal Station from the north-east were very popular.
- ❑ A new innovative approach was adopted by introducing languages other than Hindi from Bhopal, Jaipur and Lucknow stations in Malayalam, Kannada and Tamil respectively.



More on Educational programmes of Akashvani

- Non-Formal Education - Five specific stations of AIR, at Jaipur, Nagpur, Simla, Srinagar and Tiruchi started Non-formal education (NFE) programmes for young people between 15 and 25 years of age in the villages to prevent dropouts.
- Integrated broadcasting This concept was brought into radio in 1987. A serial on social forestry was broadcast for children in the state of Karnataka with the active support of the Forest Department. It had real life stories, local examples and songs. 15,000 children were signed up as enthusiastic audience for Nisarga Sampada (Nature's Wealth) .
- Dehleez This programme was an innovative approach using radio drama to entertain and education. It was 52 episode was broadcast in 1992 serial addressing teenage, sexuality, HIV/AIDS, intergenerational conflicts, and other salient adolescent issues.



Collaborative Educational Programmes

- Vigyan Prasar Vigyan Prasar is an autonomous organisation under Department of Science and Technology, Government of India responsible large-scale science popularization tasks/activities and to act as a resource-cum-facility centre for S&T communication.
 - Akashvani and Vigyan Prasar have a Memorandum of Understanding (MoU) for reviving science programmes – serials in Hindi and other major languages. Script for broadcast will be prepared by Vigyan Prasar and other facilities like studios, recording and broadcast by Akashvani . (Sekhar , 2017).
- 



Radio in Education

- Akashvani has always supplemented to the pedagogical teaching.
 - Radio has been used in different formats for educational purposes in Indian sub-continent for highly diversified audiences located across broad geographical expanses.
 - Akashvani plays the role of a catalyst in the socioeconomic development of the nation.
- 



Education programmes.. then

□ listing in Newspapers

□ **1960**

□ [https://play.google.com/books/reader?id=scnrDwAAQBAJ&pg=GBS.PA18
&hl=en_GB](https://play.google.com/books/reader?id=scnrDwAAQBAJ&pg=GBS.PA18&hl=en_GB)

□ **1977**

□ [https://play.google.com/books/reader?id=UJr_DwAAQBAJ&pg=GBS.PA40
&hl=en_GB](https://play.google.com/books/reader?id=UJr_DwAAQBAJ&pg=GBS.PA40&hl=en_GB)

□



Radio to the rescue during CoronaVirus Disease of 2019 (COVID 19)

- The COVID-19 pandemic has been one of the biggest disruptions to education the world has ever known affecting more than 90% of the world student's population. Many countries turned to online based distance education to ensure that learning never stops.
- However, some 826 million students (50%) kept out of classrooms by the pandemic do not have access to a computer at home (UIS)
- 706 million students lack internet access and 56 million live in areas not covered by mobile networks.
- Many countries had to quickly find effective solutions and television and radio have proven to be a good alternative in a context where online learning is not possible



Use of Mass Media –challenges during COVID-19

- The setting-up and use of radio and television as tools to provide distance education present major challenges, such as:
 - The non-availability of educational content in audio-visual formats
 - Difficulties of countries to produce content in quantity and quality in short time
 - The absence of pre-existing partnerships for the design and broadcasting of the educational content.
 - The need for communication and collaboration between education specialists and the professionals of the audio-visual sector for the production of educational programmes.
 - The lack of the knowhow and expertise in monitoring and evaluation of learning ...
- 



Way out

- Three **core aspects for successful implementation** of these programmes:
 - **Collaboration**- Collaboration between broadcasters, education authorities and educators for implementing radio and television based educational programmes.
 - **Pragmatism**-To be able to adapt existing formats to educational & entertainment needs, adding educational contents and interactive elements using documentaries, shows and movies from their databases.
 - **Learner-centred approach**-designed their programmes with more interactive components to capture the attention of learners, particularly the youngest ones .
 - .



Radio for Development in Education

- The 2030 Agenda for Sustainable Development is “**a plan of action for people, planet and prosperity**”. It comprises of 17 Sustainable Development Goals (SDGs). These goals are indivisible and encompass economic, social and environmental dimensions.
- SDG4 focuses on education and aims to “**ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.**”
- **Seven Targets**
- 4.1 Universal primary and secondary education
- **4.2 Early childhood development and universal pre-primary education**
- 4.3 Equal access to technical/vocational and higher education
- **4.4 Relevant skills for decent work**
- 4.5 Gender equality and inclusion
- **4.6 Universal youth literacy**
- 4.7 Education for sustainable development and global citizenship



Making of an audio programme-

- Planning is crucial for any activity, whether it is radio programming or nation-building.
- Before planning a radio programme, you must constantly keep in mind the strengths and limitations of the medium. In radio, you have to create pictures through words, music and sound for a target audience which is large and varied.
- The radio communication has to draw upon the basic skills of verbal expression and mould it to suit the listening capability of its audience, i.e., the listeners.

Thus, communication over radio depends on the message transmitted through sound to a listener who has to first listen and then interpret it to grasp the message. Not only the verbal expression of the communicator, but also the listening and understanding capacity of the listener is involved in an effective communication. To achieve this, the message has to be designed carefully. To know that this is achieved, proper audience feedback is necessary.



Future of learning with technology-in Education & Broadcasting...

Digitalisation and the use of technology in education and broadcasting is one such change that was already in the works and was brought to the forefront by the pandemic.

The importance of technology is one aspect of the twentieth century that cannot be forsaken in any aspect and the same goes for education and broadcasting , too.

- 1. **Gives practical experience for future-** Learning by incorporating technology into education and in broadcasting becomes important as it teaches students and listeners to learn basic technological skills, preparing them for future professional space.
- 2. **Provides an audio-visual experience-** Using an audio-visual medium of teaching enables students and listeners to not only learn but also understand what they are being taught better.
- 3. **Makes studying or listening less boring-** watching programmes becomes hard by traditional means as it can get repetitive and boring and the little attention span. Using technology can help.
- 4. **Gives additional tools to teachers and producers-** Technology gives additional tools t to explain a concept or a theory better through audio-visuals and enable each student to learn according to her own disposition and style.



New Education Policy-2020

- **NEP 2020 focuses more on practical rather than theoretical learning.** The new education policy enables every student to get quality education irrespective of their socio-economic background, gender or disability.
 - **NEP 2020 enables teachers to use a variety of learning techniques and experiments.** It gives students the freedom to choose any subject or stream without restrictions. (**Audio resources** being one of them)
 - **NEP 2020 emphasizes the overall development of the education system.**
- 

Listening to Radio by women when work is done



Reaching the hinterlands



Digital Divide: Unlock sees parents leave for work sites with family's only smart phone. September 27, 2020 THE HINDU

As online classes fail to reach most students due to poor mobile connectivity, the Odisha government has now turned to radio to reach out to children in remote areas of the State. The School and Mass Education Department will launch classroom teaching through All India Radio



Listening to Radio on the go- Programmes are specially curated for the morning and evening drive



Auditory learning – at your convenience

Programmes broadcast available on Social Media Platforms



Listening to Radio while working in the fields . No one left behind.



Presentation by Shirley Jacob, Programme Executive (Retd.), Akashvani



Audio Resources: Policy Perspectives, Concept, Format and Scope

June 26. 2023

Prof. Anupam Ahuja
Former Professor & Head, IRD
NCERT

International Agenda, Legal Framework and Policies

SDG Goal 4

“Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”

NEP 2020

“Equitable and Inclusive Education- Learning for All- Provide Children With Disabilities, the same opportunities of obtaining quality education as any other child”(para 6)

RPwD Act 2016

Schools to provide inclusive education -students with and without disability learn together and the system of teaching and learning is suitably adapted to meet the learning needs of students with disabilities

The common thread that runs through Acts, Policies and Conventions is provide

“Equitable Opportunities and Inclusive Education to All Children”

- Lack of accessible learning material continues to be a major barrier in providing equitable learning opportunities to Children with Disabilities
- The issue became more pronounced during COVID -2019 pandemic

Government led Policy initiatives to promote accessible e-content

- **July 2015:** Hon' Prime Minister launched “**Digital India**” programme with a vision to transform India into a digitally empowered society and knowledge economy
- **September 2017:** **DIKSHA**, a national platform for school education launched to provide accessible e-content to all learners across all the States of India
- **July 2020:** **New Education Policy -2020** launched which states that *“Teaching-learning eContent will to be developed by all states in regional languages, NCERT, CIET, CBSE, NIOS, and other bodies/ institutions, and will be uploaded onto the DIKSHA platform”* (Clause 23.6)
- **August 2020:**, Ministry of Education constituted a committee of experts to frame guidelines to be uniformly implemented across the country for developing **“e-content for Children with Disabilities”**
- **June 2021:** **Guidelines formally released** by the Hon’ble Minister of Education, for usage by content creators, developers and publishers in all States. Guidelines for the development of Video and Audio content have been detailed out in these guidelines
- **2021-23:** CIET has taken various initiatives to develop audio and video contents based on these guidelines, SAKSHAM DIGITAL LIBRARY converts print books into accessible formats and uploads upon *Sugamya Pustakalaya*, an initiative started by Saksham and later taken by Gol

Universal Design of Learning (UDL)

- Children have varied background, strengths, needs, and interests



I learn when I see pictures

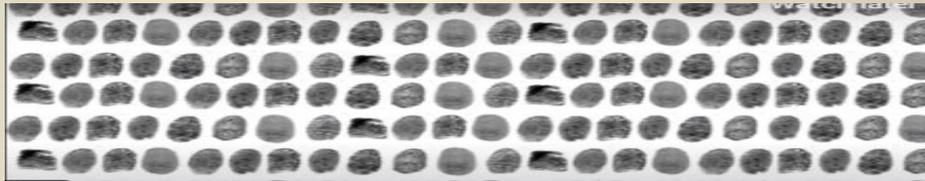


I learn when text is read loud



I learn when I conduct experiments

- The way the children learn is as unique as their fingerprints
(research based evidence)



- UDL minimises barriers and maximises learning of each student



Principles of UDL

Provide Multiple means of Representation

Present content in multiple ways

- ✓ Digital
- ✓ Print
- ✓ Text to speech
- ✓ Braille
- ✓ Videos with closed captions,
- ✓ Audio books
- ✓ Sign Language videos

Provide Multiple means of Action and expression

• Give students multiple options of expressing what they know

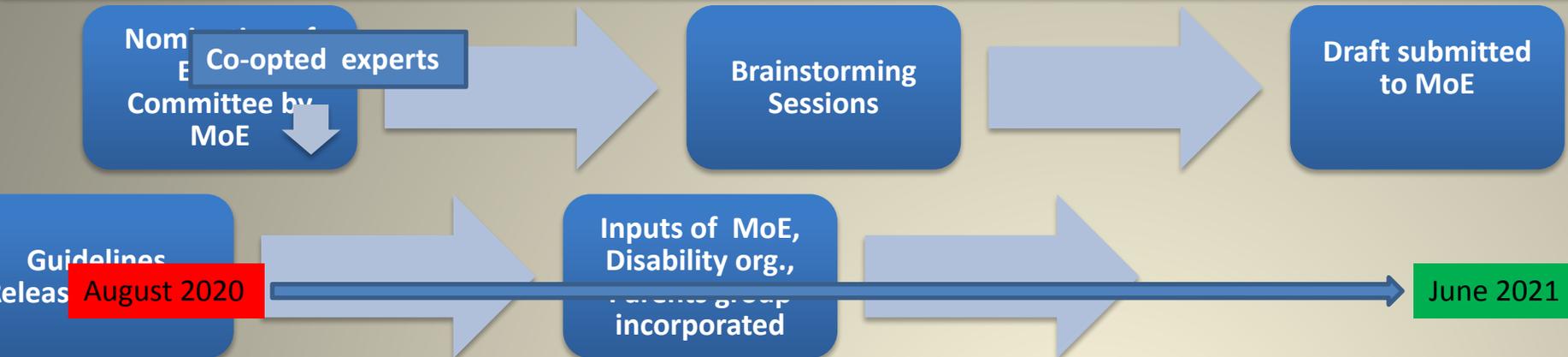
- ✓ Assignments
- ✓ Painting
- ✓ Video
- ✓ Comic strip
- ✓ access to assistive devices
- ✓ Provide feedback

Provide Multiple means of Engagement

• Use multiple ways to stimulate and maintain interest

- ✓ What fires one student may not fire up another!
- ✓ Give students choices to fuel their interests and autonomy
- ✓ Help students risk mistakes and learn from them. If they love learning they will persist through challenges

Process for Developing Guidelines



Guidelines comprising of 11 Sections and 2 Appendices can be downloaded from MoE/NCERT websites free of cost

https://www.education.gov.in/sites/upload_files/mhrd/files/CWSN_E-Content_guidelines.pdf

Business Line
Govt releases guidelines on e-content development for children with disabilities
... Minister Ramesh Pokhriyal on Tuesday approved the release of guidelines for the development of e-content for children with disabilities.
Jagran Josh

Times of India
Content for children with special needs must be diverse and flexible
In a view to ensuring accessible e-content amid the pandemic, the education ministry has released guidelines for development of e-content ...

ThePrint
Centre releases guidelines for development of e-content for children with disabilities
... goal of inclusive education, the Centre on Tuesday released the new guidelines for the development of e-Content for children with disabilities ...

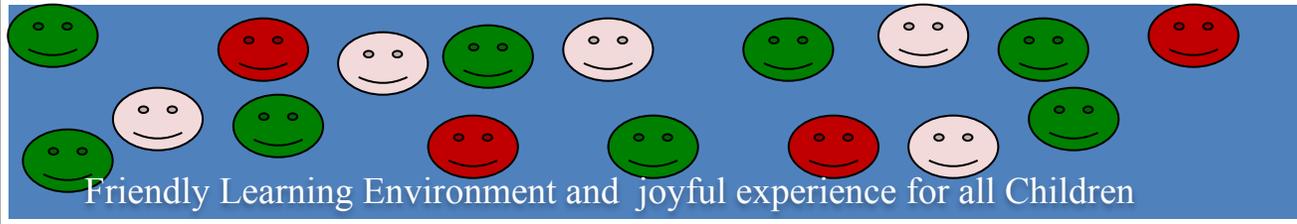
India Education Diary
Government releases guidelines for the development of e-Content for Children with Disabilities
The programme interalia envisages development of special e-content for the Divyang (Children with Disabilities-CwDs). In pursuance of this ...

NewsGram
New Guidelines For The Development Of E-Content For Children With Disabilities
The program inter alia envisages the development of special e-content for the Divyang (Children with Disabilities-CDs), stated an Education Ministry statement. In ...

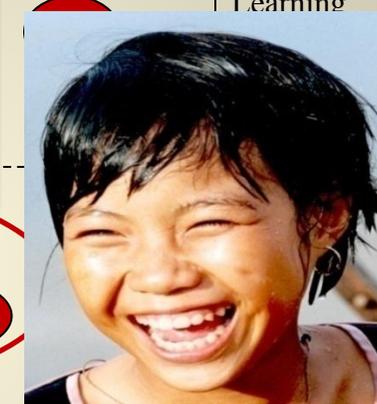
The Indian Awaaz
Govt issues guidelines for development of e-Content for ...
The guidelines state that e-Content for Children with disabilities should be developed based on four principles of robust, perceivable, operable ...

Frontline
Children as victims of the pandemic
... Union Minister for Education, approved new guidelines for the development of e-content for children with disabilities. Also read: Education in ...

Guidelines help in creating Inclusive Classrooms



The guidelines have been framed to develop e-content and pedagogy, which meet the learning needs of ALL children, including children with disabilities



If a child can't learn the way we teach, may be we should teach the way they learn.”- Ignacio Estrada

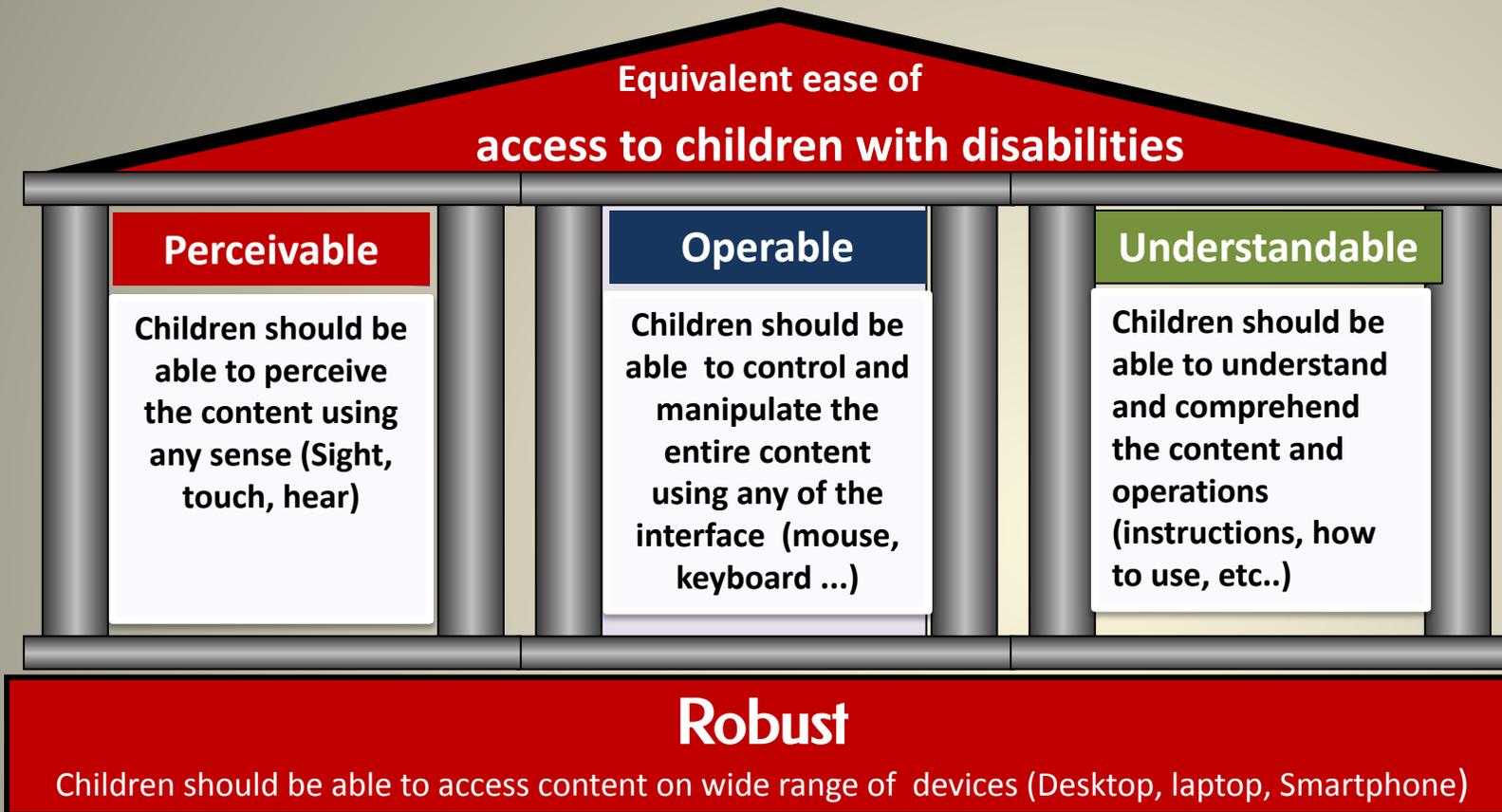
Other Children

Children from Disadvantaged Homes

Children with Disabilities

“Children who learn together, learn to live together”
“Children who live together, live to nurture an inclusive nation”

Guidelines have been framed based on four cardinal principles



Inter-linked Components of Accessible e-Content

Standards and Guidelines for all three components have been recommended

Section 10 and Appendix 2:

Guidelines for facilitating that ALL Children can :

- comprehend the content
- participate in the classroom activities and
- achieve desired learning outcomes

Pedagogy

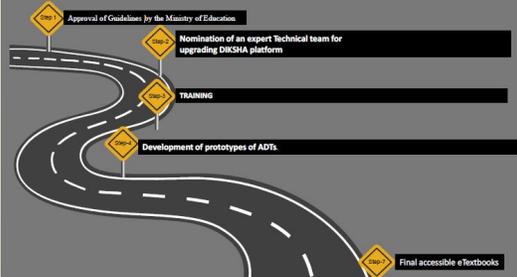
Content



Technology

- Section 5** : Guidelines for adaption of printed textbooks into ADTs
- Sections 6 to 9**: Guidelines for Supplementary e-Content for children with varied disabilities (can be used to create both academic and non- academic* content)
- Appendix 1**: Guidelines for production of Sign Language Videos

Section 11-Implementation Road map



Sections 3 and 4: Technical Standards (mandatory and preferable) for ensuring that children with disabilities can perceive, navigate and respond to the e-Content

- **Executive Summary**
- **Section 1:** Introduction
- **Section 2:** Rights of Persons with Disabilities

Compliance of guidelines for content creation, technology and pedagogy leads to equitable learning opportunities

“Barkhaa Series” to “Barkhaa-A Reading Series for All”



UDL based adaption of 40 stories by DEGSN, NCERT



Digital version of all 40 stories can be downloaded from NCERT website

Pedagogical Guidelines- A few Examples

Based on the experience of Barkhaa Series for All

- Provide Introduction to the topic in the mother tongue/dominant language and sign language at the beginning of each section/topic
- Provide instruction on “how to use” (in mother tongue/dominant language and sign language)
- Provide descriptive hyperlinks to access supplementary /additional material.
- Use simple, easy to read language
- Provide glossary linked to specific words
- Explain new concepts in multiple ways - diagrams with description , descriptive interactive models, flow charts, decision trees etc.
- Provide a linkage between the textbook concepts and activities by showing images that support the purpose of the activity
- Test the content with actual target groups before it is uploaded on the portal

Audio Resources Format

Audio Resources for **Children with visual impairment and low vision** need to be created in a format that:

- Assist in communication, learning, and information gathering,
- Provide enhanced accessibility , increased independence and autonomy
- Provide opportunity to interact with their environment more effectively and participate actively in various aspects of daily life.
- Promote inclusivity and equal opportunities in education, employment, social interactions, and overall accessibility.

Guidelines for adaption of Printed Textbooks into **Accessible Digital Textbooks** based on UDL principles (Chapter 5 of Guidelines)



Credit: UNICEF-Aceesble Digital Textbooks using UDL for lerners with and without disabilities

Why Accessible Digital Textbooks (ADTs)?

- Printed textbooks cannot offer all the features needed to ensure access to students with disabilities
- Many digital books also are not accessible to students with disabilities
- ADTs developed on **UDL principles** provide substantially equivalent access to children with disabilities

Research shows that inclusion is not only cost effective ; it also improves performance of ALL students in the classroom

Recommended to publish NCERT books “born accessible” post NCF-2023

Accessible Digital Chapters from NCERT Textbooks

Experience of Barkhaa used to develop prototypes of Stories, folktales and poems from NCERT Textbooks

- Stories and folktales**
- Bahadur Bitto
 - Ek Din ki Badshahat
 - Who will be Ningthou
 - Idgah
 - Chuskit Goes to School



- Poems**
- Chakai ka Chakdum
 - Hathi Challam Challam
 - Purane Bachche
 - Koi Laake Mujhe De

Links to all these stories and poems have been provided in the Guidelines

Scope of Audio Resources- Audio Described Movies

- Audio described movies entails adding narration that translates images or other visual information or non-dialogue portions of film into spoken words and subtitles
- Visually impaired and/or hearing impaired can access and enjoy movies together with others , without waiting for them to explain what is happening on the screen.



Scope of Audio Resources- Audio outputs of Culture and Historical Landmarks

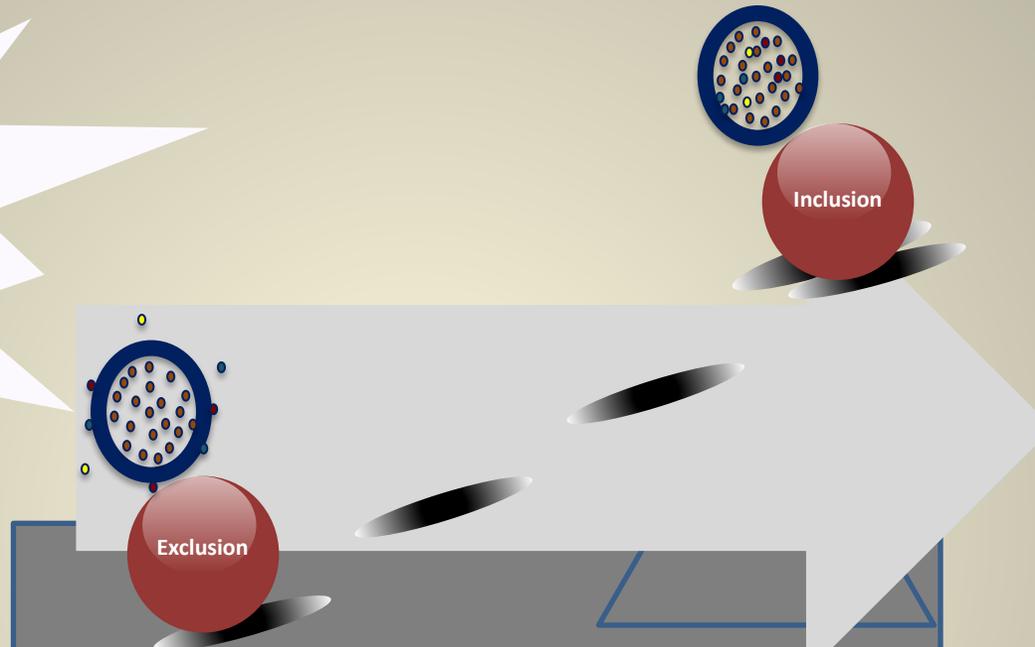
- **ANUBHAV GALLERY-** 15 Artefacts of the National Museum have been made in Replicas in Braille
- The replica comes with an audio description which can be accessed by pressing the given Sonic Labeler.
- The scope can be enlarged to include India's diverse cultural heritage and historical monuments



Replica of
Sanchi Stupa

ALL for ALL learners

- ❖ Download Guidelines
- ❖ Create Accessible Content
- ❖ Promote inclusion



Guidelines are dynamic, to be improved based on the experience and advent of new technology