Accessible Digital Content

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NEP-2020

- Intensive use of technology in education

- removing language barriers

- Increasing access for Divyang student (**Introduction to NEP**)

- Accessible Software in all major Indian languages for students in remote areas and Divyang students.(23.6)

- Teaching-learning e-content will continue to be developed in all regional languages by the NCERT, CIET, CBSE, NIOS, and other bodies/institutions, and will be uploaded onto the DIKSHA platform. (3.6)

P-2020

...SHA/SWAYAM, will be better integrated across school and... ...her education, and will include ratings/reviews by users, s... ...to enable content developers create user friendly and... ...litative content.(23.6)

...sting e-learning platforms such as DIKSHA, SWAYAM and... ...AYAMPRABHA will also be leveraged for creating virtua... ...s.(24.4 f)

NEP 2020 & AT

Section 23 Technology use and integration

- the relationship between technology and education at all levels is bi-directional
- artificial intelligence, machine learning, block chains, smart boards, handheld computing devices, adaptive computer testing for student development, require extensive research both on the technological as well as educational fronts
- Creation of National Educational Technology Forum (NETF)

NEP 2020 & AT

Section 23 Technology use and integration

- improving teaching-learning and evaluation processes, supporting teache[r] preparation and professional development, enhancing educational access[,] and streamlining educational planning, management, and administration[,] including processes related to admissions, attendance, assessments, etc.
- All tech solutions to be accessible for *Divyang* students and students livin[g] in remote areas

NEP 2020 & AT

- **Section 23 Technology use and integration**
  - **Disruptive technologies, AI, AR, VR,**
  - **Universities will aim to offer Ph.D. and Masters programs in core areas such as Machine Learning as well as multidisciplinary fields "AI + X"**
  - **Future is blended learning**

NEP 2020 & AT

Section 24 Ensuring Equitable use of Technology

- Bridge digital divide (Digital India)
- Upgrade teachers-- unless online education is blended with experiential and activity-based learning, it will tend to become a screen-based education with limited focus on the social, affective and psychomotor dimensions of learning

Some tasks for HEI

- Pilot studies for online education; Digital infrastructure; Online teaching platform and tools (DIKSHA, SWAYAM); Content creation, digital repository, and dissemination; Virtual Labs; Training and incentives for teachers; Online assessment and examinations; and Laying down standards

SEDG's recognized in NEP2020

Gender Identities
- Female and transgender individuals

Socio-cultural identities
- Scheduled Castes, Scheduled Tribes, OBC's and Minorities

Geographical Identities
- Students from villages, small towns and aspirational districts

Socio-Economic Conditions
- Migrant communities, low income house-holds, children in vulnerable situations, victims of or children of victims of trafficking, orphans including child beggars in urban areas, and the urban poor
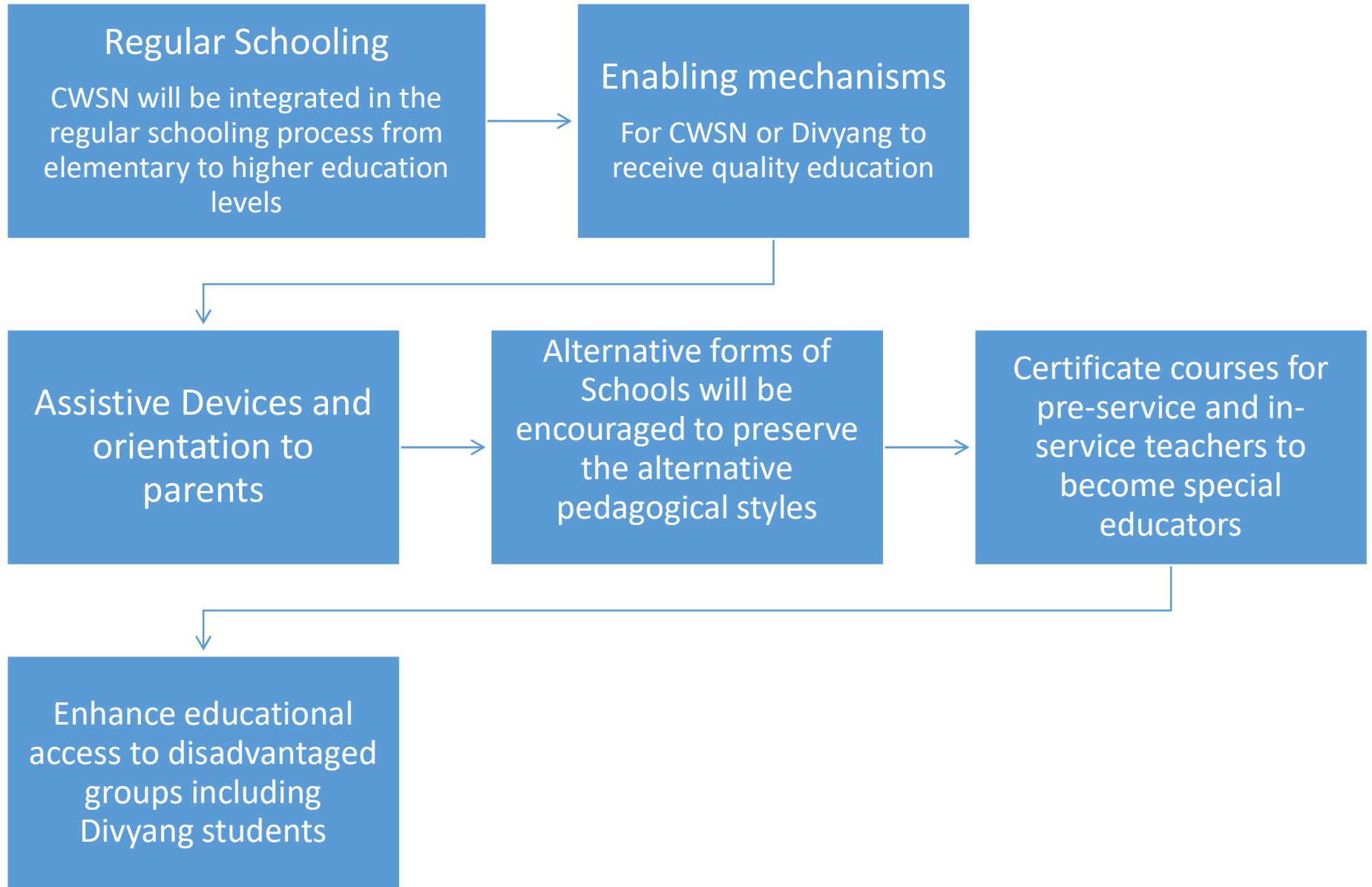
Disabilities
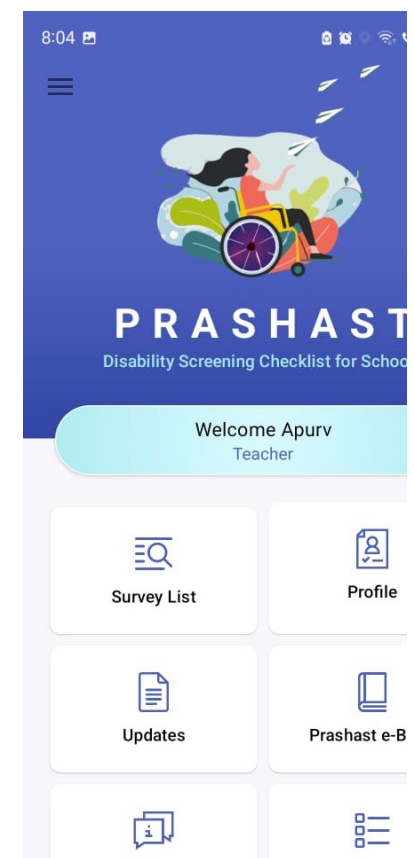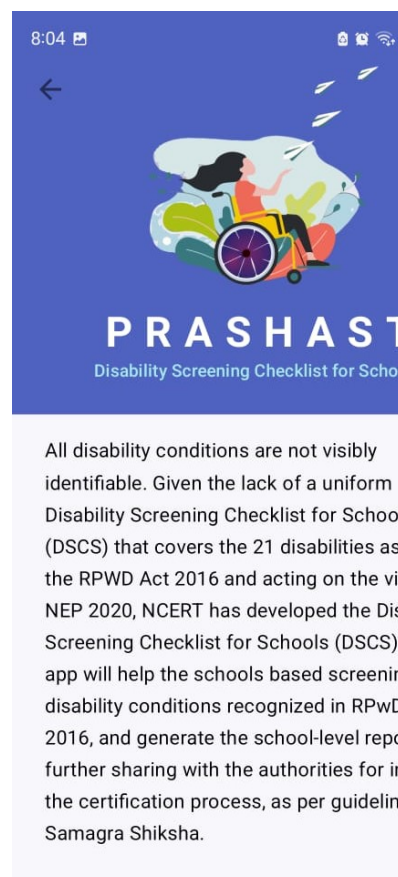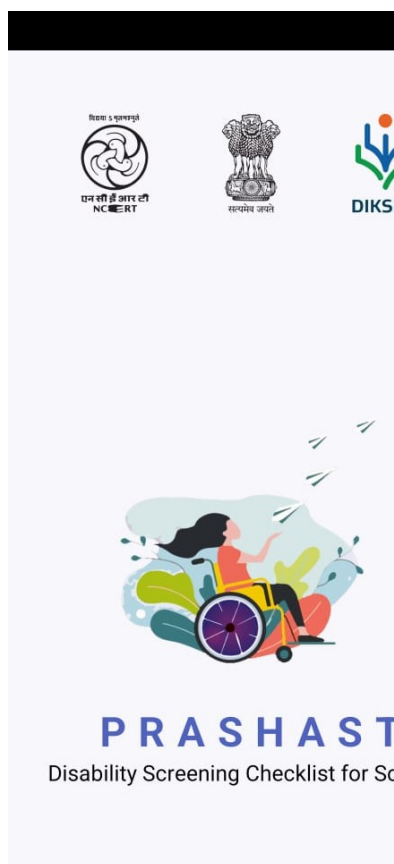- 21 recognised in RPWD Act 2016

nclusive education

means a system of education wherein students with and withou disability learn together and the system of teaching and learning i suitably adapted to meet the learning needs of different types o students with disabilities.

Supporting CWSN

Regular Schooling

CWSN will be integrated in the regular schooling process from elementary to higher education levels

Enabling mechanisms

For CWSN or Divyang to receive quality education

Assistive Devices and orientation to parents

Alternative forms of Schools will be encouraged to preserve the alternative pedagogical styles

Certificate courses for pre-service and in-service teachers to become special educators

Enhance educational access to disadvantaged groups including Divyang students

PRASHAST: Disability Screening Checklist for Schools

https://ncert.nic.in/pdf/DSCS_booklet.pdf

All disability conditions are not visibly identifiable. Given the lack of a uniform Disability Screening Checklist for Schools (DSCS) that covers the 21 disabilities as the RPWD Act 2016 and acting on the vis NEP 2020, NCERT has developed the Disa Screening Checklist for Schools (DSCS). app will help the schools based screening disability conditions recognized in RPwD 2016, and generate the school-level repor further sharing with the authorities for in the certification process, as per guideline Samagra Shiksha.

Welcome Apurv
Teacher

Survey List

Profile

Updates

Prashast e-B

cessible e-content

sible means a person with a disability---

s the opportunity to acquire the **same** **ormation**, **engage in the same interactions**, and **ioy the same services** as a person without a ability in an equally effective and equally egrated manner, with substantially equivalent se of use.

ust be able to obtain the information as **fully,** **ually, and independently** as a person without a ability.

ble to use technology with **comparable ease**

Electronic conten (e-content) refers to the content, information delivered over network based electronic devices or that is made available using computer networ such as internet.

ACCESSIBLE

Web

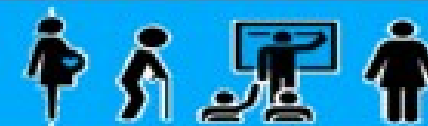ns a PWD can perceive, erstand, gate, interact contribute to web

Digital World

- Technology Products, Devices and services are usable and comprehensib le

Material

- PwD can navigate, perc and understand content takes into account Physical, Visual, Au Neurological, and Cogni disability.

GUIDELINES
e-Content

Guidelin
for the Developmen
e-Conte
for Children with Disa

ACCESSIBLE standards International

GRA
nter

N-
DE

WCAG

- Perceivable
- Operable
- Understandable
- Robust
- *sub-indicators within each one above*

E-PUB

- Logical reading order in text
- Image descriptions
- Include page numbers
- Use MathML
- Interactive content
- Accessibility metadata
- Ensure validity of EPUB check

DAISY

- For peop with pri disability

ccessible digital content developed by NCERT

ps://diksha.gov.in/

ya: https://www.youtube.com/watch?v=b54V-54sVco

Decoding Assistive Technologies (AT)

Any tech solution that helps in day to day activities

Is it AT?

- If there is NO digital technology involved ?
- AT and AET are same or different?

AT is human rights obligation

- As a right, ensure the availability of high-quality, afforda assistive products , because they are recognized as the first cruc and mediating step towards equal opportunities

United Nations Convention on the Rights of Persons with Disabilit (UNCRPD)

Who is it for ?

Older people

People with non-communicable diseases such as diabetes and stroke

People with mental health conditions

People with gradual functional decline

People with disabilities

People with language concerns

People with communication challenges

People from disadvantaged sections or sedg's

Finding right AT ?

Target specific skill

Assistive technology should be chosen based on specific need and not on disability labels .Each assistive technology i designed with a specific objectives ,therefore choosing the right technology for right purpose is necessary.

Principles of AT

5A&Q - Availability, Accessibility, Affordability, Adaptability, Acceptability and Quality

me for hands on learning : AT apps

Name of Application	Key Features	Disability	Free Version	Paid Version
TapTapSee	Click Picture and it will describe the object in front of you. Choose voiceover option in your phone to allow speaking the object.	Blind	Free	-
Cash Reader	Say aloud the cash in front of you (different currency options available)	Blind	Free for 5, 10 and 20 Rupees Or 14 day free trial for Paid version	299 per year 2599 for lifetim
Be My Eyes	Link Volunteers and Blind people above 17 years of age Place the phone in front, call a volunteer and they will tell you what is there in front of you	Blind	Free	-
Petralex	Amplify sound for better hearing	Partially Deaf	7 days free	1149/month 4,899/month
Transparent Note	Use both screen and notes at the same time Helpful where closed captions are not available like video lecture	Deaf	Free	Better user com for laptop/pc/ mac(Paid)
Laptop accessibility feature (i5, Windows 10)	Voiceover, stylus, highlight, attach it to a braille keyboard for easy typing	Deaf/blind (Stylus is helpful for handicapped)	Free	-
Microsoft edge	Read out aloud pdfs/word doc	Blind	Free	-
Wheel Map	Finds wheelchair accessible places for food, shopping, entertainment, healthcare etc.	Locomotive Disability	Free	-
HandTalk	Converts audio to sign language	Deaf	Free	-

MPLEMENTATION POINTS

Set up enabling Units/Cells

Collaborate Establish partnerships

Organize training and sensitization

Accommodate Needs not on the basis of equality but on the basis of equity

Variations in AT

Box 2. **Examples of assistive technology that can help children attai[n]**

- Protective headgear can ensure the physical well-being of children with epilepsy and enable them to participate in activities important for social well-being.

- A pressure relief cushion in a wheelchair can protect a child with paralysis from pressure sores and associated fatal infections.

- Ramps and handle bars can help children to access health facilities, and a hearing aid can help a child

- Parallel bars can help ch[ildren with] balance challenges to d[evelop] balance and strength.

- A communication board [can help] a child with speech diffi[culties] express herself.

- A screen reader can ma[ke] for a child who cannot s[ee] information on the web[site].

- A splint can enable a ch[ild to join] family at a cultural even[t].

Barriers and Challenges

Lack of awareness (technophobia)

Lack of appropriate legislation, policies and national programs

Lack of services

Lack of products

Inaccessible Environments

Lack of human resources

Financial barriers

nclusive Classroom

Language

Class 1:

Text Book: Marigold

Lesson 1: A happy child

A Happy Child

Enjoy this poem

My house is red - a little house;
A happy child am I.
I laugh and play the whole day long,
I hardly ever cry.

I have a tree, a green, green tree,
To shade me from the sun;
And under it I often sit,
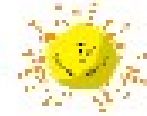When all my play is done.

New words

cry   day   red   sun

Vocabulary words for CwVI and HI
- Red
- Little
- House
- Happy
- Whole

- Tree
- Green
- Shade
- Sun
- Under

Make flash cards in Braille or tactile format
As well as using pictures

Let's read

The **sun** shines in the sky.
I have a **red** pen.

Do you find any difficulty in doing this exercise in inclusive classroom having children with Visual Impairments !
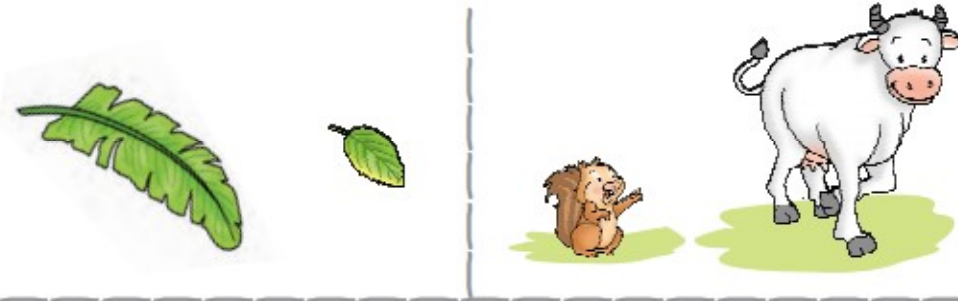
Reflect why and where?

EXAMPLE:
MATHEMATICS

Let's initiate a new Beginning ….

For most people, technology makes things easier. For people with disabilities, technology makes things possible.

Mary Pat Radabaugh